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Roche Site-Wide Monitoring Well Documentation

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MONITORING WELL LOGS, RECORDS AND PERMITS

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306290

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586565 Northing (Y): 729830
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 22RI-MW1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: May 6, 2013
Expiration Date: May 6, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306290

WELL PERMIT

VIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-I.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201306290
2. Site Well Number as shown on application or plans):	22RI-MW1
3. Well Completion Date:	05/07/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	8.0'
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.27'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306290
2. Site Well Number (As shown on application or plans): 22RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 31.3" Latitude: North 40° 50' 11.5"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729829.5 East 586562.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.19
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

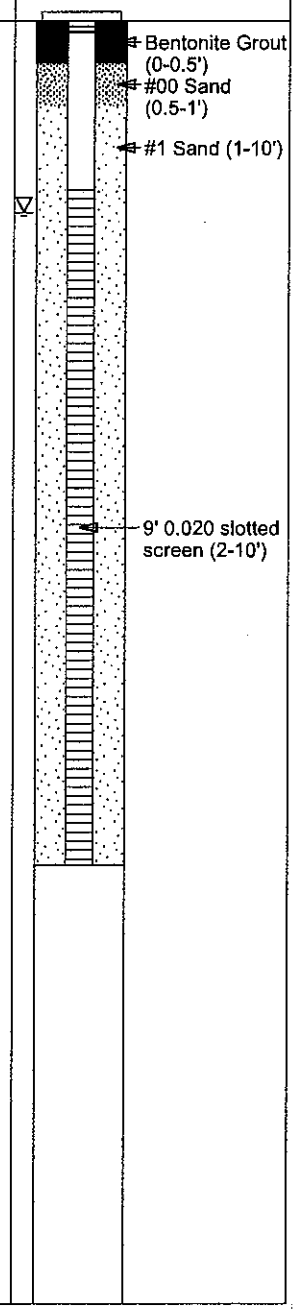
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/7/2013
LOCATION Permit #: E201306290
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 22RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.27
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 115.19
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 22RI-22

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-3" ASPHALT.		
1				3-32" Red-brown fine SAND, some silt, trace gravel.		
2						
3						
4						
5				0-15" Brown SILT, trace clay, moist.		
6						
7				15-39" Red-brown fine SAND, some silt.		
8						
9						
10				End of Boring @ 10 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306296

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 1153 BLOOMFIELD AVE

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586453 Northing (Y): 729779
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 23RI-MW-1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: May 6, 2013
Expiration Date: May 6, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306296

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201306296
2. Site Well Number as shown on application or plans):	23RI-MW1
3. Well Completion Date:	05/15/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	8.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2.00'
7. Screen Length (or length of open hole) in feet:	6.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	3.17'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306296
2. Site Well Number (As shown on application or plans): 23RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.7" Latitude: North 40° 50' 11.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729780.2 East 586452.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.39
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

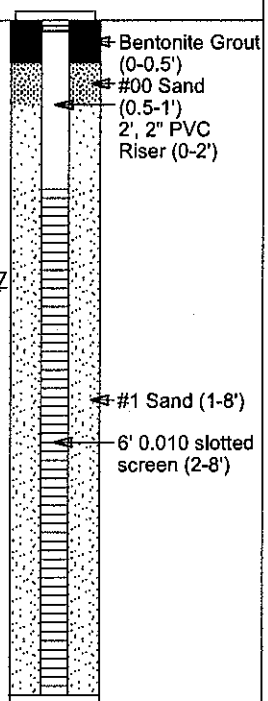
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/15/2013
LOCATION Permit #: E201306296
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 23RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 3.17
TOTAL DEPTH (Feet) 8
GROUND ELEVATION (Feet, NAVD 88) 115.39
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby well MW-129

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-24" ASPHALT and SUB-BASE.		
2				0-20" Pulverized GRAVEL and red-brown fine to medium SAND, some fine gravel.		
4				0-12" Black fine to medium SAND, some silt, little gravel, moderate oily odor, black staining, wet.		
8				0-18" Dark-brown to black fine to coarse SAND, some fine gravel, black staining, mild petroleum odor.		
				18-28" Gray fine to coarse SAND, some fine gravel, some silt, moderate petroleum odor, wet.		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306297

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 1153 BLOOMFIELD AVE

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586479 Northing (Y): 729762
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 23RI-MW-2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Plawski

Approval Date: May 6, 2013
Expiration Date: May 6, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306297

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201306297
2. Site Well Number as shown on application or plans):	23RI-MW2
3. Well Completion Date:	05/16/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	8.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	6.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	3.26'
13. Yield (gallons per minute):	0.22 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	3 hr and 45 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306297
2. Site Well Number (As shown on application or plans): 23RI-MW-2
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.3" Latitude: North 40° 50' 10.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729762.7 East 586479.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 116.22
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

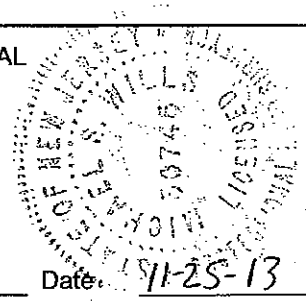
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date: 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

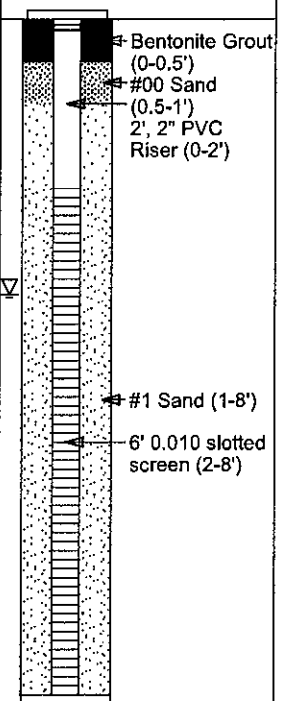
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/16/2013
LOCATION Permit #: E201306297
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 23RI-MW2
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 3.26
TOTAL DEPTH (Feet) 8
GROUND ELEVATION (Feet, NAVD 88) 116.22
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 23RI-9

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-7" ASPHALT and CONCRETE.		
1				7-23" Brown medium SAND, some red-brown silt, little siltstone fragments, lens of light-brown medium sand at 3.5-feet, slightly moist.		
2						
3						
4				0-17" Brown SILT, some clay, little fine to medium sand, soft, moist.		
5						
6				17-26" Red-brown SILT, some siltstone fragments, slightly moist.		
7				No lithology recorded.		
8				End of Boring @ 8 feet (refusal)		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306295

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586298 Northing (Y): 729309
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 26RI-MW-1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Pilawski

Approval Date: May 6, 2013
Expiration Date: May 6, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306295

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
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In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
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This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 24

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201306295
2. Site Well Number as shown on application or plans):	26RI-MW1
3. Well Completion Date:	05/20/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	10.73'
13. Yield (gallons per minute):	0.15 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	2 hr and 50 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 24 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306295
2. Site Well Number (As shown on application or plans): 26RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 34.7" Latitude: North 40° 50' 06.4"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729312.7 East 586300.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 121.20
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

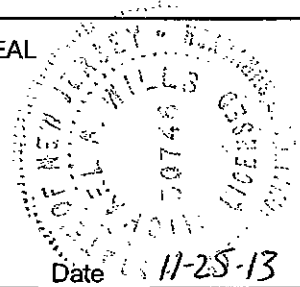
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1969, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

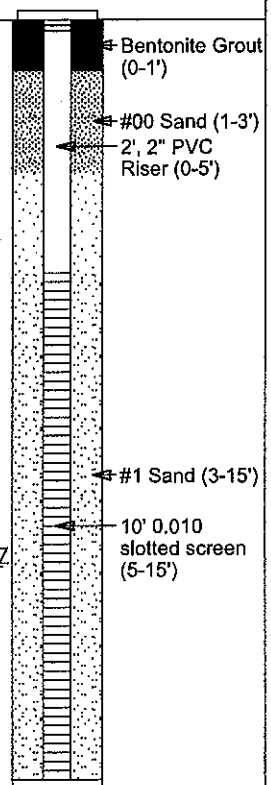
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/20/2013
LOCATION Permit #: E201306295
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 26RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 10.73
TOTAL DEPTH (Feet) 15
GROUND ELEVATION (Feet, NAVD 88) 121.20
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby well MW-43

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-3" ASPHALT.		
1				3-6" GRAVEL.		
2				Red-brown fine to coarse SAND, some gravel.		
3						
4				Brown fine SAND.		
5						
6				Fine grained SANDSTONE, dry.		
7						
8				Moist cuttings from rock.		
9						
10				Dry BEDROCK (sandstone).		
11						
12						
13						
14						
15				End of Boring @ 15 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304935

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman - LaRoche

Address: 1153 Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586110 Northing (Y): 730240
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 53RI-MW1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Plawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304935

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304935

MONITORING WELL RECORD

PROPERTY OWNER: GREG CIERPIAL

Company/Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St. Nutley, New Jersey 07110

WELL LOCATION: Hoffman - LaRoche

Address: 1153 Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586110 Northing (Y): 730240
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 18, 2013

DATE WELL COMPLETED: April 18, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 53RI-MW1

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15 Finished Well Depth (ft.): 15 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	6		
Casing	0	5	2	PVC	40
Screen	5	15	2	pvc	10

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	3	6	2	5	94	8
Gravel Pack	3	15	6	2	morie 1		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Sonic

ADDITIONAL INFORMATION

Protective Casing: No
Static Water Level: 5 ft. below land surface
Water Level Measure Tool: WLI
Well Development Period: 1 hrs.
Method of Development: pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: CRS17
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 15: redish brown SP - Poorly graded sands and gravelly sands, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Steve R Wolf, JOURNEYMAN LICENSE # 0001317 Company: AQUIFER DRILLING & TESTING

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201304935
2. Site Well Number as shown on application or plans):	53RI-MW1
3. Well Completion Date:	04/18/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	13.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	3.50'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.35'
13. Yield (gallons per minute):	0.40 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	3 hr and 20 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304935
2. Site Well Number (As shown on application or plans): 53RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 37.0" Latitude: North 40° 50' 15.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730247.4 East 586119.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 123.46
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonmenL

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

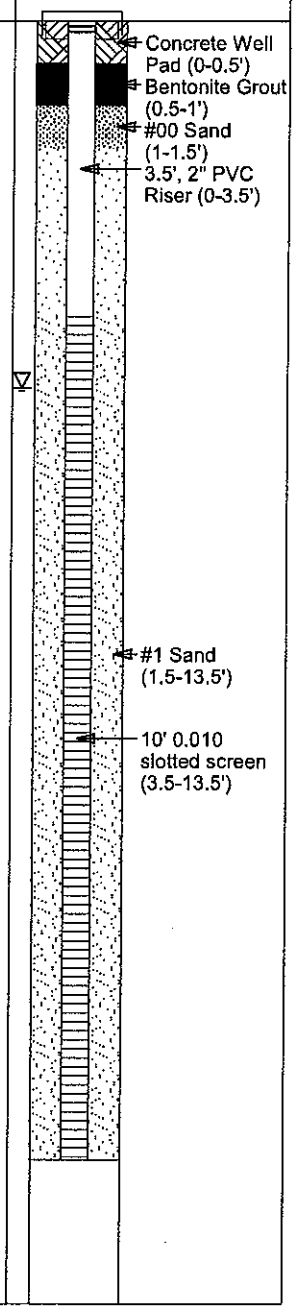
BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Ayudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 4/18/2013
LOCATION Permit #: E201304935
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 53RI-2

BORING/WELL NUMBER 53RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 4.35
TOTAL DEPTH (Feet) 13.5
GROUND ELEVATION (Feet, NAVD 88) 123.46
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
1				0-6" ASPHALT and SUB-BASE.		
				6-10" Red-brown fine SAND and SANDSTONE fragments, moist.		
2				10-26" White SILT like material (pond fill), soft, slightly moist.		
3						
4						
5				26-27" WOOD fragments.		
				0-3" WOOD fragments.		
				3-8" Brown and black sandy SILT, trace gravel, wet.		
6				8-22" Dark-brown sandy SILT, soft, very moist.		
7						
8				22-29" Blue-gray and red-brown SILT, stiff, slightly moist.		
9				29-31" Red-brown fine SAND, moist.		
				31-38" Blue-gray and red-brown SILT, stiff, slightly moist.		
10				0-12" Red-brown sandy SILT, trace gravel, saturated.		
11				12-17" Gray SILT, wet.		
				17-30" Red-brown fine SAND, wet.		
12						
13				30-41" Red-brown fine SAND, some gravel, trace silt, slightly moist.		
				End of Boring @ 13.5		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304937

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman - LaRoche

Address: 1153 Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586170 Northing (Y): 730190
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 53RI-MW2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304937

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201304937
2. Site Well Number as shown on application or plans):	53RI-MW2
3. Well Completion Date:	04/22/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	8.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.12'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304937
2. Site Well Number (As shown on application or plans): 53RI-MW-2
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 36.3" Latitude: North 40° 50' 15.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730190.7 East 586177.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 117.75
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

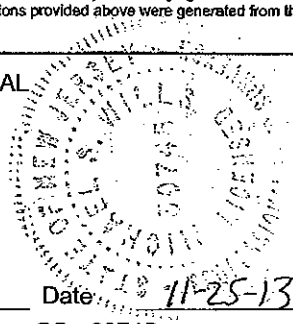
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

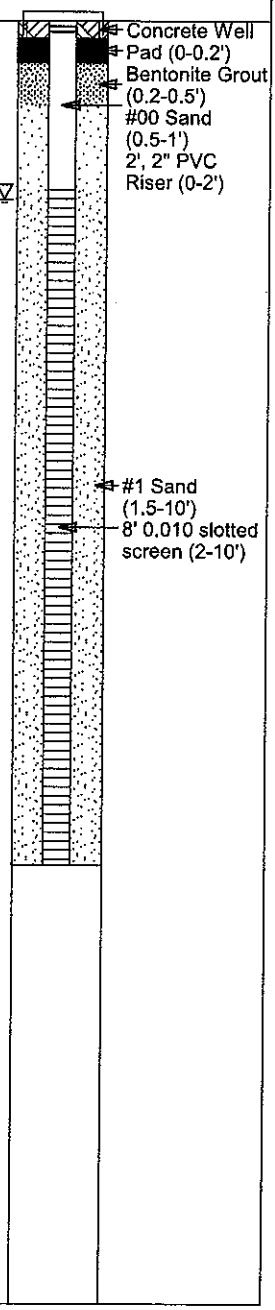
BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 4/22/2013
LOCATION Permit #: E201304937
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 53RI-8

BORING/WELL NUMBER 53RI-MW2
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.12
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 117.75
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-6" Brown sandy SILT, medium stiff, very moist.		
1				6-12" Gray-brown SILT and CLAY, stiff, very moist.		
2				12-32" Green-gray CLAY, stiff, very moist.		
3						
4						
5				32-35" Red-brown sandy SILT, little gravel, trace clay, medium stiff, moist.		
				0-5" Red-brown sandy SILT, little gravel, trace clay, medium stiff, moist.		
6				5-7" WOOD fragments.		
				7-11" Brown and olive-green mottled CLAY and SILT, trace fine sand, stiff, moist.		
7				11-23" Olive-green CLAY, stiff, moist.		
				23-36" Red-brown CLAY, some silt, trace fine sand, stiff, moist.		
8				36-39" Red-brown SAND and SILT, some gravel, stiff, slightly moist.		
				39-41" SANDSTONE fragments.		
9				41-43" Red-brown SAND and SILT, some gravel, stiff, slightly moist.		
				43-46" Red-brown SAND and SILT, some gravel, stiff, moist to very moist at 45-inches.		
10				No lithology recorded.		
				End of Boring @ 10 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304940

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman - LaRoche

Address: 1153 Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586100 Northing (Y): 730090
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 53RI-MW3

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Plawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304940

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201304940
2. Site Well Number as shown on application or plans):	53RI-MW3
3. Well Completion Date:	04/16/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	8.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.50'
7. Screen Length (or length of open hole) in feet:	6.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.24'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304940
2. Site Well Number (As shown on application or plans): 53RI-MW3
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 37.1" Latitude: North 40° 50' 14.2"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730094.7 East 586113.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.02
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

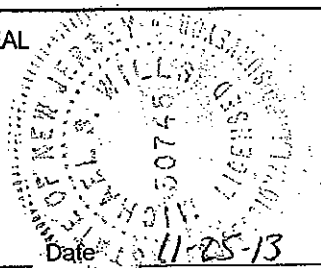
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

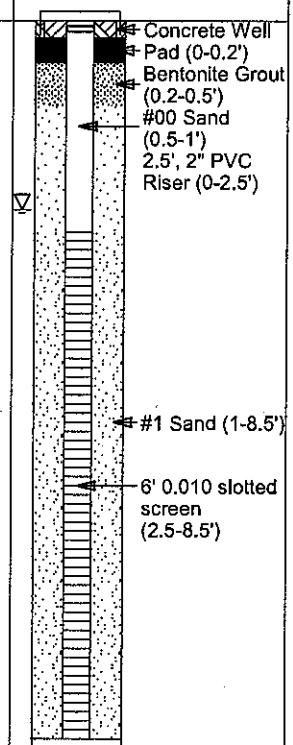
BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 4/16/2013
LOCATION Permit #: E201304940
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 53RI-11

BORING/WELL NUMBER 53RI-MW3
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.24
TOTAL DEPTH (Feet) 8.5
GROUND ELEVATION (Feet, NAVD 88) 118.02
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-1" GRAVEL.		
				1-5" Gray-brown and red-brown clayey sandy SILT, moist.		
1				5-28" Gray and orange/yellow-brown mottled clayey SILT, moist.		
2						
3						
4				0-8" brown silty CLAY, soft, moist.		
5				8-15" Red-brown fine SAND, trace silt, trace gravel, moist.		
6				15-24" Blue-gray and gray SILT, stiff, slightly moist.		
7				24-38" Red-brown fine SAND, trace silt, trace gravel, moist.		
8				0-7" Gray-brown silty CLAY, trace gravel, soft, saturated.		
				7-29" Red-brown fine to medium SAND, trace gravel, wet.		
				End of Boring @ 8.5 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304941

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman - LaRoche

Address: 1153 Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586030 Northing (Y): 730100
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 53RI-MW4

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304941

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201304941
2. Site Well Number as shown on application or plans):	53RI-MW4
3. Well Completion Date:	04/16/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.30'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304941
2. Site Well Number (As shown on application or plans): 53RI-MW-4
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 38.2" Latitude: North 40° 50' 14.2"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730097.5 East 586029.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 124.25
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

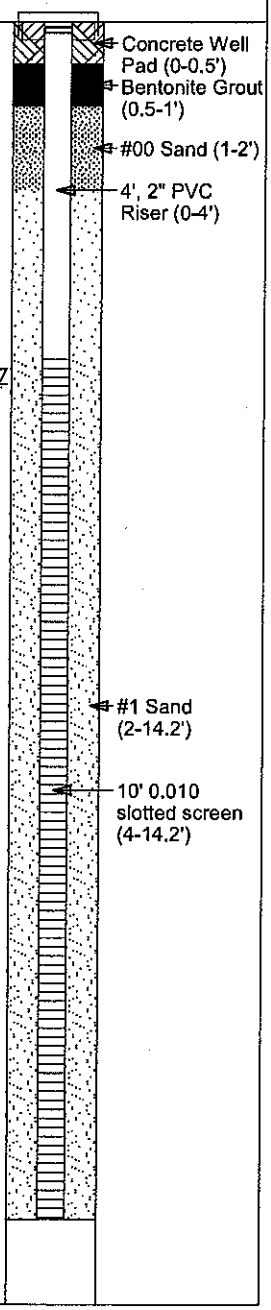
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Ayudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 4/16/2013
LOCATION Permit #: E201304941
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 53RI-MW4
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 4.30
TOTAL DEPTH (Feet) 14.2
GROUND ELEVATION (Feet, NAVD 88) 124.25
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 53RI-16

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-6" ASPHALT and SUB-BASE.		
1				6-11" Brown-gray medium SAND, some silt, some angular gravel.		
2				11-13" WOOD fragments.		
				13-17" Brown-gray medium SAND, some silt, some angular gravel.		
3				17-21" WOOD fragments.		
4				21-28" Brown-gray fine to medium SAND and SILT, trace gravel, medium stiff, moist.		
5				0-4" Brown fine to medium SAND, some black angular gravel, trace silt, loose, wet.		
				4-5" WOOD fragments.		
6				5-15" Brown fine to medium SAND, some black angular gravel, trace silt, medium stiff, moist.		
7				15-27" Green and brown mottled fine SAND and SILT, little gravel, stiff, slightly moist.		
8						
9				27-30" SANDSTONE fragments.		
				No lithology recorded.		
10						
11						
12						
13						
14				End of Boring @ 14.2 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304943

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman - LaRoche

Address: 1153 Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586040 Northing (Y): 730240
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 53RI-MW5

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304943

MONITORING WELL RECORD

PROPERTY OWNER: GREG CIERPIAL

Company/Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St. Nutley, New Jersey 07110

WELL LOCATION: Hoffman - LaRoche

Address: 1153 Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586040 Northing (Y): 730240
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 19, 2013

DATE WELL COMPLETED: April 19, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 53RI-MW5

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15 Finished Well Depth (ft.): 15 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	6		
Casing	0	5	2	PVC	40
Screen	5	15	2	pvc	10

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	3	6	2	5	94	8
Gravel Pack	3	15	6	2	morie 1		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Sonic

ADDITIONAL INFORMATION

Protective Casing: No
Static Water Level: 6 ft. below land surface
Water Level Measure Tool: WLI
Well Development Period: 1 hrs.
Method of Development: pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: CRS17
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 15: redish brown SP - Poorly graded sands and gravelly sands, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Steve R Wolf, JOURNEYMAN LICENSE # 0001317 Company: AQUIFER DRILLING & TESTING

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304943

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201304943
2. Site Well Number as shown on application or plans):	53RI-MW5
3. Well Completion Date:	04/19/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.70'
13. Yield (gallons per minute):	.76 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hr and 45 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304943
2. Site Well Number (As shown on application or plans): 53RI-MW-5
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 38.0" Latitude: North 40° 50' 15.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730240.1 East 586040.4
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 125.97
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

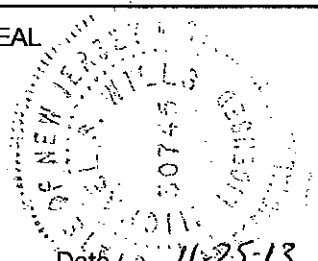
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date: 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

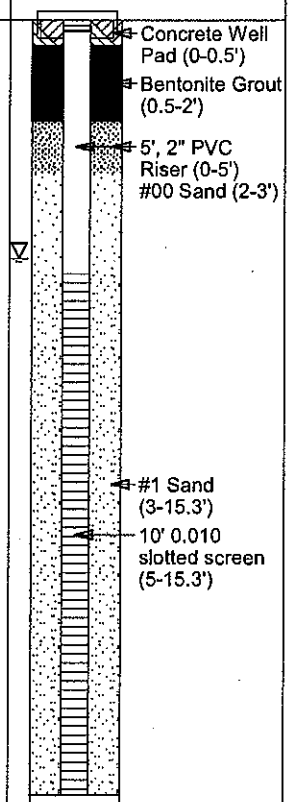
BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 4/19/2013
LOCATION Permit #: E201304943
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 53RI-17

BORING/WELL NUMBER 53RI-MW5
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 4.70
TOTAL DEPTH (Feet) 15.3
GROUND ELEVATION (Feet, NAVD 88) 125.97
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-8" ASPHALT and SUB-BASE.		
1				8-11" Brown fine SAND and CLAY, trace gravel, stiff, slightly moist.		
2				11-16" CONCRETE fragments.		
3				16-27" Red-brown fine to medium SAND, some silt, trace gravel, stiff, moist.		
4				27-32" CONCRETE fragments.		
5				0-4" Red-brown medium SAND and SILT, some black angular gravel.		
6				4-29" Dark-brown fine to medium SAND, trace clay, trace silt, stiff, slightly moist.		
7						
8						
9				29-42" Olive-green CLAY, trace fine sand, hard, slightly moist.		
10				0-6" Brown fine to medium SAND, some silt, some gravel, loose, wet.		
11				6-20" Red-brown medium SAND and SILT, trace gravel, stiff, slightly moist.		
12						
13				No lithology recorded.		
14						
15				End of Boring @ 15.3		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304921

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman-LaRoche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586350 Northing (Y): 730610
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304921

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
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For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201304921
2. Site Well Number as shown on application or plans):	66RI-MW1
3. Well Completion Date:	04/15/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	16.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	6.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	NA
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

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2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

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2. Site Well Number (As shown on application or plans): 66RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 33.2" Latitude: North 40° 50' 19.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730581.1 East 586407.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.00
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

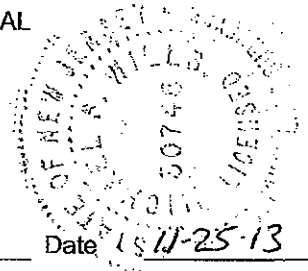
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

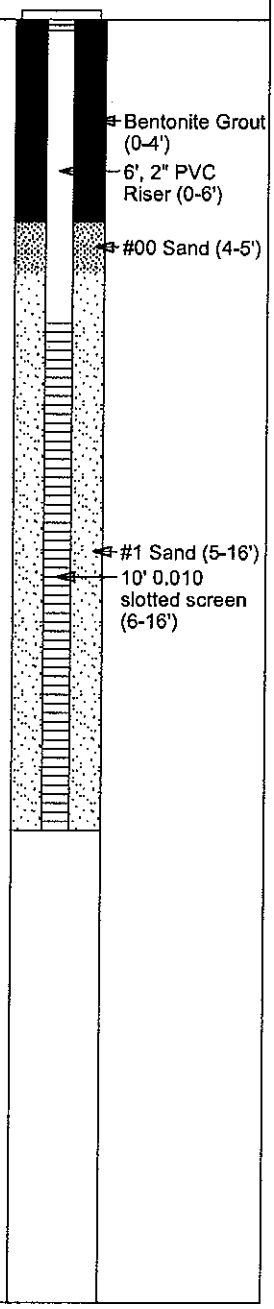
TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST J. Robinson
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 4/15/2013
LOCATION Permit #: E201304921
SAMPLING METHOD NA
DRILLING METHOD Sonic SDC 390-14
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 66RI-TP-1-14

BORING/WELL NUMBER 66RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) Not Encountered
TOTAL DEPTH (Feet) 16
GROUND ELEVATION (Feet, NAVD 88) 120.00
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-9" ASPHALT and SUB-BASE.		
1				9-14" Black fine to coarse SAND, few fine non-native blue angular gravel, medium dense, slightly moist.		
2				14-17" Red-brown to black silty fine to medium SAND, little fine native and non-native gravel, medium dense, slightly moist.		
3				17-46" Black silty fine to medium SAND, some fill (rubber, wood, concrete, glass), dense, slightly moist to moist, very wet slough at top.		
4						
5				0-23" Black silty fine to medium SAND, little wood, trace clay, trace rubber, slightly dense, moist.		
6						
7						
8						
9				23-30" Gray clayey SILT, little coarse gravel (sandstone), trace wood fragments, dense, slightly moist.		
10				0-17" Gray clayey SILT, little coarse gravel (sandstone), trace wood fragments, trace fine to medium rounded gravel, trace red mottling, dense, slightly moist.		
11						
12						
13				17-30" Gray to tan silty fine to medium SAND, dense, moist.		
14						
15				30-34" Red-brown medium to coarse SAND, little medium rounded gravel, dense, wet.		
16				0-27" Red-brown medium to coarse SAND, little medium rounded gravel, dense, wet.		
				End of Boring @ 16 feet (refusal on bedrock)		



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304925

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman-LaRoche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586600 Northing (Y): 730460
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304925

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201304925
2. Site Well Number as shown on application or plans):	66RI-MW2
3. Well Completion Date:	04/15/2013
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	5.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	NA
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304925
2. Site Well Number (As shown on application or plans): 66RI-MW-2
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 30.6" Latitude: North 40° 50' 17.8"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730463.7 East 586607.4
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 119.64
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

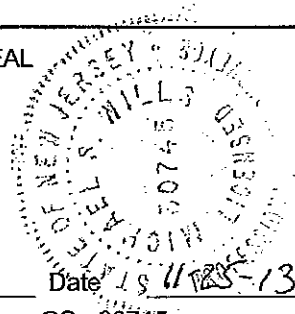
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 1/8/2013

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

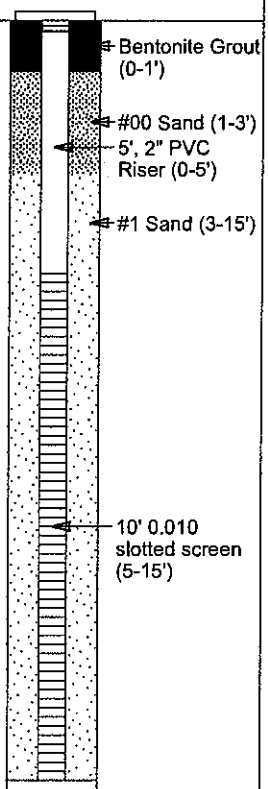
BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST J. Robinson
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 4/15/2013
LOCATION Permit #: E201304925
SAMPLING METHOD NA
DRILLING METHOD Sonic SDC 390-14
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 66RI-8

BORING/WELL NUMBER 66RI-MW2
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) Not Encountered
TOTAL DEPTH (Feet) 15
GROUND ELEVATION (Feet, NAVD 88) 119.64
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-10" ASPHALT and FILL.		
1				0-38" Brown fine SAND, little red-brown silt, little gravel, slightly moist.		
2						
3						
4						
5				0-13" Dark-gray SILT, little organics, wet.		
6						
7				13-18" Light-gray SILT, little brown fine sand, slightly moist.		
8				18-31" Light-gray SILT, slightly moist.		
9				31-45" Brown medium SAND, some silt, moist.		
10				0-23" Brown medium SAND, little silt, moist.		
11						
12						
13				23-47" Brown fine to medium SAND, some red-brown silt, moist.		
14						
15				End of Boring @ 15 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304929

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman-LaRoche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586670 Northing (Y): 730400
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW3

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304929

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201304929
2. Site Well Number as shown on application or plans):	66RI-MW3
3. Well Completion Date:	04/17/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	8.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.50'
7. Screen Length (or length of open hole) in feet:	6.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	1.70'
13. Yield (gallons per minute):	.33 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hr and 30 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304929
2. Site Well Number (As shown on application or plans): 66RI-MW-3
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 29.8" Latitude: North 40° 50' 17.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730380.5 East 586674.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.90
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1969, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

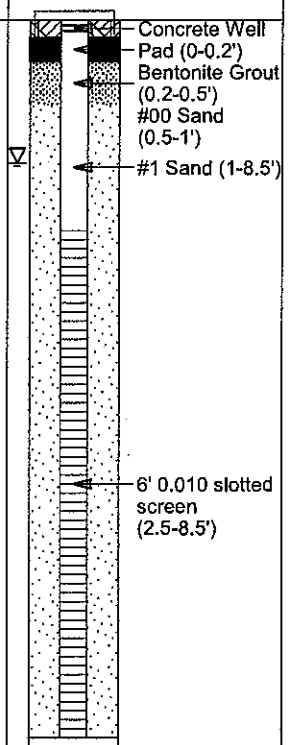
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 4/17/2013
LOCATION Permit #: E201304929
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 66RI-MW3
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 1.70
TOTAL DEPTH (Feet) 8.3
GROUND ELEVATION (Feet, NAVD 88) 118.90
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 66RI-10

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-7" CONCRETE.		
1				7-28" Red-brown SILT, some sand, trace gravel.		
4				28-35" Red-brown to gray SILT, trace gravel.		
5				0-12" Red-brown to gray SILT, trace gravel.		
7				12-30" Red-brown medium SAND, trace gravel.		
8				End of Boring @ 8.3 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304931

WELL PERMIT

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Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman - LaRoche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586640 Northing (Y): 730200
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW4

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 12, 2013
Expiration Date: April 12, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304931

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304931

MONITORING WELL RECORD

PROPERTY OWNER: GREG CIERPIAL

Company/Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St. Nutley, New Jersey 07110

WELL LOCATION: Hoffman - LaRoche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586640 Northing (Y): 730200
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 17, 2013

DATE WELL COMPLETED: April 17, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 66RI-MW4

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15 Finished Well Depth (ft.): 15 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	6		
Casing	0	5	2	PVC	40
Screen	5	15	2	pvc	10

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	3	6	2	5	94	8
Gravel Pack	3	15	6	2	morie 1		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Sonic

ADDITIONAL INFORMATION

Protective Casing: No
Static Water Level: 4 ft. below land surface
Water Level Measure Tool: WLI
Well Development Period: 1 hrs.
Method of Development: Sub pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: CRS17
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 15: Redish Brown SP - Poorly graded sands and gravelly sands, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Steve R Wolf, JOURNEYMAN LICENSE # 0001317 Company: AQUIFER DRILLING & TESTING

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201304931
2. Site Well Number as shown on application or plans):	66RI-MW4
3. Well Completion Date:	04/17/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	9.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2.50'
7. Screen Length (or length of open hole) in feet:	7.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.40'
13. Yield (gallons per minute):	.33 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hr and 30 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304931
2. Site Well Number (As shown on application or plans): 66RI-MW-4
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 30.1" Latitude: North 40° 50' 15.2"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730201.6 East 586648.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.01
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

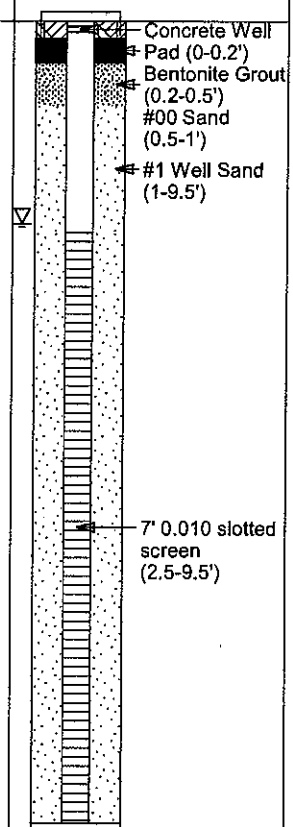
BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 4/17/2013
LOCATION Permit #: E201304931
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 66RI-14

BORING/WELL NUMBER 66RI-MW4
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.40
TOTAL DEPTH (Feet) 9.7
GROUND ELEVATION (Feet, NAVD 88) 118.01
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-4" ASPHALT and SUB-BASE.		
				4-8" Brown medium SAND, loose, moist.		
1				8-11" Brown silty SAND, little gravel, stiff, moist.		
				11-25" Red-brown sandy SILT, some sandstone fragments, slightly moist.		
2						
3						
				25-29" Red-brown and grey mottled clayey SILT, slightly moist.		
4				29-31" Non-native WOOD fragments.		
				31-37" Red-brown and dark-gray mottled SILT and CLAY, stiff, moist.		
5				0-10" Red-brown sandy SILT, some gravel, stiff, moist.		
				10-12" Red-brown SILTSTONE fragments.		
6				No lithology recorded.		
7						
8						
9				End of Boring @ 9.7 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305780

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586605 Northing (Y): 730085
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW5

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305780

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201305780
2. Site Well Number as shown on application or plans):	66RI-MW5
3. Well Completion Date:	05/02/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	8.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	6.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.57'
13. Yield (gallons per minute):	0.18 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	3 hours and 45 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305780
2. Site Well Number (As shown on application or plans): 66RI-MW-5
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 30.8" Latitude: North 40° 50' 14.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730080.7 East 586597.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.90
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

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2. Site Well Number (As shown on application or plans): 66RI-MW-5
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4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730080.7 East 586597.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.90
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

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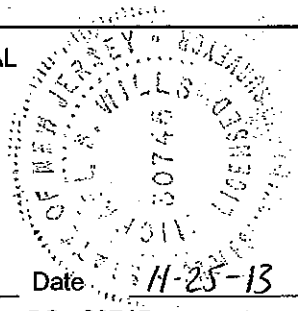
SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/2/2013
LOCATION Permit #: E201305780
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 66RI-MW5
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.57
TOTAL DEPTH (Feet) 8
GROUND ELEVATION (Feet, NAVD 88) 115.90
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 66RI-15

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-10" ASPHALT and SUB-BASE.			Bentonite Grout (0-0.5')
1				10-14" Red-brown and dark-gray mottled sandy SILT, little gravel, stiff, moist.			2', 2" PVC Riser (0-2')
2				14-31" Dark-gray sandy SILT, trace clay, moist.			#00 Sand (0.5-1.5') #1 Sand (1.5-8')
3				31-44" Red-brown silty SAND, some gravel.			
4				44-47" SANDSTONE fragments.			
5				31-53" Red-brown silty SAND, some gravel.			6' 0.010 slotted screen (2-8')
6				No lithology recorded.			
7							
8				End of Boring @ 8 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305781

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586465 Northing (Y): 730110
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW6

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Plawski

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305781

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201305781
2. Site Well Number as shown on application or plans):	66RI-MW6
3. Well Completion Date:	05/02/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2.00'
7. Screen Length (or length of open hole) in feet:	8.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.70'
13. Yield (gallons per minute):	0.89 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	0 hours and 45 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305781
2. Site Well Number (As shown on application or plans): 66RI-MW-6
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.5" Latitude: North 40° 50' 14.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730110.7 East 586467.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 117.37
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

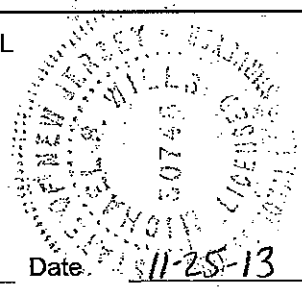
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date: 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 5/2/2013
LOCATION Permit #: E201305781
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 66RI-MW6
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.70
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 117.37
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring IA-10RI-17

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-12" ASPHALT and SUB-BASE.			Bentonite Grout (0-0.5')
1				12-19" Gray-brown sandy SILT, trace gravel,stiff, slightly, moist.			2', 2" PVC Riser (0-2') #00 Sand (0.5-1.5')
2				19-36" Red-brown sandy SILT, trace gravel, trace wood fragments, stiff, slightly moist.			
3							
4				36-44" Black sandy SILT (organic), roots, slightly moist.			
5				0-16" Red-brown sandy SILT, little gravel, stiff, slightly moist.			
6				16-18" GRAVEL.			#1 Sand (1.5-10') 8' 0.010 slotted screen (2-10')
7				18-40" Red-brown fine SAND, trace silt, trace gravel, slightly stiff, moist.			
8				No lithology recorded.			
9							
10				End of Boring @ 10 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305782

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: Bloomfiled Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586335 Northing (Y): 730204
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW7

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305782

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201305782
2. Site Well Number as shown on application or plans):	66RI-MW7
3. Well Completion Date:	05/02/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2
7. Screen Length (or length of open hole) in feet:	8
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.40'
13. Yield (gallons per minute):	0.30 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	2 hours and 45 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305782
2. Site Well Number (As shown on application or plans): 66RI-MW-7
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 34.1" Latitude: North 40° 50' 15.2"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730204.1 East 586346.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 119.65
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 5/2/2013
LOCATION Permit #: E201305782
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 66RI-MW7
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.40
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 119.65
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 66RI-21

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-6" ASPHALT.			Bentonite Grout (0-0.5')
1				6-34" Black fine to coarse SAND and SILT, some debris, odor.			2', 2" PVC Riser (0-2')
2							#00 Sand (0.5-1.5')
3							#1 Sand (1.5-10')
4							
5				No lithology recorded.			
6							8' 0.010 slotted screen (2-10')
7							
8							
9							
10				End of Boring @ 10 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305783

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586220 Northing (Y): 730235
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 66RI-MW8

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305783

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201305783
2. Site Well Number as shown on application or plans):	66RI-MW8
3. Well Completion Date:	05/03/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	5.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.62'
13. Yield (gallons per minute):	0.74 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	2 hours and 15 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305783
2. Site Well Number (As shown on application or plans): 66RI-MW-8
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 35.7" Latitude: North 40° 50' 15.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730240.4 East 586221.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 119.63
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

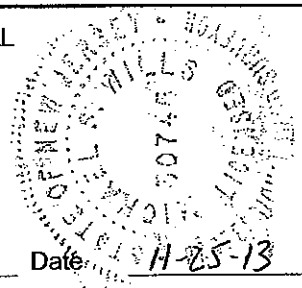
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

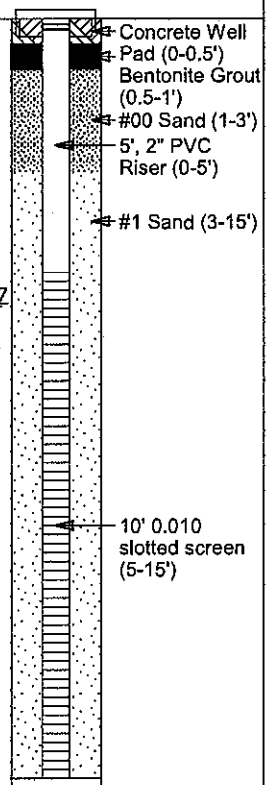
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/3/2013
LOCATION Permit #: E201305783
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 66RI-MW8
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 5.62
TOTAL DEPTH (Feet) 15
GROUND ELEVATION (Feet, NAVD 88) 119.63
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 66RI-25M

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
1–4				0-39" Black SILT, some wood fragments, some leaf debris, trace glass, odor.		
5				0-7" GARBAGE, trace glass, trace wood fragments.		
6				7-22" Red-brown SILT, little clay, trace gravel, moist.		
8				22-37" Red-brown SILT, trace sand, trace gravel.		
10				0-5" Red-brown SILT, trace sand, trace gravel, slightly moist.		
11				5-27" Red-brown SILT, little sand, trace gravel, wet.		
15				End of Boring @ 15 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306020

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586580 Northing (Y): 729800
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 131RI-MW1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Terry D. Pilawski

Approval Date: May 1, 2013
Expiration Date: May 1, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306020

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
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In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
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The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201306020
2. Site Well Number as shown on application or plans):	131RI-MW1
3. Well Completion Date:	05/07/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	9.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	1.50'
7. Screen Length (or length of open hole) in feet:	8.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	1.85'
13. Yield (gallons per minute):	0.917 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hr and 0 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306020
2. Site Well Number (As shown on application or plans): 131RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 30.9" Latitude: North 40° 50' 11.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729807.6 East 586589.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.81
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

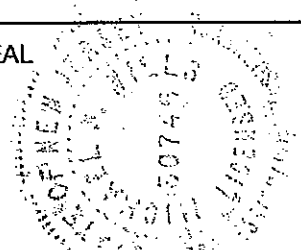
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 5/7/2013
LOCATION Permit #: E201306020
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 131RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 1.85
TOTAL DEPTH (Feet) 9.5
GROUND ELEVATION (Feet, NAVD 88) 114.81
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 131RI-5-7

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-6" ASPHALT and SUB-BASE.			Bentonite Grout (0-0.5')
1				6-23" Brown fine SAND, some clay, some small to large gravel, dense, moist.			1.5', 2" PVC Riser (0-1.5')
2							#00 Sand (0.5-1')
3							#1 Sand (1-9.5')
4							
5				23-26" Red-brown fine to medium SAND and SILT, some small gravel, dense, slightly moist.			
6				No lithology available.			9' 0.010 slotted screen (1.5-9.5')
7							
8							
9				BEDROCK.			
				End of Boring @ 9.5 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306319

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586421 Northing (Y): 729771
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 138RI-MW1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: May 6, 2013
Expiration Date: May 6, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306319

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
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For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201306319
2. Site Well Number as shown on application or plans):	138RI-MW1
3. Well Completion Date:	05/10/2013
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	8.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	6.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.18'
13. Yield (gallons per minute):	.306 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	3 hr and 0 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306319
2. Site Well Number (As shown on application or plans): 138RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 33.1" Latitude: North 40° 50' 11.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729771.3 East 586421.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.74
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

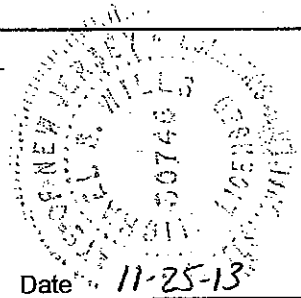
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/10/2013
LOCATION Permit #: E201306319
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig
NOTES No lithology recorded during well install. approximate lithology from nearby soil boring 138RI-14

BORING/WELL NUMBER 138RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.18
TOTAL DEPTH (Feet) 8
GROUND ELEVATION (Feet, NAVD 88) 114.74
REFERENCE ELEVATION (Feet, NAVD 88) NA

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-6" ASPHALT.			Bentonite Grout (0-0.5')
1				6-10" Black to dark-gray fine to coarse SAND and fine GRAVEL.			#00 Sand (0.5-1')
2				10-14" Brown to gray medium to coarse SAND and fine GRAVEL, moist.			2', 2" PVC Riser (0-2')
3				14-24" Red-brown fine SAND and SILT, some fine gravel.			#1 Sand (1-8')
4				No lithology recorded.			
5							6' 0.010 slotted screen (2-8')
6							
7							
8				End of Boring @ 8 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306285

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 10 Block: 79.04

Easting (X): 586498 Northing (Y): 730024
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 179RI-MW1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: May 6, 2013
Expiration Date: May 6, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306285

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201306285
2. Site Well Number as shown on application or plans):	179RI-MW1
3. Well Completion Date:	05/08/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2.00'
7. Screen Length (or length of open hole) in feet:	8.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	0.79'
13. Yield (gallons per minute):	.667 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	2 hrs and 0 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306285
2. Site Well Number (As shown on application or plans): 179RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.0" Latitude: North 40° 50' 13.5"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730032.2 East 586504.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 116.34
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

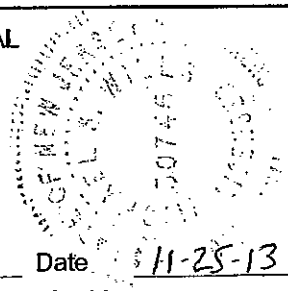
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 5/8/2013
LOCATION Permit #: E201306285
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring J-139

BORING/WELL NUMBER 179RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 0.79
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 116.34
REFERENCE ELEVATION (Feet, NAVD 88)

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-6" ASPHALT.			Bentonite Grout (0-0.5')
1				6-10" Red-brown to gray fine to coarse SAND and fine GRAVEL.			#00 Sand (0.5-1')
2				10-26" Brown to red-brown CLAY, some silt, some fine to medium sand.			2', 2" PVC Riser (0-2')
3							#1 Sand (1-10')
4				26-33" Brown fine to coarse SAND and fine to medium GRAVEL, some silt.			
5				0-29" Red-brown fine to medium SAND and SILT, some fine gravel, some coarse sand.			
6							8' 0.010 slotted screen (2-10')
7							
8							
9							
10				End of Boring @ 10 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305800

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586255 Northing (Y): 729975
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 186RI-MW1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Pilawski

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305800

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201305800
2. Site Well Number as shown on application or plans):	186RI-MW1
3. Well Completion Date:	05/03/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	8.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	1.23'
13. Yield (gallons per minute):	0.37 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	2 hr and 15 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305800
2. Site Well Number (As shown on application or plans): 186RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 35.2" Latitude: North 40° 50' 13.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729977.9 East 586258.9
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.65
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

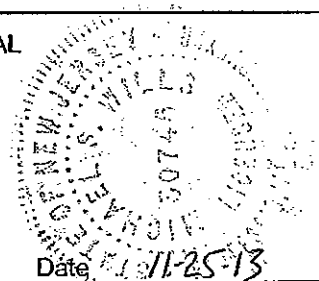
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

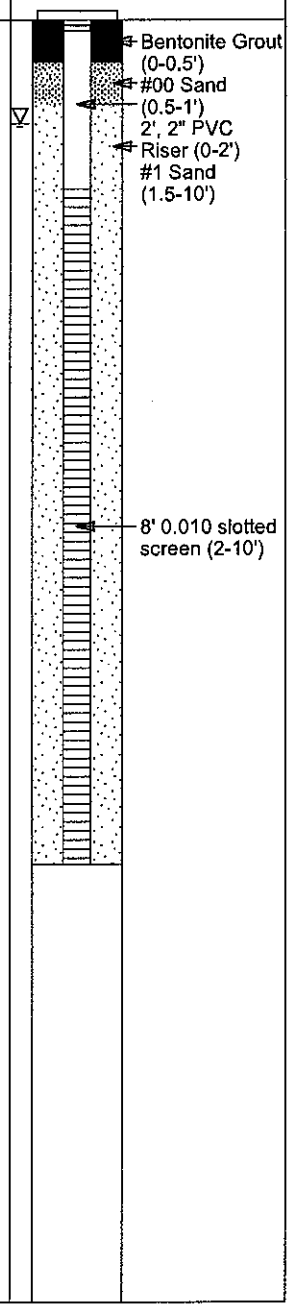
BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 5/3/2013
LOCATION Permit #: E201305800
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 186RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 1.23
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 115.65
REFERENCE ELEVATION (Feet, NAVD 88)

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 186RI-3

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
				0-4" ASPHALT.			
1				4-37" Red-brown fine SAND, some silt.			
2							
3							
4							
5				No lithology recorded.			
6							
7							
8							
9							
10				End of Boring @ 10 feet			



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305801

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586365 Northing (Y): 729890
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 186RI-MW2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305801

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201305801
2. Site Well Number as shown on application or plans):	186RI-MW2
3. Well Completion Date:	04/30/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	8.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.93'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305801
2. Site Well Number (As shown on application or plans): 186RI-MW-2
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 33.6" Latitude: North 40° 50' 12.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729891.2 East 586382.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.65
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

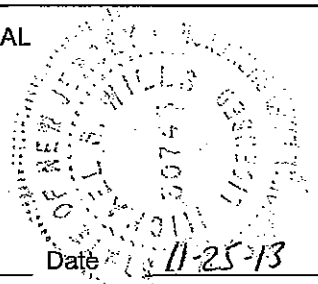
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/G. Riveria
DATE DRILLED 4/30/2013
LOCATION Permit #: E201305801
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 186RI-MW2
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 2.93
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 115.65
REFERENCE ELEVATION (Feet, NAVD 88)

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 186RI-5

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-4" ASPHALT.			Bentonite Grout (0-0.5')
1				4-17" Blue angular GRAVEL, wet.			#00 Sand (0.5-1')
2							2', 2" PVC Riser (0-2')
3							#1 Sand (1.5-10')
4				0-4" Blue angular GRAVEL, wet.			
5				4-12" Gray fine SAND, some silt, some gravel, wet.			
6				12-35" Red-brown SILT, some fine sand, little sandstone fragments, moist.			8' 0.010 slotted screen (2-10')
7							
8				No lithology recorded.			
9							
10				End of Boring @ 10 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305808

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586492 Northing (Y): 729790
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 186RI-MW3

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Plawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305808

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201305808
2. Site Well Number as shown on application or plans):	186RI-MW3
3. Well Completion Date:	04/30/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	9.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2.00'
7. Screen Length (or length of open hole) in feet:	7.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	3.17'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305808
2. Site Well Number (As shown on application or plans): 186RI-MW-3
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.2" Latitude: North 40° 50' 11.2"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729795.9 East 586490.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.61
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

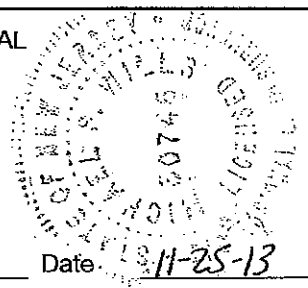
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: _____ Date: 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST D. Avudzega
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
DATE DRILLED 4/30/2013
LOCATION Permit #: E201305808
SAMPLING METHOD NA
DRILLING METHOD Sonic Drill Rig

BORING/WELL NUMBER 186RI-MW3
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 3.17
TOTAL DEPTH (Feet) 9
GROUND ELEVATION (Feet, NAVD 88) 115.61
REFERENCE ELEVATION (Feet, NAVD 88)

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 23RI-14

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-19" Crushed CONCRETE and ASPHALT.			Bentonite Grout (0-0.5')
1							#00 Sand (0.5-1')
2				0-18" Red-brown SILT, some siltstone fragments, slightly moist.			2', 2" PVC Riser (0-2')
3				18-45" Red-brown SILT, some brown fine sand, little gravel, slightly moist.			#1 Sand (1.5-9')
4				0-11" Brown fine SAND and red-brown SILT, little siltstone fragments, slightly moist.			
5							
6				11-23" Brown fine SAND, some clay, little silt, trace gravel, soft, slightly moist.			7' 0.010 slotted screen (2-9')
7				No lithology recorded.			
8							
9				End of Boring @ 9 feet			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306018

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: Bloomfield Ave

County: Passaic Municipality: Clifton City Lot: 21 Block: 79.04

Easting (X): 586560 Northing (Y): 729660
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 186RI-MW4

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 17

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: May 1, 2013
Expiration Date: May 1, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201306018

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201306018
2. Site Well Number as shown on application or plans):	186RI-MW4
3. Well Completion Date:	05/07/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	8.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	1.50'
7. Screen Length (or length of open hole) in feet:	7.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.91'
13. Yield (gallons per minute):	0.46 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	3 hr and 15 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201306018
2. Site Well Number (As shown on application or plans): 186RI-MW-4
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 31.4" Latitude: North 40° 50' 09.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729663.8 East 586555.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.97
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.O. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

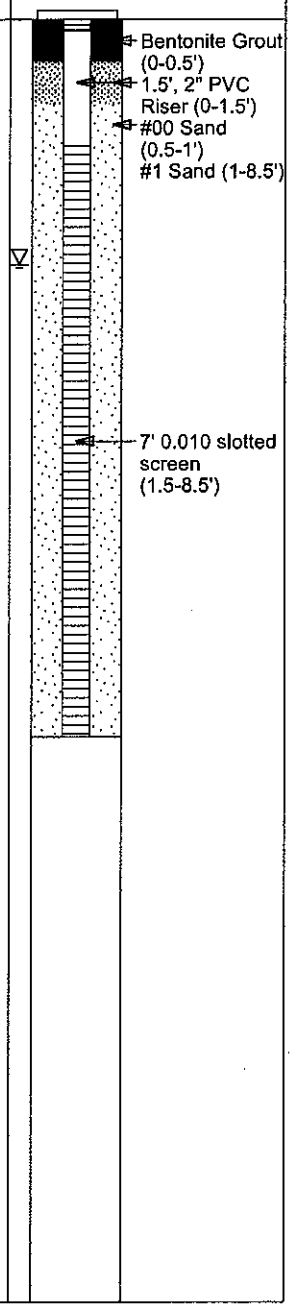
TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
BORING/WELL NUMBER 186RI-MW4
EVENT ID IA-10
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
TRC GEOLOGIST D. Avudzega
FILTER PACK TYPE/SIZE #1 Sand
DRILLING CONTRACTOR/FOREMAN ADT/David Moon
GROUT TYPE Bentonite Grout
DATE DRILLED 5/7/2013
DEPTH TO WATER (Approximate Feet) 2.91
LOCATION Permit #: E201306018
TOTAL DEPTH (Feet) 8.5
SAMPLING METHOD NA
GROUND ELEVATION (Feet, NAVD 88) 114.97
DRILLING METHOD Sonic Drill Rig
REFERENCE ELEVATION (Feet, NAVD 88)
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 186RI-10

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-6" ASPHALT.		
1				6-9" Gray-brown fine to coarse SAND, some fine to medium gravel.		
				9-12" Black fine to coarse SAND, slightly shine.		
2				12-26" Orange-brown SILT and CLAY, little fine to medium sand.		
3						
4				26-33" Brown to red-brown SILT and fine SAND, little fine gravel, wet.		
				33-37" Red-brown crushed ROCK.		
5				0-3" Red-brown crushed ROCK.		
6				3-14" Red-brown fine to medium SAND and SILT, little fine gravel, moist.		
7				No lithology recorded.		
8				End of Boring @ 8.5 feet		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305797

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586559 Northing (Y): 729330
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 187RI-MW-1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305797

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305797

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMAN LA ROCHE

Company/Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24 S SAN FRANCISCO, California 94080

WELL LOCATION: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586556 Northing (Y): 729325
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: May 1, 2013

DATE WELL COMPLETED: May 1, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 187RI-MW-1

WELL CONSTRUCTION

Total Depth Drilled (ft.): 14 Finished Well Depth (ft.): 14 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	14	6		
Casing	0	4	2	PVC	sch 40
Screen	4	14	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	2	6	2	2.5	47	4
Gravel Pack	2	3	6	2	00 sand		
Gravel Pack	3	14	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 9 ft. below land surface
Water Level Measure Tool: tape
Well Development Period: .5 hrs.
Method of Development: tape
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: ss-15
Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: black OT - Other asphalt
1 - 5: red-brown GM - Silty gravels, gravel-sand-silt mixtures
5 - 14: red-brown SM - Silty sands, sand-silt mixtures

ADDITIONAL INFORMATION:

Driller of Record: Aubrey Vierheilig, JOURNEYMAN LICENSE # 0001357 Company: ADVANCED DRILLING INC

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201305797
2. Site Well Number as shown on application or plans):	187RI-MW1
3. Well Completion Date:	05/01/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14.3'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4.30'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	6.0'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305797
2. Site Well Number (As shown on application or plans): 187RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 31.4" Latitude: North 40° 50' 06.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729325.5 East 586556.4
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 110.94
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

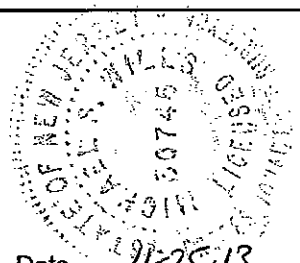
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

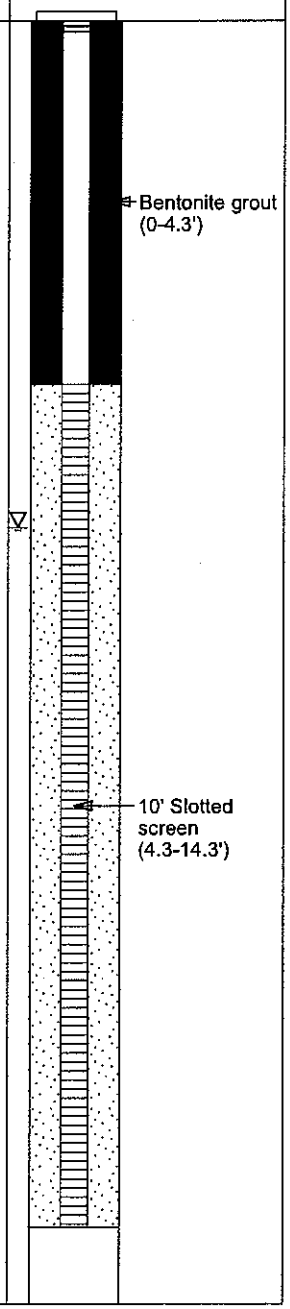
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST B. Phillips
DRILLING CONTRACTOR/FOREMAN ADI/Joel Maixell
DATE DRILLED 4/30/2013
LOCATION Permit #: E201305797
SAMPLING METHOD NA
DRILLING METHOD Air Hammer

BORING/WELL NUMBER 187RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 6
TOTAL DEPTH (Feet) 14.3
GROUND ELEVATION (Feet, NAVD 88) 110.94
REFERENCE ELEVATION (Feet, NAVD 88) 110.94

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 187RI-2

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-5" ASPHALT.		
1				5-10" SUB-BASE (DGA).		
2				10-29" Red-brown SILT, some fine sand, little blue angular gravel, trace coal pieces, slightly moist.		
3						
4				0-6" Red-brown SILT, some fine sand, little blue angular gravel, trace coal pieces, moist.		
5				6-29" Light-gray to tan CLAY, wet from 6 to 16-inches, moist from 16 to 29-inches (perched water).		
6						
7				29-48" Red-brown SILT, little gravel, dry.		
8				No lithology recorded.		
9						
10						
11						
12						
13						
14				End of Boring @ 14.3		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305798

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586565 Northing (Y): 729166
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 187RI-MW-2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305798

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305798

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMAN LA ROCHE

Company/Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24 S SAN FRANCISCO, California 94080

WELL LOCATION: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586570 Northing (Y): 729168
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 30, 2013

DATE WELL COMPLETED: April 30, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 187RI-MW-2

WELL CONSTRUCTION

Total Depth Drilled (ft.): 12 Finished Well Depth (ft.): 12 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	12	6		
Casing	0	2	2	PVC	sch 40
Screen	2	12	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2	1.25	23.5	2
Gravel Pack	1	1.5	6	2	00 sand		
Gravel Pack	1.5	12	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 9 ft. below land surface
Water Level Measure Tool: tape
Well Development Period: .5 hrs.
Method of Development: pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: ss-15
Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: black OT - Other blacktop
1 - 5: red-brown GM - Silty gravels, gravel-sand-silt mixtures
5 - 12: red-brown SM - Silty sands, sand-silt mixtures

ADDITIONAL INFORMATION:

Driller of Record: Aubrey Vierheilig, JOURNEYMAN LICENSE # 0001357 Company: ADVANCED DRILLING INC

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201305798
2. Site Well Number as shown on application or plans):	187RI-MW2
3. Well Completion Date:	04/30/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	12.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	10.60'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305798
2. Site Well Number (As shown on application or plans): 187RI-MW-2
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 31.2" Latitude: North 40° 50' 05.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729168.4 East 586570.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 110.69
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1988, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

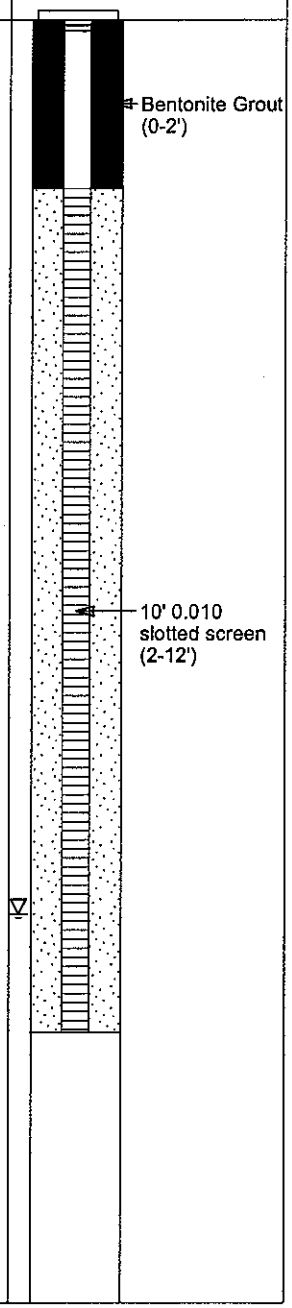
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST B. Phillips
DRILLING CONTRACTOR/FOREMAN ADI/Joel Maixell
DATE DRILLED 4/30/2013
LOCATION Permit #: E201305798
SAMPLING METHOD NA
DRILLING METHOD Air Hammer

BORING/WELL NUMBER 187RI-MW2
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 10.6
TOTAL DEPTH (Feet) 12.3
GROUND ELEVATION (Feet, NAVD 88) 110.69
REFERENCE ELEVATION (Feet, NAVD 88) 110.69

NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 187RI-4

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-9" ASPHALT.		
1				9-13" SUB-BASE.		
				13-15" FILL (black shiny granular material), fine gravel.		
2				15-28" Red-brown SILT and fine SAND, little gravel, trace coal, slightly moist.		
3				28-39" Red-brown SILT, some sandstone fragments, slightly moist.		
4				0-12" Red-brown SILT, some sandstone fragments, odor, slightly moist.		
5						
6				12-30" Red-brown fine SAND and gray medium to coarse SAND, little gravel, odor, wet.		
				6' Weathered BEDROCK		
7						
8				8' Slight petroleum odor		
9						
10						
11						
12				End of Boring @ 12.3 feet (refusal on competent bedrock)		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305799

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586603 Northing (Y): 729067
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 187RI-MW-3

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305799

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305799

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMAN LA ROCHE

Company/Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24 S SAN FRANCISCO, California 94080

WELL LOCATION: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586607 Northing (Y): 729070
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 29, 2013

DATE WELL COMPLETED: April 29, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 187RI-MW-3

WELL CONSTRUCTION

Total Depth Drilled (ft.): 14 Finished Well Depth (ft.): 14 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	14	6		
Casing	0	4	2	PVC	sch 40
Screen	4	14	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	2	6	2	2.5	47	4
Gravel Pack	2	3	6	2	00 sand		
Gravel Pack	3	14	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 5 ft. below land surface
Water Level Measure Tool: tape
Well Development Period: .5 hrs.
Method of Development: pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: ss-15
Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: black OT - Other blacktop
1 - 5: red-brown GM - Silty gravels, gravel-sand-silt mixtures
5 - 14: red-brown SM - Silty sands, sand-silt mixtures

ADDITIONAL INFORMATION:

Driller of Record: Aubrey Vierheilig, JOURNEYMAN LICENSE # 0001357 Company: ADVANCED DRILLING INC

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201305799
2. Site Well Number as shown on application or plans):	187RI-MW3
3. Well Completion Date:	04/29/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14.2'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	4.20'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.20'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 3 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305799
2. Site Well Number (As shown on application or plans): 187RI-MW-3
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 30.7" Latitude: North 40° 50' 04.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729070.8 East 586607.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 107.94
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: _____ Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

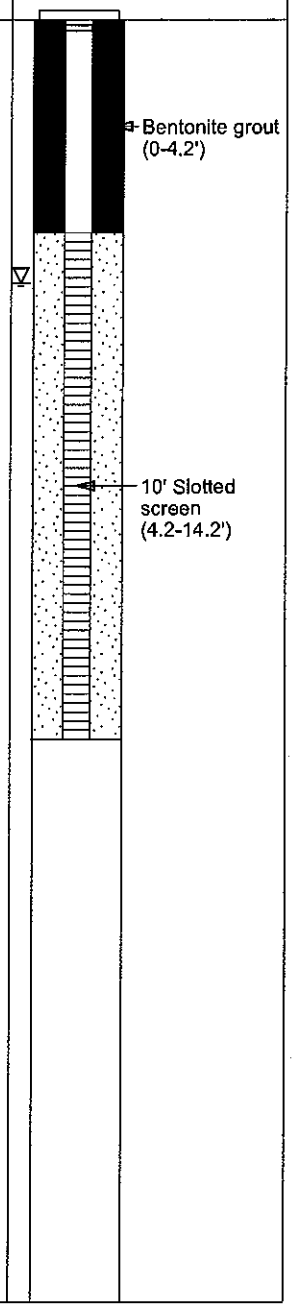
TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST B. Phillips
DRILLING CONTRACTOR/FOREMAN ADI/Joel Maixell
DATE DRILLED 4/29/2013
LOCATION Permit #: E201305799
SAMPLING METHOD NA
DRILLING METHOD Air Hammer
NOTES No lithology recorded during well install, approximate lithology from nearby soil boring 187RI-5

BORING/WELL NUMBER 187RI-MW3
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #1 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 5.2
TOTAL DEPTH (Feet) 14.2
GROUND ELEVATION (Feet, NAVD 88) 107.94
REFERENCE ELEVATION (Feet, NAVD 88) 107.97

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
1				0-3" ASPHALT, geotextile at 3-inches. 3-7" SUB-BASE.			
2				7-11" Orange-brown fine SAND, little angular gravel, slightly moist.			
3				11-15" Red-brown silty SAND, trace gravel, slightly moist. 15-17" Light-brown sandy SILT.			
4				17-18" Red-brown silty SAND, trace gravel, slightly moist. 18-23" Light-brown SILT.			
5				23-25" Dark-gray SILT, soft, slightly moist. 25-29" Light-brown SILT.			
6				0-8" Light-brown SILT. 8-14" Light-brown to red-brown fine SAND, little gravel, trace silt, moist at 11-inches.			
7				14-48" Red-brown fine to medium SAND, some gravel, moist to slightly moist at 28-inches.			
8							
9							
10				No lithology recorded.			
11							
12							
13							
14				End of Boring @ 14.2			



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305795

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586516 Northing (Y): 729363
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 190RI-MW-1

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305795

WELL PERMIT

VIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305795

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMAN LA ROCHE

Company/Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24 S SAN FRANCISCO, California 94080

WELL LOCATION: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586510 Northing (Y): 729362
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: May 1, 2013

DATE WELL COMPLETED: May 1, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 190RI-MW-1

WELL CONSTRUCTION

Total Depth Drilled (ft.): 13 Finished Well Depth (ft.): 13 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	13	6		
Casing	0	3	2	PVC	sch 40
Screen	3	13	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2	1.25	23.5	2
Gravel Pack	1	2	6	2	00 sand		
Gravel Pack	2	13	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 9 ft. below land surface
Water Level Measure Tool: tape
Well Development Period: .5 hrs.
Method of Development: pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: ss-15
Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: black OT - Other asphalt
1 - 5: red-brown GM - Silty gravels, gravel-sand-silt mixtures
5 - 13: red-brown SM - Silty sands, sand-silt mixtures

ADDITIONAL INFORMATION:

Driller of Record: Aubrey Vierheilig, JOURNEYMAN LICENSE # 0001357 Company: ADVANCED DRILLING INC

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201305795
2. Site Well Number as shown on application or plans):	190RI-MW1
3. Well Completion Date:	05/01/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	13.3'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	3.30'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	9.00'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305795
2. Site Well Number (As shown on application or plans): 190RI-MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.0" Latitude: North 40° 50' 06.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729362.2 East 586510.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 111.31
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST B. Phillips
DRILLING CONTRACTOR/FOREMAN ADI/Joel Maixell
DATE DRILLED 4/30/2013
LOCATION Permit #: E201305795
SAMPLING METHOD NA
DRILLING METHOD Air Hammer
NOTES No lithology recorded from 0-9' during well install, approximate lithology from nearby soil boring 190RI-2

BORING/WELL NUMBER 190RI-MW1
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE NA
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 9
TOTAL DEPTH (Feet) 13.3
GROUND ELEVATION (Feet, NAVD 88) 111.31
REFERENCE ELEVATION (Feet, NAVD 88) 111.31

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
0				0-2" ASPHALT.			
				2-9" SUB-BASE.			
1				9-18" Red-brown SILT, little black shiny gravel (possible coal), moist.			
2							Bentonite Grout (0-3.3')
3				18-38" Red-brown SILT, some fine sand, little gravel, moist.			
4							
5				38-40" Gray CLAY, little red-brown silt, moist.			
				0-12" Gray CLAY, little red-brown silt, moist.			
6				12-18" Gray medium SAND, wet (perched).			
				18-24" Red-brown fine SAND, some silt, little gravel, very moist.			
7				24-36" Red-brown SILT, little gravel, slightly moist.			
8							
9				9' Weathered BEDROCK			▽
10							10' 0.010 slotted screen (3.3-13.3')
11							
12							
13				End of Boring @ 13.3 feet (refusal on competent bedrock)			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305796

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: SCOTT ALBERALLA, JOURNEYMAN LICENSE # 0001087

Permit Issued to: ADVANCED DRILLING INC

Company Address: 3 COLT RD PITTSTOWN, NJ 08867

PROPERTY OWNER

Name: HOFFMAN LA ROCHE

Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24

City: S SAN FRANCISCO State: California Zip Code: 94080

PROPOSED WELL LOCATION

Facility Name: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586563 Northing (Y): 729067
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: 190RI-MW-2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Plawski

Approval Date: April 26, 2013
Expiration Date: April 26, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305796

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201305796

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMAN LA ROCHE

Company/Organization: HOFFMAN LA ROCHE

Address: 1 DNA WAY MS 24 S SAN FRANCISCO, California 94080

WELL LOCATION: Hoffmann LaRoche

Address: 340 KINGSLAND ST

County: Essex Municipality: Nutley Twp Lot: 3 Block: 200

Easting (X): 586553 Northing (Y): 729057
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 29, 2013

DATE WELL COMPLETED: April 30, 2013

WELL USE: MONITORING

Other Use(s):

Local ID: 190RI-MW-2

WELL CONSTRUCTION

Total Depth Drilled (ft.): 12 Finished Well Depth (ft.): 12 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	12	6		
Casing	0	2	2	PVC	sch 40
Screen	2	12	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2	1.25	23.5	2
Gravel Pack	1	12	6	2	00 sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 5 ft. below land surface
Water Level Measure Tool: tape
Well Development Period: .5 hrs.
Method of Development: pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: ss-15
Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: black OT - Other blacktop
1 - 5: red-brown GM - Silty gravels, gravel-sand-silt mixtures
5 - 12: red-brown SM - Silty sands, sand-silt mixtures

ADDITIONAL INFORMATION:

Driller of Record: Aubrey Vierheilig, JOURNEYMAN LICENSE # 0001357 Company: ADVANCED DRILLING INC

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201305796
2. Site Well Number as shown on application or plans):	190RI-MW2
3. Well Completion Date:	04/30/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	12.3'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	2.30'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.70'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 3 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201305796
2. Site Well Number (As shown on application or plans): 190RI-MW-2
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 31.4" Latitude: North 40° 50' 03.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729057.6 East 586553.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 108.79
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

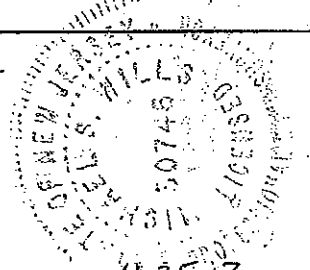
   N.J. Monument No. 8689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 8690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

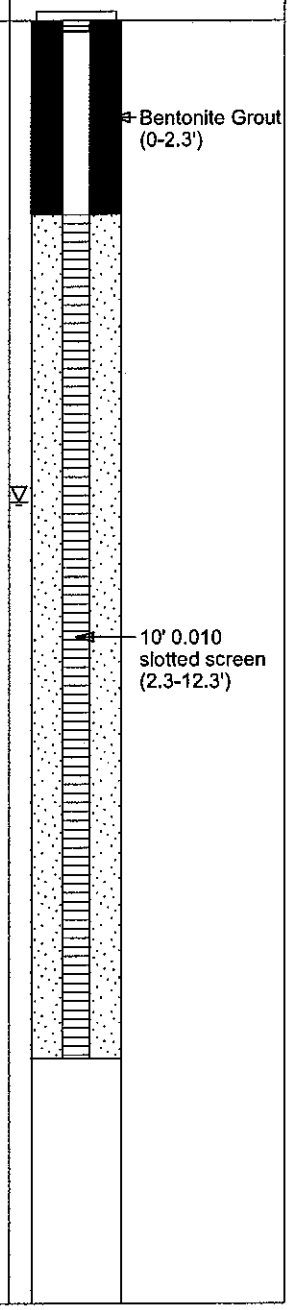
CLIENT/PROJECT NUMBER Hoffmann-La Roche / 198233
EVENT ID IA-10
TRC GEOLOGIST B. Phillips
DRILLING CONTRACTOR/FOREMAN ADI/Joel Maixell
DATE DRILLED 4/29/2013
LOCATION Permit #: E201305796
SAMPLING METHOD NA
DRILLING METHOD Air Hammer

BORING/WELL NUMBER 190RI-MW2
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE NA
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 5.7
TOTAL DEPTH (Feet) 12.3
GROUND ELEVATION (Feet, NAVD 88) 108.79
REFERENCE ELEVATION (Feet, NAVD 88) 108.79

NOTES No lithology recorded from 0-6' during well install, approximate lithology from nearby soil boring 190RI-23

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
0				0-4" ASPHALT, geotextile at 4-inches.		
				4-10" SUB-BASE (angular gravel, QP FILL material).		
1				10-14" Orange-brown fine SAND, little gravel, slightly moist.		
2				14-40" Red-brown silty SAND, little gravel, very gravelly from 18 to 21-inches, stiff, slightly moist.		
3						
4						
5				0-2" Red-brown silty SAND, little gravel, stiff, slightly moist.		
				2-8" Red-brown to gray fine SAND, little gravel, wet.		
6				8-29" Red-brown sandy SILT, some gravel, slightly moist.		
				6' Weathered BEDROCK		
7						
8						
9						
10						
11						
12				End of Boring @ 12.3 feet (refusal on competent bedrock)		

WELL DIAGRAM



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310219

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587122 Northing (Y): 729334
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: ARTMWI

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: July 23, 2013
Expiration Date: July 23, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310219

WELL PERMIT

VIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201310219
2. Site Well Number as shown on application or plans):	ART-MW-1
3. Well Completion Date:	07/29/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	18
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4
7. Screen Length (or length of open hole) in feet:	14
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310220

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587094 Northing (Y): 729381
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: ARTMW2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Terry D. Pilawski

Approval Date: July 23, 2013
Expiration Date: July 23, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310220

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
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The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201310220
2. Site Well Number as shown on application or plans):	ART-MW-2
Well Completion Date:	07/30/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310221

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587062 Northing (Y): 729384
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: ARTMW3

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Pilawski

Approval Date: July 23, 2013
Expiration Date: July 23, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310221

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block#: Lot #:

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201310221
2. Site Well Number as shown on application or plans):	ART-MW-3
Well Completion Date:	07/29/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4
7. Screen Length (or length of open hole) in feet:	11.5
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310222

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587104 Northing (Y): 729311
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: ARTMW4

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: July 23, 2013
Expiration Date: July 23, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310222

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201310222
2. Site Well Number as shown on application or plans):	ART-MW-4
3. Well Completion Date:	07/30/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	18
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4
7. Screen Length (or length of open hole) in feet:	14
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
15. Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310117

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: H. ROBERT SEYBOLD, JOURNEYMAN LICENSE # 0001348

Permit Issued to: B & B DRILLING INC

Company Address: BOX 8 RT 206 NETCONG, NJ 07857

PROPERTY OWNER

Name: HOFFMANN - LA ROCHE, INC.

Organization: Hoffmann-La Roche, Inc.

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 67110

PROPOSED WELL LOCATION

Facility Name: Hoffmann-La Roche

Address: Route 3

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587105 Northing (Y): 729364
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: ART-MW-5

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: Y

Drilling Method: Dual Rotary

Attachments: IA-02 Construciton Details.pdf
ILS_071613-ART Well-8.5X11.pdf
NJDEP Variance Request.pdf

SPECIFIC CONDITIONS/REQUIREMENTS

Well must be built in accordance with submitted deviation [N.J.A.C. 7.9D-2.8]

Approval Date: July 22, 2013
Expiration Date: July 22, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310117

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	Please see attache documents.
Unusual Conditions:	Please see attache documents.
Reason for Deviation:	Please see attache documents.
Proposed Well Construction	Please see attache documents.

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201310117
2. Site Well Number as shown on application or plans):	ART-MW-5
Well Completion Date:	07/31/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	29
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	24
7. Screen Length (or length of open hole) in feet:	5
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310118

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: H. ROBERT SEYBOLD, JOURNEYMAN LICENSE # 0001348

Permit Issued to: B & B DRILLING INC

Company Address: BOX 8 RT 206 NETCONG, NJ 07857

PROPERTY OWNER

Name: HOFFMANN - LA ROCHE, INC.

Organization: Hoffmann-La Roche, Inc.

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 67110

PROPOSED WELL LOCATION

Facility Name: Hoffmann-La Roche

Address: Route 3

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587090 Northing (Y): 729399
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: ART-MW-6

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: Y

Drilling Method: Dual Rotary

Attachments: IA-02 Construciton Details.pdf
ILS_071613-ART Well-8.5X11.pdf
NJDEP Variance Request.pdf

SPECIFIC CONDITIONS/REQUIREMENTS

Well must be built in accordance with submitted deviation [N.J.A.C. 7.9D-2.8]

Jerry D. Pilawski

Approval Date: July 22, 2013
Expiration Date: July 22, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201310118

WELL PERMIT

VIATION INFORMATION	
Purpose:	Please see attache documents.
Unusual Conditions:	Please see attache documents.
Reason for Deviation:	Please see attache documents.
Proposed Well Construction	Please see attache documents.

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment gulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new l would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# _____ Lot # _____

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	E201310118
2. Site Well Number as shown on application or plans):	ART-MW-6
3. Well Completion Date:	07/31/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	40
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	25
7. Screen Length (or length of open hole) in feet:	15
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
15. Length of Time well is developed/pumped or bailed (hours and minutes):	

DWR-133 (8/86)

Mail to

Water Allocation
CN 029
Trenton, N.J. 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

2611827 to 2611835

Permit No. 9 wells

PERMIT TO DRILL WELL 2

VALID ONLY AFTER APPROVAL BY THE D.E.P.

26.02.9 .28

Owner Hoffman - La Roche Facility
Address Nutley NJ

Driller Warren George Inc.
Address Ft. of Jersey Ave
Jersey City NJ

Name of Facility Hoffmann-La Roche Facility
Address Rt. 3 Clifton NJ

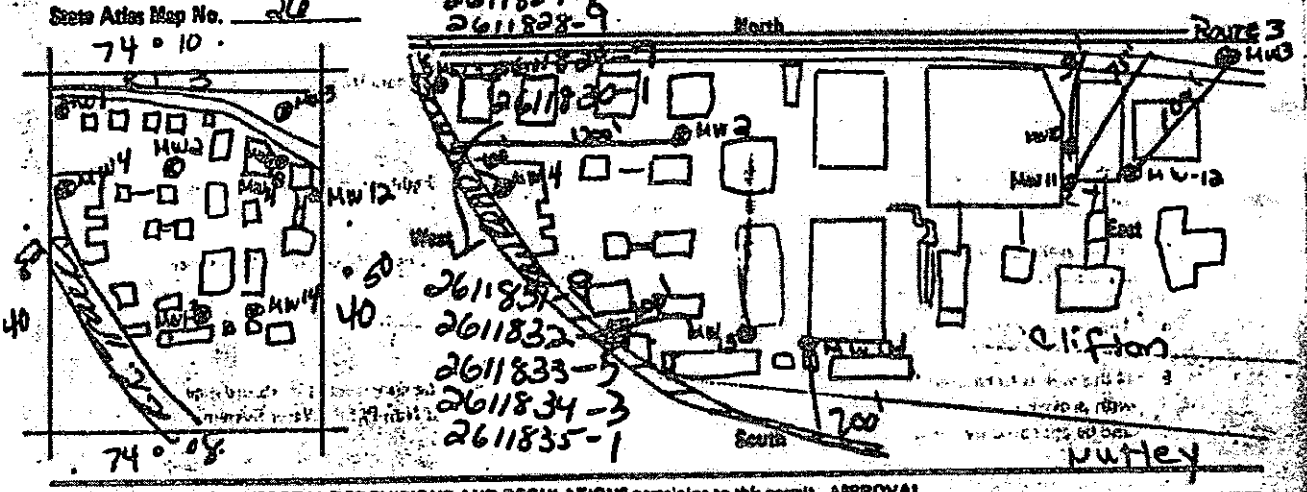
Diameter of Well	4" Inches	Proposed Depth of Well	35 Feet
Proposed Capacity of Pump	— GPM	Method of Drilling (cable-tool, rotary, etc.)	Rotary
Use of Well (See Reverse)	Monitoring		

LOCATION OF WELL

Lot #	Block #	Municipality	County
1	80-002	Clifton	Passaic

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan must be obtained prior to using the water and submitted to _____.
- ☐ Domestic Potable Water Supply - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ Domestic Irrigation Supply - No piping from the well for which the permit applies shall enter any building.
- ☐ Industrial/Commercial Supply - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ Heat Pump Wells - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation

OCT 27 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 10/8/87

Signature of Owner Frank Gregory

COPIES: Water Allocation – White ; Health Dept. – Yellow Owner – Blue Driller – White

Form DWR-138A
6/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26.02.9.28
PERMIT NO. 2611827-1
APPLICATION NO. _____
COUNTY Passaic.

WELL RECORD

1. OWNER Hoffmann-LaRoche Facility ADDRESS Nutley, New Jersey
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Rt. 3 Clifton, New Jersey
3. DATE COMPLETED 11/19/87 DRILLER Warren George, Inc.
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 15' Feet
5. CASING: Type PVC Diameter 4" Inches Length 4' Feet
6. SCREEN: Type PVC. Size of Opening ____ Diameter 4" Inches Length 10' Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
   RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log
14. DATA OBTAINED BY WARREN GEORGE, INC. Date 1/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated,

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

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SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600011827
2. Site Well Number as shown on application or plans):	MW-1
3. Well Completion Date:	11/19/87
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14.3
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4.3
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	3.14
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

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1. Well Permit Number (This number must be permanently affixed to the well casing): 2600011827
2. Site Well Number (As shown on application or plans): MW-1
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 27.8" Latitude: North 40° 50' 14.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730109.7 East 586830.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 119.24
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

Environmental Resources Management

Drilling Log

Project Hoffmann LaRoche Owner Same

Location Nutley, NJ W.O. Number 137-03

Well Number MW-1 Total Depth 14.5 ft. Diameter 4 in.

Surface Elevation ____ Water Level: Initial 7 ft. 24-hrs. 3.14

Screen: Dia. 4 inch Length 10.0 ft. Slot Size .020

Casing: Dia. 4 inch Length 4.3 ft. Type Flush PVC

Drilling Company Warren George Drilling Method Mud Rotary

Driller Mike K. Log By A. Jaroszewski Date Drilled 11/19/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0				Asphalt 0-3"
				Fill 3"-3.0 Brown poorly sorted fine to medium sand; trace fine gravel.
				SILT 3.0 - 3.5' gray silt, trace clay
				31,100/6 SILT/SAND/SHALE 3.5 - 8.0'
5				Alternating layers of shale with reddish brown silty fine sand, embedded with little fine to coarse gravel
			2	15,24,100/4
				SHALE 8.0'
10				alternating layers of competent and moderately competent shale to 15'; competent from 11' to bottom
15				Gravel pack - 14.5-4.5'
				Bentonite pellet seal - 4.5-3.5'
				Grout/cement - 3.5-0'

JOB LOCATION:
Hoffman LaRoche
Nutley, N.J.

WARREN GEORGE. INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

FOR: ERM North east 26.02.9.28 26011827-1

SHEET 1 OF 1
LOCATION Nutley, N.J.
HOLE NO. MW-1
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 11/19/87
DATE, FINISH: 11/19/87

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. ____ I.D. ____
SAMPLER O.D. 2" I.D. ____
DIAMOND BIT SIZE 7-3/4"

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER 30"

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-2'	Blacktop, Stone
									2'-4'	Gray Silty Clay
									4'-8'	Red fine Silty Snad
10									8'-15'	Red Shale
										END OF HOLE 15'
										Note: Well set at 14'6"
20										
30										

DWR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26-24654
Atlas Sheet Coordinates 26 : 02 : 976

OWNER IDENTIFICATION - Owner ~~HOFFMAN LA ROCHE, INC.~~
Address 340 KINGLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-1A
County Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address

TYPE OF WELL (as per Well Permit Categories) Date well completed 11/01/91
Regulatory Program Requiring Well MONITORING ~~ECRA~~ Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ERM-NE / N. LEVINE Tele. #(516) ~~994~~-4300

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 9.5 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	1.0	4	SCH. 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	1.0	9.5	4	SCH. 40 PVC .020"
Tail Piece	—	—	—	—
Gravel Pack	.5	10.0	11	NO. 2 MORIE
Annular Seal/Grout	0	.5	11	CEMENT / BENTONITE
Method of Grouting	GRAVITY PLACEMENT			

Static water level after drilling 4.2 ft.
Water level was measured using Tape
Well was developed for 1 hours at < 5 gpm
Method of development CENTRIFUGAL PUMP
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method HSA
Drilling Fluid NONE Type of Rig SCHRAMM T-450
Name of Driller H. L. REXRODE JR.
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494
Name of Drilling Company H. LEONARD REXRODE, JR. AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-1A
0 - .5 ASPHALT + GRAVEL
.5 - 10.0' REDDISH BROWN FINE SAND W/ GRAVEL & WESTFIELD SHALE, WET @ 4.6

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. Leonard Rexrode Jr. Date 12/19/91

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

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3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

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1. Well Permit Number (This number must be permanently affixed to the well casing):	2600024654
2. Site Well Number as shown on application or plans):	MW-1A
3. Well Completion Date:	11/01/91
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	9.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	1.5
7. Screen Length (or length of open hole) in feet:	8.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.2
13. Yield (gallons per minute):	<5
14. Development Techinque (specify):	Centrifugal pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hour

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
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2. Site Well Number (As shown on application or plans): MW-1A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 27.1" Latitude: North 40° 50' 14.2"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730105.0 East 586881.6
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.23
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
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SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

ERM-Northeast

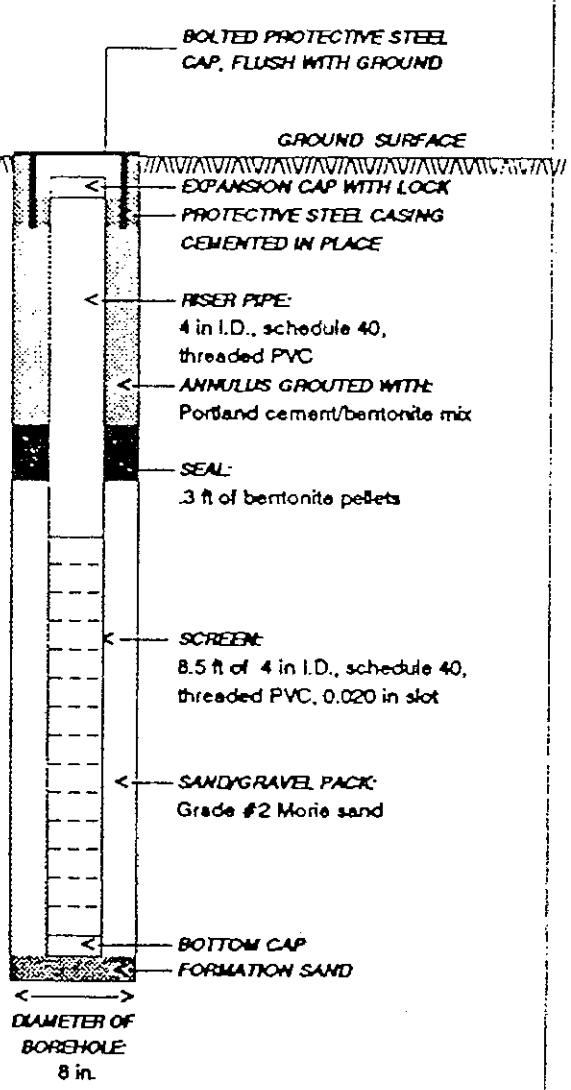
375 Bridgeport Avenue, Shelton, CT 06484 (203) 929-8687

CONSTRUCTION OF MONITORING WELL: MW-1a

Project name & location Hoffmann LaRoche, Nutley, NJ	*Project No.* 137.009	*Ground water level (ft bsl)* *Date*	*Time*	*Water level*	*Elevation datum* Not Surveyed
Drilling company ADT Inc., Long Island City, NY		Nov 1, 91	18:30	3.0' BGL	*Ground elevation* Ft
Surveyor "none"		Nov 13, 91	17:05	2.78' BC	*Top of protective steel casing elevation* Ft
Date and time of completion Nov. 01, 1991	*Geologist* N. Levine	BGL - Below ground level BC - Below top of PVC casing			*Top of riser PVC pipe elevation* Ft

GENERALIZED SOIL DESCRIPTION	ELEVATIONS (ft above Mean Sea Level)	DEPTHS (ft below ground, not to scale)
		0
0.0-0.5' Asphalt and Gravel		0.25
		0.50
		0.80
		1.50
First water at 3.0'		
0.5' to 8.0' Red brown fine - coarse SAND little fractured shale trace silt		
8.0-10.0' Red brown fractured, weathered shale		9.50
		10.00

CONSTRUCTION DETAILS



REMARKS (Installation, development):

Well was developed by pumping ground water until it ran clear
The well was allowed to recover and the pumping wasrepeated four times.

Drill rig: Schramm T-450 air rotary

D:\123\HOFFMANN\LOG-MW1A.WK1

orm DWR-138A
12/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26.02.9.28
PERMIT NO. 2611828-9
APPLICATION NO. _____
COUNTY Passaic.

WELL RECORD

1. OWNER Hoffman-LaRoche Facility ADDRESS Nutley, New Jersey
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Pt. 30 Clifton, New Jersey
3. DATE COMPLETED 11/18/87 DRILLER [illegible]
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 31' Feet
5. CASING: Type PVC-Stainless Steel. Diameter 4" Inches Length _____ Feet
6. SCREEN: Type PVC Size of Opening _____ Diameter 4" Inches Length _____ Feet
   steel pipe 6"-10'5"
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
   RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log
14. DATA OBTAINED BY [illegible] Date 1/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated,

New Jersey Department of Environmental Protection
Site Remediation Program

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3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600011828
2. Site Well Number as shown on application or plans):	MW-2
3. Well Completion Date:	11/18/1987
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	30.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	10.5
7. Screen Length (or length of open hole) in feet:	20
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	16.0
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600011828
2. Site Well Number (As shown on application or plans): MW-2
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 24.2" Latitude: North 40° 50' 10.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729744.2 East 587102.9
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.41
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: _____ Date _____

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: _____ Fax: 973.235.2011

Environmental Resources Management

Drilling Log

Project Hoffmann-LaRoche Owner Same

Location Nutley, NJ W.O. Number 137-03

Well Number MW-2 Total Depth 31 ft. Diameter 5 in.

Surface Elevation 122' Water Level: Initial 16 24-hrs. 5.4 ft.

Hole
Screen: Dia. 5 7/8" Length 20.5 Slot Size Open Hole

Casing: Dia. 6 in. Length 10.5 ft. Type .020

Drilling Company Warren George Drilling Method Mud Rotary

Driller Mike K. Log By A. Jaroszewski Date Drilled 11/18/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0				Asphalt 0 - 5"
				Sand/silt 5"-3.0 Brown poorly sorted fine sand and silt; trace gravel.
			1	25,50,60/3 SHALE 3.0'
				reddish brown shale; weathered in top foot;
5				competent, hard throughout;
				fracture at 29.5'
10				
15				

JOB LOCATION:
Hoffman LaRoche
Nutley, N.J.

WARREN GEORGE, INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

FOR: ERM North east 26.02.9.28 26011828.9

SHEET 1 OF 1
LOCATION Nutley, N.J.
HOLE NO. MW-2
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 11/16/87
DATE, FINISH: 11/18/87

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. ____ I.D. ____
SAMPLER O.D. 2" I.D. ____
DIAMOND BIT SIZE 5-1/2"

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER ____

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-2'	Blacktop, Stone
10									2'-11'	Red Shale
20										
30									11'-31'	Red Shale
40										

MW-3

DWR-133 (5/85)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

2611827 to 2611835

Permit No. 9 wells

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

PERMIT TO DRILL WELL 2

VALID ONLY AFTER APPROVAL BY THE D.E.P.

26.02,9 .28

Owner Hoffman - La Roche Facility
Address Nutley NJ

Driller Warren George Inc.
Address Ft. of Jersey Ave. Jersey City NJ

Name of Facility Hoffmann-La Roche Facility
Address Rt. 3 Clifton NJ

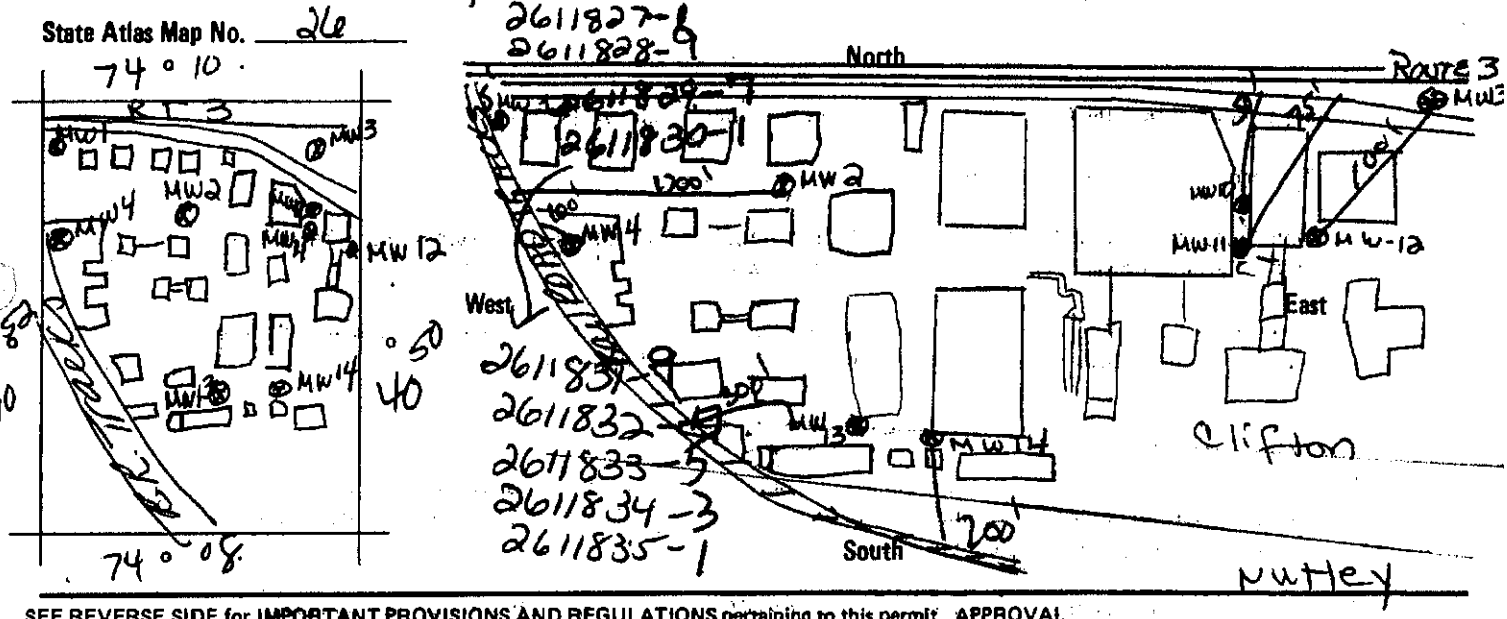
Diameter of Well	4" Inches	Proposed Depth of Well	35 Feet
Proposed Capacity of Pump	— GPM	Method of Drilling (cable-tool, rotary, etc.)	Rotary
Use of Well (See Reverse)	Monitoring		

LOCATION OF WELL

Lot #	Block#	Municipality	County
1	80-002	Clifton	Passaic

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____.
- ☐ **Domestic Potable Water Supply** - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ **Domestic Irrigation Supply** - No piping from the well for which the permit applies shall enter any building.
- ☐ **Industrial/Commercial Supply** - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ **Heat Pump Wells** - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
OCT 27 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 10/8/87

Signature of Owner Frank Gregory

COPIES: Water Allocation – White Health Dept. – Yellow Owner – Blue Driller – White

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26.02.9.28
PERMIT NO. 2611829-7
APPLICATION NO. _____
COUNTY Passaic.

WELL RECORD

1. OWNER Hoffman-LaRoche Facility ADDRESS Nutley, New Jersey.
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Rt. 3 Clifton, New Jersey
3. DATE COMPLETED 10/29/87 DRILLER WARREN GEORGE, INC.
4. DIAMETER: Top 6" inches Bottom _____ inches TOTAL DEPTH 79' Feet
5. CASING: Type Install 25' 6" Steel Pipe Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
   RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Borings Log
14. DATA OBTAINED BY [illegible] Date 1/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated,

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600011829
2. Site Well Number as shown on application or plans):	MW-3
3. Well Completion Date:	10/28/1987
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	79
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	25
7. Screen Length (or length of open hole) in feet:	54
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open Hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	75
13. Yield (gallons per minute):	Not Available
14. Development Techinque (specify):	Not Available
15. Length of Time well is developed/pumped or bailed (hours and minutes):	Not Available

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

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1. Well Permit Number (This number must be permanently affixed to the well casing): 2600011829
2. Site Well Number (As shown on application or plans): MW-3
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 05.7" Latitude: North 40° 50' 02.8"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728954.2 East 588532.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 158.50
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 6-19-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

JOB LOCATION:
Hoffman LaRoche
Nutley, N.J.

WARREN GEORGE, INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

FOR: ERM North east 20-02-9-28 20011829-7

SHEET 1 OF 2
LOCATION Nutley, N.J.
HOLE NO. MW-3
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 10/28/87
DATE, FINISH: 10/29/87

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. ____ I.D. ____
SAMPLER O.D. 2" I.D. ____
DIAMOND BIT SIZE 5-1/2"

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER 30"

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-2'	Blacktop, Sand
10									2'-20'	Red brown Gladal Till
20									20'-25'	Red Shale
30										

Environmental Resources Management

Drilling Log

Project Hoffmann-LaRoche Owner Same

Location Nutley, NJ W.O. Number 137-03

Well Number MW-3 Total Depth 79' Diameter 5.5'

Surface Elevation 160 Water Level: Initial 75' 24-hrs. 47

Screen: Dia. 5 7/8" Length 54 feet Slot Size Open Hole

Casing: Dia. 6 in. Length 25 ft. Type Steel

Drilling Company Warren George Drilling Method MVD/Air Rotary

Driller Mike K. Log By A. Jaroszewski Date Drilled 10/28/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	B. COUNTS	RECOVERY	Description/Soil Classification (Color, Texture, Structures)
			1	29,30 39	10"	Asphalt 0 - 4" Silt/Clay 4"-20' reddish brown silt, clay and very fine sand embedded with trace of fine to coarse gravel; very dense; dry; no odor.
10			2	100/4	4"	
			3	75 100/5	9"	
20			4	39 100/5	8"	SHALE 20' reddish brown shale; alternating zones of very competent and moderately competent rock; occasional thin sandstone/siltstone layers (a few inches thick)
30						
40						
50						

A.

Jun-09-97 02:52 ADT-MA 1 609 538 0575 P.02

SERIAL #: 51549

DWR-133M (8/95)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

Permit No. 26428

Mail to
NJDEP
Bureau Water Allocation
CN 426
Trenton, NJ 08625-0426

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.02.979

Owner [illegible]

Address [illegible]

Name of Facility [illegible]

Address [illegible]

Driller [illegible]

Address [illegible]

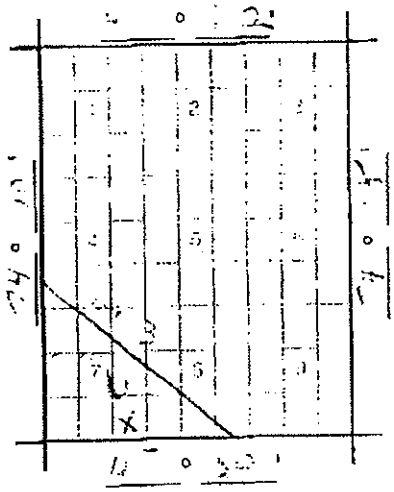
Diameter of Well(s) 4 Inches	Proposed Depth of Well(s) [illegible] Feet
# of Wells Applied for (max. 10) 1	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) [illegible]	If Yes, give pump capacity cumulative GPM

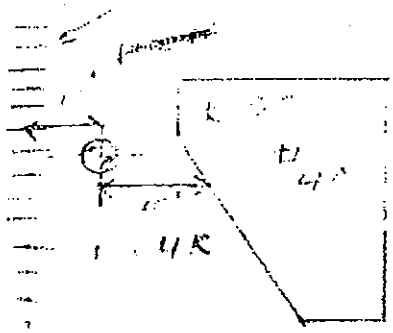
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	[illegible]	[illegible]	[illegible]

State Atlas Map No. [illegible]

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.





N↑

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) [illegible]

CASE I.D. Number [illegible]

This Space for Approval Stamp

WELL PERMIT APPROVED
N J D E P
DEC 4 1995
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☑ For monitoring purposes only
☐ [illegible]

⚠ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date [illegible] Signature of Driller [illegible] Registration No. [illegible]

Signature of Owner [illegible]

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER ALLOCATION

MONITORING WELL RECORD

Well Permit No. 26 - 42998
Atlas Sheet Coordinates 26 : 02 : 979

OWNER IDENTIFICATION - Owner HOFFMAN-LA ROCHE INC
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code 07110

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW4A
County ESSEX Municipality NUTLEY TOWN Lot No. 1 Block No. 292
Address 340 KINGSLAND ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well MEMO OF AGREEMENT
Date well completed 3,21,96
Case I.D. # NJD000533472
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Hoffman-La Roche - Jeff Stubig Tele. # 201-235-0235

WELL CONSTRUCTION
Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	6	2	SCH 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	6	16	2	.020 SLOT SCH 40 PVC
Tail Piece	—	—	—	—
Gravel Pack	4	16	6	#2 MORIE SAND
Annular Seal/Grout	2 / 0	4 / 2	6	BENTONITE SLURRY CEMENT/BENTONITE GROUT
Method of Grouting	TREMIE GROUT			

Static water level after drilling 7' ft.
Water level was measured using MEASURE
Well was developed for NA hours at NA gpm
Method of development NA
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method HOLLOW STEM AUGER
Drilling Fluid NA Type of Rig CT 250
Name of Driller THOMAS SCHMIDT
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 13II
Name of Drilling Company ATLANTIC INC

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-1' FILL
1'-7' RUBBLE/SILTY SAND
7'-16' RUBBLE/DECOMPOSED STONE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 4-23-96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600042998
2. Site Well Number as shown on application or plans):	MW-4A
3. Well Completion Date:	03/21/1996
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	16.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	6.0
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	7.0
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Pump & Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600042998
2. Site Well Number (As shown on application or plans): MW-4A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 29.7" Latitude: North 40° 50' 12.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729882.3 East 586682.4
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 119.34
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-4A	Sheet
Hoffmann LaRoche Sewer	20447-0100-00000	Well No.	1 of 2
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT/ T. Brown	Canterra CT-250	Air Rotary

Sampler Description Cuttings Monitored	**Drilling Method** Air Rotary	**Coordinates** X= Y=
Filter Seal Amount/Type: 2ft Bentonite/Cement	**Drill Bit/Auger Diameter:** 4.75 Inches	**Ref. El.:**
Sand Pack Amount/Type: 12ft/ #2 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: 10ft/ 2" 20 Slot PVC	**Water Table Depth:** 7 ft	**Surface Elevation:**
Riser Length/Type: 6ft / 2" Sch 40 PVC	**Total Depth:** 16 ft	**Date Start:** 3/21/96 **Date Finish:** 3/21/96

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				Red-brown fine to coarse SAND ans silt, some fine to medium gravel to 16 ft.				
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) Refusal on bedrock.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-4A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	2 of 2
Location Description		**TRC Geologist**	
Nutley, NJ		Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
15				End of boring.				
16								
17								
18								
19								
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-4A

Project: Hoffmann LaRoche Sewer **No.:** 204470100

Client: Peter Jeuck **Date Completed:** 3/21/96

Location: West of Building 40

Drilling Contractor: ADT **Method:** Air Rotary

TRC Geologist: Charles Foster

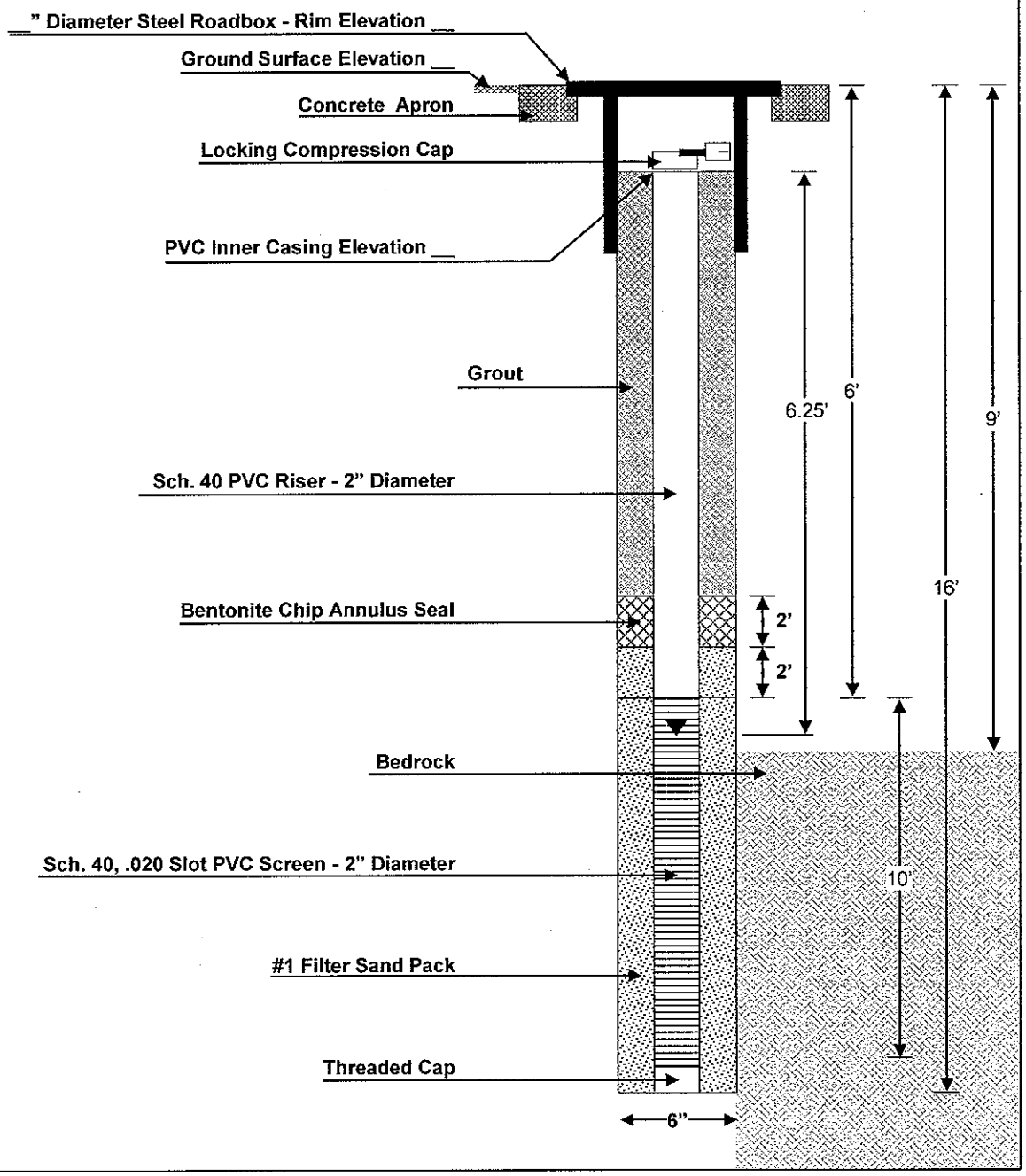
Reference Elevation: 120.51

Reference Description: PVC Riser

NJDEP Permit No.:

Development Date: 3/22/96

Development Method: Pump & Surge



AF-375/

MW-5

DWR-133 (5/85)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

Permit No. 2611821-1
2611822-0
2611823-8

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

PERMIT TO DRILL WELL

16

3 wells

26.12.3 .85

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Owner Hoffmann-La Roche Facility
Address Nutley NJ

Driller Warren George Inc.
Address 47 Of Jersey Ave
Jersey City NJ

Name of Facility Hoffman-La Roche Facility
Address Rt 3 Nutley NJ

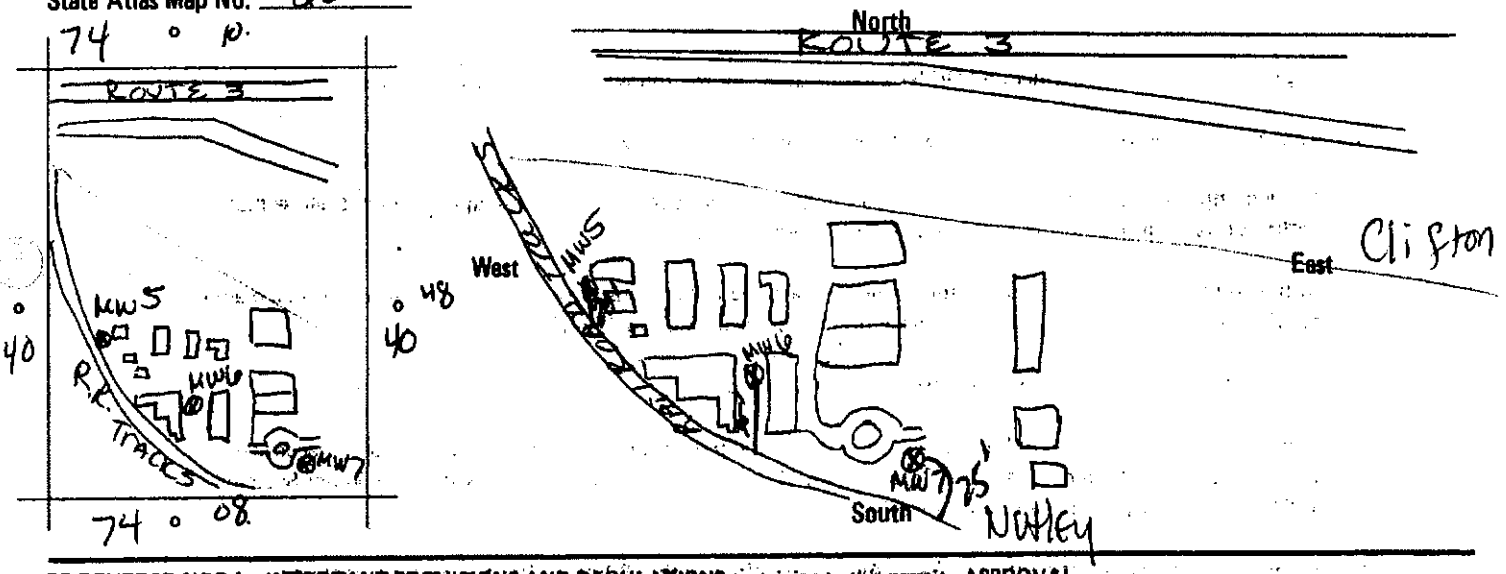
Diameter of Well	4" Inches	Proposed Depth of Well	35 Feet
Proposed Capacity of Pump	GPM	Method of Drilling (cable-tool, rotary, etc.)	Rotary
Use of Well (See Reverse)	monitoring		

LOCATION OF WELL

Lot #	Block #	Municipality	County
1	292	Nutley	~~Hassaic~~ ESSEX

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____.
- ☐ **Domestic Potable Water Supply** - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ **Domestic Irrigation Supply** - No piping from the well for which the permit applies shall enter any building.
- ☐ **Industrial/Commercial Supply** - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ **Heat Pump Wells** - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Spece for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
OCT 27 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 10/8/87

Signature of Owner Frank Gregory

COPIES: Water Allocation – White Health Dept. – Yellow Owner – Blue Driller – White

MW-5

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD. 26. 12. 338 [redacted]
PERMIT NO. 2611821
APPLICATION NO. _____
COUNTY Passaic

WELL RECORD

1. OWNER Hoffmann-LaRoche Facility ADDRESS Nutley, New Jersey.
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Rt. 3 Nutley, New Jersey
3. DATE COMPLETED 11/6/87 DRILLER WARREN GEORGE, INC.
4. DIAMETER: Top _____ inches Bottom _____ inches TOTAL DEPTH _____ Feet
5. CASING: Type 13' - 6" Steel pipe Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log
14. DATA OBTAINED BY WARREN GEORGE, INC. Date 1/23/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600011821
2. Site Well Number as shown on application or plans):	MW-5
3. Well Completion Date:	11/06/1987
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	30.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	13.0
7. Screen Length (or length of open hole) in feet:	17.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open Hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	22.0
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600011821
2. Site Well Number (As shown on application or plans): MW-5
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 30.3" Latitude: North 40° 50' 06.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729359.2 East 586642.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 113.64
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

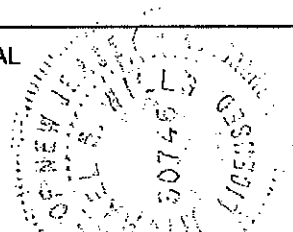
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-22-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___-___-___-_____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW5

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-31.7 Latitude: North 40-50-06.5

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729587.0774 East 2140533.1593

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.65' (6" CIP)
Flange = 114.89' (OLD X), Ground Surface = 114.90' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

20·12·5·[redacted]50 20110217-1

JOB LOCATION:	WARREN GEORGE, INC.	SHEET 1 OF 1
Hoffman LaRoche	FOOT OF JERSEY AVENUE	LOCATION Nutley, N.J.
Nutley, N.J.	P. O. BOX 413	HOLE NO. MW-5
	JERSEY CITY, N.J. 07303	LINE & STA.
	FOR: ERM North east	OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____	DATE, START: 11/5/87	GROUND ELEVATION ____
DEPTH ____ FT. ALL CASING OUT DATE: ____	DATE, FINISH: 11/6/87	GROUND WATER ELEVATION ____

CASING O.D. 6" I.D. ____	WEIGHT OF HAMMER 140 LBS.	HAMMER FALL
SAMPLER O.D. 2" I.D. ____	INSIDE LENGTH OF SAMPLER ____ IN.	CASING ____ SAMPLER 30"
DIAMOND BIT SIZE ____		

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-2'	Blacktop, Stone
									2'-6'	Red Glacial Till
10										
20										
30									6'-30'	Red Shale
										END OF HOLE 30'

Environmental Resources Management

Drilling Log

Project Hoffmann-LaRoche Owner Same

Location Nutley, NJ W.O. Number 137-03

Well Number MW-5 Total Depth 30.0 ft. Diameter 5 in.

Surface Elevation 115 Water Level: Initial 22.0 ft. 24-hrs. 6.5 ft.

Screen: Dia. 5 7/8" Length 27' Slot Size Open Hole

Casing: Dia. 6 in. Length 13.0 ft. Type Steel

Drilling Company Warren George Drilling Method Air/mud Rotary

Driller Mike K. Log By A. Jaroszewski Date Drilled 11/10/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Bl. Cts. / Rec.	Description/Soil Classification (Color, Texture, Structures)
					ASPHALT/FILL to 3.0
			1	2,2,8, 3"	CLAY 3.0-4.5' reddish brown clay, little silt, trace sand and fine to coarse gravel very dense
10					BEDROCK 6.2 ft.
					reddish brown shale; weathered clay layers in upper 5 ft. a few inches thick; occasional soft zones between 15 and 25 feet; thin sandstone layers between 25 and 30 feet.
20					
30					
40					
50					

R-138A
wd8

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-14983
APPLICATION NO. _____
COUNTY _____
COORD. 26.02.956

WELL RECORD

La-Roche

1. OWNER Mike Cody, Hoffman ADDRESS _____
Owner's Well No. MW-6A SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Hoffman LaRoche, Nutley N.J.
3. DATE COMPLETED 12/2/88 DRILLER Warren George Inc.
4. DIAMETER: Top _____ inches Bottom _____ inches TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
Range in Depth { Top _____ Feet / Bottom _____ Feet
Geologic Formation See Attached log
Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
Static water level before pumping _____ Feet below surface
Pumping level _____ feet below surface after _____ hours pumping
Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
How pumped _____ How measured _____
Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
Type _____ Mfrs. Name _____
Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
(Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
SOURCE OF DATA Boring log
DATA OBTAINED BY Warren George Inc. Date 12/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600014983
2. Site Well Number as shown on application or plans):	MW-6A
3. Well Completion Date:	12/07/1988
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	25
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	15.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.010
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	15.00
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hr

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600014983
2. Site Well Number (As shown on application or plans): MW-6A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 28.7" Latitude: North 40° 50' 03.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728975.5 East 586759.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 112.59
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

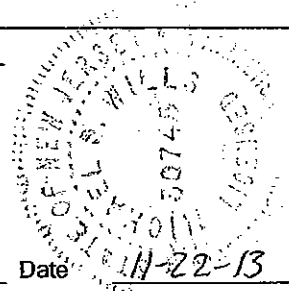
   N.J. Monument No. 8689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-22-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___-___-___-_____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW6A

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-30.2 Latitude: North 40-50-02.7

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729204.3472 East 2140651.5080

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 112.75' (4" PVC) Flange = 113.02' (NEW X), Ground Surface = 112.98' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

26-02-956

N. Y. TEL. 267-3215

N. J. TEL. (201) 433-9797

WARREN GEORGE, INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

TEST BORINGS

Permit # 2614983

Project Hoffman La Roche Nutley NJ

Boring No. 6A Job No. _____ Rig No. _____ Date 12-7 19 88

BORING LOG		SPOON SAMPLE AND CORE DATA				BLOWS ON CASING			
DEPTH FROM TO	DESCRIPTION OF MATERIAL	SAMPLE NUMBER	DEPTH FROM - TO	BLOWS PER FT. / CORE RECOV'D. INCHES	D=DRY U=UNDISTURBED T=TRAP W=WASH R=ROD C=CORE / CORE RECOV'D. NO. PCS. Remarks *	0--1		59-60	
0 / 1'	Asphalt Gravel	1	1-3			1--2		60-61	
		2	5-7		NO	2--3		61-62	
1' / 12'6"	Rd Brn Clayey Sand + Gravel	3	10-12		Blows	3--4		62 63	
		4	20-22			4--5		63-64	
12'6" / 24'	Rock					5--6		64-65	
						6--7		65 66	
	Set @ 24'					7--8		66-67	
	10' 4" Screen					8--9		67 68	
	14' 4" Riser					9-10		68-69	
	1 Bottom Cap					10-11		69 70	
	1 Top Cap Locking					11-12		70 71	
	3½ Bags Sand					12-13		71-72	
	½ Pie Pellets					13-14		72-73	
	3 Cement					14-15		73 74	
	1 8" Manhole					15-16		74-75	
	1 Lock					16-17		75 76	
						17-18		76-77	
	1 Hr Developing Time					18-19		77-78	
						19-20		78-79	
						20-21		79-80	
						21-22		80-81	
						22-23		81-82	
						23-24		82-83	
						24-25		83-84	
						25-26		84-85	
						26-27		85-86	
						27-28		86-87	
						28-29		87 88	
						29-30		88-89	
						30-31		89-90	
						31-32		90-91	
						32-33		91-92	
						33-34		92-93	
						34-35		93-94	
						35 36		94-95	
						36-37		95 96	
						37-38		96-97	
						38-39		97-98	
						39-40		98-99	
						40 41		99 100	
						41-42		100 101	
						42-43		101 102	
						43-44		102 103	
						44-45		103 104	
						45 46		104 105	
						46 47		105 106	
						47 48		106 107	
						48 49		107 108	

DRILLING LOG

ERM-Northeast

Project HOFFMANN LAROCHE
Location NUTLEY, N.J. W.O. Number
Well Number MW-6A Total Depth 25'
Water Level Init. 15' 24-hrs. 15.77'
Screen: Dia. 4" Length 10' Slot Size 0.010
Casing: Dia. 4" Length 15' Type PVC
Drilling Co. WARREN GEORGE Drilling Method AIR/MUD ROTARY
Driller R.V. GREGORY Log By D. KOVARIK Date 12/7/88

Sketch Map

Notes

Depth	Well Constr.	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0		1	1.0-2.0 Crushed stone 3" Recovery SHALE: Red, very firm, platey to blocky. 12-15-14-16
5		2	5.0-7.0 CLAY: Red, reddish brown, grey, silty, 11" Recovery moderately firm, interbedded with very 15-11-13-8 fine to fine sand. Dry. No odor.
10		3	10.0-12.0 SHALE: Red, reddish brown, silty, 8" Recovery weathered. Competant bedrock @ 12.5' 19-44-56-100+ Dry. No odor.
15		4 ▼	15.0-17.0 SHALE: Red, reddish brown, firm to very 2" Recovery firm, platey to fissile, silty, 100/4" fractured. Moist.
20		5	20.0-22.0 SHALE: Red, Reddish brown, firm to very 2" Recovery firm, platey to fissile, silty. 100/2"
25			23.0-25.0 Fractured
			TOTAL DEPTH: 25 FEET SCREEN SETTING: 15.0-25.0 FEET GRAVEL PACK: 13.5-25.0 FEET (#2 morie sand) BENTONITE: 12.5-13.5 FEET (bentonite pellets) GROUT: 2.0-12.5 FEET (cement/bentonite) NEAT CEMENT: 0.0- 2.0 FEET FLUSH MOUNT CURB BOX AT SURFACE

MW-7A

SERIAL # 007007

DWR-133M (10/96)

Mail to

NJDEP
Bureau Water Allocation
N 426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

10

2651888
2651889

Permit No. _____

COORD #: 26.02.973

Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
NUTLEY NJ 07110-1199

Name of Facility SAME
Address

Driller **Summit Drilling Co., Inc.**
Address **Central Jersey Industrial Park**
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

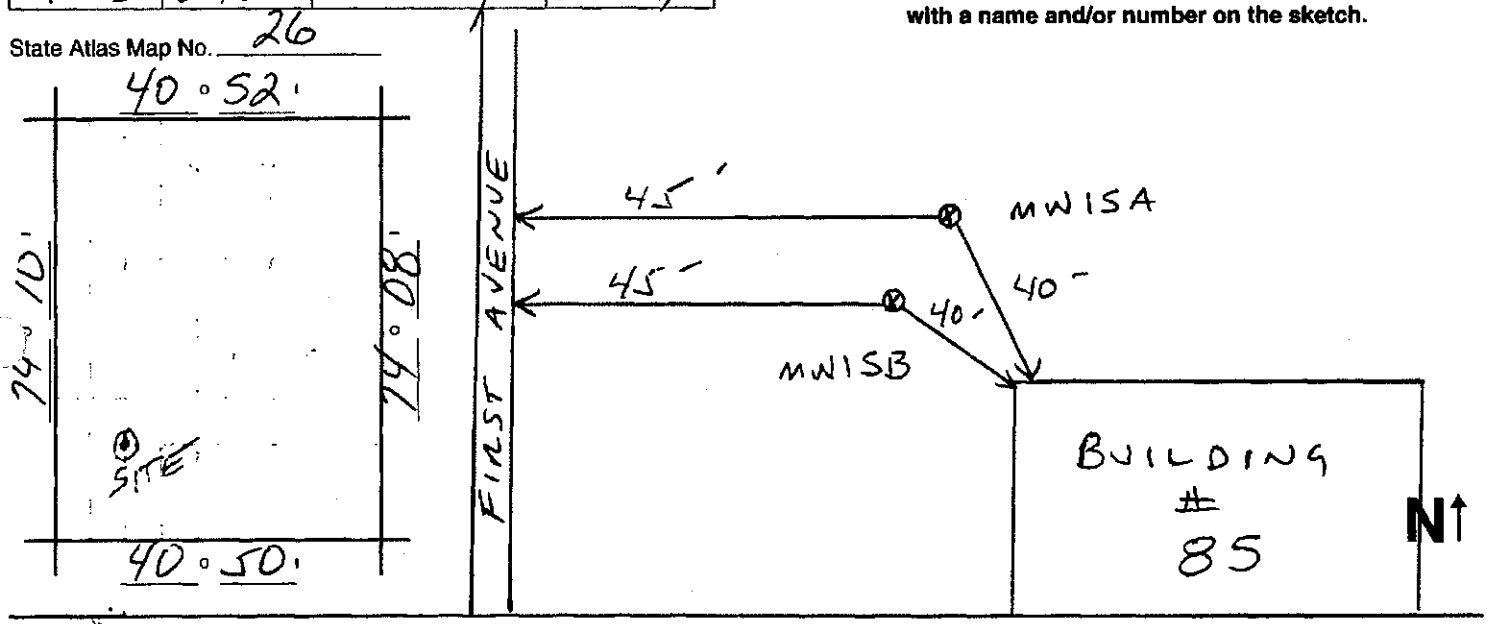
Diameter of Well(s) 2, 6 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☑
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
SEP 8 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐ _____
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98 TRC

Signature of Driller Carmine Delorso Registration No. 51210

Signature of Owner Charles Foster (MS)

COPIES: Water Allocation — White; Health Dept. — Yellow; Owner — Blue; Driller — White

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 43991
Atlas Sheet Coordinates 26 : 02 : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-7R
County PASSAIC Municipality CLIFTON CITY Lot No. 1 & 4 Block No. 80.02
Address 240 KINGSLAND ST. Date well started 3/19/96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/19/96
Regulatory Program Requiring Well MEMO OF AGREEEMENT Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. FOSTER. Tele. # 908 656-3625

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 16 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade
☒ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed?
☒ Yes ☐ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	6	2	SCH 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	6	16	2	SCH 40. PVC .020
Tail Piece	—	—	—	—
Gravel Pack	4	16	8	NO. 2 MORIE.
Annular Seal/Grout	0	4	8	CEMENT/BENTONITE
Method of Grouting	TREMIE GROUTED			

Static water level after drilling 13 ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity NA gpm
Pump type: NA
Drilling Method HSA
Drilling Fluid NONE Type of Rig MOBILE B-61HDX
Name of Driller S. WOLF
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. Registration No. 10-1579 H. LEONARD REXRODE, JR.
Name of Drilling Company AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-7R

0 - 16' REDDISH BROWN SILTY SAND AND CLAY WET @ 13 FT.

16' - BEDROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature [signature] Date 6/5/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 240 Kingsland Street, Clifton, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 &4(Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600043991
2. Site Well Number as shown on application or plans):	MW-7A
3. Well Completion Date:	03/19/1996
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.5
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	13
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Surge with Bailer
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600043991
2. Site Well Number (As shown on application or plans): MW-7A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 25.2" Latitude: North 40° 49' 58.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728496.4 East 587031.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 104.32
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

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Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW7A

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-26.7 Latitude: North 40-49-58.0

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 728725.4108 East 2140924.1797

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 105.27' (2" PVC) Flange = 105.97' (OLD X) , Ground Surface = 105.97' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

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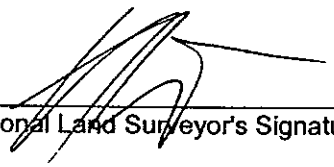
SEAL



10/22/98

Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

TRC

Soil Boring Log

Project/Client Hoffmann LaRoche Sewer	**Project No.** 20447-0100-00000	**Boring No.** MW-7A	**Sheet** 1 of 2
		Well No.	
Location Description Nutley, NJ		**TRC Geologist** C. Foster	
Drilling Contractor/Foreman ADT/ S. Wolf	**Drill Rig Make/Model** Mobile B-61	**Anger/Drive Casing Size/Type** Auger	
Sampler Description Cuttings Monitored	**Drilling Method** HSA	**Coordinates** X= Y=	
Filter Seal Amount/Type: 2ft Bentonite/Cement	**Drill Bit/Auger Diameter:** 4.75 Inches	**Ref. El.:**	
Sand Pack Amount/Type: 12ft/ #2 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush	
Screen Length/Type: 10ft/ 2" 20 Slot PVC	**Water Table Depth:** 12 ft	**Surface Elevation:**	
Riser Length/Type: 5.6 ft / 2" Sch 40 PVC	**Total Depth:** 15.5 ft	**Date Start:** 3/18/96	**Date Finish:** 3/18/96

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				18 inches Asphalt and Concrete. Red-brown fine to coarse SAND and silt, some fine gravel to 15.5 ft.				
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) Refusal on bedrock.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-7A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	2 of 2
Location Description: Nutley, NJ		TRC Geologist: Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
15				End of boring.				
16								
17								
18								
19								
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

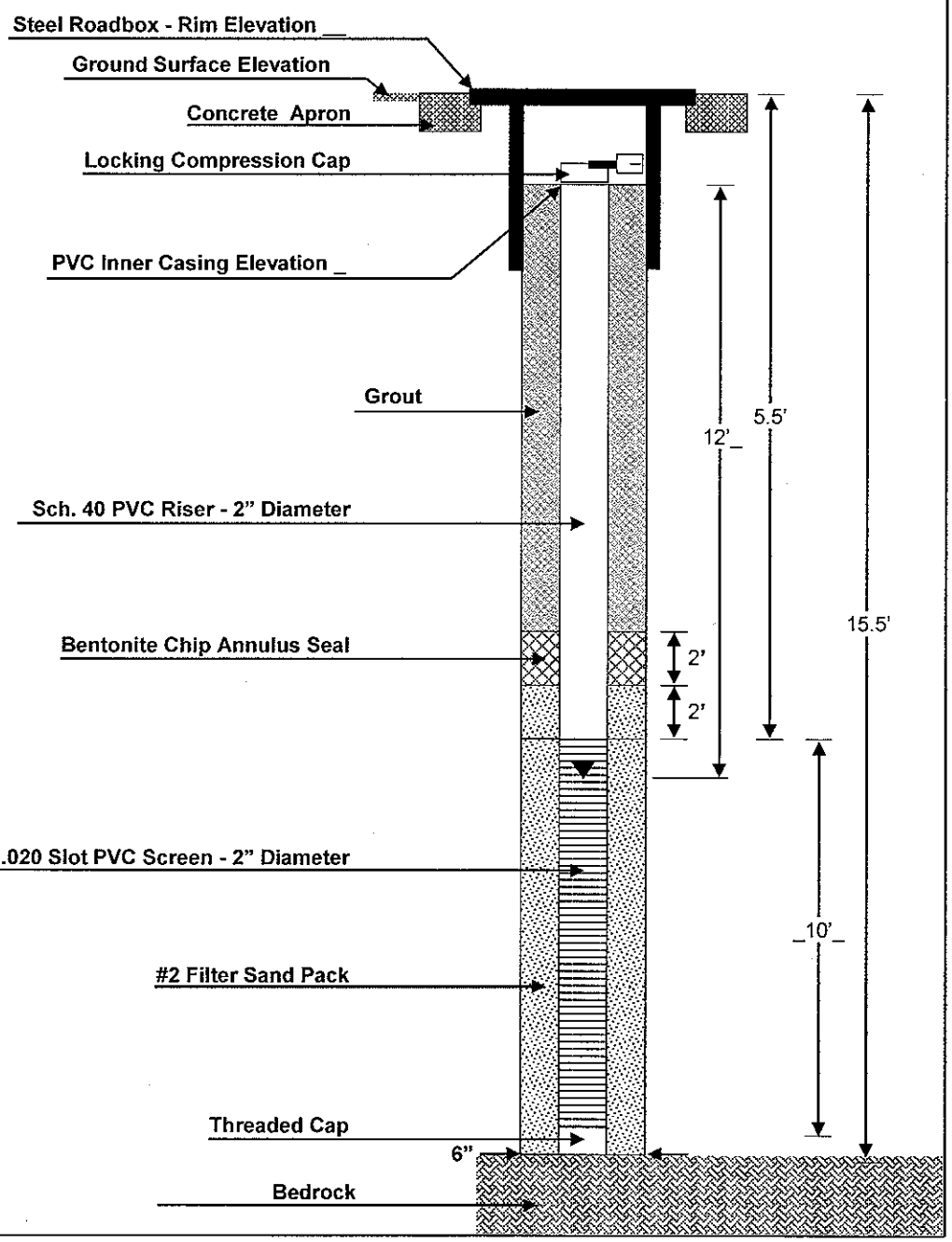
TRC

Flush Mount Overburden Monitoring Well Construction Log

Well No. MW-7A

Project: Hoffmann LaRoche Sewer **No.:** 204470100
Client: Hoffmann LaRoche **Date Completed:** 3/18/96
Location: West of building 59/81
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 105.29
Reference Description: PVC Riser
NJDEP Permit No.: 26 43991
Development Date: 3/20/96
Development Method: Surge with Bailer



AF-376

DWR-133M (10/96)

Mail to

NJDEP
Bureau Water Allocation
426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. 2651885

COORD #: 26 02.973

Owner HOFFMAN - LAROCHE
Address 340 KINGSLAND ST.
NUTLEY NJ 07110-1199

Name of Facility
Address SAME

Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

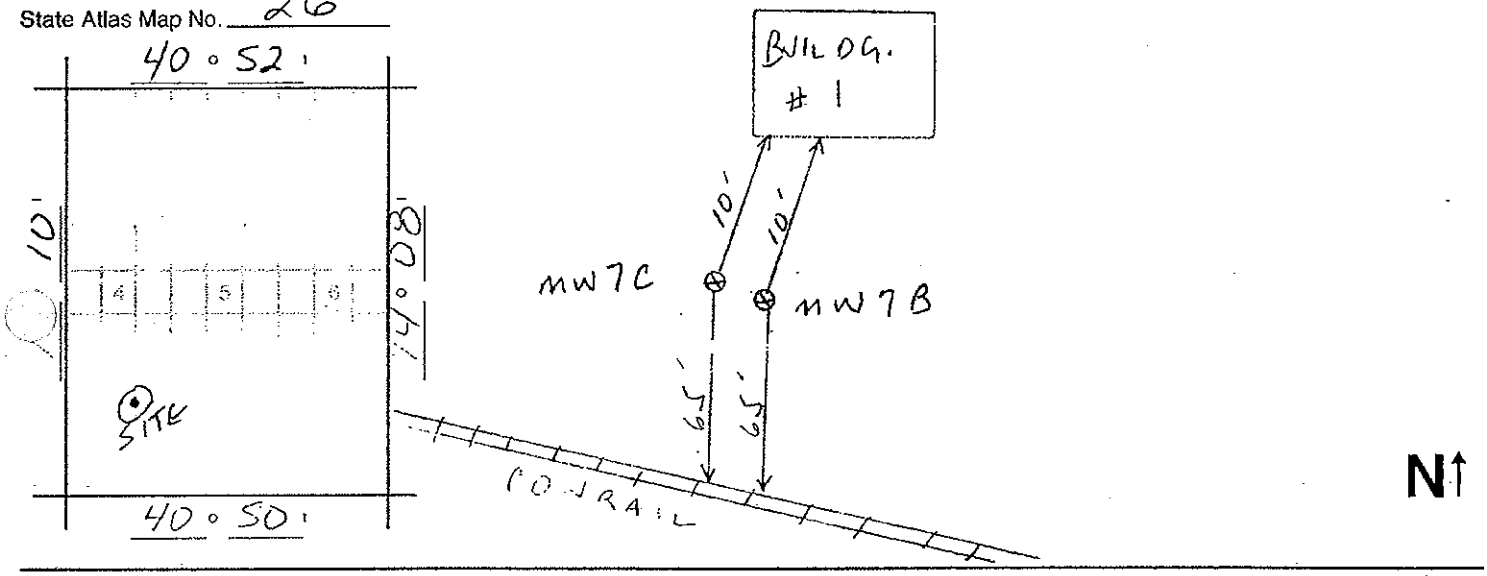
Diameter of Well(s) 2", 6" Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE
- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐

☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98 Signature of Driller Carmine DeCorso Registration No. J1210

TRC

Signature of Owner Charles Foster (MS)

COPIES Water Allocation White Health Dept Yellow Owner Blue Driller White

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. [illegible]

Atlas Sheet Coordinates [illegible]

OWNER IDENTIFICATION - Owner [illegible]
Address [illegible]
City [illegible] State [illegible] Zip Code [illegible]

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW7B
County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address [illegible]

DATE WELL STARTED [illegible]
DATE WELL COMPETED [illegible]

TYPE OF WELL (as per Well Permit Categories) [illegible]
Regulatory Program Requiring Well [illegible] Case I.D.# [illegible]

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC Environmental Tele. # [illegible]

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was they protective casing installed? ☐ Yes ☒ No

Static water level after drilling 14 ft.

Water level was measured using [illegible]

Well was developed for 1/2 hours at 1/2 gpm.

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type ____

Drilling Fluid ____ Type of Rig B-40

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) [illegible]

Driller's Signature [illegible]

Registration No. [illegible] Date [illegible]

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Vigil/Paving (Branch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					[illegible]
Open Hole or Screen (No. Used) 1	5	15	2	PVC	Sch 40
Blank Casings (No. Used) 1					
Tail Piece					
Gravel Pack	3	15			[illegible]
Grout	0	3		Neat Cement Bentonite	[illegible] lbs. [illegible] lbs.

Grouting Method [illegible]
Drilling Method [illegible]

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

[illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600051884
2. Site Well Number as shown on application or plans):	MW-7B
3. Well Completion Date:	09/29/1998
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	13.6
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Surge/ pump with bailer
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

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SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600051884
2. Site Well Number (As shown on application or plans): MW-7B
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 26.7" Latitude: North 40° 49' 59.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728620.2 East 586916.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 109.42
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW7B

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-28.2 Latitude: North 40-49-59.2

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 728849.0465 East 2140809.0985

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 109.34' (2" PVC)
Flange = 109.58' (NEW X) , Ground Surface = 109.56' (SOIL)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Hoffmann LaRoche Sewer	20447-0100-00000	MW-7B	1 of 2
		Well No.	

Location Description	TRC Geologist
Nutley, NJ	C. Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
Summit Inc/ Pedro Vega	Mobile B-80	Auger

Sampler Description	Drilling Method	Coordinates
2 Foot Split-Spoon	Air Rotary	X= Y=
Filter Seal Amount/Type: 2ft Bentonite	**Drill Bit/Auger Diameter:** 6 Inches	**Ref. EL:**
Sand Pack Amount/Type: 12 ft # 1 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: 10 ft/ 2" 20 Slot PVC	**Water Table Depth:** 13.6 ft	**Surface Elevation:**
Riser Length/Type: 5ft/ 2" Sch 40 PVC	**Total Depth:** 15 ft	**Date Start:** 9/30/98 **Date Finish:** 9/30/98

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				Brown organic rich topsoil and roots. Red-brown fine SAND and SILT.				
2								
3								
4								
5								
6				Red-brown fine SAND and SILT, trace fine gravel.				
7								
8				Brown fine SAND and silt, some cylindrical weathered rock fragments.				
9								
10								
11				Weathered bedrock zone, description from MW-7C.				
12								
13				Weathered sandstone in cuttings.	▼			

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) MW-7B installed as overburden/weathered bedrock well.
2.) 2 inch PVC screen installed from 15 up to 5 ft.
3.) Sand pack installed from 15 to 3ft.
4.) Bentonite seal from 1 to 3 feet.
5.) Cemented manhole installed to one foot.
6.) Overburden descriptions repeated from MW-7C exploration.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-7C	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	2 of 2
Location Description: Nutley, NJ		TRC Geologist: Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
15				End of Boring. 2 inch PVC well installed to 15 feet.				
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW- 7B

Project: Hoffmann LaRoche Sewer **No.:** 204470100

Client: Peter Jeuck **Date Completed:** 9/30/98

Location: South Side of Building in Lawn

Drilling Contractor: Summit **Method:** Air Rotary

TRC Geologist: Charles Foster

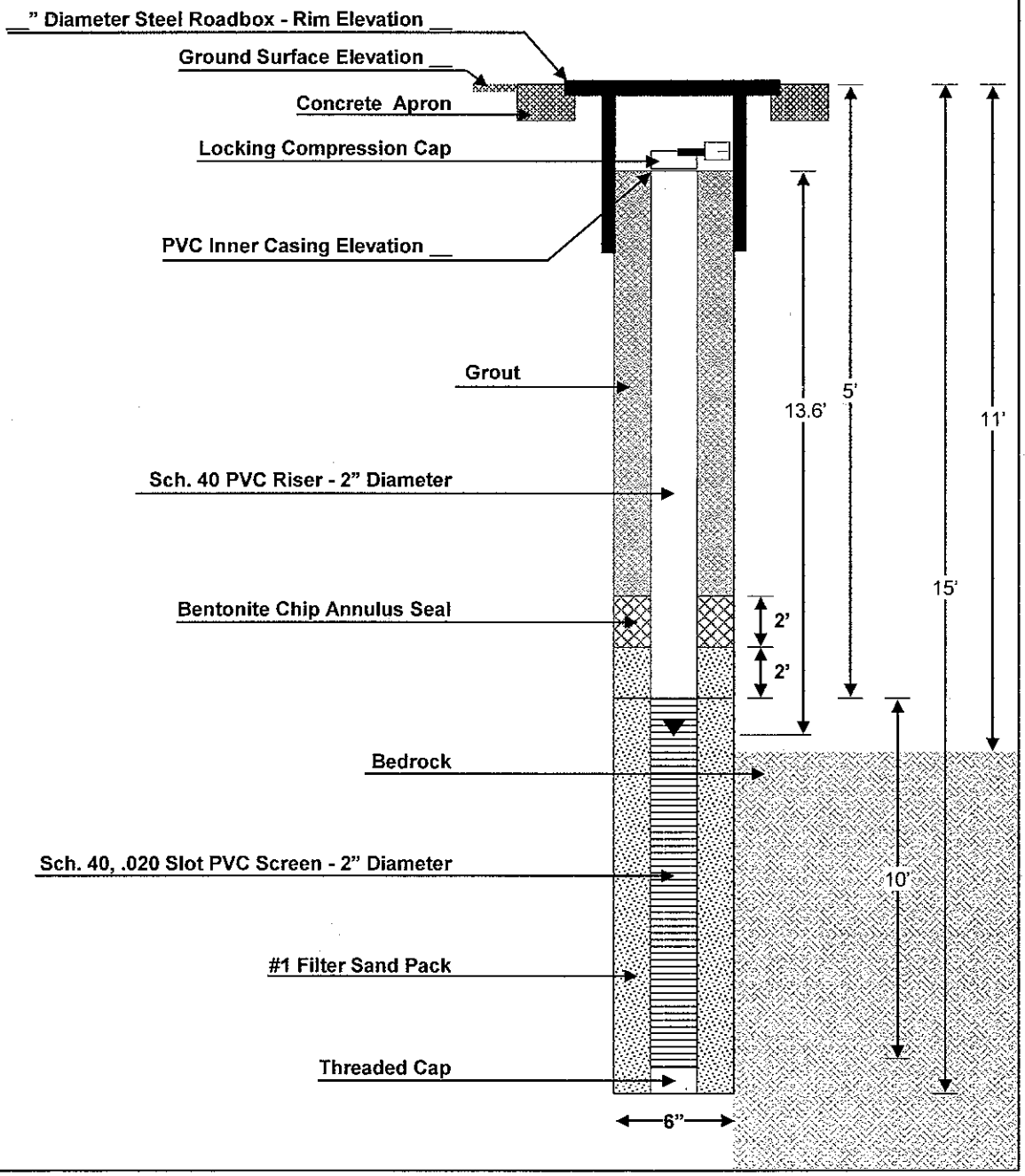
Reference Elevation: 109.34

Reference Description: PVC Riser

NJDEP Permit No.: 26 51884

Development Date: 10/2/98

Development Method: Surge/ pump with bailer



AF-375/

DWR-133M (10/96)

Mail to

NJDEP
eau Water Allocation
426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. 2651885

COORD #: 26 02.973

Owner HOFFMAN - LAROCHE
Address 340 KINGSLAND ST.
NUTLEY NJ 07110-1199

Name of Facility
Address SAME

Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

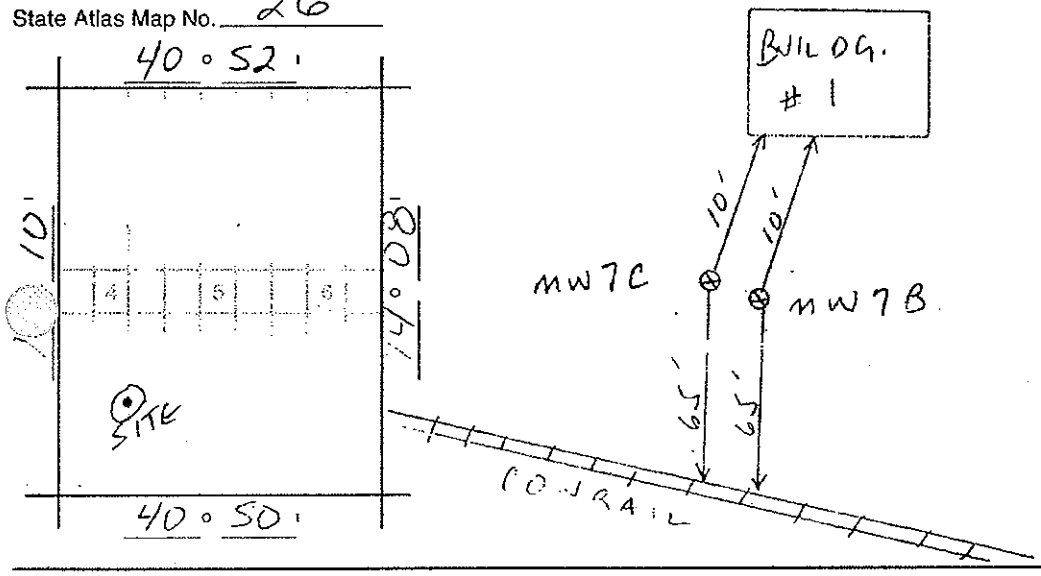
Diameter of Well(s) 2", 6" Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE
- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐

☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

9-16-98
TRC

Signature of Driller Carmine DeCorso Registration No. J1210

Signature of Owner Charles Foster (MS)

COPIES Water Allocation White Health Dept Yellow Owner Blue Driller White

Date Issued
Initial

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. [illegible]

Mast Shield Coordinates [illegible]

OWNER IDENTIFICATION - Owner [illegible]

Address [illegible]

City [illegible] State [illegible] Zip Code [illegible]

WELL LOCATION - If not the same as owner (please give address) - Owner's Well No. [illegible]

County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]

Address [illegible]

DATE DRILL STARTED [illegible]

DATE WELL COMPLETED [illegible]

TYPE OF WELL (as per Well Permit Categories) [illegible]

Regulatory Program Requiring Well [illegible] Case I.D.# [illegible]

CONSULTING FIRM/FIELD STAFF Involved (if applicable) [illegible]

WELL CONSTRUCTION

Total depth of Well [illegible] ft.

Well finished to [illegible] ft.

Borehole Diameter

Top [illegible] in.

Bottom [illegible] in.

Well was finished: ☐ above grade
☐ flush mounted

If finished above grade, casing height (above land surface) [illegible] ft.

Was steel protective casing installed?
☐ Yes ☐ No

Static water level after drilling [illegible] ft.

Water level was measured using [illegible]

Well was developed for [illegible] hours
at [illegible] gpm

Method of development [illegible]

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity [illegible] gpm

Pump type [illegible]

Drilling Fluid [illegible] Type of Rig [illegible]

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one): None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) [illegible]

Driller's Signature [illegible]

Registration No. [illegible] Date [illegible]

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Well Opening (inches) or No.
Height of Riser Casing above land surface	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Filter Casing (Not to exceed depth of well)					
Riser Casing (Between Assembly)					
Type, Size or Screen No. Slots	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sump Casing No. Slots					
Top Plug					
Gravel Pack	[illegible]	[illegible]	[illegible]	[illegible]	
Grout	[illegible]	[illegible]		Neat Cement Concrete	[illegible]

Grouting Method [illegible]

Drilling Method [illegible]

GEOLOGIC LOG

Note each depth where water was encountered or unconsolidated formations.

[illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	2600051885
2. Site Well Number as shown on application or plans):	MW-7C
3. Well Completion Date:	09/30/98
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	30.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	15.0
7. Screen Length (or length of open hole) in feet:	15.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	16
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pump & Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

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   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

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SEAL

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Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW7C

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-28.1 Latitude: North 40-49-59.2

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 728846.2963 East 2140815.3385

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 109.10' (2" PVC) Flange = 109.55' (NEW X), Ground Surface = 109.58' (SOIL)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

10/22/98

Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

TRC

Rock Core Log

Project:	Project No.	Date/Time	Sheet 1 of 1
Hoffmann LaRoche	20447-0100-00000	09/30/98 0840	

Contractor Personnel:	TRC Personnel:
Summit Inc./Pedro Vega	Charles Foster

Boring/Well Number:	Driller/Equipment:	Elevation: / Orientation: / Time Start: / Time Finish:
MW-7C	Mobile B-80, NQ/NX	

Depth	Comments (Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss)	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description (Tightness, Planarity, Smoothness, Filling, Staining, Orientation)	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
18	1min, 30sec/ft, H2O loss	17-24' 35.7 %	X	4	10.7%	>10		Non-competent Red-Brown sandstone fragments, highly	
19	2 min, 30sec/ft, H2O loss		X			>10		weathered and calcified.	
20	1 min, 30sec/ft					>10			
21	2 min 30sec/ft					2		Red-brown sandstone with fewer fractures.	
22	2 min/ft					3			
23	5 min/ft					2		Red -brown shale with few vertical fractures.	
24	4 min 30 sec/ft					9			
25	8 minutes/ft	24-27' 83.3			33%	3			
26	Core barrel jammed, 6-inch air hammer used to								
27	ream hole to 30 ft. for well installation								
28									
29									
30									
31									

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-7C	Sheet
Hoffmann LaRoche Sewer	20447-0100-00000	Well No.	1 of 2
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
Summit Inc/ Pedro Vega	Mobile B-80	Auger

Sampler Description 2 Foot Split-Spoon	**Drilling Method** Air Rotary	**Coordinates** X= Y=
Filter Seal Amount/Type: 2ft Bentonite	**Drill Bit/Auger Diameter:** 6 Inches	**Ref. El.:**
Sand Pack Amount/Type: 17 ft # 1 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: 15ft/ 2" 20 Slot PVC	**Water Table Depth:** 14.7 ft	**Surface Elevation:**
Riser Length/Type: 15ft/ 2" Sch 40 PVC	**Total Depth:** 30 ft	**Date Start:** 9/29/98 **Date Finish:** 9/30/98

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				Brown organic rich topsoil and roots. Red-brown fine SAND and SILT.				
2								
3								
4								
5	S-1	10	24/20	Red-brown fine SAND and SILT, some cylindrical weathered rock fragments.				
6		12						
		14						
7		12						
	S-2	14	24/20					
8		22						
		18						
9		24						
	S-3	20	18/16	10 Inches Red-brown fine SAND and SILT, trace gravel, moist.				
10		22		8 inches Red-gray to black weathered shale.				
		70/4		Last 8 inches are wet.				
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) 6 inch casing installed and grouted in weathered rock to 17 ft.
2.) MW-7C core hole reamed to 6 inch bore.
3.) 2 inch PVC screen installed from 30 up to 13ft.
4.) Bentonite seal installed 11to 13ft.
5.) grout within casing and completed with concrete pad and manhole.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-7C	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	_2_ of _2
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15								
16								
17	Run-1	10.7%	35.7%	6 inch casing installed and grouted to 16.5ft.				
				Rock core 17 to 27ft.				
18				Extremely weathered and non-competent red-brown sandstone with horizontal and vertical fractures.				
19								
20								
21				Weathered reed-brown Shale with vertical fractures showing calcification.				
22								
23								
24	Run-2	33.3%	83.3%	Horizontally oriented Shale with fewer vertical fractures.				
25				Weathered zones within horizontally bedded fractures.				
26								
27								
28				Red-brown horizontally oriented shale, weathering noted in fractures and along bedding planes.				
29								
30								
31								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

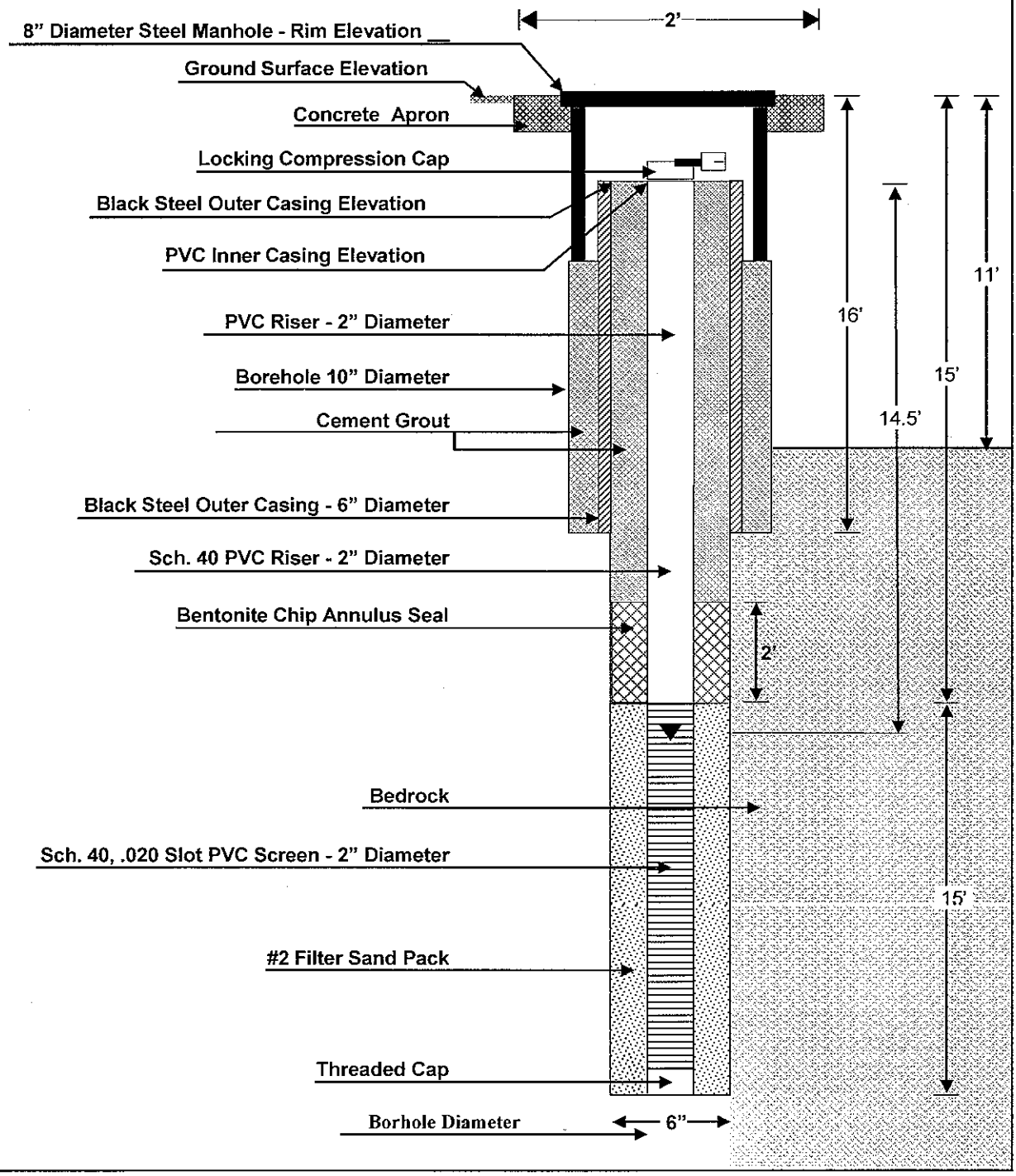
TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-7C

Project: Hoffmann LaRoche **No.:** 20447-0100
Client: Peter Jeuck **Date Completed:** 9/30/98
Location: South of Building 1 in lawn
Drilling Contractor: Summit **Method:** HSA/Air Rotary
TRC Geologist: Charles Foster

Reference Elevation: 109.10
Reference Description: PVC Riser
NJDEP Permit No.: 26 51885
Development Date: 10/2/98
Development Method: Pump & Surge



DWR-133M (4/90) SERIAL # 18706

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

Permit No. 26 29852

Mail to

Water Allocation
CN 029
Trenton, N.J. 08625

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P. COORD #: 26 02.9 87

Owner HOFFMAN LA ROCHE, INC

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

Address 51-35 34TH STREET
LONG ISLAND CITY, N.Y. 11101

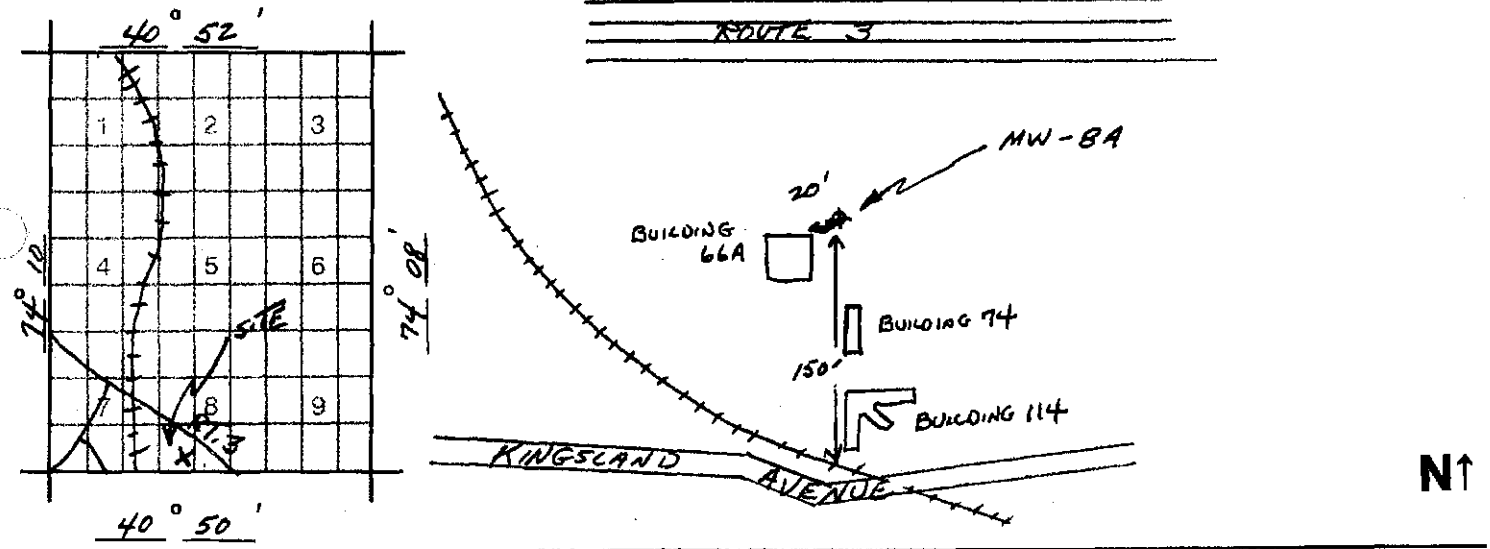
Diameter of Well(s)	6 Inches	Proposed Depth of Well(s)	20 Feet
# of Wells Applied for (max. 10)	1	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80-002	CLIFTON	PASSAIC

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☒ ECRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Div. Hazardous Waste Mgmt. Enforcement Case
- ☐ Div. Water Resources Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____

Case I.D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
JUN 18 1992

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐ _____

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 6/18/92

Signature of Driller _____ License # 1494

Signature of Owner _____ for Renee Bobo @ Hoffman LaRoche

COPIES: Water Allocation — White and Pink Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Hoffman LaRoche Inc Well Permit No. 26 - 29852
Atlas Sheet Coordinates ~~26~~ : ~~02~~ : 987

OWNER IDENTIFICATION - Owner HOFFMAN LA ROCHE, INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-8A
County Municipality CLIFTON CITY Lot No. 1 Block No. 80.002
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 6/24/92
Regulatory Program Requiring Well RCRA Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ERM-NE / N. LEVINE Tele. # (203) 929-8687

WELL CONSTRUCTION

Total depth drilled 33.0 ft.
Well finished to 33.0 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☐ Yes ☑ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	14.5	6	SCH. 40 STEEL
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	14.5	33.0'	6	OPEN BEDROCK
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	14.5	10	CEMENT / BENTONITE
Method of Grouting	TREMIE PIPE PRESSURE GROUTED			

Static water level after drilling 17.9 ft.
Water level was measured using N.L. INDICATOR
Well was developed for 2 hours at 7 gpm
Method of development AIR / SURGE BLOCK
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY / AIR HAMMER
Drilling Fluid NONE Type of Rig SCHRAMM T-450H
Name of Driller H.L. REXRODE, JR / N. CASTIGLIONI
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1494 H. LEONARD REXRODE, JR.
Name of Drilling Company AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-8A

0 - 9.50 RED SILT, LITTLE VERY FINE SAND

9.50 - 33.0 RED BROWN, MASSIVE SHALE, FRACTURE ZONE 17-18, & 27-28 FT. WET AT 17.9'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature H. L. Rexrode Jr. Date 6/30/92

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600029852
2. Site Well Number as shown on application or plans):	MW-8A
3. Well Completion Date:	06/24/92
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	33.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	14.5
7. Screen Length (or length of open hole) in feet:	18.5
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	17.9
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
15. Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

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SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600029852
2. Site Well Number (As shown on application or plans): MW-8A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 17.5" Latitude: North 40° 49' 54.8"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728136.2 East 587630.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 121.47
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW8A

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-18.9 Latitude: North 40-49-54.4

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 728365.9972 East 2141523.5897

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 122.22' (6" CIP)
Flange = 122.66' (OLD V), Ground Surface = 122.66' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

10/22/98

Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304822

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: ERIC BLOIS, JOURNEYMAN LICENSE # 592949

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: HOFFMANN LAROCHE TAX DEPT

Organization: Owner

Address: 340 Kingsland Street

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: 340 Kingsland Street

Address: 340 Kingsland Street

County: Essex Municipality: Nutley Twp Lot: 1 Block: 300

Easting (X): 587639 Northing (Y): 728143
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-8C

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 6

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 80

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 10, 2013
Expiration Date: April 10, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Plawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304822

WELL PERMIT

VIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201304822
2. Site Well Number as shown on application or plans):	MW-8C
3. Well Completion Date:	04/17/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	80
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	60
7. Screen Length (or length of open hole) in feet:	20
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
15. Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304822
2. Site Well Number (As shown on application or plans): MW-8C
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 17.6" Latitude: North 40° 49' 54.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728129.0 East 587616.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.30
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 426 Trenton, NJ 08625-0426 Tel: 609-984-6831

Well Permit Number
E201000872

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: WILLIAM ELLEFSEN, JOURNEYMAN LICENSE # 0001430

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: HOFFMAN LAROCHE

Organization: Hoffman LaRoche

Address: 340 Kingsland Street

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman LaRoche-Bldg 100

Address: 800 Bloomfield Avenue

County: Essex Municipality: Nutley Twp Lot: 1 Block: 300

Easting (X): 587167 Northing (Y): 728718
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-9A

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 6

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 30

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: February 1, 2010
Expiration Date: February 1, 2011

Approved by the authority of:
Mark Mauriello
Acting Commissioner

John Fields, Acting Bureau Chief
Bureau of Water Systems and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 426 Trenton, NJ 08625-0426 Tel: 609-984-6831

Well Permit Number
E201000872

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request.
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq.
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit.
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting.
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval.
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed.
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq.
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property.
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application.
This permit conveys no rights, either expressed, or implied to divert water.
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained.
This permit is NONTRANSFERABLE
This well shall not be used for the supply of potable / drinking water.

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201000872

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMAN LAROCHE

Company/Organization: Hoffman LaRoche

Address: 340 Kingsland Street Nutley, New Jersey 07110

WELL LOCATION: Hoffman LaRoche-Bldg 100

Address: 800 Bloomfield Avenue

County: Essex Municipality: Nutley Twp Lot: 1 Block: 300

Easting (X): 587701 Northing (Y): 728544
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: July 14, 2010

DATE WELL COMPLETED: July 20, 2010

WELL USE: MONITORING

Other Use(s):

Local ID: MW-9A

WELL CONSTRUCTION

Total Depth Drilled (ft.): 34 Finished Well Depth (ft.): 34 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	24	10		
Borehole	24	34	6		
Casing	0.3	24	6	Steel	19 lb/ft.
Screen					

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0.5	24	10	6	45	846	72
Gravel Pack							

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Air Rotary

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 20 ft. below land surface
Water Level Measure Tool: m-scope
Well Development Period: 1 hrs.
Method of Development: sub. pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: T3W
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: Brown OT - Other Grass and toposil
1 - 12: Red GP - Poorly graded gravels and gravel-sand mixtures, little or no fines
12 - 14: Red WR - Weathered Rock Weathered red sandstone
14 - 34: Red CR - Competent Rock Red sandstone

ADDITIONAL INFORMATION:

Driller of Record: William Ellefsen, JOURNEYMAN LICENSE # 0001430 Company: SBI ENVIRONMENTAL WELL DRILLING

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201000872
2. Site Well Number as shown on application or plans):	MW-9A
3. Well Completion Date:	07/20/2010
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	30
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	19.5
7. Screen Length (or length of open hole) in feet:	10.5
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	20
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	sub. pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

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2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201000872
2. Site Well Number (As shown on application or plans): MW-9A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 16.5" Latitude: North 40° 49' 58.8"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728544.2 East 587701.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 117.95
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 6-20-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

MW-10

DWR-133 (5/85)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

2611827 to 2611835

Permit No. 9 wells

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

PERMIT TO DRILL WELL 2

VALID ONLY AFTER APPROVAL BY THE D.E.P.

26.02,9 .28

Owner Hoffman-La Roche Facility
Address Nutley NJ

Driller Warren George Inc.
Address Ft. of Jersey Ave Jersey City NJ

Name of Facility Hoffmann-La Roche Facility
Address Rt. 3 Clifton NJ

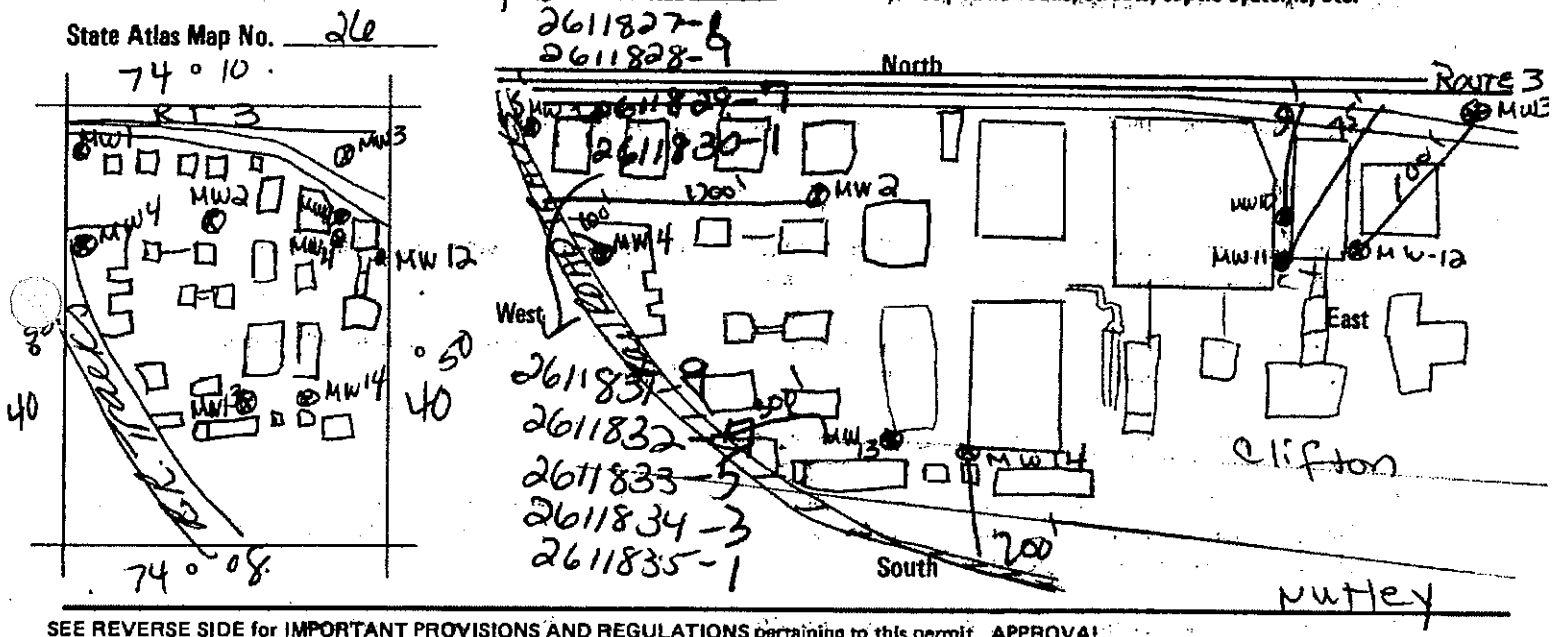
Diameter of Well	4" Inches	Proposed Depth of Well	35 Feet
Proposed Capacity of Pump	— GPM	Method of Drilling (cable-tool, rotary, etc.)	Rotary
Use of Well *(See Reverse)*	Monitoring		

LOCATION OF WELL

Lot #	Block #	Municipality	County
1	80-002	Clifton	Passaic

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____.
- ☐ **Domestic Potable Water Supply** - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ **Domestic Irrigation Supply** - No piping from the well for which the permit applies shall enter any building.
- ☐ **Industrial/Commercial Supply** - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ **Heat Pump Wells** - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
OCT 27 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 10/8/87

Signature of Owner Frank Gregory

COPIES: Water Allocation – White Health Dept. – Yellow Owner – Blue Driller – White

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26. 02. 928
PERMIT NO. 26118.31-9
APPLICATION NO. _____
COUNTY Passaic

WELL RECORD

1. OWNER Hoffman LaRoche ADDRESS Nutley, New Jersey
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Rt. 3 Clifton, New Jersey
3. DATE COMPLETED 10/27/87 DRILLER WARREN GEORGE, INC.
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 15' Feet
5. CASING: Type PVC Diameter 4" Inches Length 5' Feet
6. SCREEN: Type PVC Size of Opening _____ Diameter 4" Inches Length 10' Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log
14. DATA OBTAINED BY WARREN GEORGE, INC. Date 1/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600011831
2. Site Well Number as shown on application or plans):	MW-10
3. Well Completion Date:	10/27/1987
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14.8
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4.8
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.6
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

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2. Site Well Number (As shown on application or plans): MW-10
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 12.3" Latitude: North 40° 50' 03.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729045.7 East 588022.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.46
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

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   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
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SEAL

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

ling Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW10

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-13.8 Latitude: North 40-50-03.4

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729276.3043 East 2141914.4930

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 119.38' (4" PVC)
Flange = 120.09' (NEW X) , Ground Surface = 120.07' (PAVE)

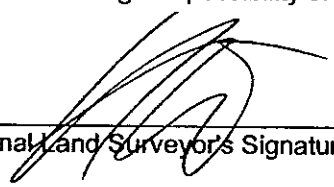
Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



10/22/98

Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

JOB LOCATION:
Hoffman LaRoche
Nutley, N.J.

WARREN GEORGE. INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

FOR: ERM North east 26.02.928 26.11831-9

SHEET 1 OF 1
LOCATION Nutley, N.J.
HOLE NO. MW-10
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 10/26/87
DATE, FINISH: 10/27/87

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. ____ I.D. ____
SAMPLER O.D. 2" I.D. ____
DIAMOND BIT SIZE ____

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER 30"

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-2'	Blacktop, Stone
									2'-8'6"	Red brown medium to fine Sand
10									8'6"-15'	Red Shale
										END OF HOLE 15'
										Note: Well set at 15'
20										
30										
40										

Environmental Resources Management

Drilling Log

Project Hoffmann-LaRoche Owner Same

Location Nutley, NJ W.O. Number 137-03

Well Number MW-10 Total Depth 15 Diameter 4 in.

Surface Elevation 120 Water Level: Initial 5.6 ft. 24-hrs. 6.24 ft.

Screen: Dia. 4 in. Length 15 ft. Slot Size .020

Casing: Dia. 4 in. Length 4.8 ft. Type Flush PVC

Drilling Company Warren George Drilling Method MUD Rotary

Driller Mike K. Log By M. Cody Date Drilled 10/27/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
				BLACKTOP 0 - 4"
5			1	SAND 5 - 6.5' reddish brown fine to coarse sand with clays, silts, and gravels
				SHALE 8.5' reddish brown shale, strong medicinal (vitamin) odor
10				
15				
				Gravel Pack: 15.0'-4.0' Pellet Seal: 4.0'-2.0' Cement: 2.0-0'

MW-12

DWR-133 (5/85)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

2611827 to 2611835

Permit No. 9 wells

Mail to
Water Allocation
CN 029
Trenton, N.J. 08625

PERMIT TO DRILL WELL 2

VALID ONLY AFTER APPROVAL BY THE D.E.P.

26.02,9 .28

Owner Hoffman-LaRoche Facility
Address Nutley NJ

Driller Warren George Inc
Address Ft. of Jersey Ave
Jersey City NJ

Name of Facility Hoffmann-LaRoche Facility
Address Rt. 3 Clifton NJ

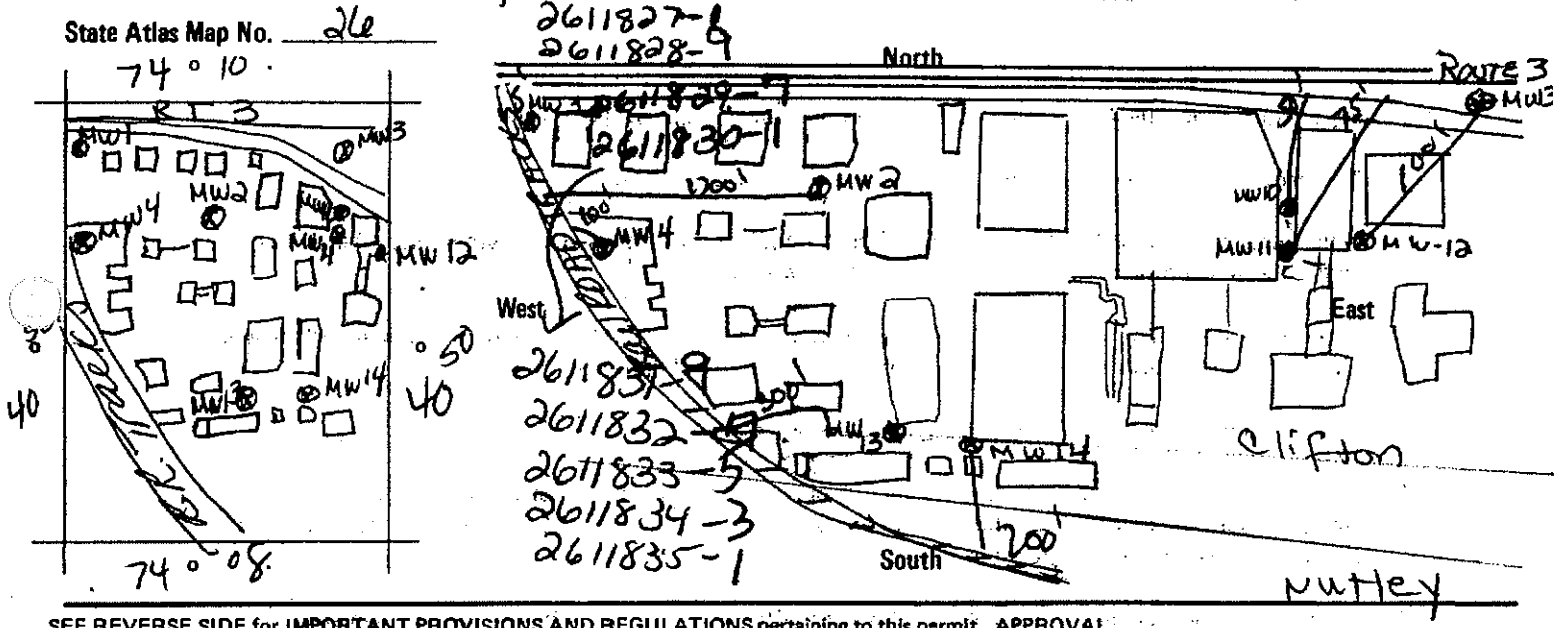
Diameter of Well	4" *Inches*	Proposed Depth of Well	35 *Feet*
Proposed Capacity of Pump	— *GPM*	Method of Drilling *(cable-tool,rotary,etc.)*	Rotary
Use of Well *(See Reverse)*	Monitoring		

LOCATION OF WELL

Lot #	Block #	Municipality	County
1	80-002	Clifton	Passaic

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____.
- ☐ **Domestic Potable Water Supply** - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ **Domestic Irrigation Supply** - No piping from the well for which the permit applies shall enter any building.
- ☐ **Industrial/Commercial Supply** - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ **Heat Pump Wells** - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
OCT 27 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 10/8/87

Signature of Owner Frank Gregory

COPIES: Water Allocation – White Health Dept. – Yellow Owner – Blue Driller – White

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26.02.928
PERMIT NO. 26118335
APPLICATION NO. _____
COUNTY Passaic

WELL RECORD

1. OWNER Hoffman LaRoche ADDRESS Nutley, New Jersey
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION RT 3 Clifton, New Jersey.
3. DATE COMPLETED 11/10/87 DRILLER WARREN GEORGE INC
4. DIAMETER: Top 6" inches Bottom _____ inches TOTAL DEPTH 58' Feet
5. CASING: Type 6" - 15' Steel Pipe. Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log
14. DATA OBTAINED BY WARREN GEORGE, INC. Date 1/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	2600011833
2. Site Well Number as shown on application or plans):	MW-12
3. Well Completion Date:	11/10/87
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	50.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	15.0
7. Screen Length (or length of open hole) in feet:	35.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	28
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600011833
2. Site Well Number (As shown on application or plans): MW-12
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 11.0" Latitude: North 40° 50' 02.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728879.4 East 588120.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 145.13
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW12

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-12.5 Latitude: North 40-50-01.7

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729110.0736 East 2142012.3466

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 165.98' (6" CIP)
Flange = 166.32' (OLD V) , Ground Surface = 166.30' (SOIL)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

10/22/98

Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

Environmental Resources Management

Drilling Log

Project Hoffmann-LaRoche Owner Same

Location Nutley, NJ W.O. Number 137-03

Well Number MW-12 Total Depth 50 Diameter 5 in.

Surface Elevation 146 Water Level: Initial 28 ft. 24-hrs. 18 ft.

~~Screen~~ Hole: Dia. 5 7/8" Length 35' Slot Size Open Hole

Casing: Dia. 6 in. Length 15 ft.± Type Steel

Drilling Company Warren George Drilling Method Mud Rotary

Driller Mike K. Log By A. Jaroszewski Date Drilled 11/9/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number		Description/Soil Classification (Color, Texture, Structures)
0					ASPHALT; 0 - 5"
			1	7,9,12 8"	FILL .5 - 7' gray to green poorly sorted fine to medium sand; trace of silt; moist
5					
10			2		SILT 7' - 10.5' reddish brown silt and clay, embedded with little fine to coarse gravel SHALE 10.5' alternating layers of competent to moderately competent shale fracture at 42'

JOB LOCATION:
Hoffman LaRoche
Nutley, N.J.

WARREN GEORGE. INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

FOR: ERM North east 26.02.928 2611833-7

SHEET 1 OF 2
LOCATION Nutley, N.J.
HOLE NO. MW-12
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 11/9/87
DATE, FINISH: 11/10/87

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. 6" I.D.
SAMPLER O.D. 2" I.D.
DIAMOND BIT SIZE 10"- 5½"

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER 30"

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST. MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-2'	Blacktop, Stone
									2'-8'	Cinder fill
									8'-10'	Red Glacial Till
10										
20										
30										
40										

MW-13

DWR-133 (5/85)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

2611827 to 2611835

Permit No. 9 wells

Mail to

Water Allocation
CN 029
Trenton, N.J. 08625

PERMIT TO DRILL WELL 2

VALID ONLY AFTER APPROVAL BY THE D.E.P.

26.02,9 .28

Owner Hoffman - La Roche Facility
Address Nutley NJ

Driller Warren George Inc.
Address 1 St. of Jersey Ave. Jersey City NJ

Name of Facility Hoffmann-La Roche Facility
Address Rt. 3 Clifton NJ

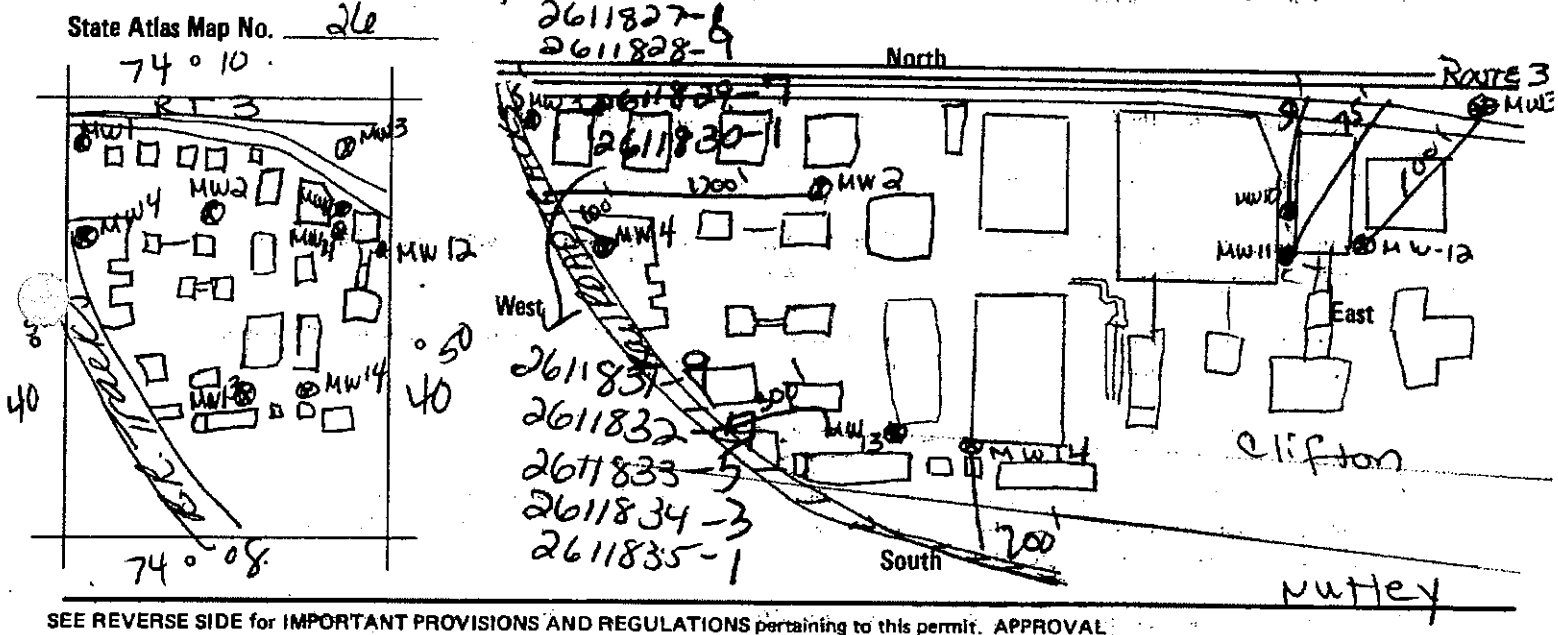
Diameter of Well	4" Inches	Proposed Depth of Well	35 Feet
Proposed Capacity of Pump	— GPM	Method of Drilling (cable-tool, rotary, etc.)	Rotary
Use of Well (See Reverse)	Monitoring		

LOCATION OF WELL

Lot #	Block #	Municipality	County
1	80-002	Clifton	Passaic

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____.
- ☐ **Domestic Potable Water Supply** - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ **Domestic Irrigation Supply** - No piping from the well for which the permit applies shall enter any building.
- ☐ **Industrial/Commercial Supply** - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ **Heat Pump Wells** - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
OCT 27 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 10/8/87

Signature of Owner Frank Gregory

COPIES: *Water Allocation — White* *Health Dept. — Yellow* *Owner — Blue* *Driller — White*

Form DWR-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD: 26.02.928
PERMIT NO. 26118 34-3
APPLICATION NO. _____
COUNTY Passaic

WELL RECORD

1. OWNER Hoffman La Roche ADDRESS Nutley, NJ
   Owner's Well No. _____ SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION RT. 3 Clifton, New Jersey
3. DATE COMPLETED 11/12/87 DRILLER WARREN GEORGE, INC.
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 15' Feet
5. CASING: Type PVC Diameter 4" Inches Length 5' Feet
6. SCREEN: Type PVC Size of Opening _____ Diameter 4" Inches Length 10' Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
   RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log
14. DATA OBTAINED BY WARREN GEORGE, INC. Date 1/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated,

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600011834
2. Site Well Number as shown on application or plans):	MW-13
3. Well Completion Date:	11/12/87
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14.3
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4.3
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.0
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600011834
2. Site Well Number (As shown on application or plans): MW-13
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 25.1" Latitude: North 40° 50' 06.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729332.2 East 587038.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 116.44
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 6-18-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

JOB LOCATION:
Hoffman LaRoche

Nutley, N.J.

WARREN GEORGE, INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

FOR: ERM North east 26.02.928 2611834-5

SHEET 1 OF 1
LOCATION Nutley, N.J.
HOLE NO. MW-13
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 11/12/87
DATE, FINISH: 11/12/87

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. ____ I.D. ____
SAMPLER O.D. 2" I.D. ____
DIAMOND BIT SIZE 7-3/4"

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER 30"

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTHS ELEV. / FEET	SAMPLE RECOVERY	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-2'	Blacktop, Stone
10									2'-14'	Miscellaneous construction Rubble, Wood, Concrete, Brick
									14'-15'	Red GLacial Till
20										END OF HOLE 15'
30										Note: Well set at 14'6"

Environmental Resources Management

Drilling Log

Project: Hoffmann-LaRoche Owner: Same

Location: Nutley, NJ W.O. Number: 137-03

Well Number: MW-13 Total Depth: 14.5 Diameter: 4"

Surface Elevation: 118 Water Level: Initial: 5.0 24-hrs.: 4.6

Screen: Dia.: 4" Length: 10' Slot Size: .020"

Casing: Dia.: 4" Length: 4.3' Type: Flush PVC

Drilling Company: Warren George Drilling Method: Mud Rotary

Driller: Mike K. Log By: M. Cody Date Drilled: 11/12/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0				Blacktop surface
				Construction debris within a sand/silt/clay matrix
	F			
	I			
	L			
5	L			
			S-1	B.C. 13-19-22
			S-2	Dr./Rec: 18"/0" Medium-Coarse Sands
	S			
10	A			
	N		S-3	B.C. 20-22-26 Medium-Coarse Sands in tip of split spoon
	D			Dr./Rec: 18"/0"
				14': Water Loss
15				Till-like materials 14-16'
				B.C. - 100/6" Wood Fragments in tip of split spoon
	S			SHALE 17.0'
	H			
	A			
20	L			
	E			

SERIAL # 00 / 00 /

DWR-133M (10/96) MW-14A

16

2651888
2651889

Mail to

NJDEP
Bureau Water Allocation
CN 426
...nton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

Permit No.

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.02.973

Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
NUTLEY NJ 07110-1199

Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

Name of Facility
Address SAME

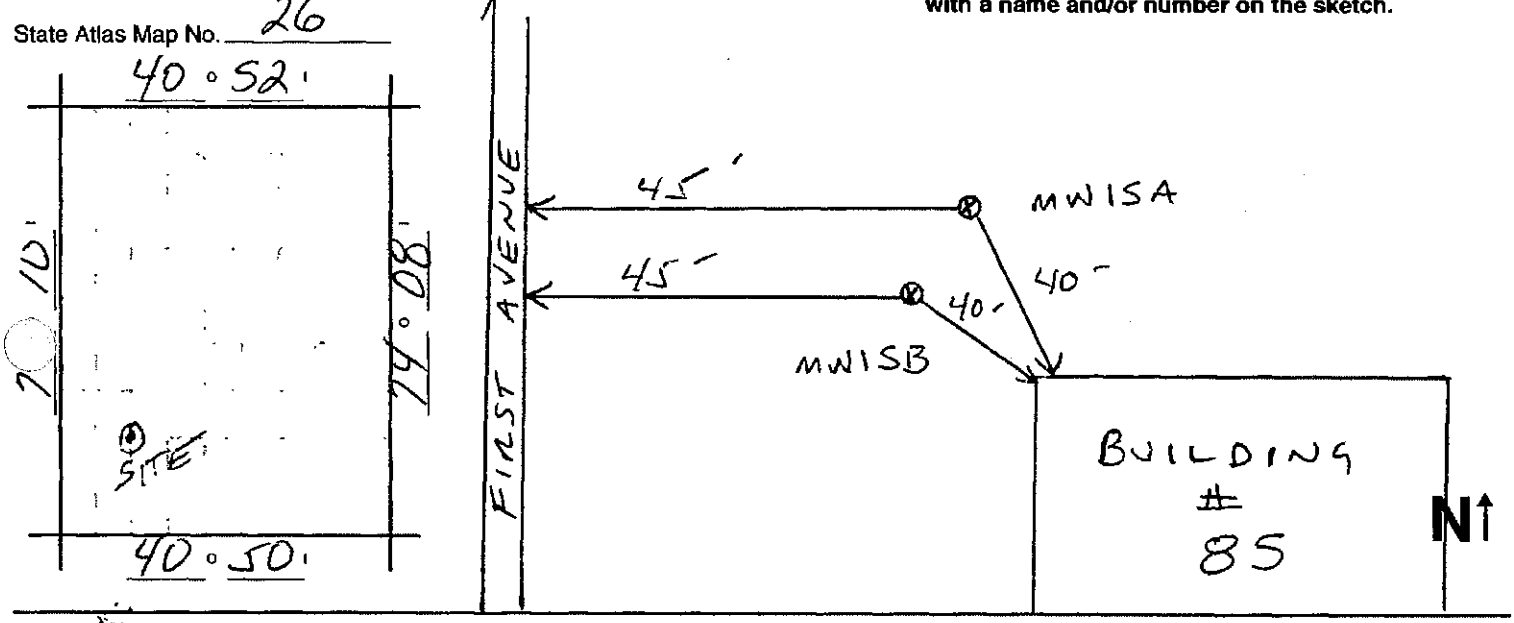
Diameter of Well(s) 2, 6 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
SEP 8 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE
- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐

☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

...mpliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98 Signature of Driller Carmine DeLorso Registration No. J1210

TRC

Signature of Owner Charles Foster MS

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 43992
Atlas Sheet Coordinates 26 : 02 : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-14R
County PASSAIC Municipality CLIFTON CITY Lot No. 1 & 4 Block No. 00.02
Address 240 KINGSLAND ST Date well started 3/18/96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/18/96
Regulatory Program Requiring Well MEMO OF AGREEEMENT Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Hofter Tele. # (508) 656-3625

WELL CONSTRUCTION

Total depth drilled 17.5 ft.
Well finished to 17 ft.
Borehole diameter: Top 8 in. Bottom 8 in.
Well was finished: ☐ above grade ☑ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.) (From land surface)	Diameter (inches)	Type and Material
Inner Casing	0	7	2	SCH 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	7	17	2	SCH 40 PVC .020
Tail Piece	—	—	—	—
Gravel Pack	5	17.5	8	No. 2 Morie
Annular Seal/Grout	0	5	8	
Method of Grouting	Tremie Grouted			

Static water level after drilling 13.8 ft.
Water level was measured using Tape
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method HSA
Drilling Fluid NONE Type of Rig MOBILE B-61 HOX
Name of Driller S. Wolf
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. Registration No. 20 1579 H. LEONARD REXRODE, JR.
Name of Drilling Company AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

MW-14R.
0 - 17.5 REDDISH BROWN SILTY SAND AND CLAY WET @ 13.8 FT.
17.5 BEDROCK - RED SHALE

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature [signature] Date 6/5/96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600043992
2. Site Well Number as shown on application or plans):	MW-14A
3. Well Completion Date:	03/18/1996
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	17.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	7.5
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	13.8
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Pump & Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600043992
2. Site Well Number (As shown on application or plans): MW-14A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 23.9" Latitude: North 40° 50' 05.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729232.4 East 587134.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.59
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW14A

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-25.3 Latitude: North 40-50-05.2

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729461.3782 East 2141025.5306

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.72' (2" PVC) Flange = 116.07' (OLD V) , Ground Surface = 116.07' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

TRC

Soil Boring Log

Project/Client Hoffmann LaRoche Sewer	**Project No.** 20447-0100-00000	**Boring No.** MW-14A	**Sheet** 1 of 2
		Well No.	
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman ADT/ S. Wolf	**Drill Rig Make/Model** Mobile B-61	**Auger/Drive Casing Size/Type** Auger
Sampler Description Cuttings Monitored	**Drilling Method** HSA	**Coordinates** X= Y=
Filter Seal Amount/Type: 2ft Bentonite/Cement	**Drill Bit/Auger Diameter:** 4.75 Inches	**Ref. El.:**
Sand Pack Amount/Type: 12ft/ #2 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: 10ft/ 2" 20 Slot PVC	**Water Table Depth:** 12 ft	**Surface Elevation:**
Riser Length/Type: 7.5ft/ 2" Sch 40 PVC	**Total Depth:** 17.5 ft	**Date Start:** 3/18/96 **Date Finish:** 3/18/96

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Stratigraphic Description	Field Testing	Lab Sample Number	Well Construction
1				6 inches Asphalt and Concrete. Red-brown fine to coarse SAND and SILT, some fine to medium gravel to 17.5 ft.				
2								
3								
4								
5								
6								
7								
8								
9								
10								
11					▼			
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) Refusal on bedrock.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-14A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	_2_ of _2_
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15				End of boring.				
16								
17								
18								
19								
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

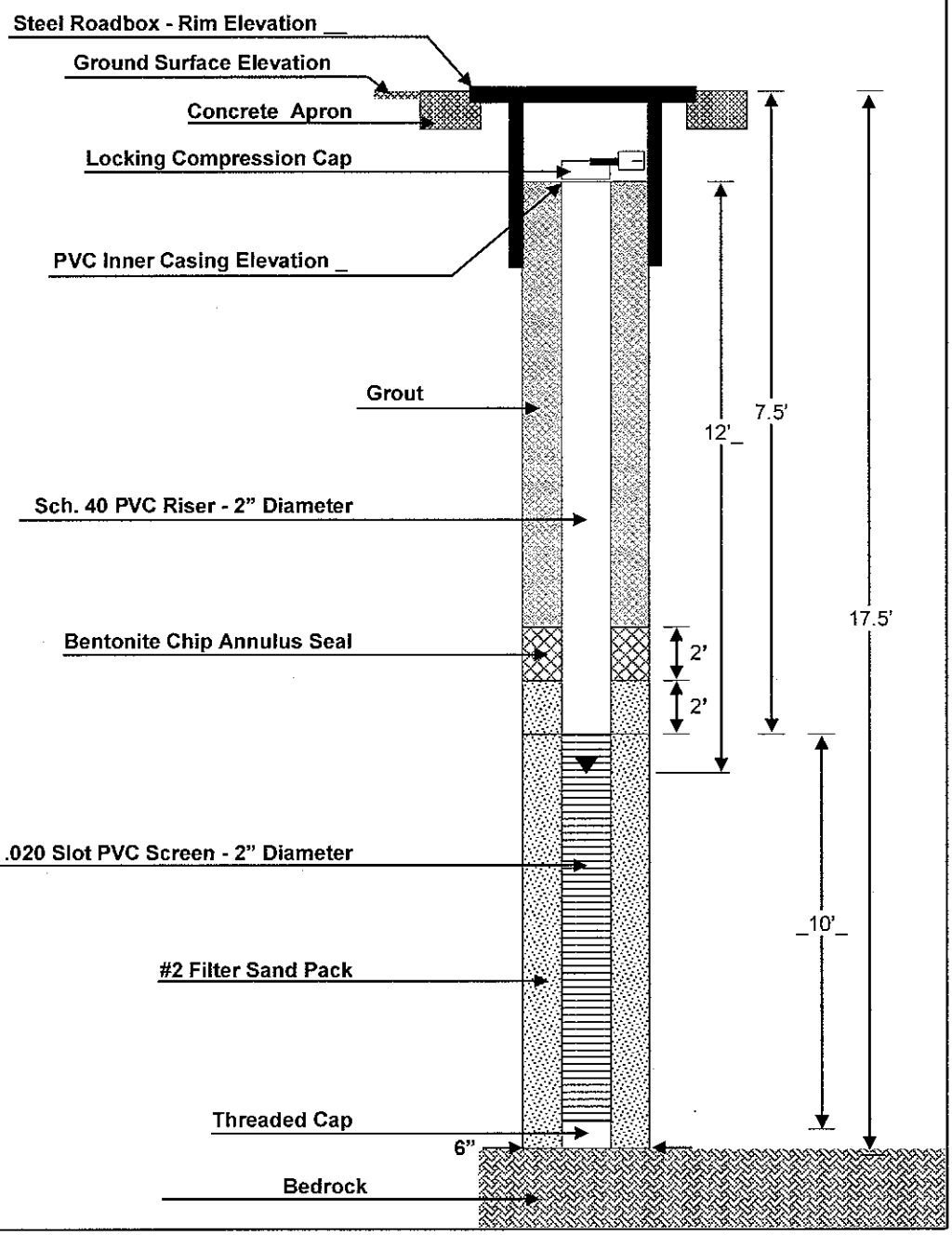
TRC

Flush Mount Overburden Monitoring Well Construction Log

Well No. MW- 14A

Project: Hoffmann LaRoche Sewer **No.:** 204470100
Client: Peter Jeuck **Date Completed:** 3/19/96
Location: NW Corner of Building 34
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 115.7
Reference Description: PVC Riser
NJDEP Permit No.: 26 43992
Development Date: 3/16/96
Development Method: Pump & Surge



AF-376

SERIAL # UU1UU1

DWR-133M (10/96)

MW-15A

10

2651888
2651889

Permit No.

Mail to

NJDEP
Bureau Water Allocation
CN 426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.02.973

Owner HOFFMAN LAROCHE

Address 340 KINGSLAND ST.
NUTLEY NJ 07110-1199

Name of Facility SAME

Address

Driller **Summit Drilling Co., Inc.**

Address **Central Jersey Industrial Park**
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

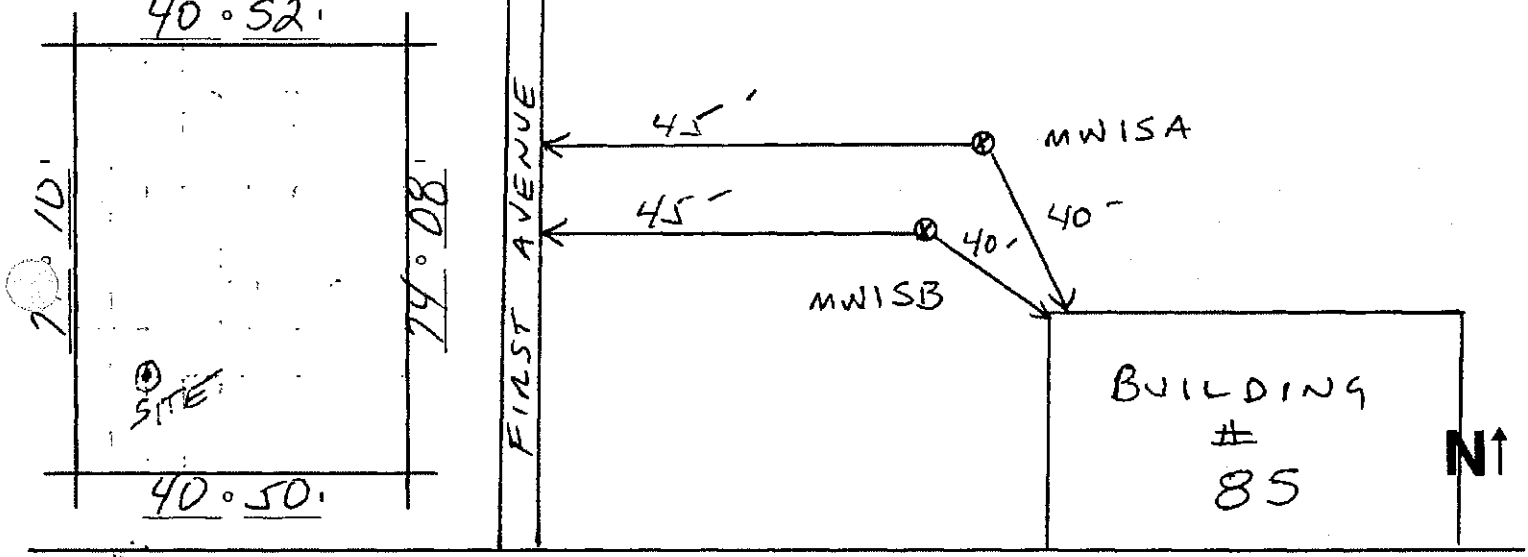
Diameter of Well(s) 2, 6 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

Compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98

Signature of Driller Carmine Delosa Registration No. J1210

TRC

Signature of Owner Charles Foster (MS)

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

GWR-1 (rev 9/98)
(1/99)

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. [illegible]

Map Sheet Coordinates [illegible]

OWNER IDENTIFICATION - Owner [illegible]
Address [illegible]
City [illegible] State [illegible] Zip Code [illegible]

WELL LOCATION - If not the same as owner address - Owner's Well No. [illegible]
County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address [illegible]

Date Well Started [illegible]
DATE Well COMPLETED [illegible]

Type of Well (as per Well Permit Categories) [illegible]
Regulatory Program Requiring Well [illegible] Closed ID # [illegible]

CONSULTING FIRM WELL SURVEYED (if applicable) [illegible] Year [illegible]

WELL CONSTRUCTION

Total depth drilled [illegible] ft.
Well finished to [illegible] ft.

Borehole diameter:
Top [illegible] in.
Bottom [illegible] in.

Well was finished: ☐ above grade
☐ flush mounted

If finished above grade, casing height (stick-up) above land surface [illegible] ft.

Was steel protective casing installed? ☐ Yes ☐ No

Static water level after drilling [illegible] ft.

Water level was measured using [illegible]

Well was developed for [illegible] hours
at [illegible] gpm

Method of development [illegible]

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity [illegible] gpm

Pump type [illegible]

Drilling Fluid [illegible] Type of Rig [illegible]

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one): None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) [illegible]

Driller's Signature [illegible]

Registration No. [illegible] Date [illegible]

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wall Thickness (Schedule No.)
Surface Casing	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Riser Casing (for single cased wells only)					
Outer Casing (Telescoped Casing)					
Open Hole or Screen (No. Used [illegible])	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Riser Casings (No. Used [illegible])					
Tail Piece					
Grout Plug	[illegible]	[illegible]		[illegible]	
Other	[illegible]	[illegible]		Used Cement Bentonite	[illegible] lbs. [illegible] lbs.

Grouting Method [illegible]
Drilling Method [illegible]

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

[illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600051888
2. Site Well Number as shown on application or plans):	MW-15A
3. Well Completion Date:	10/01/1998
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	14
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pump & Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600051888
2. Site Well Number (As shown on application or plans): MW-15A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 21.2" Latitude: North 40° 50' 01.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728829.9 East 587340.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 109.24
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 6-20-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility: Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW15A

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-22.7 Latitude: North 40-50-01.3

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729059.1928 East 2141232.3980

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): Could not be determined Flange = 110.55' (NEW X), Ground Surface = 110.52' (SOIL)

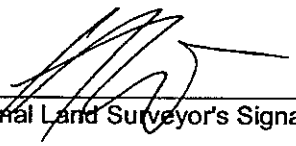
Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: Filled with water, could not accurately identify casing

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



10/22/98

Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

TRC

Soil Boring Log

Project/Client Hoffmann LaRoche Sewer	**Project No.** 20447-0100-00000	**Boring No.** MW-15A	**Sheet** 1 of 2
		Well No.	
Location Description Nutley, NJ		**TRC Geologist** C. Foster	
Drilling Contractor/Foreman Summit Inc./ Pedro Vega	**Drill Rig Make/Model** Mobile B-80	**Auger/Drive Casing Size/Type** 6 Inch Air Hammer	
Sampler Description 2 Foot Split-Spoon	**Drilling Method** Air Rotary	**Coordinates** X= Y=	
Filter Seal Amount/Type: 2ft Bentonite/Cement	**Drill Bit/Auger Diameter:** 6 Inches	**Ref. El.:**	
Sand Pack Amount/Type: 12ft/ #1 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush	
Screen Length/Type: 10ft/ 2" 20 Slot PVC	**Water Table Depth:** 11.26 ft	**Surface Elevation:**	
Riser Length/Type: 5ft/ 2" Sch 40 PVC	**Total Depth:** 15 ft	**Date Start:** 10/1/98	**Date Finish:** 10/1/98

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				Brown organic topsoil and roots. Red-brown fine SAND and SILT, trace clay.				
2								
3								
4								
5				Red-brown fine SAND and SILT, trace fine gravel.				
6								
7								
8								
9								
10				Red-brown fine SAND and SILT, trace fine gravel. Light brown, well sorted, fine SAND.				
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) 2 Inch PVC screen installed from 15 up to 5 feet.
2.) Sand pack installed from 15 up to 3 feet.
3.) Bentonite seal installed from 3 up to 1 foot.
4.) Cemented Manhole installed to 1 foot.
5.) Overburden descriptions repeated from MW-15B exploration.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-15A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	_2_ of _2
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15				Cylindrical shale fragments from driven spoon. Spoon refusal at 15.3ft.				
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Flush Mount Overburden Monitoring Well Construction Log

Well No. MW- 15A

Project: Hoffmann LaRoche Sewer **No.:** 204470100

Client: Peter Jeuck **Date Completed:** 10/1/98

Location: Southwest corner of lawn west of building 123

Drilling Contractor: Summit **Method:** Air Rotary

TRC Geologist: Charles Foster

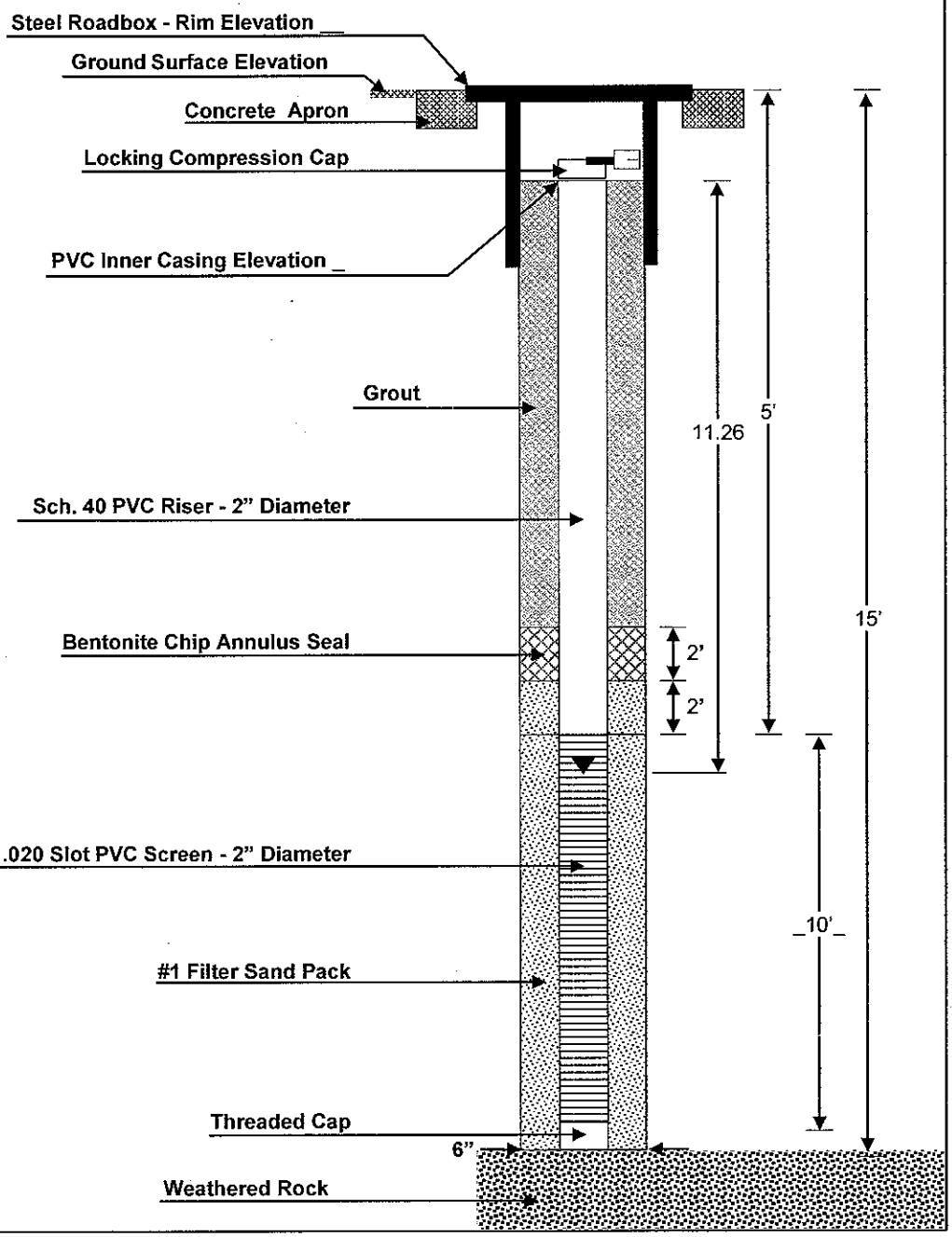
Reference Elevation: 110.62

Reference Description: Top of PVC Riser

NJDEP Permit No.: 26 51888

Development Date: 10/5/98

Development Method: Pump & Surge



AF-376

SERIAL # UU/UU1 MW-1SB

DWR-133M (10/96)

Mail to

NJDEP
Bureau Water Allocation
CN 426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

10

2651888
2651889

Permit No. _____

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.02.973

Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
NUTLEY NJ 07110-1199

Name of Facility SAME
Address

Driller **Summit Drilling Co., Inc.**
Address **Central Jersey Industrial Park**
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

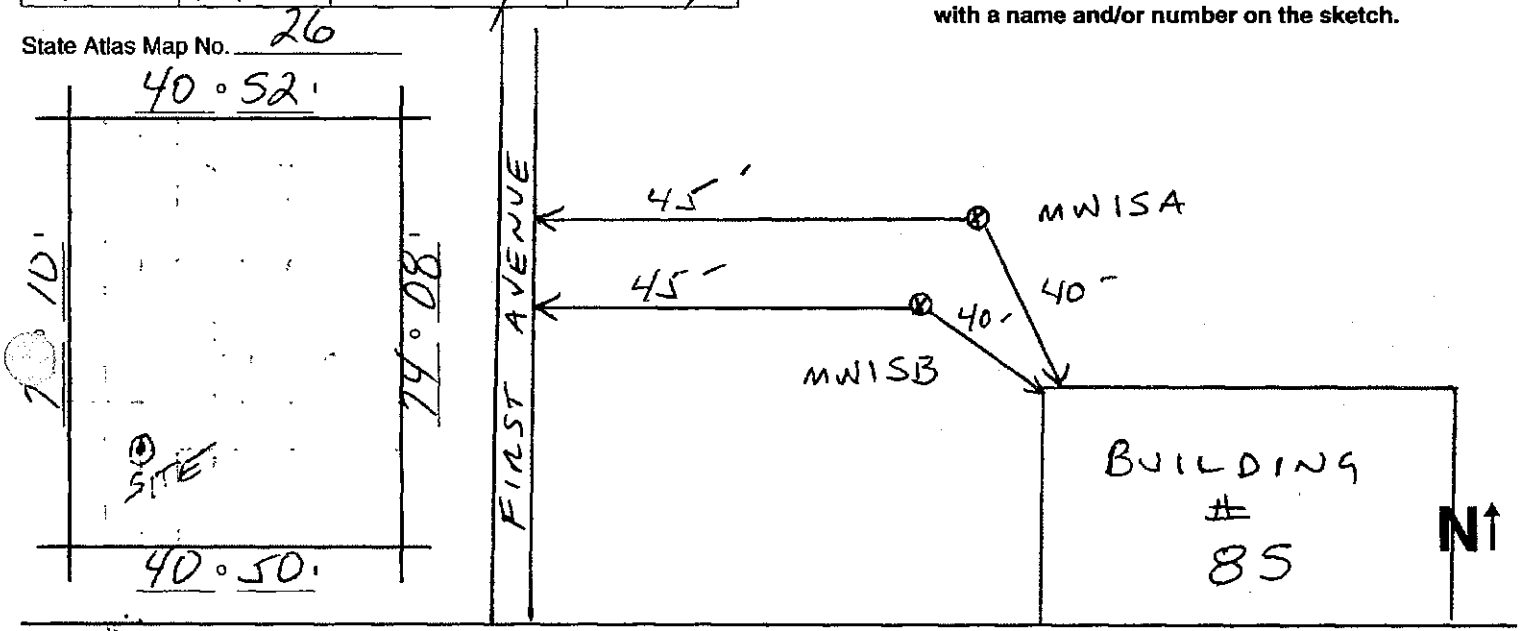
Diameter of Well(s) 2, 6 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐ _____
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98

Signature of Driller Carmine Delosa Registration No. 51210

TRC

Signature of Owner Charles Foster MS

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. [illegible]

Atlas Sheet Coordinates [illegible]

OWNER IDENTIFICATION - Owner [illegible]
Address [illegible]
City [illegible] State [illegible] Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW15B
County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address [illegible]

DATE WELL STARTED [illegible]
DATE WELL COMPLETED [illegible]

TYPE OF WELL (as per Well Permit Categories) [illegible]
Regulatory Program Requiring Well [illegible] Case I.D.# [illegible]

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) [illegible] Title #

WELL CONSTRUCTION

Total depth drilled 21 ft.
Well finished to 21 ft.

Borehole diameter:
Top 6 in.
Bottom 6 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ___ ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 15 ft.

Water level was measured using [illegible]

Well was developed for 4 hours at [illegible] gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sec/ft.)
Single/Inner Casing	0	20	6	Steel	[illegible]
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	20	21		Open hole	
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0	20		Neat Cement / Bentonite	[illegible] lbs / [illegible] lbs

Grouting Method [illegible]
Drilling Method [illegible]

Method of development [illegible]

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ___ gpm

Pump type ___

Drilling Fluid ___ Type of Rig [illegible]

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None ⓑ C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) [illegible]

Driller's Signature [illegible]

Registration No. [illegible] Date [illegible]

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

[illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600051889
2. Site Well Number as shown on application or plans):	MW-15B
3. Well Completion Date:	10/05/1998
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	30.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	20.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open Hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	3
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	15
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pump & Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

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County: Essex Zip Code: 07110

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4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728836.9 East 587343.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 109.71
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

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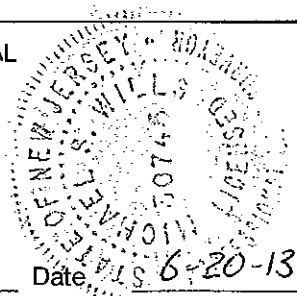
SEAL



Professional Land Surveyor's Signature: Date 6-20-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Rock Core Log

Project: Hoffmann LaRoche	**Project No.** 20447-0100-00000	**Date/Time** 10/05/98 0920	**Sheet** 1 **of** 1
Contractor Personnel: Summit Inc.		**TRC Personnel:** Charles Foster	
Boring/Well Number: MW-15B	**Driller/Equipment:** Mobile B-80, NQ/NX	**Elevation:** **Orientation:** **Time Start:** **Time Finish:**	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
	3 min/ft	20-30' 92.5 %		5	65.8 %	8		Majority of bedded sandstone with horizontal and few high angle fractures.	
21	2 min, 30sec/ft		X			5			
22	2 min, 30sec/ft					3			
23	2 min /ft					3		Filled with quartz, mineralization water bearing zone..	
24	2 min , 30sec/ft					2			
25	3 min/ft					3			
26	2 min, 30sec/ft					3			
27	3 min/ft					3			
28	3 min, 30sec/ft					3		Change to shale at bottom, high angle calcified fracture.	
29	2 min, 30sec/ft					3			
30									

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-15B	Sheet
Hoffmann LaRoche Sewer	20447-0100-00000	Well No.	1 of 2
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
Summit Inc./ Pedro Vega	Mobile B-80	Auger

Sampler Description	Drilling Method	Coordinates
NX Rock Coring	Air Rotary/ Coring	X= Y=
Filter Seal Amount/Type: 6 Inch Grouted Casing	**Drill Bit/Auger Diameter:** 9 7/8 Inches	**Ref. El.:**
Sand Pack Amount/Type: NA	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: 3 Inch Open Hole	**Water Table Depth:** 8 ft	**Surface Elevation:**
Riser Length/Type: NA	**Total Depth:** 31 ft	**Date Start:** 10/1/98 **Date Finish:** 10/1/98

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
	S-1	10		Brown organic topsoil and roots, trace asphalt, fill.				
1		7						
		8		Red-brown fine SAND and Silt, trace clay.				
2		8						
				Styrofoam in cuttings.				
3								
4								
5								
	S-2	3		Red-brown fine SAND and SILT, trace fine gravel.				
6		4						
		4						
7		4						
8								
9								
10								
	S-3	5		8 Inches Red-brown fine SAND and SILT, trace fine gravel.				
11		12						
		9		8 Inches light brown, well sorted fine SAND, wet.				
		9						
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) Refusal on bedrock.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-15B	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	_2_ of _2
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15				Cylindrical shale fragments from driven spoon. Spoon refusal at 15.3ft.				
16								
17								
18								
19								
20				Rock core from 20-30feet.				
21				Horizontally bedded Red-brown sandstone with some quartz, mineralization in water bearing fractures.				
22								
23								
24								
25								
26								
27				Red-brown Shale, horizontally bedded with few weathered fractures.				
28								
29								
30				Red-brown Shale with a high angle calcified fracture.				
31								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

MW-16

CNR-133 (5/86)

Mail to

Water Allocation
CN 029
Trenton, N.J. 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

Permit No. 26l 2044-5
1 well

PERMIT TO DRILL WELL OF

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26. 12.3.25

Owner Hoffman - LaRoche Facility
Address Nutley, NJ

Driller Warren George, Inc.
Address P.O. Box 413
Jersey City, NJ 07303

Name of Facility Hoffman-LaRoche Facility
Address RT. 3 Clifton, NJ

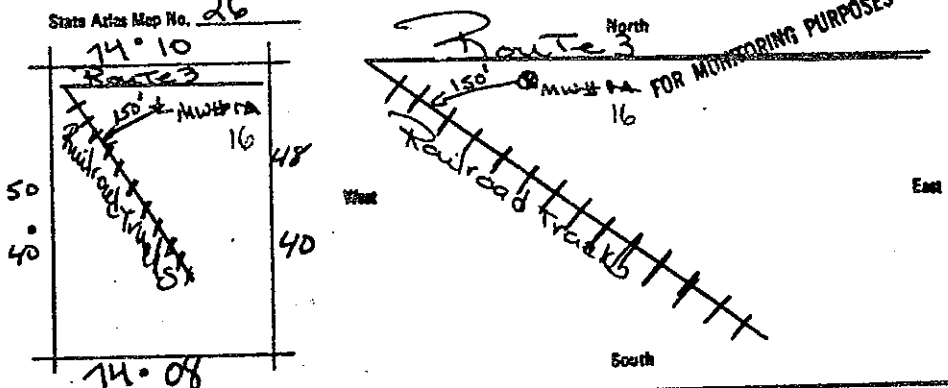
Diameter of Well	3" Inches	Proposed Depth of Well	35' Feet
Proposed Capacity of Pump	— GPM	Method of Drilling (cable-tool, rotary, etc.)	Stony
Use of Well (See Reverse)	Monitoring		

LOCATION OF WELL

Lot #	Block #	Municipality	County
1	80.002	Clifton	Passaic

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to the permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4' in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan must be obtained prior to using the water and submitted to _____.
- ☐ Domestic Potable Water Supply - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ Domestic Irrigation Supply - No piping from the well for which the permit applies shall enter any building.
- ☐ Industrial/Commercial Supply - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ Heat Pump Wells - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
DEC 02 1987

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date November 30, 1987

Signature of Owner _____

COPIES: Water Allocation – White Health Dept. – Yellow Owner – Blue Driller – White

Form DEP-138A
10/87

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

COORD Le 12.3.25
PERMIT NO. 26120005
APPLICATION NO. _____
COUNTY Passaic

WELL RECORD

1. OWNER Hoffman / La Roche ADDRESS Nutley, NJ
   Owner's Well No. MW-16 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION RT. 3 Clifton, NJ
3. DATE COMPLETED 11/5/87 DRILLER Warren George
4. DIAMETER: Top 4" inches Bottom 4" inches TOTAL DEPTH 95" Feet
5. CASING: Type PVC Diameter 4" Inches Length 41 Feet
6. SCREEN: Type PVC Slot of Opening _____ Diameter 4" Inches Length 40' Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet Geologic Formation _____
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log
14. DATA OBTAINED BY WARREN GEORGE, INC. Date 1/28/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600012044
2. Site Well Number as shown on application or plans):	MW-16
3. Well Completion Date:	11/05/87
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	13.8
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	3.8
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	6.0
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

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3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600012044
2. Site Well Number (As shown on application or plans): MW-16
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 28.3" Latitude: North 40° 50' 16.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 730345.7 East 586785.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.38
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

THIS FORM MUST BE COMPLETED BY THE PERMITTEE OR HIS/HER AGENT

GROUND WATER MONITORING WELL CERTIFICATION-FORM B-LOCATION CERTIFICATION

Name of Permittee: Hoffmann-La Roche Inc.
Name of Facility: Same As Above
Location: 340 Kingsland Street, Nutley, New Jersey
NJPDES Number: Not Applicable

LAND SURVEYOR'S CERTIFICATION

Well Permit Number (As assigned by NJDEP's Bureau of Water Allocation): 2 6 - 1 2 0 4 4 - 5
This number must be permanently affixed to the well casing.
Datum NAD 27
Longitude (one-tenth of a second): West 74°-09'-29.8"
Latitude (one-tenth of a second): North 40°-50'-16.3"
Elevation of Top of Casing (cap off) (one-hundredth of a foot): WC= 121.64/PVC= 121.46/GRD= N/A
Owners Well Number (As shown on application or plans): MW-16

BENCHMARK - Monument 6690 Elevation 79.106'

DATE OF SURVEY - February 1992

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Paul J. Emilius
PROFESSIONAL LAND SURVEYOR'S SIGNATURE

Paul J. Emilius
PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type)

SEAL

New Jersey P.L.S. License No. 11363
PROFESSIONAL LAND SURVEYOR'S LICENSE #

The Department reserves the right in cases of violation of permit specified ground water limits or Ground Water Quality Standards (N.J.A.C. 7:9-6.1 et seq. to require that wells be resurveyed to an accuracy of one-hundredth of a second latitude and longitude. This shall not be considered to be a major modification of the NJPDES permit.

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW16

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-29.8 Latitude: North 40-50-16.3

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 730574.1659 East 2140676.8958

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 121.15' (4" PVC) Flange = 121.35' (OLD X) , Ground Surface = 121.32' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

MW-16

26.12.3.85

WARREN GEORGE. INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

FOR: ERM North east

JOB LOCATION: Hoffman LaRoche, Nutley, N.J.

SHEET 1 OF 1
LOCATION Nutley, N.J.
HOLE NO. MW-16
LINE & STA.
OFFSET

DEPTH ____ FT. ____ FT. CASING OUT DATE: ____
DEPTH ____ FT. ALL CASING OUT DATE: ____

DATE, START: 11/4/87
DATE, FINISH: 11/9/87

GROUND ELEVATION
GROUND WATER ELEVATION

CASING O.D. ____ I.D. ____
SAMPLER O.D. 2" I.D. ____
DIAMOND BIT SIZE Two 3/4"

WEIGHT OF HAMMER 140 LBS.
INSIDE LENGTH OF SAMPLER ____ IN.

HAMMER FALL
CASING ____ SAMPLER 30"

DEPTH BELOW SURFACE	CASING BLOWS PER FOOT	SAMPLE NUMBER	SAMPLE DEPTH ELEV. / FEET	BLOWS STARTS	BLOWS PER 6" ON SAMPLER 0-6	6-12	12-18	DENSITY OR CONSIST OR MOISTURE	PROFILE CHANGE DEPTH	FIELD IDENTIFICATION OF SOILS REMARKS
0									0'-1'	Concrete
									1'-3'	Miscellaneous fill
									3'-9'	Red brown Silty Clay, trace Sand
10									9'-14'	Red Shale
										END OF HOLE 14'
20										
30										

Environmental Resources Management

Drilling Log

Project: Hoffmann-LaRoche Owner: Same

Location: Nutley, NJ W.O. Number: 137-03

Well Number: MW-16 Total Depth: 13.5 ft. Diameter: 4 in.

Surface Elevation: 122 Water Level: Initial: 6.0 24-hrs.: 3.11

Screen: Dia.: 4 in. Length: 10.0 ft. Slot Size: .020

Casing: Dia.: 4 in. Length: 3.8 ft. Type: Flush PVC

Drilling Company: Warren George Drilling Method: Mud/Air Rotary

Driller: Mike K. Log By: A. Jaroszewski Date Drilled: 11/4/87

Sketch Map

Notes

Depth (Feet)	Graphic Log	Well Construction	Sample Number			Description/Soil Classification (Color, Texture, Structures)
0			1	7,8,9	3"	FILL; 0-2' Gravel (traprock)
5			2	12,25 40	12"	SILT/SAND 2.0-8.0' reddish brown fine sand and silt embedded with trace fine to coarse gravel
			3	100/5	4"	Bedrock 8.0' slightly to moderately indurated reddish brown clay and silt (shale and siltstone)
10						
15						
20						

Gravel Pack: 13.5-3.0'

Pellet Seal: 3.0-2.0'

Cement: 2.0-0'

DWR-133 (5/85)
MW-17
Mail to

Water Allocation
CN 029
Trenton, N.J. 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

Permit No. 2614980-C

16

PERMIT TO DRILL WELL

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD#: 26.12.3.59

Owner Mike Cody, Hoffman LaRoche Facility
Address 3 Nutley ep N.J. [illegible] CT 06484

Driller Warren George Inc
Address Ft. of Jersey City J.C N.J. 07306

Name of Facility Hoffman - La Roche Facility
Address Nutley, N.J.

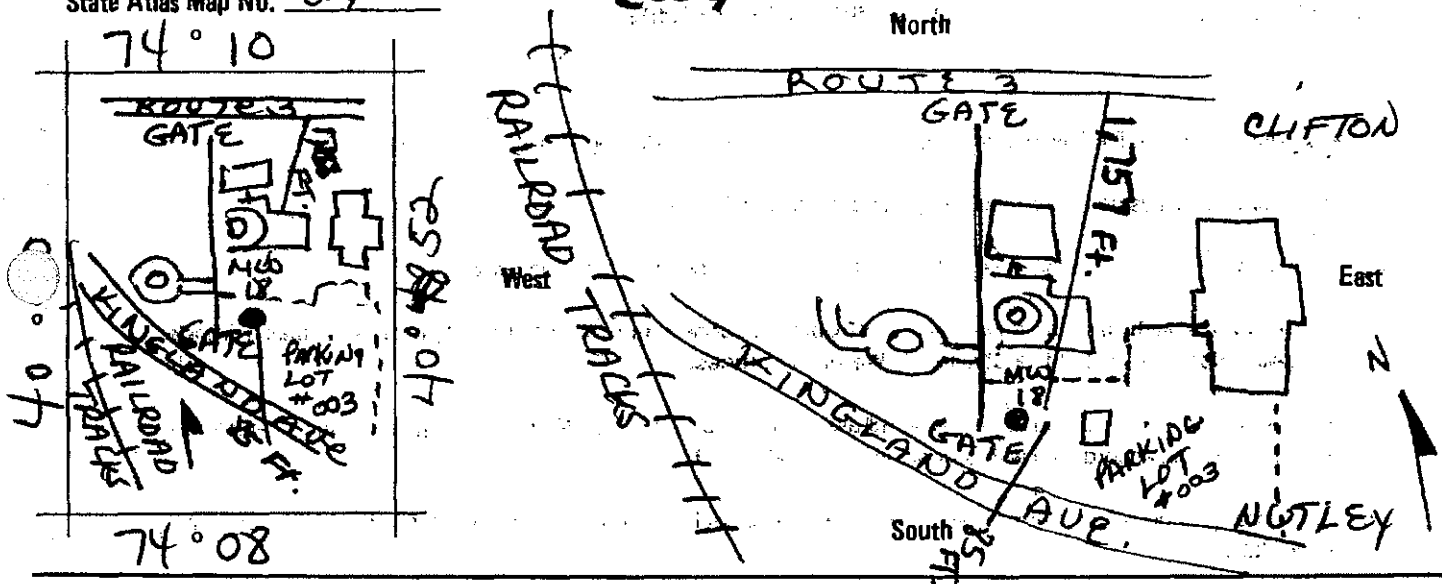
Diameter of Well 4" Inches	Proposed Depth of Well 35 Feet
Proposed Capacity of Pump — GPM	Method of Drilling (cable-tool, rotary, etc.) Rotary
Use of Well (See Reverse) Monitoring	

LOCATION OF WELL

Lot #	Block #	Municipality	County
2	292	Nutley	~~Passaic~~ Essex

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4" in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____.
- ☐ **Domestic Potable Water Supply** - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ **Domestic Irrigation Supply** - No piping from the well for which the permit applies shall enter any building.
- ☐ **Industrial/Commercial Supply** - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ **Heat Pump Wells** - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp
WELL [illegible] APPROVED
Dept. of [illegible] Protection
Water [illegible] Allocation
DEC 01 1988

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 11/30/88

Signature of Owner Mike Cody

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller —

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-14984
APPLICATION NO. _____
COUNTY _____
COORD. 26.02.956

WELL RECORD

1. OWNER Mike Cody - Hoffman La-Roche ADDRESS _____
   Owner's Well No. MW-17 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Hoffman LaRoche, Nutley NJ.
3. DATE COMPLETED 12/8/88 DRILLER Warren George, Inc.
4. DIAMETER: Top _____ inches Bottom _____ inches TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation See Attached log sheet
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
   RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes _____ No _____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
    SOURCE OF DATA Boring Log
    DATA OBTAINED BY Warren George Inc. Date 12/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600014984
2. Site Well Number as shown on application or plans):	MW-17
3. Well Completion Date:	12/08/1988
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	18.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	8.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.010
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	12.5
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hr

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

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   Longitude: West 74° 09' 24.6" Latitude: North 40° 50' 04.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729125.5 East 587075.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.26
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

26.02.956

N. Y. TEL. 267-3215

N. J. TEL. (201) 433-9797

WARREN GEORGE, INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

TEST BORINGS

Permit # 2614984

Project Hoffman La Rocke

Boring No. MW-17" Job No. _____ Rig No. _____ Date 12-8- 1988

BORING LOG		SPOON SAMPLE AND CORE DATA				BLOWS ON CASING	
DEPTH FROM TO	DESCRIPTION OF MATERIAL	SAMPLE NUMBER	DEPTH FROM - TO	BLOWS PER FT. / CORE RECOV'D. INCHES	D=DRY U=UNDISTURBED T=TRAP W=WASH R=ROD C=CORE / CORE RECOV'D. NO. PCS. Remarks		
0 / 16'	Rd Brwn Sndy Slt layers M-F Snd	1	1-3		7-7-7-5	0--1	59-60
		2	5-7		3-3-9-8	1--2	60-61
16' / 18'	Rd Brwn Gravely Till	3	10-12		12-50-59-31	2--3	61-62
		4	15-17		17-29-35-38	3--4	62-63
						4--5	63-64
						5--6	64-65
						6--7	65-66
	Set @ 18'					7--8	66-67
						8--9	67-68
	10' 4" Screen					9--10	68-69
	8' 4" Riser					10--11	69-70
						11-12	70-71
	1 Bottom Cap					12-13	71-72
	1 Top locking Cap					13-14	72-73
						14-15	73-74
	5 Bags Sand					15-16	74-75
	½ Pie Pellets					16-17	75-76
						17-18	76-77
	3 Cement					18-19	77-78
	1 8" Manhole					19-20	78-79
						20-21	79-80
	1 Lock					21-22	80-81
						22-23	81-82
						23-24	82-83
	1 Hr Developing Time					24-25	83-84
						25-26	84-85
						26-27	85-86
						27-28	86-87
						28-29	87-88
						29-30	88-89
						30-31	89-90
						31-32	90-91
						32-33	91-92
						33-34	92-93
						34-35	93-94
						35-36	94-95
						36-37	95-96
						37-38	96-97
						38-39	97-98
						39-40	98-99
						40-41	99-100
						41-42	100-101
						42-43	101-102
						43-44	102-103
						44-45	103-104
						45-46	104-105
						46-47	105-106
						47-48	106-107

ERM-Northeast

DRILLING LOG

Project HOFFMANN LAROCHE
Location NUTLEY, N.J. W.O. Number
Well Number MW-17 Total Depth 18'
Water Level Init. 12.5' 24-hrs. 11.14'
Screen: Dia. 4" Length 10' Slot Size 0.010
Casing: Dia. 4" Length 8' Type PVC
Drilling Co. WARREN GEORGE Drilling Method AIR/MUD ROTARY
Driller R.V. GREGORY Log By N. LEVINE Date 12/08/88

Sketch Map

Notes

Depth	Well Constr.	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0		1	1.0-3.0 TILL: Reddish brown, sandy, silt slightly 12" Recovery mottled. No odor. Dry. 7-7-7-5
5		2	5.0-7.0 SAND: Reddish brown, silty, 5" layer of 16" Recovery sandy fill. Gray, loose, sand fill 3-3-9-8
10		3	10.0-12.0 SAND: Red brown silty 2" layer 12" Recovery coarse grained quartz sand. ▼ 12-50-59-31
			12.5 First Water
15		4	15.0-17.0 SAND: 5" medium gravel, underlain by red 18" Recovery sand. Red-brown till. 7-29-35-38
			TOTAL DEPTH: 18 FEET SCREEN SETTING: 8.0-18.0 FEET GRAVEL PACK: 7.0-18.0 FEET (#2 morie sand) BENTONITE: 6.0-7.0 FEET (bentonite pellets) GROUT: 1.0-6.0 FEET (cement/bentonite) NEAT CEMENT: 0.0-1.0 FEET FLUSH MOUNT CURB BOX AT SURFACE

DWR-133 (5/86) MW-18

Mail to

Water Allocation
CN 029
Trenton, N.J. 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

Permit No. 2614980-C

16

PERMIT TO DRILL WELL

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD#: 26.12.3.59

Owner Mike Cody, Hoffman LaRoche Facility
Address 3 Nutley ep N.J. [illegible] CT 06484

Driller Warren George Inc
Address Ft. of Jersey City J.C N.J. 07306

Name of Facility Hoffman - La Roche Facility
Address Nutley, N.J.

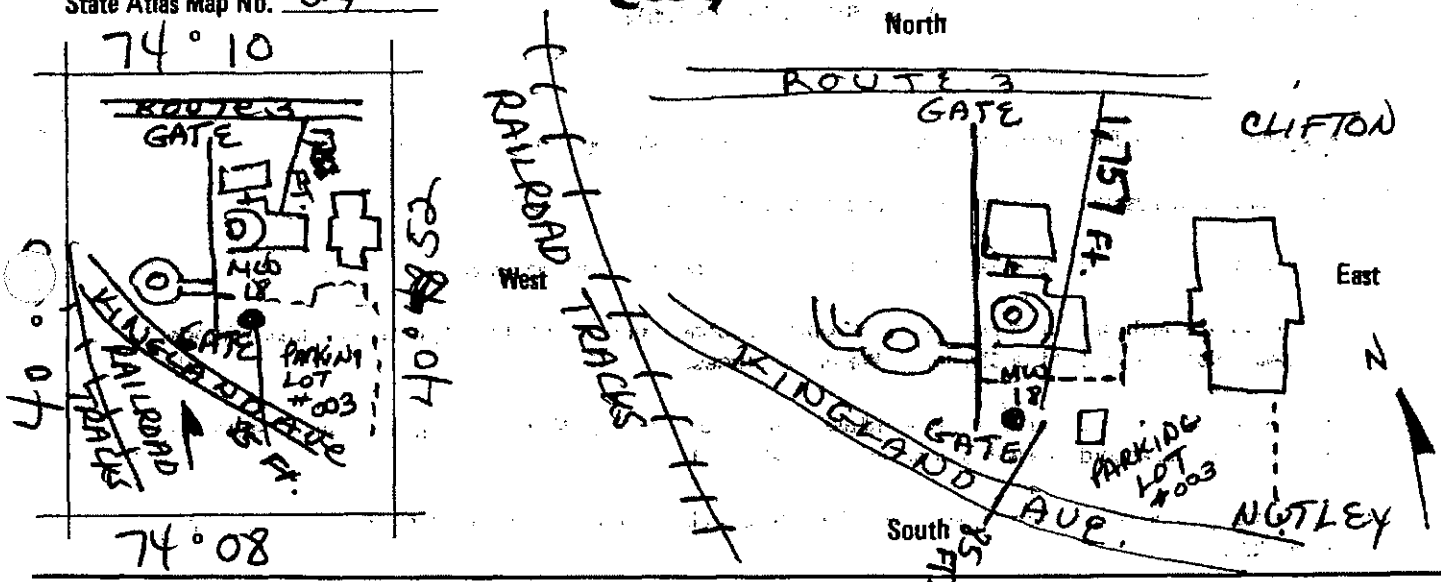
Diameter of Well 4" Inches	Proposed Depth of Well 35 Feet
Proposed Capacity of Pump — GPM	Method of Drilling (cable-tool, rotary, etc.) Rotary
Use of Well (See Reverse) Monitoring	

LOCATION OF WELL

Lot #	Block #	Municipality	County
2	292	Nutley	~~Passaic~~ Essex

State Atlas Map No. 26

Draw sketch showing distance and relations of well site to nearest public roads, streets, septic systems, etc.



SEE REVERSE SIDE for IMPORTANT PROVISIONS AND REGULATIONS pertaining to this permit. APPROVAL of this permit is made SUBJECT TO acceptance of and compliance with the following ADDITIONAL CONDITIONS.

- ☐ Pinelands - Well must be drilled over 100' deep or a clay layer at least 4" in thickness must be encountered.
- ☐ It is necessary that Geophysical Logs of this well be made. Permanent pumping equipment SHALL NOT be installed until such logs are made.
- ☐ Authorization by rule under N.J.A.C. 7:14A-1 et seq.
- ☐ Samples of cuttings required every _____ feet or change in material.
- ☐ The results of a volatile organic scan mut be obtained prior to using the water and submitted to _____.
- ☐ **Domestic Potable Water Supply** - The service line for water from the public community water supply system shall be turned off at the curb cock, and the meter shall be removed by the water purveyor.
- ☐ **Domestic Irrigation Supply** - No piping from the well for which the permit applies shall enter any building.
- ☐ **Industrial/Commercial Supply** - A physical connection permit shall be obtained pursuant to the provisions of N.J.A.C. 7:10-10-1 et seq., and a vigorous cross connections control program shall be instituted and maintained within the premises.
- ☐ **Heat Pump Wells** - Wells must be 50 feet apart and the water must be returned to the same aquifer as the production well.
- ☐ _____

This Space for Approval Stamp
WELL [illegible] APPROVED
Dept. of [illegible] Protection
Water [illegible] Water Allocation
DEC 01 1988

In compliance with R.S. 58:4A-14, application is made for a permit to drill a well as described above.

Date 11/30/88

Signature of Owner Mike Cody

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller —

DWR-138A
1/88

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES

PERMIT NO. 26-14980
APPLICATION NO. _____
COUNTY _____
COORD. 26·12[redacted]
30

WELL RECORD

1. OWNER Mike Cody, Hoffman-LaRoche ADDRESS _____
   Owner's Well No. MW-98 SURFACE ELEVATION _____ Feet (Above mean sea level)
2. LOCATION Hoffman-LaRoche, Nutley NJ.
3. DATE COMPLETED 12/8/88 DRILLER Warren George, Inc.
4. DIAMETER: Top _____ inches Bottom _____ inches. TOTAL DEPTH _____ Feet
5. CASING: Type _____ Diameter _____ Inches Length _____ Feet
6. SCREEN: Type _____ Size of Opening _____ Diameter _____ Inches Length _____ Feet
   Range in Depth { Top _____ Feet / Bottom _____ Feet } Geologic Formation See ATTached Log
   Tail Piece: Diameter _____ Inches Length _____ Feet
7. WELL FLOWS NATURALLY _____ Gallons per minute at _____ Feet above surface
   Water rises to _____ Feet above surface
8. RECORD OF TEST: Date _____ Yield _____ Gallons per minute
   Static water level before pumping _____ Feet below surface
   Pumping level _____ feet below surface after _____ hours pumping
   Drawdown _____ Feet Specific Capacity _____ Gals. per min. per ft. of drawdown
   How pumped _____ How measured _____
   Observed effect on nearby wells _____
9. PERMANENT PUMPING EQUIPMENT:
   Type _____ Mfrs. Name _____
   Capacity _____ G.P.M. How Driven _____ H.P. _____ R.P.M. _____
   Depth of Pump in well _____ Feet Depth of Footpiece in well _____ Feet
   Depth of Air Line in well _____ Feet Type of Meter on Pump _____ Size _____ Inches
10. USED FOR _____ AMOUNT { Average _____ Gallons Daily / Maximum _____ Gallons Daily }
11. QUALITY OF WATER _____ Sample: Yes ____ No ____
    Taste _____ Odor _____ Color _____ Temp. _____ °F.
12. LOG _____ Are samples available? _____
    (Give details on back of sheet or on separate sheet. If electric log was made, please furnish copy.)
13. SOURCE OF DATA Boring Log Sheet
14. DATA OBTAINED BY Warren George, Inc. Date 12/22/88

(NOTE: Use other side of this sheet for additional information such as log of materials penetrated, analysis of the water, sketch map, sketch of special casing arrangements, etc.)

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600014980
2. Site Well Number as shown on application or plans):	MW-18
3. Well Completion Date:	12/08/1988
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	19.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	9.0
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	0.010
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	11.00
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hr

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600014980
2. Site Well Number (As shown on application or plans): MW-18
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 22.4" Latitude: North 40° 49' 57.6"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728417.9 East 587252.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 104.30
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site hes been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW18

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-23.8 Latitude: North 40-49-57.2

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 728647.0179 East 2141145.5689

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 106.29' (6" CIP)
Flange = 106.58' (OLD V), Ground Surface = 106.57' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

26-12-[redacted] 338

N. Y. TEL. 267-3215

N. J. TEL. (201) 433-9797

WARREN GEORGE, INC.
FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

TEST BORINGS

2614980-0

Project Hoffman & La Roche Nutley NJ

Boring No. MW-18 Job No. _____ Rig No. _____ Date 12-8 19 88

BORING LOG		SPOON SAMPLE AND CORE DATA				BLOWS ON CASING			
DEPTH FROM TO	DESCRIPTION OF MATERIAL	SAMPLE NUMBER	DEPTH FROM - TO	BLOWS PER FT. / CORE RECOV'D. INCHES	D=DRY U=UNDISTURBED T=TRAP W=WASH R=ROD C=CORE / CORE RECOV'D. NO. PCS. Remarks *				
0 / 1'	Asphalt & Gravel	1	1-3		14-30-20-23	0--1		59-60	
		2	5-7		10-11-11-5	1--2		60-61	
1' / 9'	Rd Brwn F-M Sandy Slt	3	10-12		13-36-15-25	2--3		61-62	
		4	15-17		17-20-23-26	3--4		62 63	
	Some layers of M-F Snd					4--5		63-64	
						5--6		64-65	
9 / 10	Grey Sndy Slt					6--7		65 66	
						7--8		66-67	
10' / 19'	Rd Brwn F-M Sandy Slt layers M-F Snd					8--9		67 68	
						9-10		68-69	
	Set well @ 19'					10-11		69 70	
	10' 4" Screen					11-12		70 71	
	9' Risers					12-13		71-72	
	7 Bags Snd					13-14		72-73	
	1 Ballon Cap					14-15		73-74	
	1 Top locking Cap					15-16		74-75	
	3 Bags Cement					16-17		75 76	
	1 8" Manhole					17-18		76-77	
	½ Pie Pellets					18-19		77-78	
	1 Lock					19-20		78-79	
	1 Hr Developing					20-21		79-80	
						21-22		80-81	
						22-23		81-82	
						23-24		82-83	
						24-25		83-84	
						25-26		84-85	
						26-27		85-96	
						27-28		86-87	
						28-29		87-88	
						29-30		88-89	
						30-31		89-90	
						31-32		90-91	
						32-33		91-92	
						33-34		92-93	
						34-35		93-94	
						35 36		94-95	
						36-37		95 96	
						37-38		96-97	
						38-39		97-98	
						39-40		98-99	
						40 41		99 100	
						41-42		100 101	
						42-43		101 102	
						43-44		102 103	
						44-45		103-104	
						45 46		104 105	
						46 47		105 106	
						47 48		106 107	
						48 49		107 108	

ERM-Northeast

DRILLING LOG

Project HOFFMANN LAROCHE
Location NUTLEY, N.J. W.O. Number
Well Number MW-18 Total Depth 19'
Water Level Init. 11.' 24-hrs. 10.75'
Screen: Dia. 4" Length 10' Slot Size 0.010
Casing: Dia. 4" Length 9' Type PVC
Drilling Co. WARREN GEORGE Drilling Method AIR/MUD ROTARY
Driller R.V. GREGORY Log By N. LEVINE Date 12/08/88

Sketch Map

Notes

Depth	Well Constr.	Sample Number	Description/Soil Classification (Color, Texture, Structures)
0		1	1.0-3.0 CLAYEY SILT: reddish brown slightly mottled. No odor. Moist. 18" Recovery 14-30-20-23
5		2	5.0-7.0 TILL: Reddish brown, slighty mottled. Clay fragments. No odor. 9" Recovery 10-11-11-5
			8.0 SAND: Brown underlain by grey silty sand.
10		3	10.0-12.0 TILL: Reddish brown 1" layer of sand. No odor. First water @ 11.0' 15" Recovery 12-36-15-25
15		4	15.0-17.0 TILL: Reddish brown sand. No odor. Saturated. 14" Recovery 17-20-23-26
20			

TOTAL DEPTH: 19 FEET
SCREEN SETTING: 9.0-19.0 FEET
GRAVEL PACK: 8.0-19.0 FEET (#2 morie sand)
BENTONITE: 7.0-8.0 FEET (bentonite pellets)
GROUT: 1.0-7.0 FEET (cement/bentonite)
NEAT CEMENT: 0.0-1.0 FEET
FLUSH MOUNT CURB BOX AT SURFACE

NOTE: WOOD CHIPS IN CUTTINGS IN UPPER 10'

Health Dept — Yellow Owner — Blue

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 426 Trenton, NJ 08625-0426 Tel: 609-984-6831

Well Permit Number
E201000867

WELL PERMIT

New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: WILLIAM ELLEFSEN, JOURNEYMAN LICENSE # 0001430

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: HOFFMAN LAROCHE

Organization: Owner

Address: 340 Kingsland Street

City: Clifton City State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman LaRoche

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 4 Block: 80.02

Easting (X): 587302 Northing (Y): 729941
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-19A R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: February 1, 2010
Expiration Date: February 1, 2011

Approved by the authority of:
Mark Mauriello
Acting Commissioner

John Fields, Acting Bureau Chief
Bureau of Water Systems and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 426 Trenton, NJ 08625-0426 Tel: 609-984-6831

Well Permit Number
E201000867

WELL PERMIT

VIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request.
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq.
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit.
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting.
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval.
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed.
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq.
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property.
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application.
This permit conveys no rights, either expressed, or implied to divert water.
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained.
This permit is NONTRANSFERABLE
This well shall not be used for the supply of potable / drinking water.

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201000867

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMAN LAROCHE

Company/Organization: Owner

Address: 340 Kingsland Street Clifton City, New Jersey 07110

WELL LOCATION: Hoffman LaRoche

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 4 Block: 80.02

Easting (X): 587874 Northing (Y): 728739
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 21, 2010

DATE WELL COMPLETED: April 22, 2010

WELL USE: MONITORING

Other Use(s):

Local ID: MW-19A R

WELL CONSTRUCTION

Total Depth Drilled (ft.): 17 Finished Well Depth (ft.): 17 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	17	8		
Casing	0.3	7	4	PVC	Sch. 40
Screen	7	17	4	Wire wrapped PVC	0.010"

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0.5	6	8	4	10	188	16
Gravel Pack	6	17	8	4	#1 well sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Air Rotary

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 11 ft. below land surface
Water Level Measure Tool: m-scope
Well Development Period: 1 hrs.
Method of Development: sub. pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: T3W
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: Black/gray OT - Other Asphalt and gravel
1 - 7: Red GP - Poorly graded gravels and gravel-sand mixtures, little or no fines
7 - 17: Red WR - Weathered Rock Weathered red shale

ADDITIONAL INFORMATION:

Driller of Record: William Ellefsen, JOURNEYMAN LICENSE # 0001430 Company: SBI ENVIRONMENTAL WELL DRILLING

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E20100867
2. Site Well Number as shown on application or plans):	MW-19A
3. Well Completion Date:	04/22/10
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	17.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	7.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.010
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	11
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Sub. pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hour

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E20100867
2. Site Well Number (As shown on application or plans): MW-19A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 14.2" Latitude: North 40° 50' 00.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728739.6 East 587874.6
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.10
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

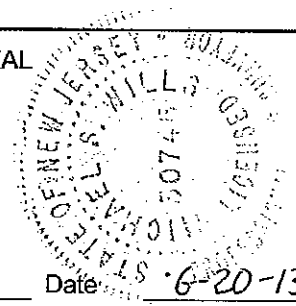
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date: 6-20-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

DWR-1 (3/88) 00001

Mail to MW-20

Water Allocation
CN 029
Trenton, N.J. 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, N.J.

Permit No. 2619596

PERMIT TO DRILL WELL

VALID ONLY AFTER APPROVAL BY THE D.E.P.

(ERM)

COORD #: 26-028-4

Owner: Hoffman La Roche
Address: 340 Kingsland St
Nutley, N.J.

Driller: Warren George Inc.
Address: P.O. Box 415
Jersey City N.J. 07303

Name of Facility: Hoffman La Roche
Address: Clifton N.J.
Rt 3 Eastbound

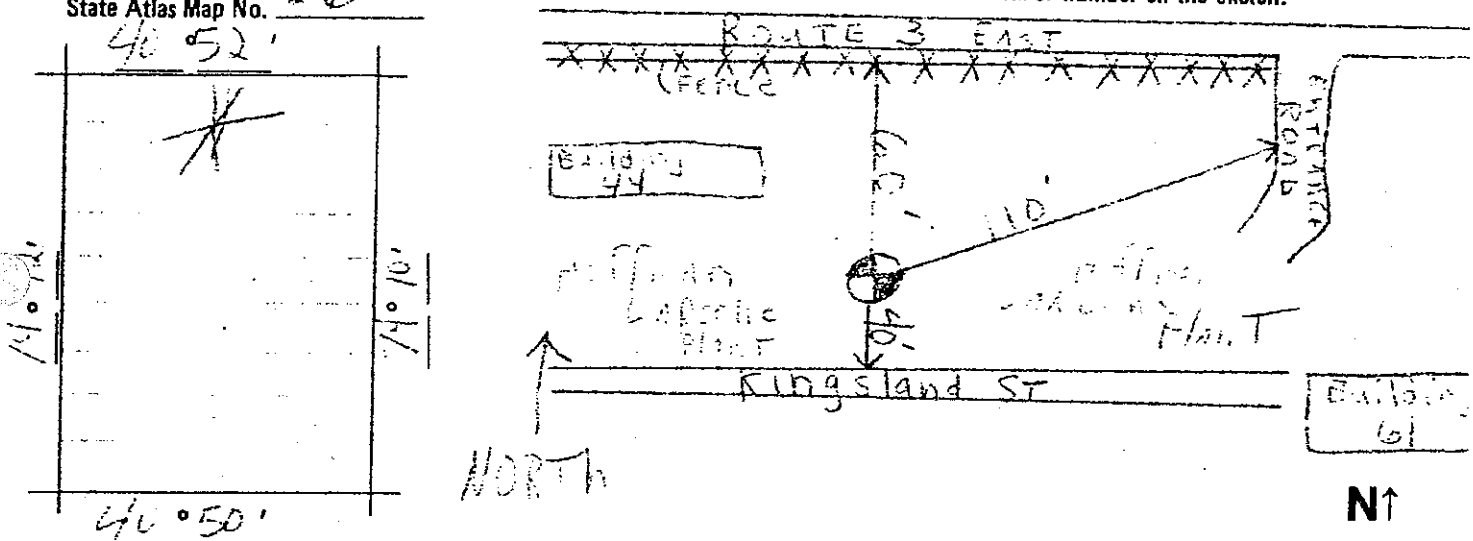
Diameter of Well(s): 4 Inches	Proposed Depth of Well(s): 25' Feet
# of Wells Applied for (max. 10): 1	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse): Monitoring	If yes, give pump capacity: GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
001	30-2	Clifton	Passaic

State Atlas Map No. 26

Draw sketch of well(s) to nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐ Only pure bentonite drilling muds are to be used for installation

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED

☐ Spill Fund Case
☐ ECRA Case
☐ CERCLA (Superfund) Site
☐ RCRA Site
☐ Underground Storage Tank
☐ NJPDES Municipal Discharge Permit
☐ NJPDES Industrial Discharge Permit
☐ Div. Hazardous Waste Mgmt. Enforcement Case
☐ Div. Water Resources Enforcement Case
☐ Aquifer Test Observation Well
☒ Other (explain) [illegible]

Case I.D. Number:

This Space for Approval Stamp

MAR 13 1990

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3-13-90

Signature of Driller [illegible]

Signature of Owner [illegible]

COPIES: Water Allocation – White and Pink

WR-138 M
6/89

New Jersey Department of Environmental Protection
Division of Water Resources

MONITORING WELL RECORD

Well Permit No. 26 - 19596
Atlas Sheet Coordinates 26 : 02 : 845

OWNER IDENTIFICATION - Owner LaROCHE, HOFFMAN
Address 340 KINGSLAND ST
City NUTLEY State NJ Zip Code 07110

WELL LOCATION - If not the same as owner please give address. Owner's Well No. [illegible]
County _____ Municipality CLIFTON CITY Lot No. 001 Block No. 80-2
Address _____

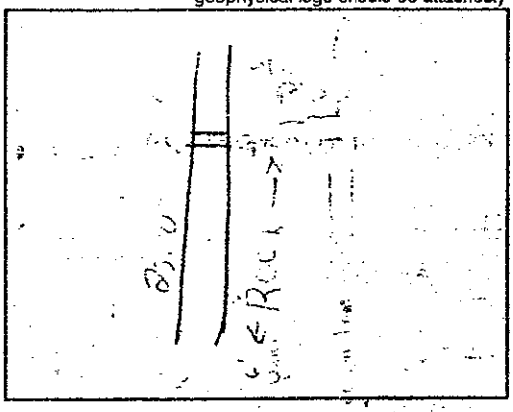
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/22/90
Regulatory Program Requiring Well _____ Case I.D. # N/A
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) N/A Tele. # N/A

WELL CONSTRUCTION
Total depth drilled 40 ft.
Well finished to 10[illegible] ft.
Borehole diameter:
Top 6 in.
Bottom 6 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface _____ ft.
Was steel protective casing installed? ☒ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	[illegible]	2	[illegible]
Outer Casing (Not Protective Casing)	N/A			
Screen (Note slot size)	N/A			
Tail Piece	N/A			
Gravel Pack	N/A			
Annular Seal/Grout	0	[illegible]		[illegible]
Method of Grouting	[illegible]			

Static water level after drilling [illegible] ft.
Water level was measured using N/A
Well was developed for N/A hours at N/A gpm
Method of development _____
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method [illegible]
Drilling Fluid N/A Type of Rig [illegible]
Name of Driller [illegible]
Health and Safety Plan submitted? ☐ Yes ☒ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. [illegible]
Name of Drilling Company WARREN GEORGE INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)



I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [illegible] Date [illegible]

COPIES: White & Green - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600019596
2. Site Well Number as shown on application or plans):	MW-20
3. Well Completion Date:	03/20/90
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	36.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	11.0
7. Screen Length (or length of open hole) in feet:	25.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.0
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	N/A
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600019596
2. Site Well Number (As shown on application or plans): MW-20
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 21.5" Latitude: North 40° 50' 12.5"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729933.8 East 587314.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.74
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW20

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-23.0 Latitude: North 40-50-12.2

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 730163.0221 East 2141204.3893

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 121.95' (6" CIP)
Flange = 122.26' (OLD V) , Ground Surface = 122.26' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

THIS FORM MUST BE COMPLETED BY THE PERMITTEE OR HIS/HER AGENT

GROUND WATER MONITORING WELL CERTIFICATION-FORM B-LOCATION CERTIFICATION

Name of Permittee: Hoffmann-La Roche Inc.
Name of Facility: Same As Above
Location: 340 Kingsland Street, Nutley, New Jersey
NJPDES Number: Not Applicable

LAND SURVEYOR'S CERTIFICATION

Well Permit Number (As assigned by NJDEP's Bureau of Water Allocation): 2 6 - 1 9 5 9 6 -
This number must be permanently affixed to the well casing.
Datum NAD 27
Longitude (one-tenth of a second): West 74°-09'-23"
Latitude (one-tenth of a second): North 40°-50'-12.2"
Elevation of Top of Casing (cap off) (one-hundredth of a foot): WC= 122.36 /PVC= 121.78 /GRD= N/A
Owners Well Number (As shown on application or plans): MW-20

BENCHMARK - Monument 6690 Elevation 79.106'

DATE OF SURVEY - February 1992

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Paul J. Emilius
PROFESSIONAL LAND SURVEYOR'S SIGNATURE

Paul J. Emilius
PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type)

SEAL

New Jersey P.L.S. License No. 11363
PROFESSIONAL LAND SURVEYOR'S LICENSE #

The Department reserves the right in cases of violation of permit specified ground water limits or Ground Water Quality Standards (N.J.A.C. 7:9-6.1 et seq. to require that wells be resurveyed to an accuracy of one-hundredth of a second latitude and longitude. This shall not be considered to be a major modification of the NJPDES permit.

N. Y. TEL. 267-3215

WARREN GEORGE, INC.

FOOT OF JERSEY AVENUE
P. O. BOX 413
JERSEY CITY, N.J. 07303

N. J. TEL. (201) 433-9797

Permit # 26-19596
Coord # 26-02-845

TEST BORINGS 500
MAYHEW Per. #

Project Hoffman-La Roche, Nutley N.J. (E.R.M.)

Boring No. M.W.20 Job No. _____ Rig No. M500 Date 3/19/90 — 3/20/90 19 ____

BORING LOG		SPOON SAMPLE AND CORE DATA				BLOWS ON CASING			
DEPTH FROM TO	DESCRIPTION OF MATERIAL	SAMPLE NUMBER	DEPTH FROM - TO	BLOWS PER FT. / CORE RECOV'D. INCHES	D=DRY U=UNDISTURBED T=TRAP W=WASH R=ROD C=CORE / CORE RECOV'D. - NO. PCS. Remarks *	0--1		59-60	
						1-2		60-61	
						2--3		61-62	
						3--4		62-63	
						4--5		63-64	
0' to 5'	Fill R. Br. Sand, Silt, gravel, Cabos, San Clay		No	Samples		5--6		64-65	
						6--7		65-66	
						7--8		66-67	
						8--9		67-68	
5' to 11'	R.Br. Soft to Hard Shale Rock					9-10		68-69	
						10--11		69-70	
						11-12		70-71	
						12-13		71-72	
Remy 0' to 11'	10" Rollet Bot					13-14		72-73	
						14-15		73-74	
						15-16		74-75	
						16-17		75-76	
Put	10'6" Steel Pipe 6" Grout					17-18		76-77	
						18-19		77-78	
						19-20		78-79	
						20-21		79-80	
3 Bag	Cement, 3/4 Bag = Bent					21-22		80-81	
						22-23		81-82	
						23-24		82-83	
						24-25		83-84	
5 3/4	Drill 11' to 36'					25-26		84-85	
1 Protect Pipe flat mount 8"x12"						26-27		85-86	
						27-28		86-87	
						28-29		87-88	
1 Bag	Cement					29-30		88-89	
						30-31		89-90	
						31-32		90-91	
						32-33		91-92	
						33-34		92-93	
						34-35		93-94	
						35-36		94-95	
						36-37		95-96	
						37-38		96-97	
						38-39		97-98	
						39-40		98-99	
						40-41		99-100	
						41-42		100-101	
						42-43		101-102	
						43-44		102-103	
						44-45		103-104	
						45-46		104-105	
						46-47		105-106	
						47-48		106-107	
						48-49		107-108	
						49-50		108-109	

ERM-Northeast
375 Bridgeport Avenue, Shelton CT 06484 (203) 929-8687

LOG OF BORING: B-20

Project name & location: Hoffmann LaRoche Nutley NJ Plant, near Bldg. 61		Project number: 137.07	
Drilling company: Warren George Inc., Jersey City, NJ		Foreman: Frank Gregory	
Drilling equipment: Mayhew-500		Method: Air Rotary	
Bit(s): Roller bit		Core barrel(s): N/A	
Casing: 6" steel	Casing hammer: N/A	Drop: N/A	
Sampler(s): N/A	Sampler hammer: N/A	Drop: N/A	

Date & time started: March 19, 1990 9:30		Date & time completed: March 20, 1990 12:10	
Elevation & datum: --		Completion depth: 36'	Rock depth: 5'
No. samples: 0	Undisturbed: N/A	undisturbed: N/A	core: N/A
Water level(s) ft: N/A	Hrs:	completion: --	24 hr.: --
ft below ground: 5'			
Drilling angle & direction: Vertical			
Inspector(s): Douglas Ratm			

SOIL DESCRIPTION	DEPTH (ft below grade)	SAMPLES No.	Recovery (ft)	Blow per 6 in	Time	HEADSPACE READINGS (in ppm) Sample	Ambient air	Time	REMARKS
6" Asphalt	0								
Red brown fine-medium sand some medium gravel	1								
	2								
	3								
	4								
Red brown fine grained fractured shale	5								
	6								
	7								
	8								
	9								
	10								
Red brown competent shale	11								
	12								
	13								
Possible fractures; rig chatters	14								
Possible fractures at 14.5-14.8' rig bounces									
Possible fractures 15.-15.5'	15								
Possible fractures 16 to 16.2'	16								
	17								
	18								
Cuttings of siltstone become sandy	19								
	20								
	21								
	22								
	23								
	24								
	25								

- prepared 13-Jun-90

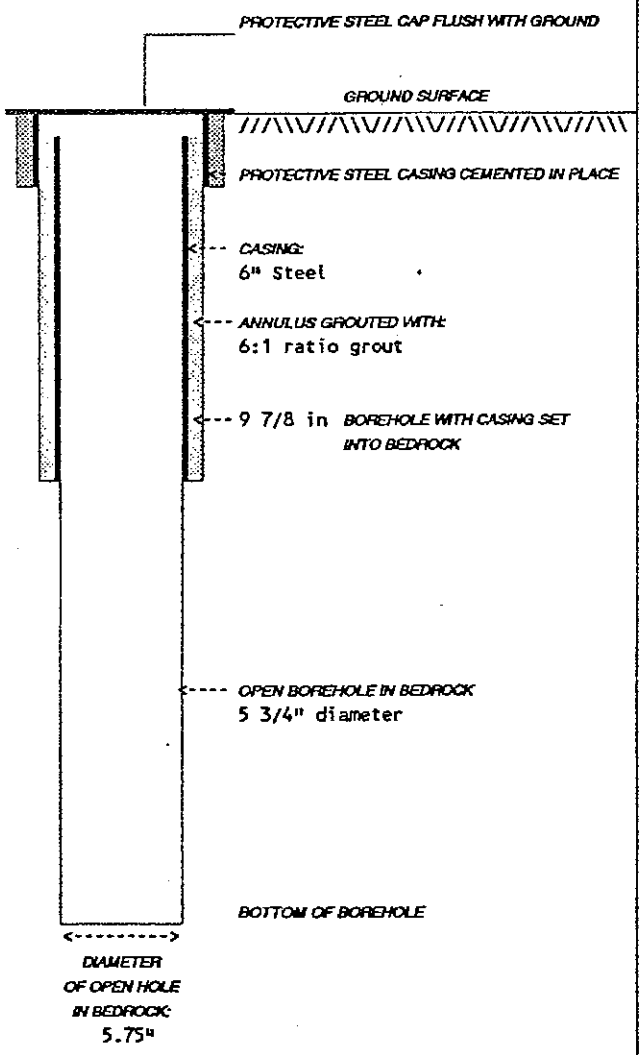
ERM-Northeast
375 Bridgeport Avenue, Shelton CT 06484 (203) 929-8687

CONSTRUCTION OF MONITORING WELL: MW-20

Project name & location Hoffmann LaRoche Nutley NJ Plant, near Bldg. 61	*Project No.* 137.07	*Water Level(s)* (ft below ____)		*Elevation datum* 100 ft arbitrary datum
Drilling company Warren George Inc., Jersey City, NJ		*Date* 3-19-90	*Level(s)* 5'	*Ground elevation* 100.00 ft
Surveyor		4-9-90	6.23'	*Top of protective steel cap elevation* 100.00 ft
Inspector Douglas Baum	*Date and time of completion* March 20, 1990 14:35			*Top of casing elevation* 99.75 ft

GENERALIZED SOIL AND ROCK DESCRIPTION	ELEVATIONS (ft above Mean Sea Level)	DEPTHS (ft below ground, not to scale)
	100.00	0.00
	99.75	0.25
	95.00	5.00
top of bedrock		
competent bedrock	89.00	11.00
fractures between 14' and 16'		
	64.00	36.00

CONSTRUCTION DETAILS



REMARKS (Installation, development):
Well development consisted of pump and surge for three hours.
The ground water had a strong odor.

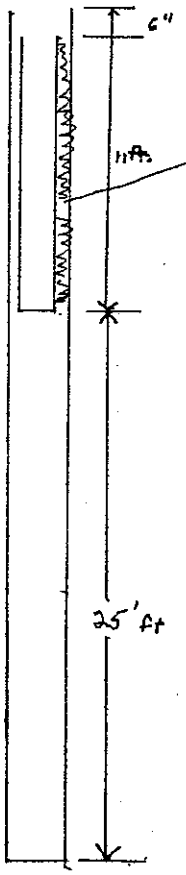
NUTLEY PLANT HOFFMANN LAROCHE 137.03

[LOT #001 LAT 40° 49' 42"
BLOCK 80-2 LONG 74° 9' 17"]

[MW-20] Between Bldg. 61-44-46.

Bags Cement

5ft Bedrock
ft Fractured Bedrock.
2 ft competen Bedrock



6" of Asphalt

Grout 6:1 ratio.

25 FT 5¾" Dia. hole

TD - 36' FT

DWR-133M (7/92) SERIAL # 33072

Mail to MW-21

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
TRENTON, NJ

2436929 -THRU- 2636935

Permit No. 2

Water Allocation
CN 029
Trenton, N.J. 08625

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

COORD #: 86 00 .987

Owner HOFFMAN LAROCHE INC

Address 340 KINGSLAND ST.
NUTLEY, N.J

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC

Address 51-41 59TH PLACE
WOODSIDE, N.Y. 11377

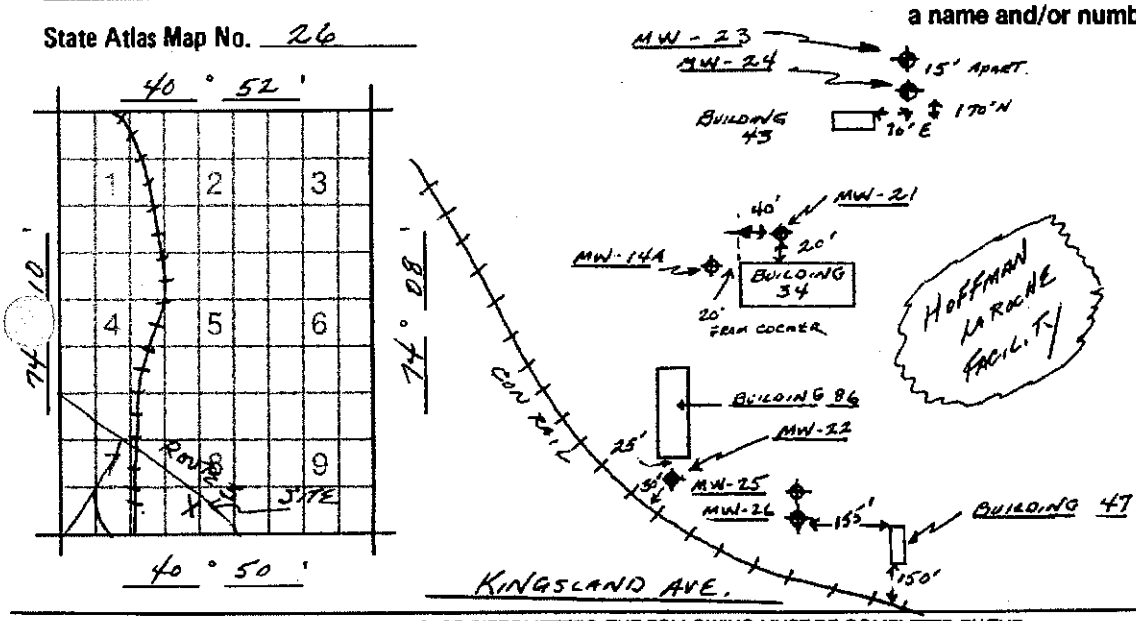
Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	7	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	N4 GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1 & 4	80.02	CLIFTON	PASSAIC

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☐ ECRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) MEMORANDUM OF AGREEMENT

Case I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
MAY 12 1994

FOR D.E.P.E. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 5/10/94

Signature of Driller [signature] License # 1494

Signature of Owner [signature] for JOHN LUCEY ROY ASSOCIATES AGENT

COPIES: Water Allocation — White and Pink Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36929
Atlas Sheet Coordinates 26 : 02 : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-21
County ~~PASSAIC~~ Municipality ~~CLIFTON CITY~~ Lot No. ~~1 & 4~~ Block No. ~~80.02~~
Address 340 Kingsland Street, Nutley, N.J.

TYPE OF WELL (as per Well Permit Categories) ~~MONITORING~~ Date well completed 5/19/94
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ROUX ASSOC./J. Lucay Tele. (609) 423-8800

WELL CONSTRUCTION

Total depth drilled 15 ft.
Well finished to 15 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	5	4	Sch. 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	5	15	4	Sch. 40 PVC .020 Slot
Tail Piece	—	—	—	—
Gravel Pack	3	15	11	No. 2 Morie
Annular Seal/Grout	0	3	11	Cement/bentonite
Method of Grouting	Gravity Placement			

Static water level after drilling 8 ft.
Water level was measured using Tape
Well was developed for 15 hours at 1 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig Mobile B-61
Name of Driller Carlos Fuente
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1129
Name of Drilling Company L. REXRODE/AQUIFER DRLG. & TES

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2' Asphalt
2-8' Dark reddish brown silt w/fine grained sand - dry
8-15' Dark reddish brown sand w/silt, fine grained - wet @ 8'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 7/12/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600036929
2. Site Well Number as shown on application or plans):	MW-21
3. Well Completion Date:	05/19/1994
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	8
13. Yield (gallons per minute):	1
14. Development Techinque (specify):	Bailed
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

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2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600036929
2. Site Well Number (As shown on application or plans): MW-21
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 22.7" Latitude: North 40° 50' 05.4"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729206.7 East 587227.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.79
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW21

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-24.1 Latitude: North 40-50-05.0

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729435.7669 East 2141118.4498

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 115.72' (4" PVC)
Flange = 115.99' (OLD V) , Ground Surface = 116.00' (PAVE)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

ROUX ASSOCIATES, INC.
CONSULTING GROUND-WATER GEOLOGISTS

GEOLOGIC LOG

Well No. MW-21

Study No. 28311I05 Date 5/19
Project Hoffmann-La Roche
Client Hoffmann-La Roche
Page 1 of 1
Logged By J. Stubbs
Loc. Hoffmann-La Roche Facility
M.P. Elevation
Drilling Started 5/19 Ended 5/19
Driller ADT
Type of Rig Mobile Rig

WELL DATA

Hole Diam. (in.)
Final Depth (ft.) 15
Casing Diam. (in.) 4
Casing Interval (ft.) 0.5-5
Screen Interval (ft.) 5-15
Screen Slot & Type 0.020 in. PVC
Well Status Monitoring Well

G. W. READINGS(1)

Date	DTW MP(2)	Elev.W.T.
--	--	--

SAMPLER

Type Split spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

--

OVM (ppm)	SAMPLE No.	Rec.(in.)	Depth(ft.)	Blow/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
						0-2	Asphalt
0	1	6	1-3	6,8,6,8	Silt	2-4	Dark reddish-brown silt with fine grained sand, dry
0	2	6	3-5	9,18,25,25		4-6	
0	3	2	5-7	NR		6-8	
0	4	15	7-9	18,17,15,9	Sand	8-10	Dark reddish-brown sand with silt, fine grained
0	5	0	9-11	18,20,21,16		10-12	
0	6	0	11-13	21,14,18,17		12-14	
0	7	3	13-15	17,18,18,9	Bedrock	14-16	End of Boring 15 feet
						16-18	
						18-20	
						20-22	

REMARKS:
(1) in feet relative to a common datum
(2) from top of PVC casing
NR = not recorded

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201012949

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: WILLIAM ELLEFSEN, JOURNEYMAN LICENSE # 0001430

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: HOFFMANN LAROCHE

Organization: Owner

Address: 340 Kingsland Street

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman LaRoche

Address: 340 KINGSLAND ST.

County: Essex Municipality: Nutley Twp Lot: 1.3 Block: 292

Easting (X): 587609 Northing (Y): 728638
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-22A

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 6

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 45

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: October 22, 2010
Expiration Date: October 22, 2011

Approved by the authority of:
Bob Martin
Commissioner

John Fields, Acting Bureau Chief
Bureau of Water Systems and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Systems and Well Permitting
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201012949

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

MW-22A

DWR-133M (10/96)

Mail to
NJDEP
Bureau Water Allocation
CN 426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT 14

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. 2651883

COORD #: 24 02 .973

Owner HOFFMAN LAROCHE
Address 340 KINGSLAND COURT
NUTLEY NJ, 07110

Name of Facility
Address SAME

Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W.
Bound Brook, NJ 08805

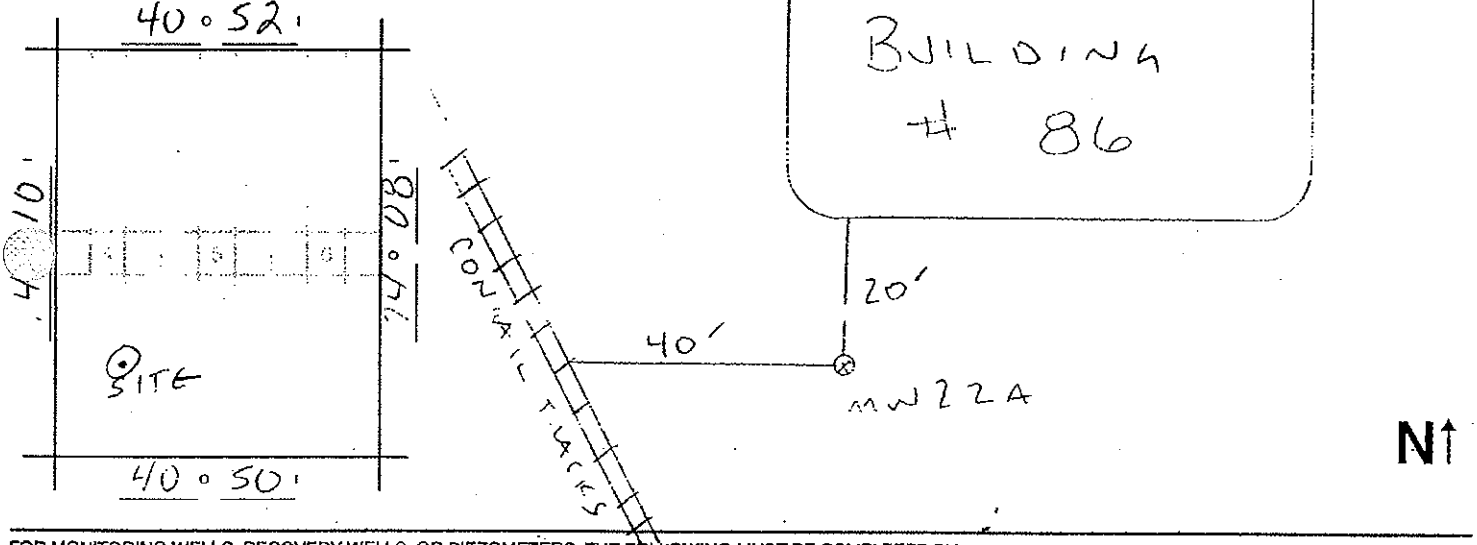
Diameter of Well(s) 6 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 1	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE.
☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98 TAC
Signature of Driller Carmine DeLoso Registration No. 513751
Signature of Owner Charles Foster (MS)

COPIES Water Allocation White Health Dept Yellow Owner Blue Driller Pink

Date mailed:
Filed:

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No: ____ ____

Map Grid Coordinates: ____ ____ ____

OWNER IDENTIFICATION - Owner: ____

Address: ____

City: ____ State: ____ Zip Code: ____

WELL LOCATION - If not the same as owner, please give address: Owner's Well No: ____

County: ____ Municipality: ____ Lot No: ____ Block No: ____

Address: ____

DATE WELL STARTED: ____
DATE WELL COMPLETED: ____

TYPE OF WELL (as per Well Permit Category(ies)): ____
Regulatory Program Requiring Well: ____ State I.D.#: ____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable): ____ Tele. #: ____

WELL CONSTRUCTION

Total depth drilled ____ ft
Well finished to: ____ ft

Borehole Diameter:
Top ____ in
Bottom ____ in

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (ft) above land surface: ____ ft

Was steel protective casing provided? ☐ Yes ☐ No

Static water level after drilling: ____ ft

Water level was measured on: ____

Well was developed for: ____ hours at ____ gpm

Method of development: ____

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity: ____ gpm

Pump type: ____

Drilling Fluid: ____ Type of Rig: ____

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one): None D C B A

I/we certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company: ____

Well Driller (Print): ____

Driller's Signature: ____

Registration No: ____ Date: ____

Water Bearing Strata Identified from land surface	Depth to Top (ft)	Depth to Bottom (ft)	Diameter (inches)	Material	Was Casing Removed? (Yes or No)
Steel Casing					
Plastic Casing (for type-cased wells only)					
Perm Casing Diameter Reduction					
Open Hole or Screen Dia. Used					
Bank Casing Dia. Used					
Tail Piece					
Packer Type					
Gravel				Was Gravel Removed?	Yes / No

Grouting Method: ____
Drilling Method: ____

GEOLOGIC LOG

Note each depth where water was observed in consolidated formation.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600051883
2. Site Well Number as shown on application or plans):	MW-22A
3. Well Completion Date:	09/29/98
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	45.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	25.0
7. Screen Length (or length of open hole) in feet:	20.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	15
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

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   Longitude: West 74° 09' 28.2" Latitude: North 40° 50' 01.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728799.5 East 586803.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 109.31
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-22-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client Hoffmann LaRoche Sewer	**Project No.** 20447-0100-00000	**Boring No.** MW-22A	**Sheet** 1 of 3
		Well No.	
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman Summit Inc./ Pedro Vega	**Drill Rig Make/Model** Mobile B-80	**Auger/Drive Casing Size/Type** 6 inch casing
Sampler Description NX Rock Coring	**Drilling Method** Air Rotary/ Coring	**Coordinates** X= Y=
Filter Seal Amount/Type: 6 inch grouted casing	**Drill Bit/Auger Diameter:** 9 7/8 Inches	**Ref. El.:**
Sand Pack Amount/Type: NA	**Hammer Weight/Fall:** NA	**Riser Stick Up:** Flush
Screen Length/Type: 3 inch open hole	**Water Table Depth:** 10.3 ft	**Surface Elevation:**
Riser Length/Type: NA	**Total Depth:** 45 ft	**Date Start:** 9/28/98 **Date Finish:** 9/28/98

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				6 inches of asphalt, concrete and crushed stone. Red-brown silty sand and clay.				
5				Same as above.				
9				Weathered non-competent bedrock at 9ft.				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) 6 inch casing installed and grouted to 25 ft.
2.) 3 inch open hole well completion from 25 to 45ft.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-22A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	_2_ of _3
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15	Run 1	20%	98%	Competent Bedrock, initiation of coring runs.				
16				Interbedded red-gray shale changing to medium grained sandstone with significantly weathered horizontal fractures.				
17								
18				Red-brown siltstone dominated by horizontal bedding and weathered fractures.				
19								
20								
21								
22				Red-brown siltstone horizontally bedded with weathering within the multiple horizontal and vertical fractures.				
23								
24				Change to red-brown shale with horizontal bedding and minor vertical fractures.				
25	Run-2	68%	99%	Red-brown shale to siltstone with few horizontal fractures and mild weathering.				
26								
27								
28								
29								
30				Horizontally bedded shale with angular weathered fractures from 30-32 ft showing some calcification.				
31								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ff	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-22A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	_3_ of _3
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
33								
34				Red-brown sandstone with some quartz mineralization within high angle fractures.				
35	Run-3	68%	100%	Red-brown sandstone with several high angle vertical fractures showing mineralization.				
36								
37								
38								
39				Horizontally bedded shale and siltstone with some clay filling of fractures.				
40								
41				Horizontally bedded shale with highly weathered vertical fractures and some calcified deposits.				
42								
43				Red-brown medium grained sandstone with few horizontal bedding planes.				
44								
45				End of coring runs.				
46								
47								
48								
49								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Rock Core Log

	Project: Hoffmann LaRoche **Project No.** 20447-0100-00000	**Date/Time** 09/29/98	**Sheet** 1 **of** 2
	Contractor Personnel: Summit Inc.	**TRC Personnel:** Charles Foster	
Boring/Well Number: MW-22A	**Driller/Equipment:** Mobile B-80, NQ/NX	**Elevation:** 147.86 **Orientation:** **Time Start:** **Time Finish:**	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
15	1min, 45sec/ft	15-25' 10' 98 %			20%	4		Red-brown to gray shale with horizontal orientation	
16									
17	3min, 30sec/ft					5		Red -brown medium to coarse grained sandstone 30" layers	
18	2 min,15sec/ft some H2O loss (17-18')		X			5		mica interior.	
19	3 min /ft		X			4			
20	3min,30sec/ft					3		Red-brown siltstone with multiple vertical and horizontal fractures	
21	4min, 30sec/ft					6		weathering within fractures.	
22	5 min/ft					9		Red-brown siltstone, Highly weathered.	
23	5min, 30sec/ft		X			6		Vertical fractures, horizontal bedding	
24	6 min/ft					5		Red-brown, siltstone, inter-bedded with shale.	
25	5 min, 30sec/ft					4			
26	5min/ft	25-35' 99%			68.3%	1		Red-brown shale few horizontal fractures w/mild weathering	
27	5 min 30sec/ft					0			
28	5 min 15sec/ft					2			
29	5 min 15sec/ft					5			
30	5 min /ft					4		High angle weathered and calcified fracture, to 30-32'	

TRC

Rock Core Log

Project: Hoffmann LaRoche	**Project No.** 20447-0100-00000	**Date/Time** 09/29/98	**Sheet** 2 **of** 2
Contractor Personnel: Summit Inc.		**TRC Personnel:** Charles Foster	
Boring/Well Number: MW-22A	**Driller/Equipment:** Mobile B-80, NQ/NX	**Elevation:** 147.86 **Orientation:** **Time Start:** **Time Finish:**	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
31	5min/ft		X			4		Red Brown Shale with High angle weathered	
32	5 min/ft					3		and calcified fracture to 32'	
33	5min, 30sec/ft					3		Red -brown medium grained sandstone with trace	
34	3 min, 30 sec/ft		X			3		mineralization..	
35	4 min/ft	35-45' 100 %			67.5%	1		High angle fracture with weathering.	
36	5 min, 30sec/ft		X			4		Red-brown,sandstone, inter-bedded with shale and siltstone	
37	5 min/ft		X			7			
38	5min, 30sec/ft					1		Shale with vertical fractures, and horizontal bedding	
39	4 min, 30 sec/ft.					2	Clay filled fractures		
40	5 min /ft		X			1		High angle to vertical fracture with calcified weathering.	
41	5min/ft					4			
42	4 min, 30sec/ft					3			
43	5 min /ft					1		Red-brown medium grained sandstone to 45 feet bgs.	
44	4 min 30 sec/ft					2			
45	5 min /ft					2			

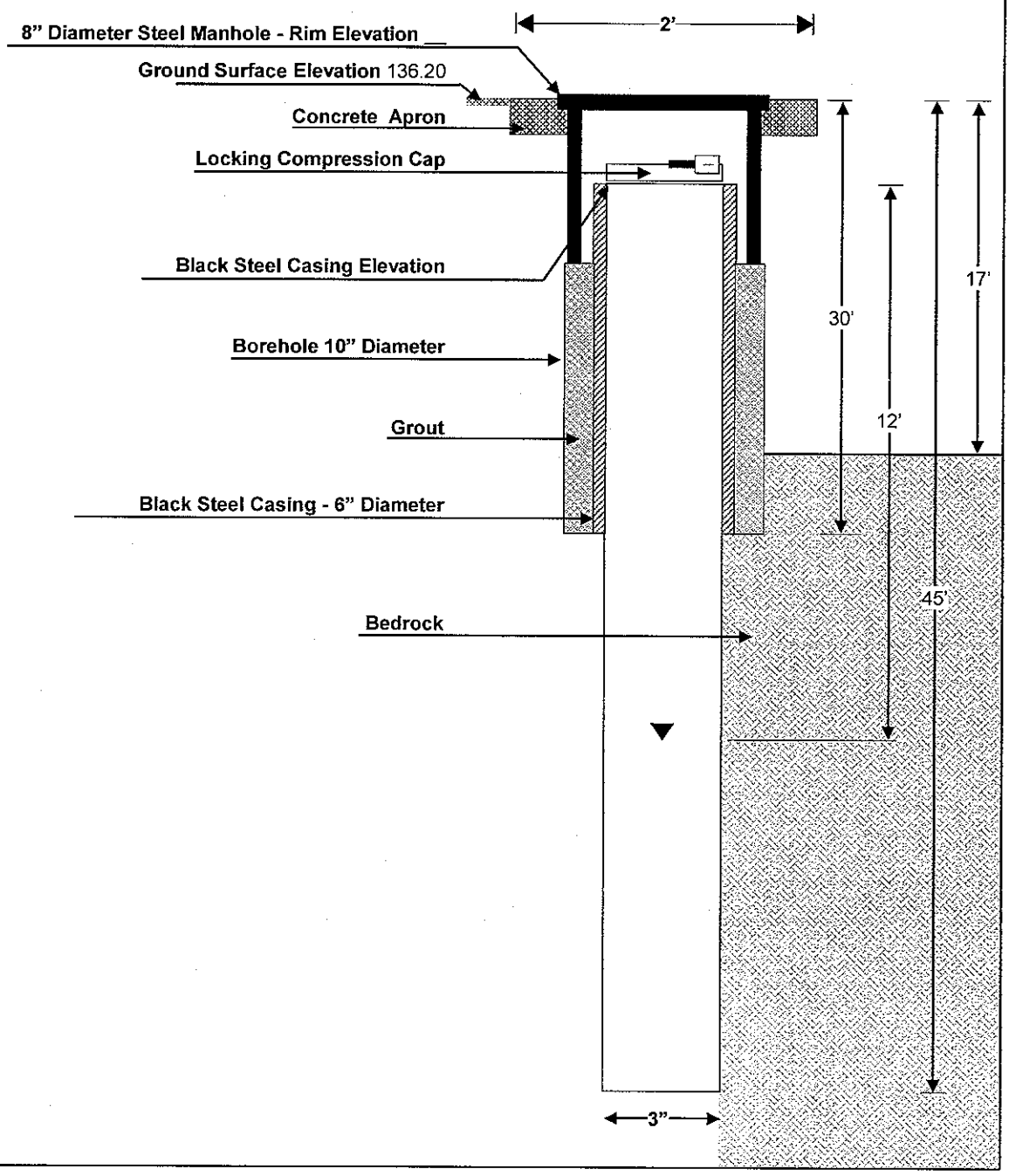
TRC

Flush Mount Open Hole Bedrock Monitoring Well Construction Log

Well No. MW-22A

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Peter Jeuck **Date Completed:** 9/30/98
Location: Southeast corner of building 86 in road
Drilling Contractor: Summit **Method:** HAS/Air Rotary
TRC Geologist: Todd Majer / Charles Foster

Reference Elevation: 110.22
Reference Description: Top of Steel Casing
NJDEP Permit No.: 26 51883
Development Date: 10/2/98
Development Method: Surging and Pumping



DWR-133M (7/92) SERIAL # 33072

Mail to MW-23

Water Allocation
CN 029
Trenton, N.J. 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
TRENTON, NJ

2636929 -THRU- 2636935

Permit No. 2

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

COORD #: 26 02.987

Owner HOFFMAN LAROCHE INC
Address 340 KINGSLAND ST.
NUTLEY, N.J.

Driller AQUIFER DRILLING & TESTING, INC
Address 51-41 59TH PLACE
WOODSIDE, N.Y. 11377

Name of Facility SAME
Address

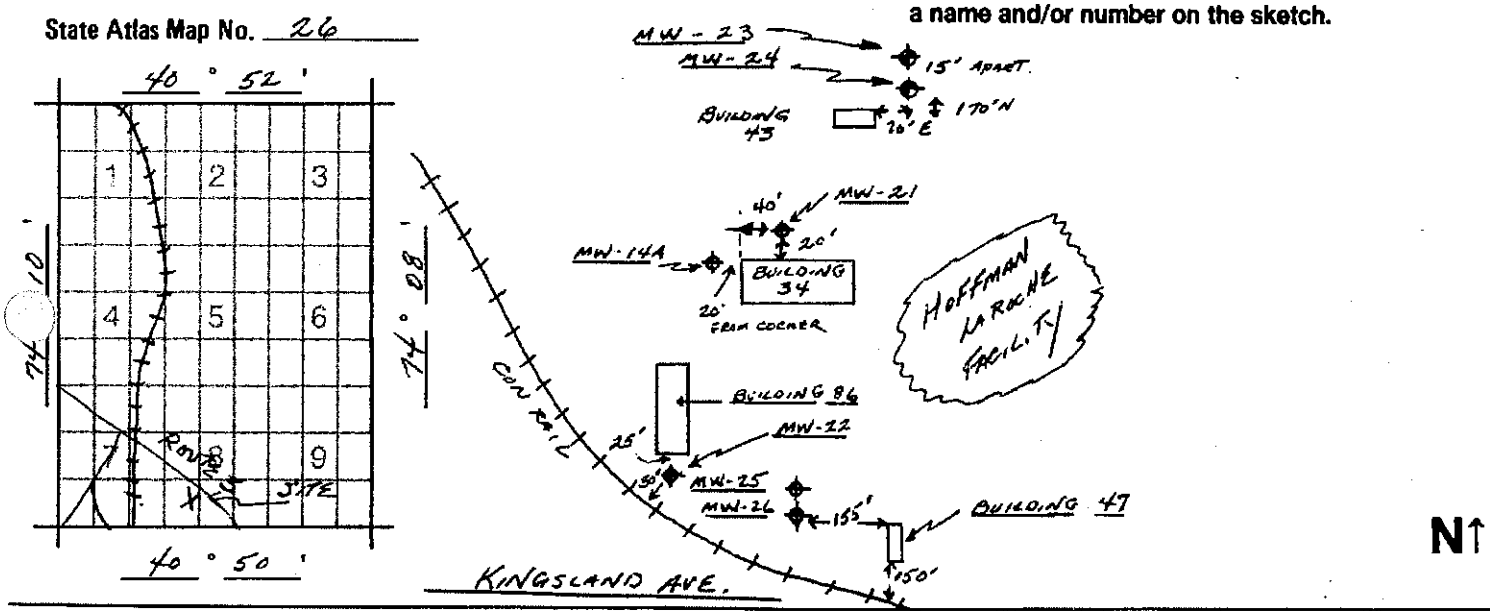
Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	7	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1 & 4	80.02	CLIFTON	PASSAIC

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.

State Atlas Map No. 26



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☐ ECRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) MEMORANDUM OF AGREEMENT

Case I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
MAY 12 1994

FOR D.E.P.E. USE
☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐

E REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 5/10/94

Signature of Driller [signature] License # 1494

Signature of Owner [signature] for JOHN LUCEY ROUX ASSOCIATES AGENT HOFF

COPIES: Water Allocation — White and Pink Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36931
Atlas Sheet Coordinates ~~26~~ : ~~02~~ : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 23
County PASSAIC Municipality CLIFTON CITY Lot No. 1 & 4 Block No. 80.02
Address 340 Kingsland Street, Nutley NJ.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 5/20/94
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Roux Assoc. / J. Lucey Tele. # (609) 423-5800

WELL CONSTRUCTION

Total depth drilled 13.5 ft.
Well finished to 13.5 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	3.5	4	Sch. 40 PVC
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	3.5	13.5	4	Sch. 40 PVC .020 Slot
Tail Piece	—	—	—	—
Gravel Pack	2	13.5	11	No. 2 Morie
Annular Seal/Grout	0	2	11	Cement/Bentonite
Method of Grouting	Gravity Placement			

Static water level after drilling 8 ft.
Water level was measured using Tape
Well was developed for 1.5 hours at 1 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid NONE Type of Rig Mobile B-61
Name of Driller Carlos Fuente
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 1129
Name of Drilling Company ~~L. REXRODE/AQUIFER DRLG. & TES~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2' Topsoil + roots
2-8' Dark reddish brown silt, trace fine grained sand, trace mica. moist, wet @ 8'
8-13.5' Dark reddish brown sand w/s.lt, fine grained, wet @ 8'

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature [signature] Date 7/16/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600036931
2. Site Well Number as shown on application or plans):	MW-23
3. Well Completion Date:	05/20/1994
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	12.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	8
13. Yield (gallons per minute):	1
14. Development Techinque (specify):	Bailed
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

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3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600036931
2. Site Well Number (As shown on application or plans): MW-23
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 13.9" Latitude: North 40° 50' 10.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729748.6 East 587895.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 122.45
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

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I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 6-19-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW23

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-15.4 Latitude: North 40-50-10.3

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729979.4036 East 2141786.0879

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 123.40' (4" PVC) Flange = 123.83' (OLD X) , Ground Surface = 123.85' (SOIL)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

ROUX ASSOCIATES, INC.
CONSULTING GROUND-WATER GEOLOGISTS

GEOLOGIC LOG

Well No. MW-23

Study No. 28311I05 Date 5/20
Project Hoffmann-La Roche
Client Hoffmann-La Roche
Page 1 of 1
Logged By J. Stubbs
Loc. Hoffmann-La Roche Facility
M.P. Elevation
Drilling Started 5/20 Ended 5/20
Driller ADT
Type of Rig Mobile B-61

WELL DATA

Hole Diam. (in.)
Final Depth (ft.) 12
Casing Diam. (in.) 4
Casing Interval (ft.) 0-2
Screen Interval (ft.) 2-10
Screen Slot & Type 0.020 in. PVC
Well Status Monitoring well

SAMPLER

Type Split spoon
Hammer 140 lb.
Fall 30 in.

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.
--	--	--

DEVELOPMENT

--

OVM (ppm)	SAMPLE No.	Rec.(in.)	Depth(ft.)	Blow/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
					Top soil	0-2	Top soil and roots
0	1	10	2-4	4,4,5,4	Silt	2-4	Dark reddish-brown silt, trace fine grained sand, trace mica, moist, wet at 8 feet
0	2	3	4-6	6,8,9,8		4-6	
0	3	NR	6-8	6,8,8,10		6-8	
0	4	12	8-10	4,4,4,4	Sand	8-10	Dark reddish-brown sand with silt, fine grained, wet
0	5	NR	10-12	7,9,6,4		10-12	
						12-14	Top of weathered bedrock 12 feet End of boring 12 feet
						14-16	
						16-18	
						18-20	
						20-22	

REMARKS:
(1) in feet relative to a common datum
(2) from top of PVC casing
NR = not recorded

DWR-133M (7/92)

SERIAL # 33072 MW-24

2436929 -THRU- 2636935

Mail to

Water Allocation
CN 029
Trenton, N.J. 08625

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
TRENTON, NJ

Permit No. 2636935

2

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

COORD #: 26 08.987

Owner HOFFMAN LAROCHE INC

Address 340 KINGSLAND ST.
NUTLEY, N.J

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC

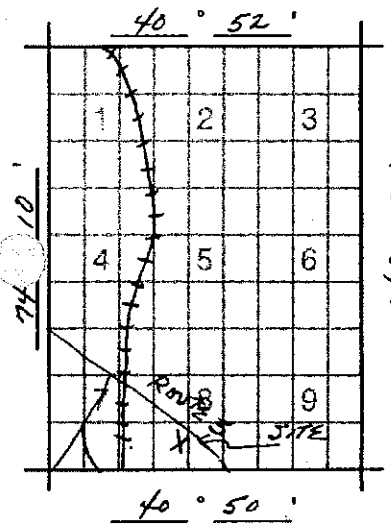
Address 51-41 59TH PLACE
WOODSIDE, N.Y. 11377

Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	7	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA GPM

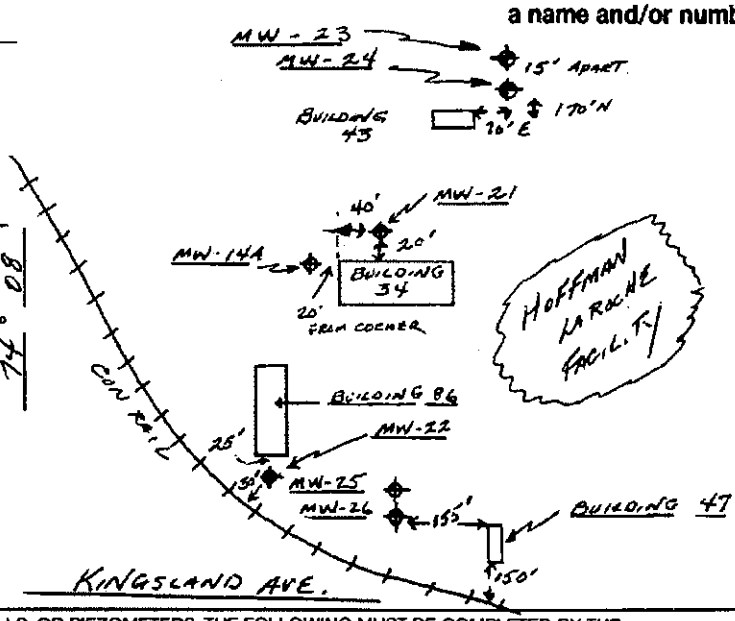
LOCATION OF WELL(S)

Lot #	Block#	Municipality	County
1 & 4	80.02	CLIFTON	PASSAIC

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



N↑

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☐ ECRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) MEMORANDUM OF AGREEMENT

Case I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
MAY 12 1994

FOR D.E.P.E. USE

☒ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or cased borehole.
☐

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 5/10/94

Signature of Driller [signature] License # 1494

Signature of Owner [signature] for JOHN LUCEY ROAD ASSOCIATES AGENT

COPIES: Water Allocation — White and Pink Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36932
Atlas Sheet Coordinates ~~26~~ : ~~02~~ : ~~987~~

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State ~~NJ~~ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 24
County PASSAIC Municipality CLIFTON CITY Lot No. 1 & 4 Block No. 80.02
Address 340 Kingsland Street, Nutley, N.J.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 5/20/94
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Roux Associates/J. Lucy Tele. # (609)423-5800

WELL CONSTRUCTION

Total depth drilled 42 ft.
Well finished to 42 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	25	6	Sch. 40 Steel
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	25	42	6	.020 bedrock well
Tail Piece	—	—	—	—
Gravel Pack	N/A	N/A	N/A	N/A
Annular Seal/Grout	0	25	10	Cement/bentonite
Method of Grouting	Tremie pipe pressure grouted			

Static water level after drilling ~ 8 ft.
Water level was measured using Tape
Well was developed for 1 hours at 10 gpm
Method of development Air
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig Schramm
Name of Driller Matt Adams
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 16613
Name of Drilling Company L. REXRODE/AQUIFER DRLG. & TES

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2' Topsoil + roots
2-10' Dark reddish brown silt, trace fine grained sand, trace mica wet @ 8' Dark reddish brown sand fine grained.
10-16' Weathered & competent bedrock
16-22' same
22-34' Dk reddish brown siltstone interbedded w/dk reddish brown sandstone w/silt, very fine grained
34-42' Fracture zone

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 7/13/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600036932
2. Site Well Number as shown on application or plans):	MW-24
3. Well Completion Date:	05/25/1994
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	42.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	22.0
7. Screen Length (or length of open hole) in feet:	20.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	8
13. Yield (gallons per minute):	10
14. Development Techinque (specify):	Air
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hour

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600036932
2. Site Well Number (As shown on application or plans): MW-24
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 14.2" Latitude: North 40° 50' 10.4"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729720.2 East 587875.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 122.46
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 6-19-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Hoffmann LaRoche, Inc.
Name of Facility:.Clifton/Nutley Site
Location: On-site
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): MW24

Geographic Coordinate NAD 27 (to nearest 1/10 of a second):
Longitude: West 74-09-15.7 Latitude: North 40-50-10.0

New Jersey State Plane Coordinates NAD 27 to nearest 10 feet:
North: 729950.7932 East 2141766.3069

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 123.43' (4" PVC) Flange = 123.86' (OLD X) , Ground Surface = 123.90' (SOIL)

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
Geodetic Control Monument No. 6690
NGVD 1929 Elev. = 79.106, NAD 1927 Horizontal Coordinate = N 727,132.37, E 2,142,932.03 ,

Significant observations and notes: _____

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

_____ 10/22/98
Professional Land Surveyor's Signature Date

Kenneth D. Dykstra, NJ License No. 32972
Professional Land Surveyor's Name and License Number

694 Route 15 South, Suite 205, Lake Hopatcong, NJ 07849, 973-663-6540
Professional Land Surveyor's Address and Phone Number

ROUX ASSOCIATES, INC.
CONSULTING GROUND-WATER GEOLOGISTS

GEOLOGIC LOG

Well No. MW-24

Study No. 28311I05 Date 5/23
Project Hoffmann-La Roche
Client Hoffmann-La Roche
Page 1 of 2
Logged By J. Stubbs
Loc. Hoffmann-La Roche Facility
M.P. Elevation
Drilling Started 5/22 Ended 5/25
Driller ADT
Type of Rig Schram 450

WELL DATA

Hole Diam. (in.)
Final Depth (ft.) 42
Casing Diam. (in.) 6
Casing Interval (ft.) 0.5-22
Screen Interval (ft.) 22-42
Screen Slot & Type Open hole
Well Status Monitoring Well

G. W. READINGS(1)

Date	DTW MP(2)	Elev.W.T.
--	--	--

SAMPLER

Type Split spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Submersible pump

OVM (ppm)	SAMPLE No.	Rec.(in.)	Depth(ft.)	Blow/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
					Top soil	0-2	Top soil and roots
0	1	10	2-4	4,4,5,4	Silt	2-4	Dark reddish-brown silt, trace fine grained sand, trace mica, wet at 8 feet
0	2	3	4-6	6,8,9,8		4-6	
0	3	NR	6-8	6,8,8,10		6-8	
0	4	12	8-10	4,4,4,4	Sand	8-10	Dark reddish-brown sand with silt, fine grained, wet
0	5	NR	10-12	7,9,6,4		10-12	
					Weathered bedrock	12-14	Weathered bedrock
					Competent bedrock	14-16	Competent bedrock
						16-18	
						18-20	
						20-22	

REMARKS:
(1) in feet relative to a common datum
(2) from top of PVC casing
NR = not recorded

ROUX ASSOCIATES, INC.
CONSULTING GROUND-WATER GEOLOGISTS

GEOLOGIC LOG

Well No. MW-24

Study No. 28311I05 Date 5/25
Project Hoffmann-La Roche
Client Hoffmann-La Roche
Page 2 of 2
Logged By J. Stubbs
Loc. Hoffmann-La Roche Facility
M.P. Elevation NR
Drilling Started 5/22 Ended 5/25
Driller ADT
Type of Rig

WELL DATA

Hole Diam. (in.)
Final Depth (ft.) 42
Casing Diam. (in.) 6
Casing Interval (ft.) 0.5-22
Screen Interval (ft.) 22-42
Screen Slot & Type Open hole
Well Status Monitoring Well

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.
--	--	--

SAMPLER

Type Split spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Submersible pump

OVM (ppm)	SAMPLE No.	Rec.(in.)	Depth(ft.)	Blow/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
						22-24	Dark reddish-brown siltstone interbedded with dark redish-brown sandstone with silt, very fine grained
						24-26	
						26-28	
						28-30	
						30-32	
						32-34	Fracture zone with water 32'
						34-36	Fracture zone 34 feet
						36-38	
						38-40	
						40-42	End of boring at 42 feet

REMARKS:
(1) in feet relative to a common datum
(2) from top of PVC casing
NR = not recorded

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201316436

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: DENNIS MOORE, JOURNEYMAN LICENSE # 0001214

Permit Issued to: AMERIDRILL INC

Company Address: 1201 EDGELY RD LEVITTOWN, PA 19057

PROPERTY OWNER

Name: HOFFMAN-LA ROCHE HOFFMAN-LA ROCHE

Organization: Hoffman-La Roche

Address: 340 Kingsland Street

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffmann-La Roche

Address: 340 Kingsland Street

County: Passaic Municipality: Clifton City Lot: 4 Block: 80.02

Easting (X): 587873 Northing (Y): 729686
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-24B

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 50

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Pilawski

Approval Date: November 6, 2013
Expiration Date: November 6, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201316436

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

DWR-133M (7/92) SERIAL # 33072

2436929 -THRU- 2636935

Mail to MW-25

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
TRENTON, NJ

Permit No. 2

Water Allocation
CN 029
Trenton, N.J. 08625

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

COORD #: 26 00 987

Owner HOFFMAN LAROCHE INC

Address 340 KINGSLAND ST.
NUTLEY, N.J

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC

Address 51-41 59TH PLACE
WOODSIDE, N.Y. 11377

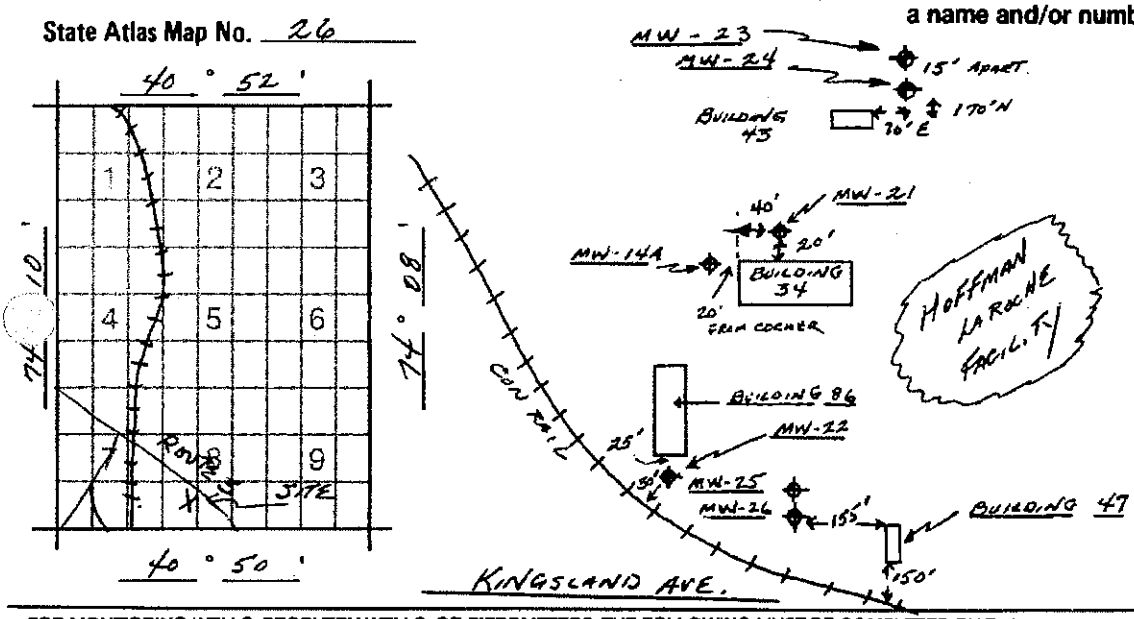
Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	7	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1 & 4	80.02	CLIFTON	PASSAIC

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☐ ECRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) MEMORANDUM OF AGREEMENT

Case I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources/Water Allocation
MAY 12 1994

FOR D.E.P.E. USE

☒ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or cased borehole.
☐

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 5/10/94

Signature of Driller [signature] License # 1494

Signature of Owner [signature] for JOHN LUCEY ENVIRONMENTAL ASSOCIATES AGENT

COPIES: Water Allocation — White and Pink Health Dept — Yellow Owner — Blue Driller — White

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 36933
Atlas Sheet Coordinates 26 : 02 : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 25
County PASSAIC Municipality CLIFTON CITY Lot No. 1 & 4 Block No. 80.02
Address 340 Kingsland Street, Nutley, NJ.

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 5/27/94
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Kaix Assoc./J. Lucey Tele. (609) 423-3800

WELL CONSTRUCTION

Total depth drilled 14 ft.
Well finished to 14 ft.
Borehole diameter:
Top 11 in.
Bottom 11 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface N/A ft.
Was steel protective casing installed? ☐ Yes ☒ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	0	4	4	Sch 40 PVC.
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	4	14	4	Sch 40 PVC .020
Tail Piece	—	—	—	—
Gravel Pack	2	14	11	No. 2 Morie
Annular Seal/Grout	0	2	11	Cement/Bentonite
Method of Grouting	Gravity, Pavement			

Static water level after drilling 8.5 ft.
Water level was measured using Tape
Well was developed for .5 hours at 1 gpm
Method of development Bailed
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity N/A gpm
Pump type: N/A
Drilling Method HSA
Drilling Fluid None Type of Rig Mobile B-57
Name of Driller Matt Adams
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A
N.J. License No. 16/3
Name of Drilling Company L. REXRODE/AQUIFER DRLG. & TES

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-2' Asphalt
2-6' Dark reddish brown sand w/silt, fine grained, dry.
6-8' Moderate brown sand w/silt, fine grained, trace gravel - moist.
8-10' Moderate brown silt w/fine grained sand - wet @ 8.5'
10-14' Dark reddish brown sand w/silt, fine grained. Some weathered bedrock, fragments.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Date 7/13/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	2600036933
2. Site Well Number as shown on application or plans):	MW-25
3. Well Completion Date:	05/27/1994
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	13.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	3.0
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	8.5
13. Yield (gallons per minute):	1
14. Development Techinque (specify):	Bailed
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

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SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600036933
2. Site Well Number (As shown on application or plans): MW-25
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 23.9" Latitude: North 40° 49' 57.4"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728402.4 East 587135.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 103.75
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

ROUX ASSOCIATES, INC.
CONSULTING GROUND-WATER GEOLOGISTS

GEOLOGIC LOG

Well No. MW-25

Study No. 28311I05 Date 5/27
Project Hoffmann-La Roche
Client Hoffmann-La Roche
Page 1 of 1
Logged By J. Stubbs
Loc. Hoffmann-La Roche Facility
M.P. Elevation NR
Drilling Started 5/27 Ended 5/27
Driller ADT
Type of Rig

WELL DATA

Hole Diam. (in.)
Final Depth (ft.) 13
Casing Diam. (in.) 4
Casing Interval (ft.) 0-3
Screen Interval (ft.) 3-10
Screen Slot & Type 0.020 in. PVC
Well Status Monitoring Well

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.
--	--	--

SAMPLER

Type Split spoon
Hammer 140 lb.
Fall 30 in.

DEVELOPMENT

Submersible pump

OVM (ppm)	SAMPLE No.	Rec.(in.)	Depth(ft.)	Blow/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
					Asphalt	0-2	Asphalt and crushed stone
0	1	10	1-3	7,8,8,9	Sand	2-4	Dark reddish-brown sand with silt, fine grained, dry
0	2	5	3-5	4,5,5,7		4-6	
0	3	12	5-7	4,8,9,6		6-8	Moderate brown, sand with silt, fine grained, trace gravel, moist
0	4	12	7-9	5,7,9,5	Silt	8-10	Moderate brown silt with fine grained sand, wet
0	5	18	9-11	12,15,18,20	Sand	10-12	Dark reddish-brown, sand with silt, fine grained, some weathered bedrock fragments, wet
0	6	10	11-13	10,14,14,38		12-14	
						14-16	Top of weathered bedrock 13 feet End of boring 13 feet
						16-18	
						18-20	
						20-22	

REMARKS:
(1) in feet relative to a common datum
(2) from top of PVC casing
NR = not recorded

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201307248

WELL PERMIT

New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: STEVE R WOLF, JOURNEYMAN LICENSE # 0001317

Permit Issued to: AQUIFER DRILLING & TESTING

Company Address: 150 NASSAU TERMINAL RD NEW HYDE PARK, NY 11040

PROPERTY OWNER

Name: GREG CIERPIAL

Organization: Hoffman-LaRoche, Inc

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman La Roche Inc

Address: 66 Montclair Ave

County: Essex Municipality: Nutley Twp Lot: 20 Block: 300

Easting (X): 587135 Northing (Y): 728395
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW25C

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 80

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Sonic

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: May 24, 2013
Expiration Date: May 24, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201307248

WELL PERMIT

VIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201307248
2. Site Well Number as shown on application or plans):	MW-25C
3. Well Completion Date:	06/04/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	80
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	60
7. Screen Length (or length of open hole) in feet:	20
8. Screen or Slot Size:	
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	
13. Yield (gallons per minute):	
14. Development Techinque (specify):	
15. Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

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List all AKAs: Roche

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SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201307248
2. Site Well Number (As shown on application or plans): MW-25C
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 23.9" Latitude: North 40° 49' 57.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728393.9 East 587134.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 103.70
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

SERIAL # UU7UU1

DWR-133M (10/96)

Mail to MW-26A

NJDEP
Bureau Water Allocation
CN 426
nton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

10

2651888
2651889

Permit No. _____

COORD #: 26.02.973

Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
NUTLEY NJ 07110-1199

Name of Facility _____
Address SAME

Driller **Summit Drilling Co., Inc.**
Address **Central Jersey Industrial Park**
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

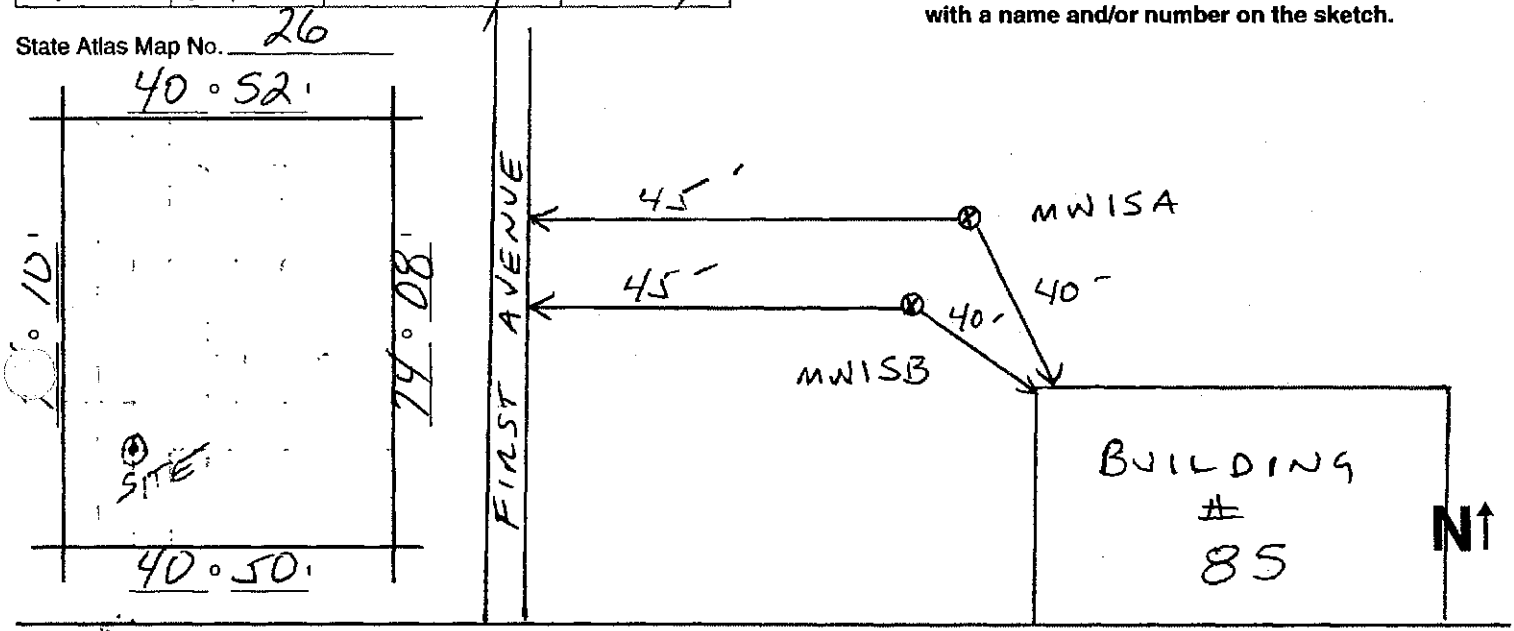
Diameter of Well(s) 2, 6 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐ _____

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

Compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98 TRC

Signature of Driller Carmine Delosa Registration No. J1210

Signature of Owner Charles Foster (MS)

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
1/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 43994
Atlas Sheet Coordinates 26 : 02 : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-264
County ~~PASSAIC~~ Municipality ~~CLIFTON CITY~~ Lot No. ~~1~~ 1 & 4 Block No. ~~80.02~~
Address ~~240~~ KINGSLAND ST. Date well started 3 / 19 / 96
TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3 / 20 / 96
Regulatory Program Requiring Well MEMO OF AGREEEMENT Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. FOSTER Tele. # (508) 656-3625

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.
Borehole diameter:
Top 10 in.
Bottom 6 in.
Well was finished: ☐ above grade
☑ flush mounted
If finished above grade, casing height (stick up) above land surface NA ft.
Was steel protective casing installed? ☑ Yes ☐ No

	Depth to Top (ft.) (From land surface)	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	0	30	6	SCH 40 STEEL
Outer Casing (Not Protective Casing)	—	—	—	—
Screen (Note slot size)	30	50	6	OPEN HOLE
Tail Piece	—	—	—	—
Gravel Pack	—	—	—	—
Annular Seal/Grout	0	30	10	CEMENT/BENTONITE
Method of Grouting	PRESSURE GROUTED			

Static water level after drilling 32 ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity NA gpm
Pump type: NA
Drilling Method AIR ROTARY / AUGER
Drilling Fluid NONE Type of Rig CATERPILLAR CT-238
Name of Driller T. BROWN
Health and Safety Plan submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. Registration No. JD-1311
Name of Drilling Company ~~H. LEONARD REXRODE, JR.~~ AQUIFER DRILLING & TESTING, INC.

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0 - 6" ASPHALT, CRUSHED STONE
REDDISH BROWN SAND w/ SILT
6" - 8' MODERATE BROWN SAND w/ SILT, TRACE GRAVEL
8' - 16' REDDISH BROWN SAND w/ SILT SOME WEATHERED BEDROCK
16-20' WEATHERED BEDROCK
20-50' BEDROCK.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Driller's Signature T. J. Brown Date 6 / 5 / 96

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

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List all AKAs: Roche

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County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

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2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 201 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600043994
2. Site Well Number as shown on application or plans):	MW-26A
3. Well Completion Date:	03/21/96
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	50.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	30.0
7. Screen Length (or length of open hole) in feet:	20.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	32
13. Yield (gallons per minute):	Not Available
14. Development Techinque (specify):	Surging & Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	Not Available

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

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   Longitude: West 74° 09' 24.1" Latitude: North 40° 49' 57.3"
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5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 103.48
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   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

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SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-26A	Sheet
Hoffmann LaRoche Sewer	20447-0100-00000	Well No.	1 of 4
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT/ T. Brown	Canterra CT-250	Air Rotary

Sampler Description	Drilling Method	Coordinates
Cuttings Monitored	Air Rotary	X= Y=
Filter Seal Amount/Type: Sealed Casing in Rock	**Drill Bit/Auger Diameter:** 9 7/8 Inches	**Ref. EL:**
Sand Pack Amount/Type: NA	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: Open Hole	**Water Table Depth:** 12 ft	**Surface Elevation:**
Riser Length/Type: NA	**Total Depth:** 50.5 ft	**Date Start:** 3/20/96 **Date Finish:** 3/21/96

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				6 inches Asphalt Red-brown fine to coarse SAND and silt, some fine to medium gravel to 16 ft.				
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12					▼			
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) Weathered Bedrock at 16 ft bgs.
2.) Casing grouted in rock to 30ft bgs.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-26A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	_2_ of _4
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15								
16				Weathered Shale.				
17				Competent Bedrock.				
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

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>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

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m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-26A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	3_ of _4
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
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c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-26A	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	3_ of _4
Location Description Nutley, NJ		**TRC Geologist** Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
51				End of Boring.				
52								
53								
54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								
65								
66								
67								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

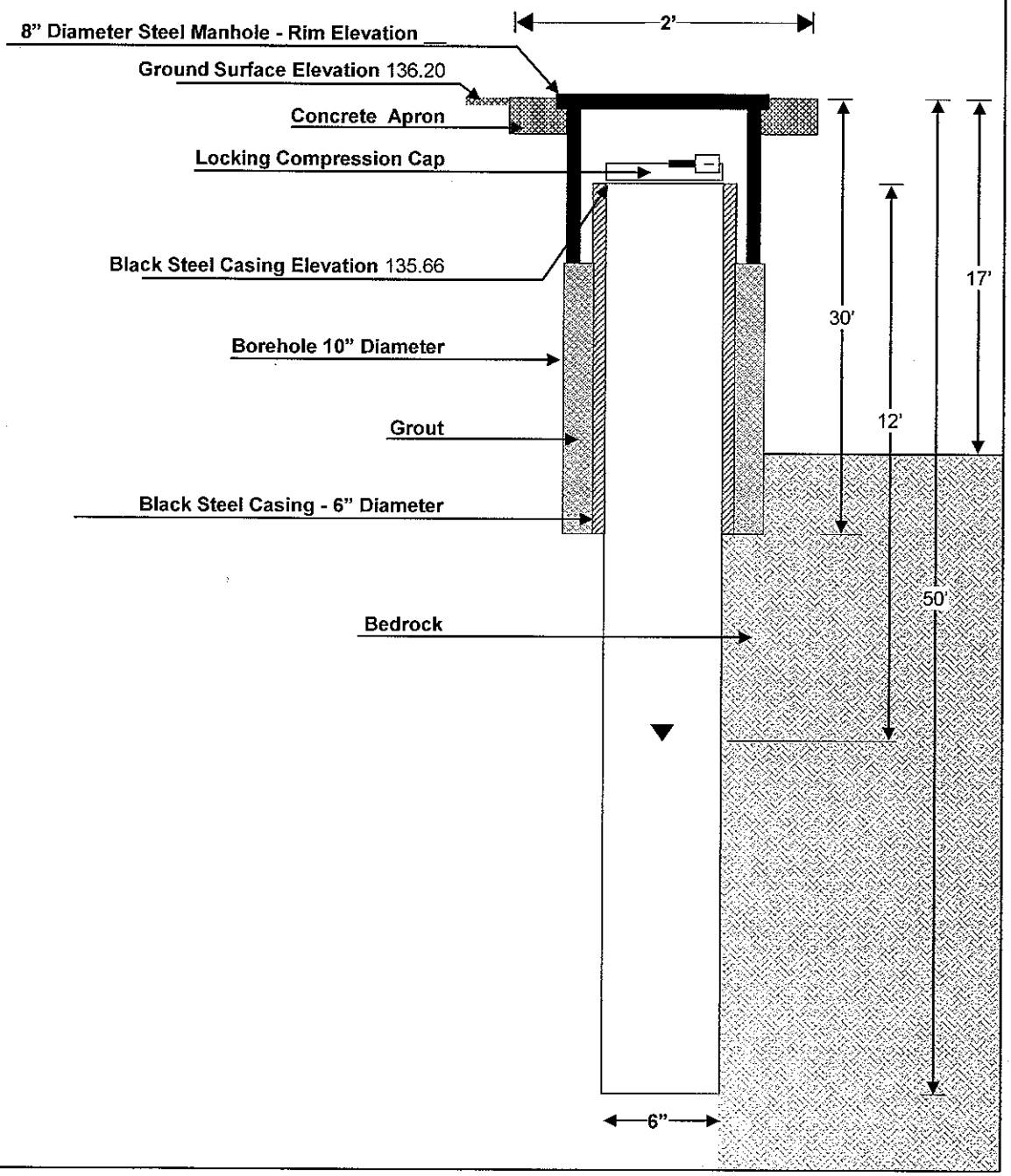
TRC

Flush Mount Open Hole Bedrock Monitoring Well Construction Log

Well No. MW-26A

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Peter Jeuck **Date Completed:** 3/21/96
Location: West Central lot 903
Drilling Contractor: ADT **Method:** HAS/Air Rotary
TRC Geologist: Todd Majer / Charles Foster

Reference Elevation: 104.62
Reference Description: Top of Steel Casing
NJDEP Permit No.: 26 36934
Development Date: 3/22/96
Development Method: Surging and Pumping



SERIAL # 007003

DWR-133M (10/96)

MW-27

Mail to

NJDEP
Bureau Water Allocation
CN 426
...ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. 2651886 2651887

COORD #: 26 .02.9 76

Owner HOFFMAN LAROUCHE
Address 340 KINGSLAND CT
NUTLEY NJ 07110

Name of Facility
Address SAME

Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

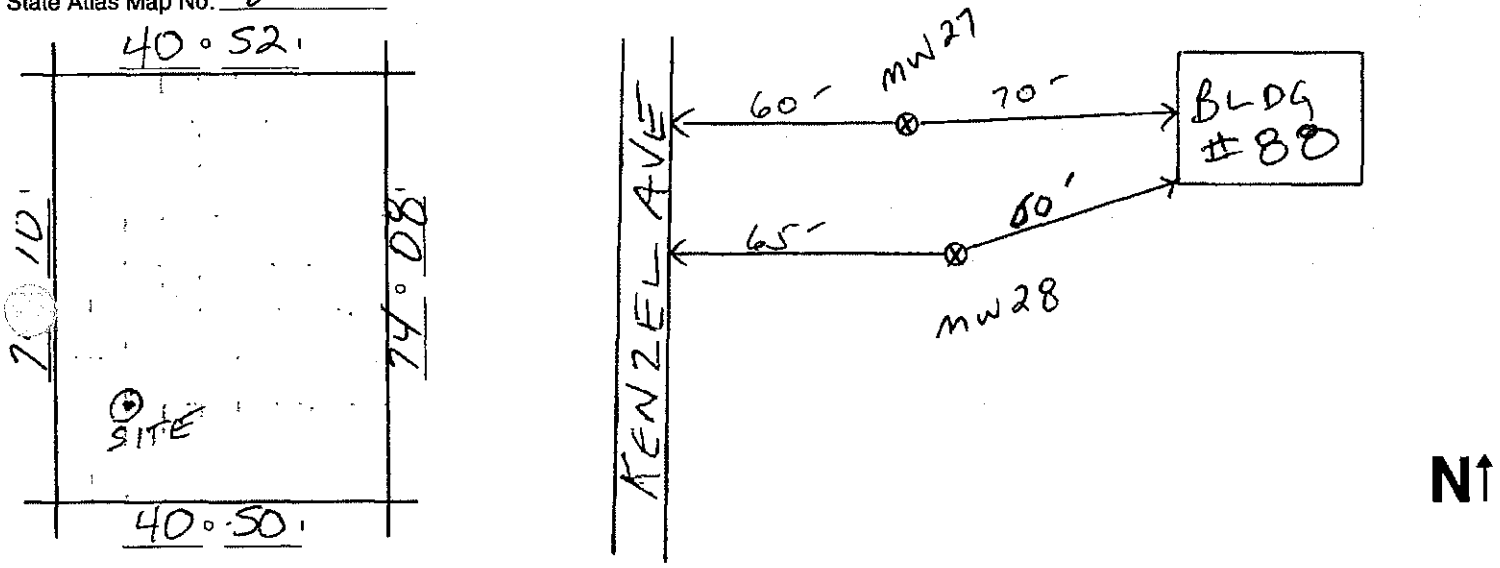
Diameter of Well(s) 2 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☑
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE
- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐

☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

...mpliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98 Signature of Driller Carmine DeLorse Registration No. J1210

TRC Signature of Owner Charles Foster (MS)

COPIES: Water Allocation — White For Health Dept. — Yellow Owner — Blue Driller — White

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600051886
2. Site Well Number as shown on application or plans):	MW-27
3. Well Completion Date:	10/01/1998
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	9.40'
13. Yield (gallons per minute):	0.5 gmp
14. Development Techinque (specify):	Pump & Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

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1. Well Permit Number (This number must be permanently affixed to the well casing): 2600051886
2. Site Well Number (As shown on application or plans): MW-27
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.6" Latitude: North 40° 50' 08.4"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729512.2 East 586461.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 112.81
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

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Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. _____

Map Grid Coordinates _____

OWNER IDENTIFICATION - Owner _____

Address _____

City _____ State _____ Zip Code _____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. _____

County _____ Municipality _____ Lot No. _____ Block No. _____

Address _____

DATE WELL STARTED _____

DATE WELL COMPLETED _____

TYPE OF WELL (as per Well Permit Category) _____

Reg'lating Program Requiring Well _____ Case I.D.# _____

Consult Title 7 Chapter 9 Subchapter 9 for applicable _____ Item # _____

WELL CONSTRUCTION

Total depth of Well _____ ft.

Well drilled to _____ ft.

Borehole diameter:
Top _____ in.
Bottom _____ in.

Well was finished: ☐ above grade ☐ flush mounted

Protective above ground casing height (with respect to land surface) _____ ft.

Is additional protective casing required? ☐ Yes ☐ No

Static water level after casing _____ ft.

Water level was measured using _____

Well was developed for _____ hours at _____ rpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Well Tested (yes/no etc.)
Grout/Neat Cement					
Middle Casing (Bentonite seal if applicable)					
Outer Casing (Temporary if applicable)					
Open Hole or Screen (Describe)					
Inner Casing (Riser Pipe)					
Tail Piece					
Gravel Pack				Gravel Pack Sieve Size	
Grout				Cement Bentonite	

Grouting Method _____

Drilling Method _____

Method of development _____

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity _____ gpm

Pump type _____

Drilling Fluid _____ Type of Rig _____

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None/ D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Contractor _____

Well Driller (Print) _____

Driller's Signature _____

Registration No. _____ Date _____

GEOLOGIC LOG

Note each depth where water was encountered or formations change

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

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SEAL

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Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client Hoffmann LaRoche Sewer	**Project No.** 20447-0100-00000	**Boring No.** MW-27	**Sheet** 1 of 2
		Well No.	
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman Summit Inc./ Pedro Vega	**Drill Rig Make/Model** Mobile B-80	**Auger/Drive Casing Size/Type** 6 Inch Casing
Sampler Description 2 ft standard split spoon	**Drilling Method** Air Rotary	**Coordinates** X= Y=
Filter Seal Amount/Type: 2ft Bent. Chips, Grout	**Drill Bit/Auger Diameter:** 6 Inches	**Ref. El.:**
Sand Pack Amount/Type: 12ft/ #1 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: 10ft/ 2" 20 Slot PVC	**Water Table Depth:** 9.4 ft	**Surface Elevation:**
Riser Length/Type: 5ft/ 2" Sch 40 PVC	**Total Depth:** 15 ft	**Date Start:** 10/1/98 **Date Finish:** 10/1/98

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1	8	24/16	Red-brown fine SAND and silt, trace angular gravel, trace concrete, fill.				
		11						
		10						
2		9						
3								
4								
5								
6	S-2	51	24/14	Red-brown fine SAND and silt, trace weathered bedrock (shale). No odor or product, wet.				
		40						
		42						
7		31						
				Red-brown weathered shale fragments in cuttings.				
8								
9								
10								
11								
12								
				Water bearing zone in weathered bedrock.				
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) 2 inch PVC screen installed from 15 to 5 feet.
2.) Sand pack installed from 15 up to 3 feet.
3.) Bentonite installed from 3 feet up to 1 foot.
4.) Temporary cemented 4inch PVC stick-up to be replaced by manhole.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-27	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	2 of 2
Location Description: Nutley, NJ		TRC Geologist: Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
15				End of Boring in weathered rock.				
16								
17								
18								
19								
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
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Cohesive Soils

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f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

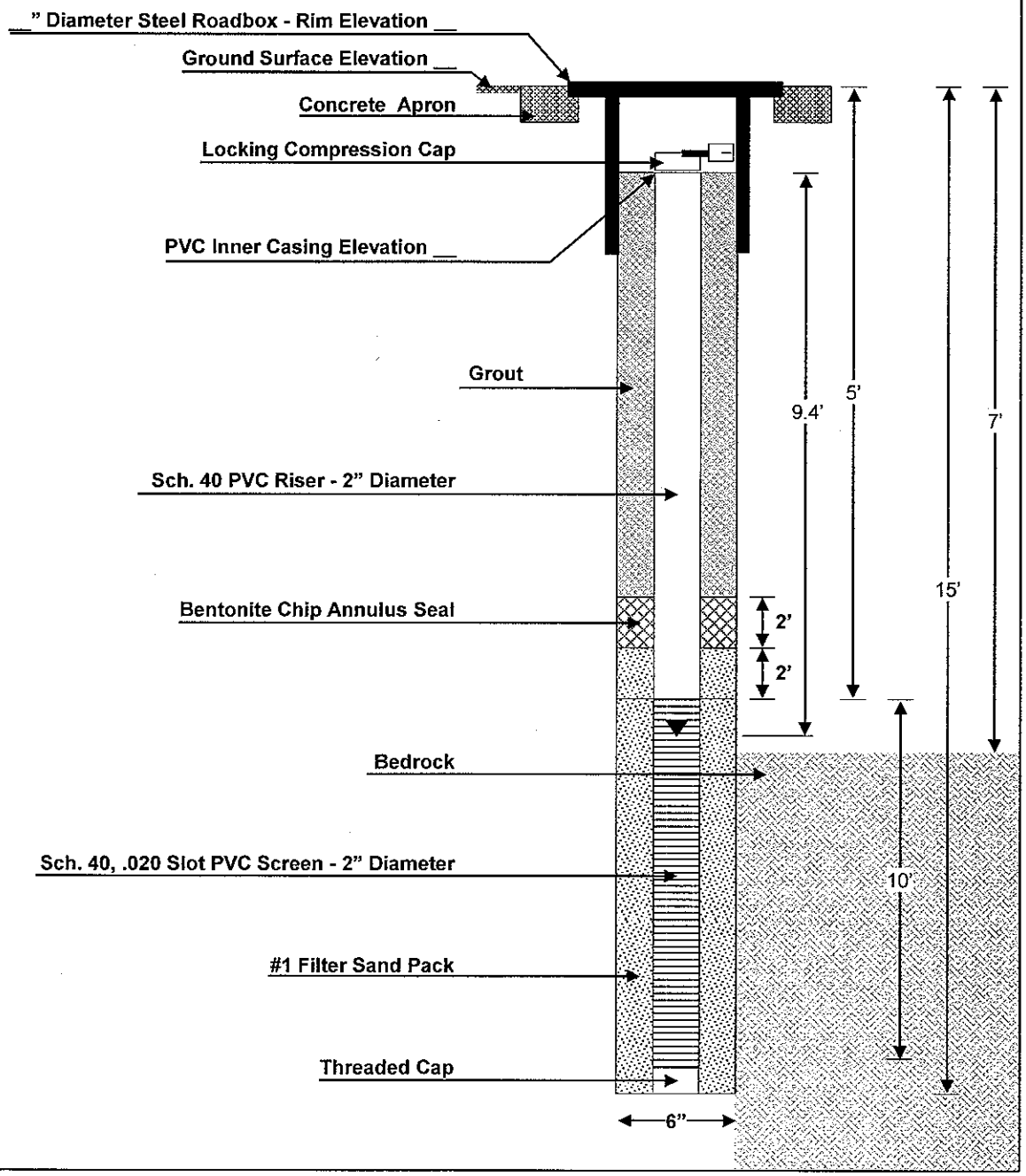
TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW- 27

Project: Hoffmann LaRoche Sewer **No.:** 204470100
Client: Peter Jeuck **Date Completed:** 10/1/98
Location: building 112
Drilling Contractor: Summit **Method:** Air Rotary
TRC Geologist: Charles Foster

Reference Elevation: 115.73
Reference Description: PVC Riser
NJDEP Permit No.: 26 51886
Development Date: 10/2/98
Development Method: Pump & Surge



AF-375I

SERIAL # 007003

DWR-133M (10/96)

Mail to MW-28

NJDEP
Bureau Water Allocation
CN 426
...ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. 2651886 2651887

COORD #: 26 .02.9 76

Owner HOFFMAN LAROUCHE
Address 340 KINGSLAND CT
NUTLEY NJ 07110

Name of Facility
Address SAME

Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

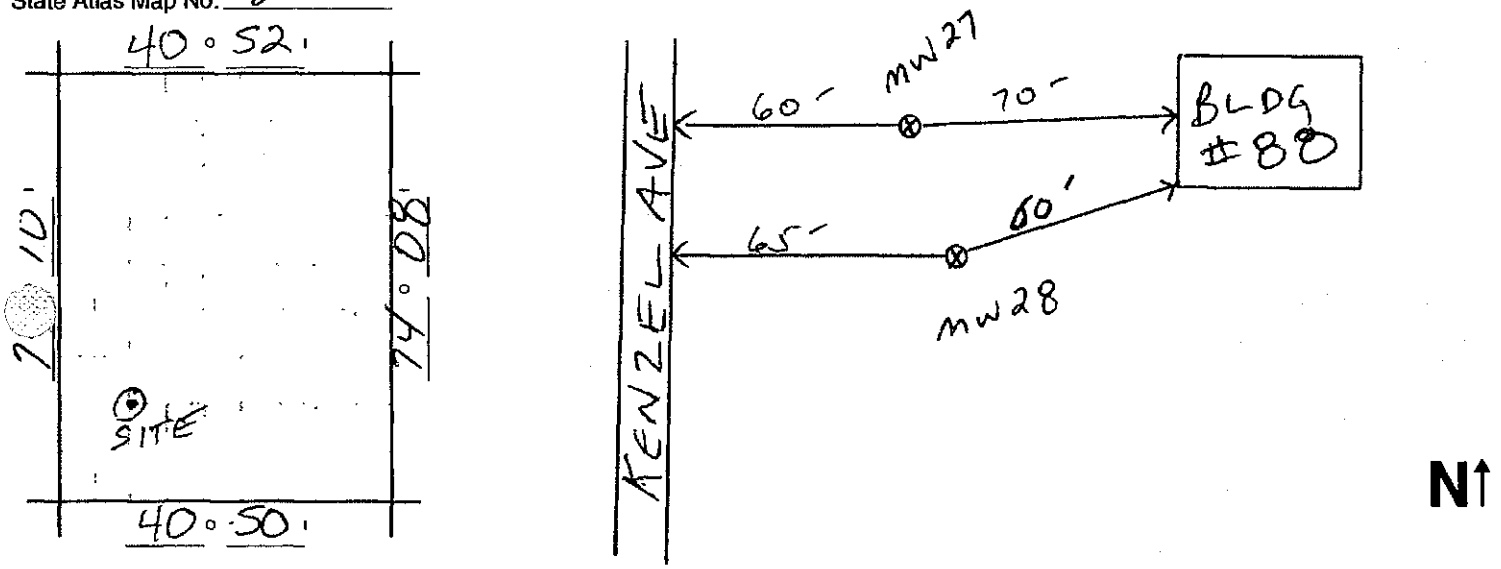
Diameter of Well(s) 2 Inches	Proposed Depth of Well(s) 45 Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☑
Type of Well (see reverse) MONITORING	If Yes, give pump capacity N/A cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1-3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
SEP 18 1998
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE
- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐

☐ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

...mpliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 9-16-98 Signature of Driller Carmine DeLorse Registration No. J1210

TRC

Signature of Owner Charles Foster (MS)

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-1(a) M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. ____ (if any)

Atlas Sheet Coordinates ____ (grid) ____ (no.)

OWNER IDENTIFICATION - Owner ____ (organization / person)

Address ____

City ____ State ____ Zip Code ____

WELL LOCATION - If not the same as owner please give address ____ Owner's Well No. ____

County ____ Municipality ____ (name) ____ Lot No. ____ Block No. ____

Address ____

DATE WELL STARTED ____

DATE WELL COMPLETED ____

TYPE OF WELL (as per Well Permit Categories) ____

Regulatory Program Requiring Well ____ Case I.D.# ____

CONSULTING / INVITED SUPERVISOR (if applicable) ____ Title ____

WELL CONSTRUCTION

Total depth drilled ____ ft.

Well finished at ____ ft.

Borehole diameter:
Top ____ in.
Bottom ____ in.

Well was installed: ☐ below grade
☐ flush mounted

If finished above grade, casing height (stick up above land surface) ____ ft.

Was any protective casing installed? ☐ Yes ☐ No

Static water level after drilling ____ ft.

Water level upon completion testing ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity ____ gpm

Pump type ____

Drawdown Test ____ Type of Pig ____

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one): None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ____

Well Driller (Print) ____

Driller's Signature ____

Registration No. ____ Date ____

Name, Material of Riser, Liner and Surface	Depth of Top (ft.)	Depth of Bottom (ft.)	Diameter (inches)	Material	Weight of Riser (lbs/ft or sch.)
Riser/Blank Casing					
Flexible Casing (for shallow cased wells only)					
Outer Casing (Temporary)					
Open Hole or Screen (Mfr. & Model)					
Grout Cement Bentonite					
Filter Pack					
Grout Pack					
Grout				Neat Cement Bentonite	lbs. lbs.

Circulating Method ____

Drilling Method ____

GEOLOGIC LOG

Note each depth where a water bearing formation is encountered.

COPIES: White - DWR Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600051887
2. Site Well Number as shown on application or plans):	MW-28
3. Well Completion Date:	10/01/1998
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	15.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.00"
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	6.00'
13. Yield (gallons per minute):	1 gpm
14. Development Techinque (specify):	Pump & Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

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SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600051887
2. Site Well Number (As shown on application or plans): MW-28
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.8" Latitude: North 40° 50' 07.8"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729455.0 East 586448.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 113.07
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-28

Project: Hoffmann LaRoche Sewer **No.:** 204470100

Client: Peter Jeuck **Date Completed:** 10/1/98

Location: building 112

Drilling Contractor: Summit **Method:** Air Rotary

TRC Geologist: Charles Foster

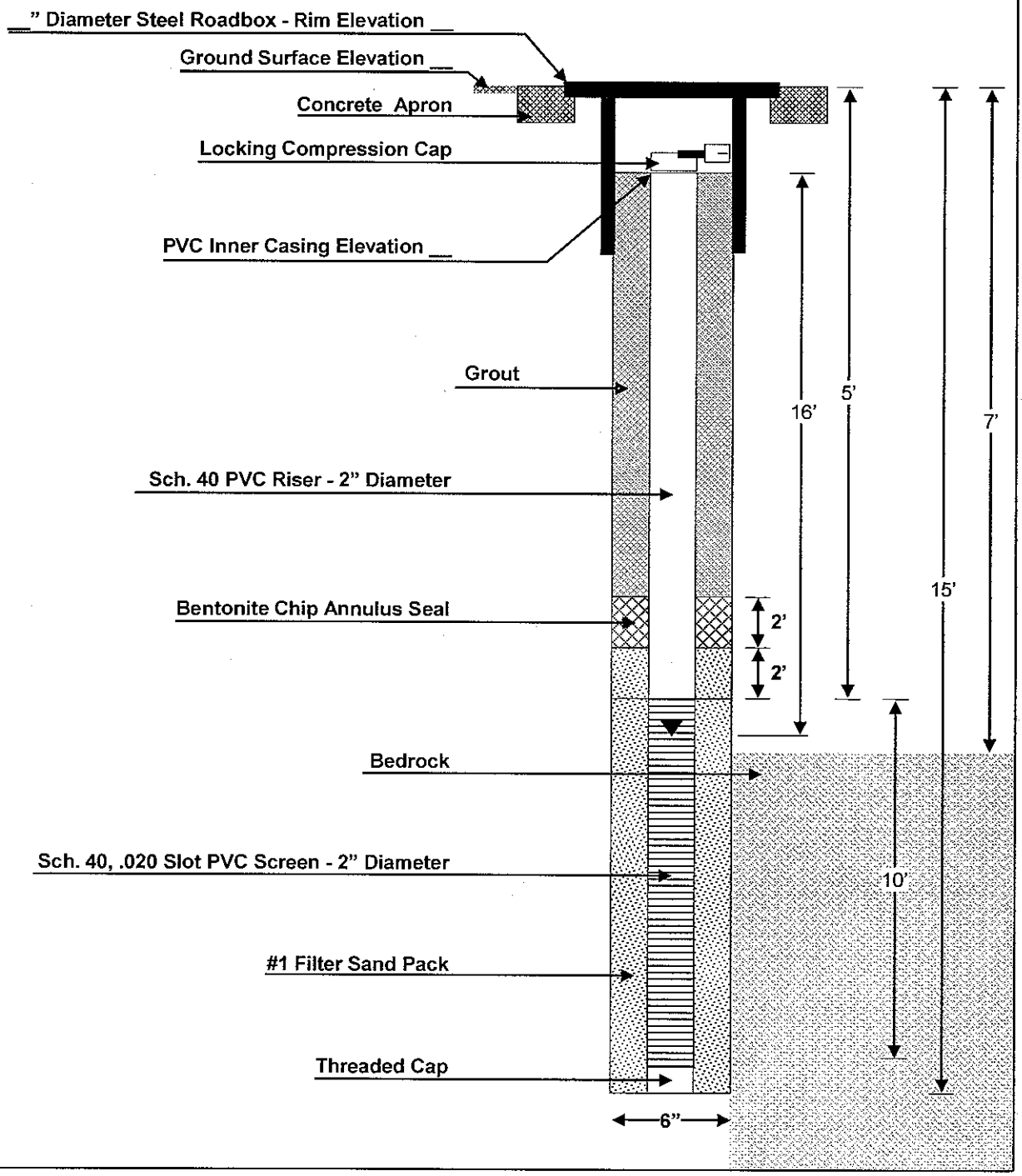
Reference Elevation: 114.99

Reference Description: PVC Riser

NJDEP Permit No.: 26 51887

Development Date: 10/2/98

Development Method: Pump & Surge



AF-375/

TRC

Soil Boring Log

Project/Client Hoffmann LaRoche Sewer	**Project No.** 20447-0100-00000	**Boring No.** MW-28	**Sheet** 1 of 2
		Well No.	
Location Description Nutley, NJ		**TRC Geologist** C. Foster	

Drilling Contractor/Foreman Summit Inc./ Pedro Vega	**Drill Rig Make/Model** Mobile B-80	**Auger/Drive Casing Size/Type** 6 Inch Casing
Sampler Description 2 ft standard split spoon	**Drilling Method** Air Rotary	**Coordinates** X= Y=
Filter Seal Amount/Type: 2ft Bent. Chips, Grout	**Drill Bit/Auger Diameter:** 6 Inches	**Ref. El.:**
Sand Pack Amount/Type: 12ft/ #2 Morie Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** Flush
Screen Length/Type: 10ft/ 2" 20 Slot PVC	**Water Table Depth:** 9.3 ft	**Surface Elevation:**
Riser Length/Type: 5ft/ 2" Sch 40 PVC	**Total Depth:** 15 ft	**Date Start:** 10/1/98 **Date Finish:** 10/1/98

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1	10	24/10	Red-brown fine SAND and silt, some brick fragments, ceramic pipe and gravel fill.		BKG		
		11						
		16						
2		14						
						BKG		
3				Concrete fragments in cuttings, gray-black odorous clay in cuttings from 3-5 ft.				
4								
						BKG		
5								
	S-2	88	10/10	Brown to black odorous clay, red-brown weathered shale in nose. Spoon refusal at 5.5 ft. some moisture (perched water).				
6		102/4				BKG		
7								
8						BKG		
9				Dry shale fragments in cuttings.				
10						BKG		
11								
12								
				Water bearing zone/fractures in weathered bedrock 12-13 ft.		BKG		
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1.) 2 inch PVC screen installed from 15 to 5 feet.
2.) Sand pack installed from 15 up to 3 feet.
3.) Bentonite installed from 3 feet up to 1 foot.
4.) Temporary cemented 4inch PVC stick-up to be replaced by manhole.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. MW-28	Sheet
Hoffman LaRoche Sewer	204470100	Well No.	2 of 2
Location Description: Nutley, NJ		TRC Geologist: Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
15				End of boring weathered rock.				
16								
17								
18								
19								
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

SERIAL # 014973

DWR-133M (10/96)

Mail to MW-29

NJDEP
Bureau Water Allocation
[illegible] 426
[illegible]nton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT 02

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. 26 53982

COORD #: 2602987

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

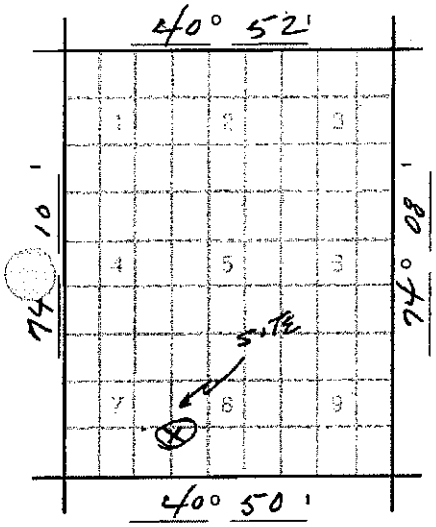
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PARK, N.Y. 11040

Diameter of Well(s)	4 inches	Proposed Depth of Well(s)	30 Feet
# of Wells Applied for (max. 10)	1	Will pumping equipment be installed?	YES ☐ NO ☒
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA cumulative GPM

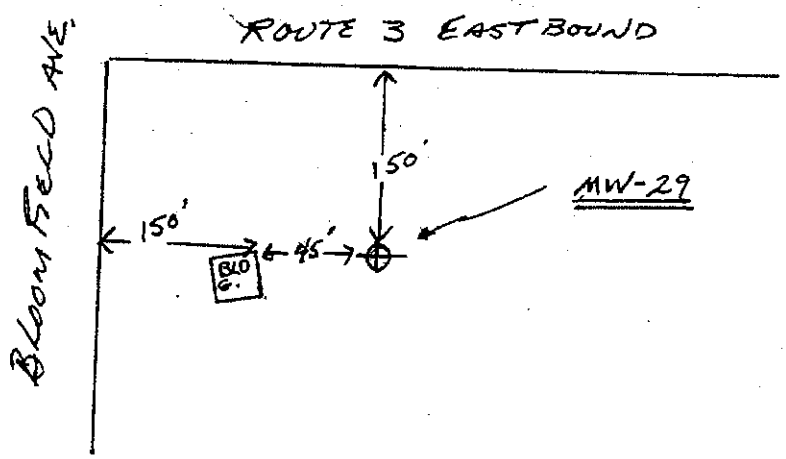
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80-002	CLIFTON	PASSAIC

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



N↑

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAY 12 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☐ For monitoring purposes only
- ☐ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
- ☐

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

Compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 5/7/99 Signature of Driller [signature] Registration No. JD-1491

Signature of Owner [signature] for CHARLES FOSTER AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53982

Atlas Sheet Coordinates 26 : 02 987

OWNER IDENTIFICATION - Owner HOFFMAN LA ROCHE
Address 340 KINGSLAND
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-29
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND

DATE WELL STARTED 5 / 14 / 99
DATE WELL COMPLETED 5 / 14 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele. # 978 970-2700

WELL CONSTRUCTION

Total depth drilled 16 ft.
Well finished to 14 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 4.1 ft.

Water level was measured using Tape

Well was developed for — hours
at — gpm

Method of development —

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75 HSA

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	—	—	—	—	
Open Hole or Screen (No. Used .020)	4	14	2"	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	2	14	8	Morie #2	
Grout	0	2	8	Neat Cement Bentonite	40 lbs. 3 lbs.

Grouting Method Gravity
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 10 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Grey Black Fine Sand + Gr
Grey Black Organic Silt w/ F Sand + Peat
5 Grey Black Peat
Grey Black Clay + F Sand
Lt Brn Clay + Silt
10 Brn F-C Sand + Gravel
Grey Clay w/ F-M Sand + RK Fragments
15 Red Brn Sand + Gravel
EOH 16

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 10 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053982
2. Site Well Number as shown on application or plans):	MW-29
3. Well Completion Date:	05/04/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	14.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	4.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.85'
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Bailer
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

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   Longitude: West 74° 09' 32.8" Latitude: North 40° 50' 18.8"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
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5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 119.17
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
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   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	Well No. MW-29	1 of 2

Location Description: MW-29, At St. Pauls North Entrance.

TRC Geologist: Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	3 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=

Filter Seal Amount/Type: 1' Bentonite Chips	Drill Bit/Auger Diameter: 4 1/4" ID	Ref. El.:	
Sand Pack Amount/Type: 12' #2 Filter Sand	Hammer Weight/Fall: 140/30	Riser Stick Up: NA	
Screen Length/Type: 10' Schedule 40 PVC	Water Table Depth: ~5'bgs	Surface Elevation: NA	
Riser Length/Type: 4' Schedule 40 PVC	Total Depth: 16'bgs	Date Start: 5/4/99	Date Finish: 5/4/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
	S-1			3" Asphalt and Trap rock				
1		3	18/12	4" Grayish-black fine SAND, some silt, trace fine gravel-stream.				
		2		8" sediment/peat				
2		4						
	S-2	3		Grayish-black organic silt, trace fine SAND,				
3		2	24/6	organic debris, wet				
		1						
4		1						
	S-3	woh	24/4	Grayish-black fine SAND-saturated.				
5		1.5						
		woh						
6		1.5						
	S-4	1	24/12	4"Black peat and roots.				
7		1		3"Gray clay, trace fine SAND, some silt, trace angular (red-brown) gravel.				
		2						
8		2						
	S-5	2	24/20	Light Brown/gray clay, inter-bedded with fine SAND and silt layers.				
9		2						
		3						
10		2						
	S-6	woh	24/10	6"Gray-light brown clay, trace silt.				
11		woh		4"Brown fine to coarse SAND, little silt, some red-brown angular gravel, till.				
		3						
12		5						
	S-7	2	24/10	4" Gray clay				
13		12		6" Red-brown fine to coarse SAND and weathered rock fragments.				
		15						
		16						

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Two aquifers are likely connected by SAND lenses through clay layer. Will set 10'screen at 14' to ensure water.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
HLR/Peter Jeuck	204470-0100-00000	Well No. MW-29	_2_ of _2_

Location Description: MW-29, At St. Pauls Northern entrance

TRC Geologist: Charles Foster

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
	S-8	16	24/14	Red-brown fine to coarse SAND and weathered rock-Till.				
15		15						
		15		End of Boring 16'bgs.				
		16						
16								
17								
18								
19								
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

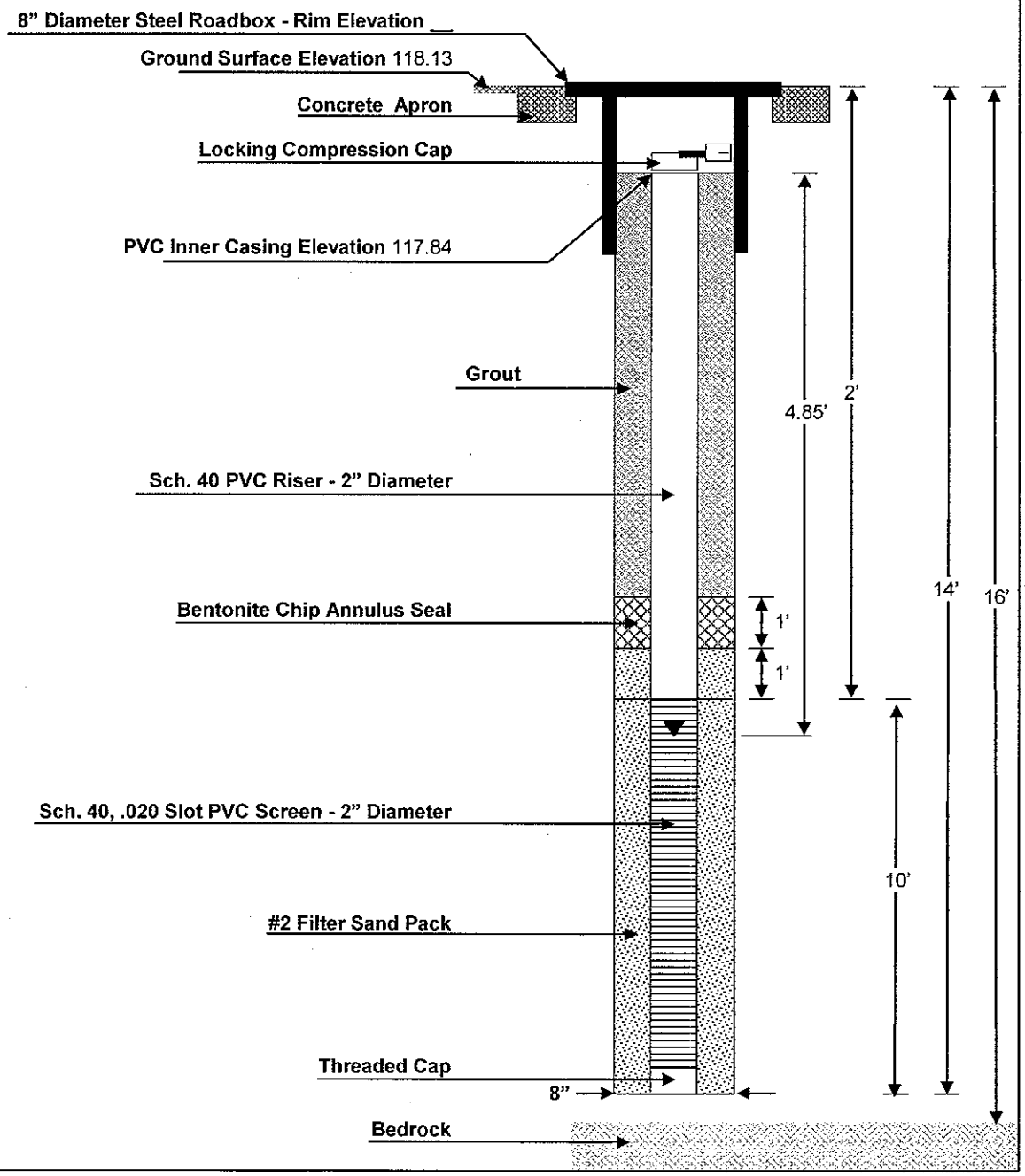
TRC

Flush Mount Overburden Monitoring Well Construction Log

Well No. MW-29

Project: Staff Gauge Plan **No.:** 204470100
Client: Hoffmann LaRoche **Date Completed:** 5/04/99
Location: Northern edge of property near St. Pauls brook
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 117.84
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653982
Development Date: 5/18/99
Development Method: Whale pump



AF-376

SERIAL # 001672

DWR-133M (10/96)

Mail to MW-30

NJDEP
Bureau Water Allocation
[illegible]426
[illegible]ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

02

Permit No. 26 53315
26 53316
26 53317

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.02.987

Owner HOFFMAN LA ROCHE, INC.

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

Address 150 NASSAU TERMINAL ROAD
NEW HYDE PARK, N.Y. 11040

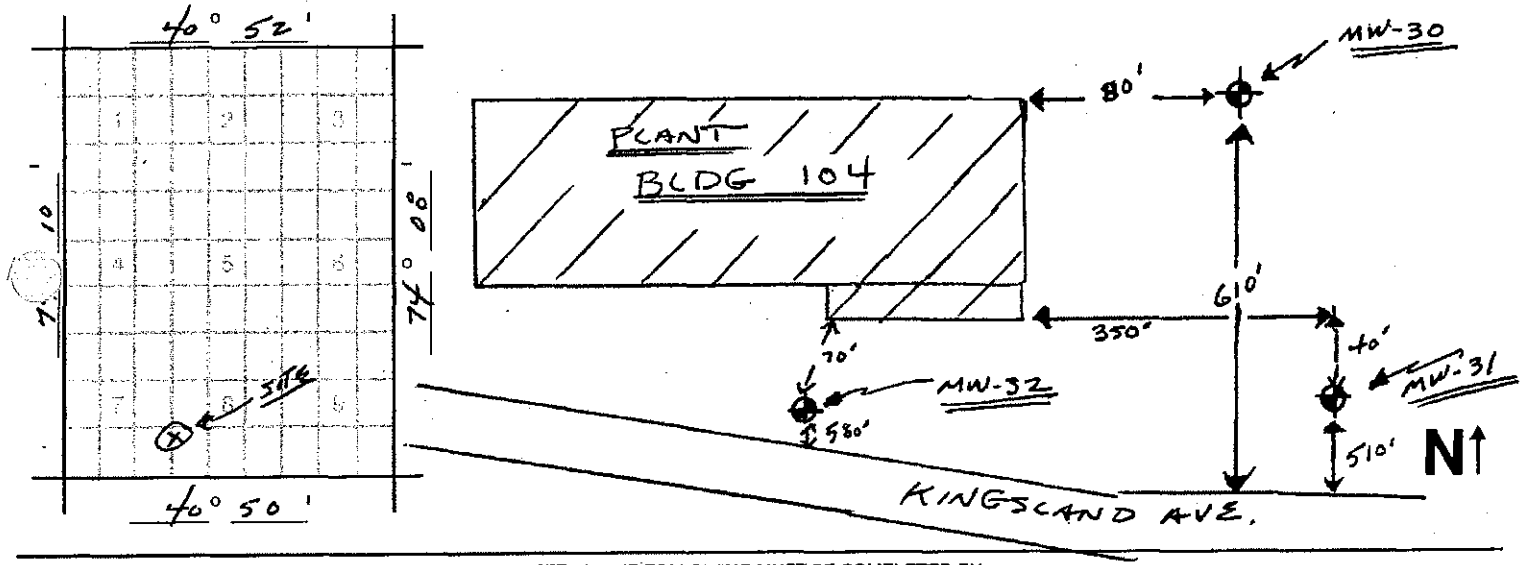
Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	20 Feet
# of Wells Applied for (max. 10)	3	Will pumping equipment be installed?	YES ☐ NO ☒
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80-002	CLIFTON	PASSAIC

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) owner's req

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 1 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

[illegible]ompliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/5/99 Signature of Driller [signature] Registration No. JD-1494

Signature of Owner [signature] FOR PAUL HUGES AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53315

Atlas Sheet Coordinates 26 : 02 987

OWNER IDENTIFICATION - Owner HOFFNAN LAROCHE, INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-30
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 5 / 15 / 99
DATE WELL COMPLETED 5 / 15 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele. # 9789702700

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick bove land surface — ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 4 ft.

Water level was measured using Tape

Well was developed for — hours
at — gpm

Method of development —

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	3	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	—	—	—	—	
Open Hole or Screen (No. Used)	3	10	2	PVC	.020
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	2	10	8	Morie #2	
Grout	0	2	8	Neat Cement Bentonite	60 lbs. 4 lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med Course Brown - Black Gravel + Sand
5
7 Red Brown Sandstone Fragments + Sand
10 Weathered Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 10 / 99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053315
2. Site Well Number as shown on application or plans):	MW-30
3. Well Completion Date:	05/05/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	3.00'
7. Screen Length (or length of open hole) in feet:	7.0'
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.65'
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Submersible pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053315
2. Site Well Number (As shown on application or plans): MW-30
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 31.5" Latitude: North 40° 50' 11.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729787.2 East 586547.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 114.69
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.O. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	Well No. MW-30	1 of 1

Location Description: MW-29, At St. Pauls North Entrance.

TRC Geologist: Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	4 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: 1' Bentonite Chips	**Drill Bit/Auger Diameter:** 4 1/4" ID	**Ref. El.:**
Sand Pack Amount/Type: 8' #2 Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: 7' Schedule 40 PVC	**Water Table Depth:** ~5'bgs	**Surface Elevation:** NA
Riser Length/Type: 3' Schedule 40 PVC	**Total Depth:** 10'bgs	**Date Start:** 5/5/99 **Date Finish:** 5/5/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Stratigraphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1			Brownish-black fine to coarse SAND, trace gravel-Fill (off auger).				
2	S-2	2	24/2	Brownish-black fine to coarse SAND, some silt, trace fine gravel-wet.				
3		3						
		1						
4		2						
	S-3	1	24/10	Red-brown pulverized sandstone fragments and fine SAND, some silt.				
5		2						
		38						
6		50/3						
	S-4	53/0	3/0	Spoon refusal-weathered bedrock in nose.				
7								
8								
9								
10				Auger refusal at 10'bgs				
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Surficial drainage area, wet at top of hole.

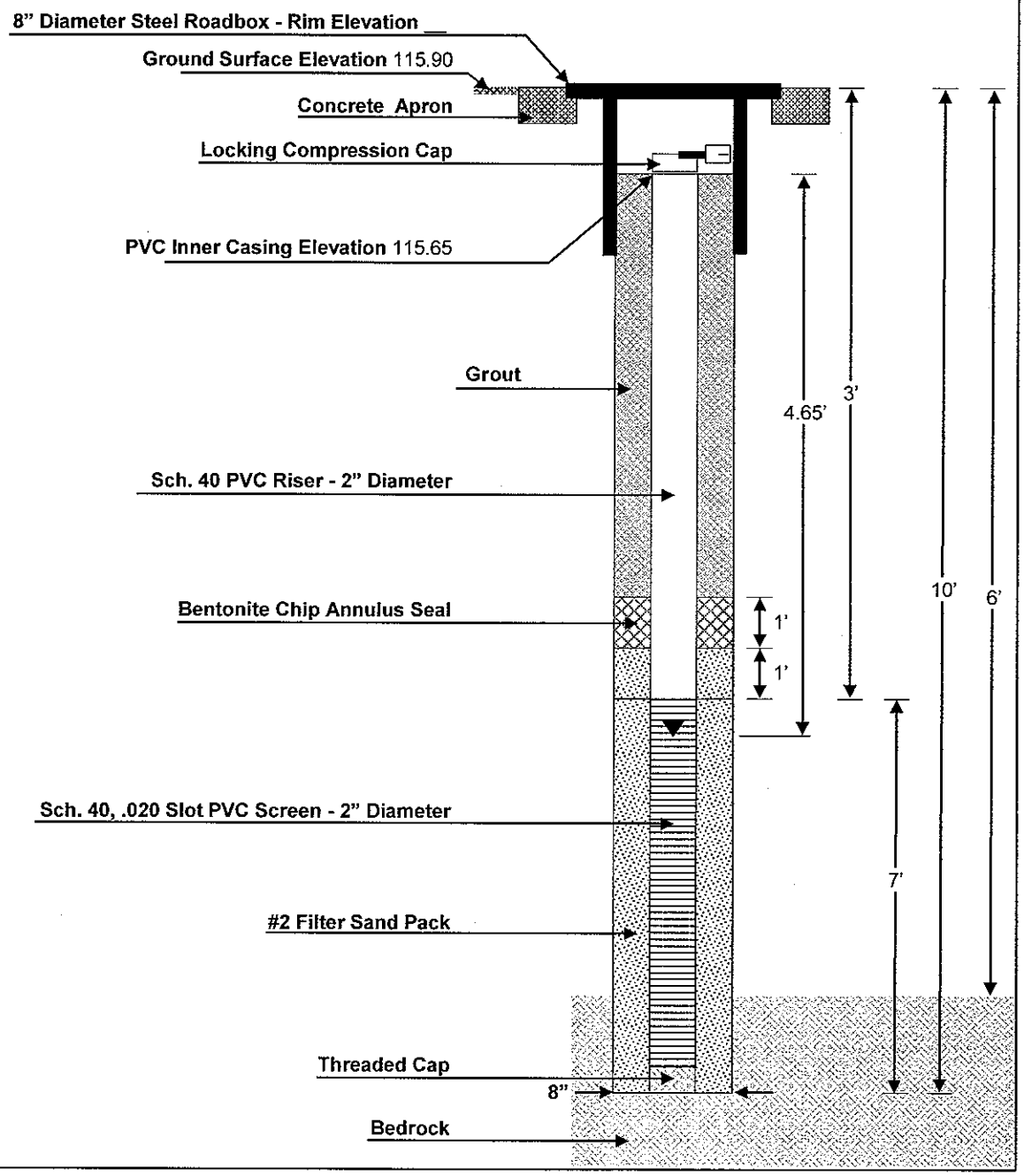
TRC

Flush Mount Overburden/ Bedrock Monitoring Well Construction Log

Well No. MW-30

Project: Staff Gauge Plan **No.:** 204470100
Client: Hoffmann LaRoche **Date Completed:** 5/05/99
Location: Western side of property next to manhole MHD-IIS-1
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 115.65
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653315
Development Date: 5/18/99
Development Method: Whale pump



AF-376

SERIAL # 001672

DWR-133M (10/96) MW-31

Mail to

NJDEP
Bureau Water Allocation
CN 426
[illegible]ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

02

26 53315
26 53316
26 53317

Permit No.

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.02.987

Owner HOFFMAN LA ROCHE, INC.

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

Address 150 NASSAU TERMINAL ROAD
NEW HYDE PARK, N.Y. 11040

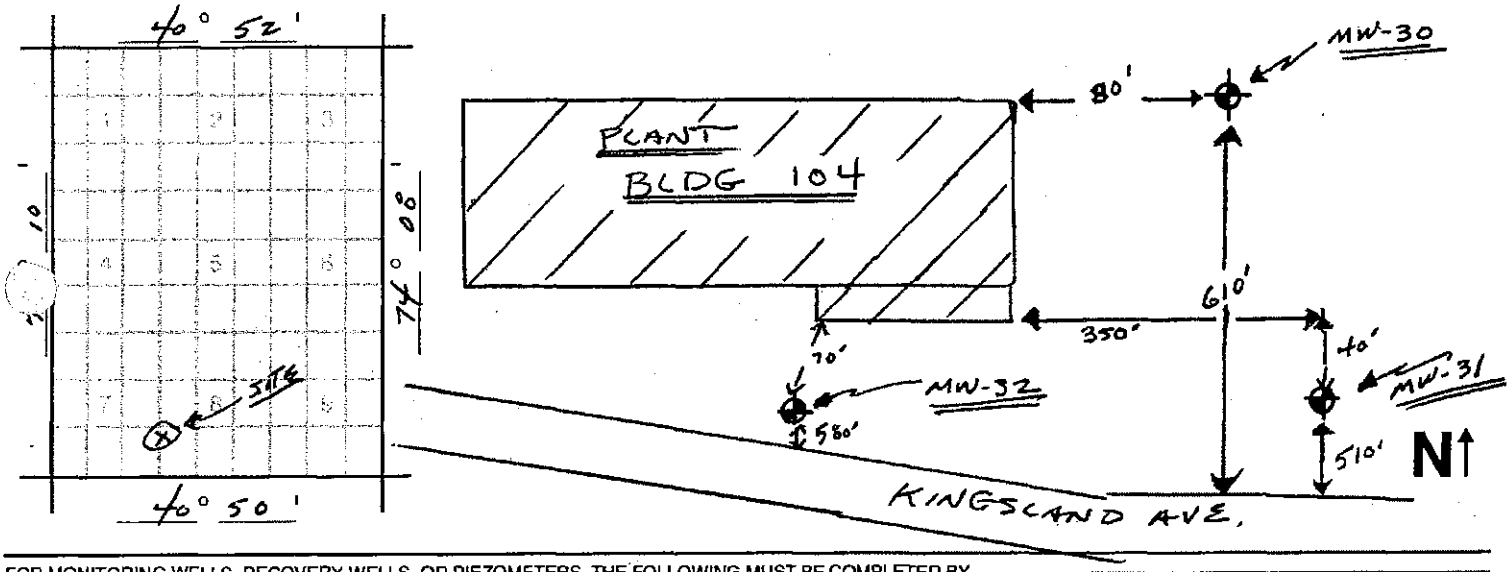
Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	20 Feet
# of Wells Applied for (max. 10)	3	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80-002	CLIFTON	PASSAIC

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) owner's req

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐

☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/5/99 Signature of Driller [signature] Registration No. JD-1484

Signature of Owner [signature] FOR PAUL HUGES AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 53316

Atlas Sheet Coordinates 26 : 02 : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE, INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 31
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 5 / 15 / 99
DATE WELL COMPLETED 5 / 15 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele. # 978 970 2700

WELL CONSTRUCTION

Total depth drilled 10 ft.
Well finished to 10 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick above land surface — ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 4.3 ft.
Water level was measured using Tape
Well was developed for — hours
at — gpm
Method of development —

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	2	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	—	—	—	—	
Open Hole or Screen (No. Used)	2	10	2"	PVC	020
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	1	10	8	Morie #2	
Grout	0	1	8	Neat Cement Bentonite	30 lbs. 2 lbs.

Grouting Method Gravity
Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Brn/Black Fine Coarse Sand + Gr
2	Red Brown Sandstone Frogments + Fine Sand Trace Clay
5	↓
10	Weathered Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 10 / 99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053316
2. Site Well Number as shown on application or plans):	MW-31
3. Well Completion Date:	05/05/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	10.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	3.00'
7. Screen Length (or length of open hole) in feet:	7.0'
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	4.65'
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Submersible pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053316
2. Site Well Number (As shown on application or plans): MW-31
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 32.0" Latitude: North 40° 50' 08.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729566.8 East 586509.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 113.37
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.O. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	Well No. MW-31	1 of 1

Location Description	TRC Geologist
MW-29, At St. Pauls North Entrance.	Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	4 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: 1' Bentonite Chips	**Drill Bit/Auger Diameter:** 4 1/4" ID	**Ref. El.:**
Sand Pack Amount/Type: 8' #2 Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: 7' Schedule 40 PVC	**Water Table Depth:** ~4'bgs	**Surface Elevation:** NA
Riser Length/Type: 3' Schedule 40 PVC	**Total Depth:** 10'bgs	**Date Start:** 5/5/99 **Date Finish:** 5/5/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1			4" Asphalt and sandy fill, trace red-brown, off auger.				
2	S-2	3	24/6					
3		6		Red-brown fine SAND and sandstone gravel fragments, trace silt.				
		5						
4		3						
	S-3	1	9/4					
5		2		Red-brown silt, some fine SAND, some clay on top of concrete.				
		50/3		Split-spoon refusal at ~5'bgs.				
6								
7								
8								
9								
10				Auger refusal at 10'bgs.				
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) This is a first water monitoring well across H_2O to compare with the manhole level.
2)Moist cuttings, silty clay at ~3.5'bgs.

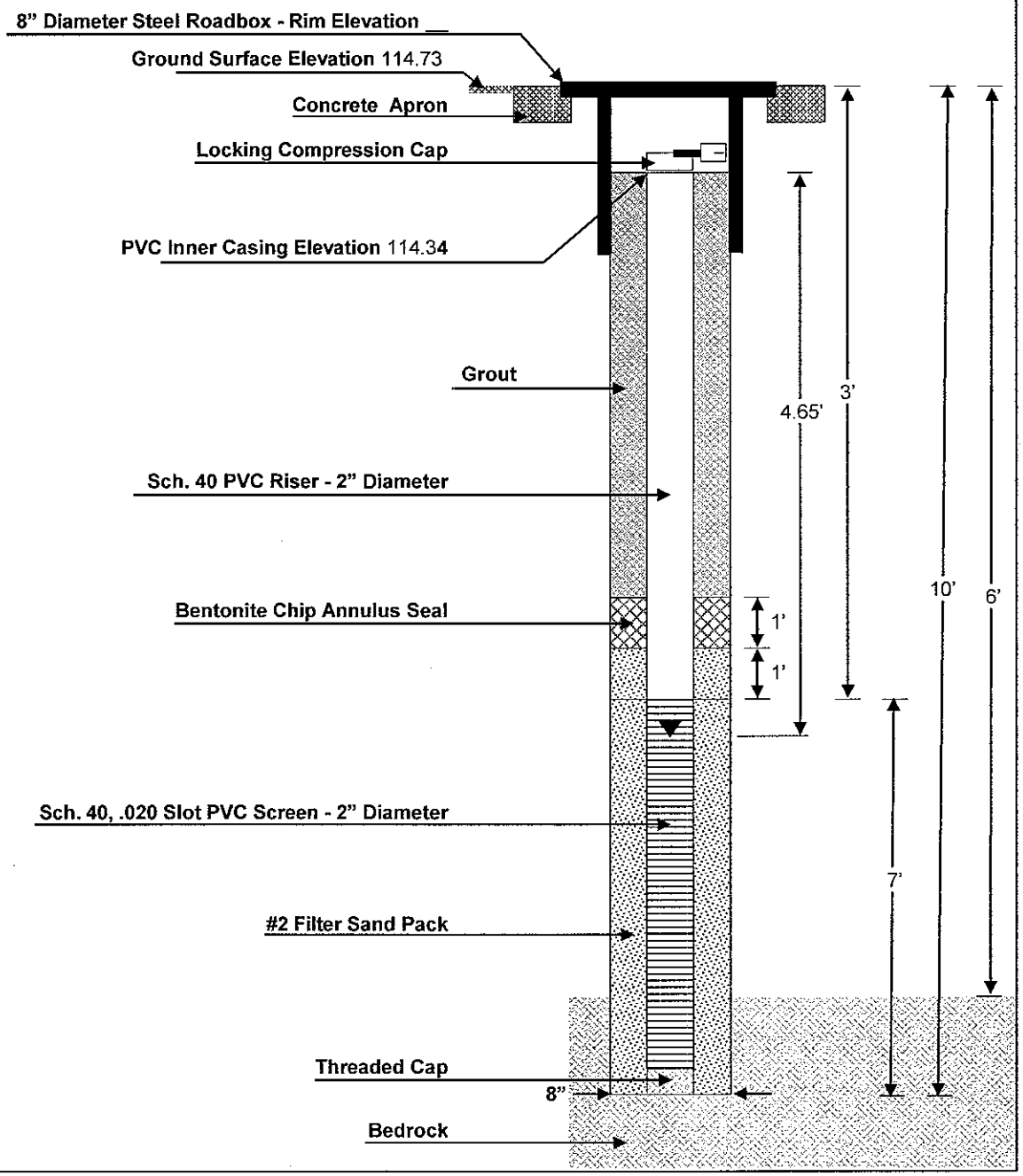
TRC

Flush Mount Overburden/ Bedrock Monitoring Well Construction Log

Well No. MW-31

Project: Staff Gauge Plan **No.:** 204470100
Client: Hoffmann LaRoche **Date Completed:** 5/05/99
Location: Western side of property next to manhole MHD-IIIS-1
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 114.34
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653316
Development Date: 5/24/99
Development Method: Whale pump



AF-376

SERIAL # 001672

DWR-133M (10/96) MW-32

Mail to

NJDEP
Bureau Water Allocation
CN 426
ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

02

Permit No. 26 53315
26 53316
26 53317

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26.02.987

Owner HOFFMAN LA ROCHE, INC.

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

Address 150 NASSAU TERMINAL ROAD
NEW HYDE PARK, N.Y. 11040

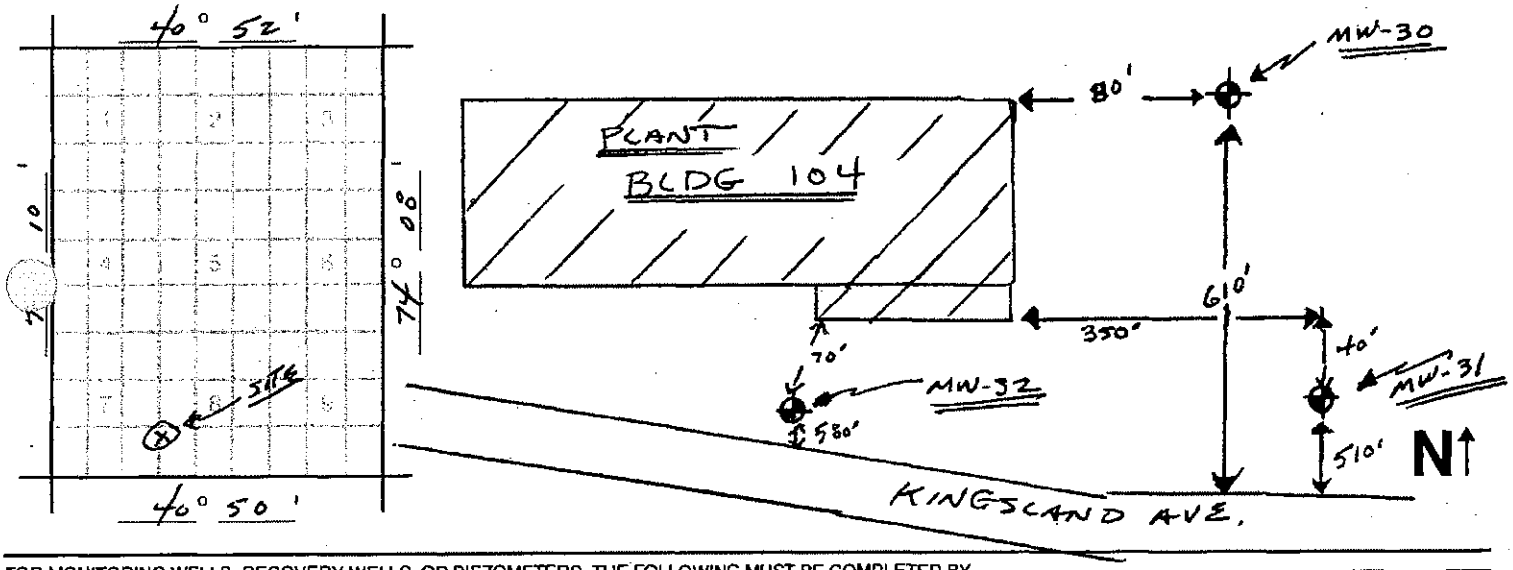
Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	20 Feet
# of Wells Applied for (max. 10)	3	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80-002	CLIFTON	PASSAIC

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.

State Atlas Map No. 26



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) owner requ

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 1 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
☐

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/5/99 Signature of Driller [signature] Registration No. JD-1494

Signature of Owner [signature] FOR PAUL HUGES AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53317

Atlas Sheet Coordinates 26 - 02 - 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE, INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 32
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 5 / 6 / 99
DATE WELL COMPLETED 5 / 6 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele. # 978 970-2700

WELL CONSTRUCTION

Total depth drilled 12 ft.
Well finished to 12 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 7.5 ft.

Water level was measured using Tape

Well was developed for — hours
at — gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	2	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	—	—	—	—	
Open Hole or Screen (No. Used)	2	12	2	PVC	.020
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	1	12	8	Morie #2	
Grout	0	1	8	Neat Cement Bentonite	30 lbs. 2 lbs.

Grouting Method Gravity
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 10 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Med Sand Fill
4	↓
5	Red Brn Fine Sand w/Silt
6	
8	
10	Red Brn Fine Sand + Weathered Shale
12	↓
15	E.O.H. 12'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053317
2. Site Well Number as shown on application or plans):	MW-32
3. Well Completion Date:	05/06/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	12.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	2.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	7.50'
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Submersible pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 79.04 Lot # 21 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053317
2. Site Well Number (As shown on application or plans): MW-32
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 35.6" Latitude: North 40° 50' 10.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729760.0 East 586228.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.77
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

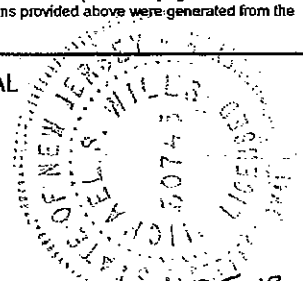
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
HLR /Peter Jeuck	20447-0100-00000	Well No. MW-32	1 of 1

Location Description	TRC Geologist
South side of building 104	Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	4 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: 1' Bentonite Chips	**Drill Bit/Auger Diameter:** 4 1/4" ID	**Ref. El.:**
Sand Pack Amount/Type: 10' #2 Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: 10' Schedule 40 PVC	**Water Table Depth:** ~7.5'bgs	**Surface Elevation:**
Riser Length/Type: 2' Schedule 40 PVC	**Total Depth:** 12'bgs	**Date Start:** 5/6/99 **Date Finish:** 5/6/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1			3"Asphalt Brown fine to coarse SAND, some silt, trace fine gravel-off auger.				
2	S-2	6	24/18	Red-brown, fine to coarse SAND, some silt, some fine gravel, rock in tip-moist.				
3		8						
4		9						
5	S-3	7	24/16	Red-brown fine SAND, some silt, trace fine gravel, trace weathered rock rock-dry.				
6		5						
7		16						
8		18						
9		25						
10	S-4	4	24/18	Red-brown fine to coarse SAND and silt, some fine gravel, weathered rock for last 6"-wet at 7.5'bgs.				
11		16						
12		14						
13		14						
	S-5	8	24/14	6"Red-brown fine SAND some silt, moist. 8"Weathered sandstone and shale.				
		16						
		40						
		50/3						

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Auger into rock and set a 12'well.

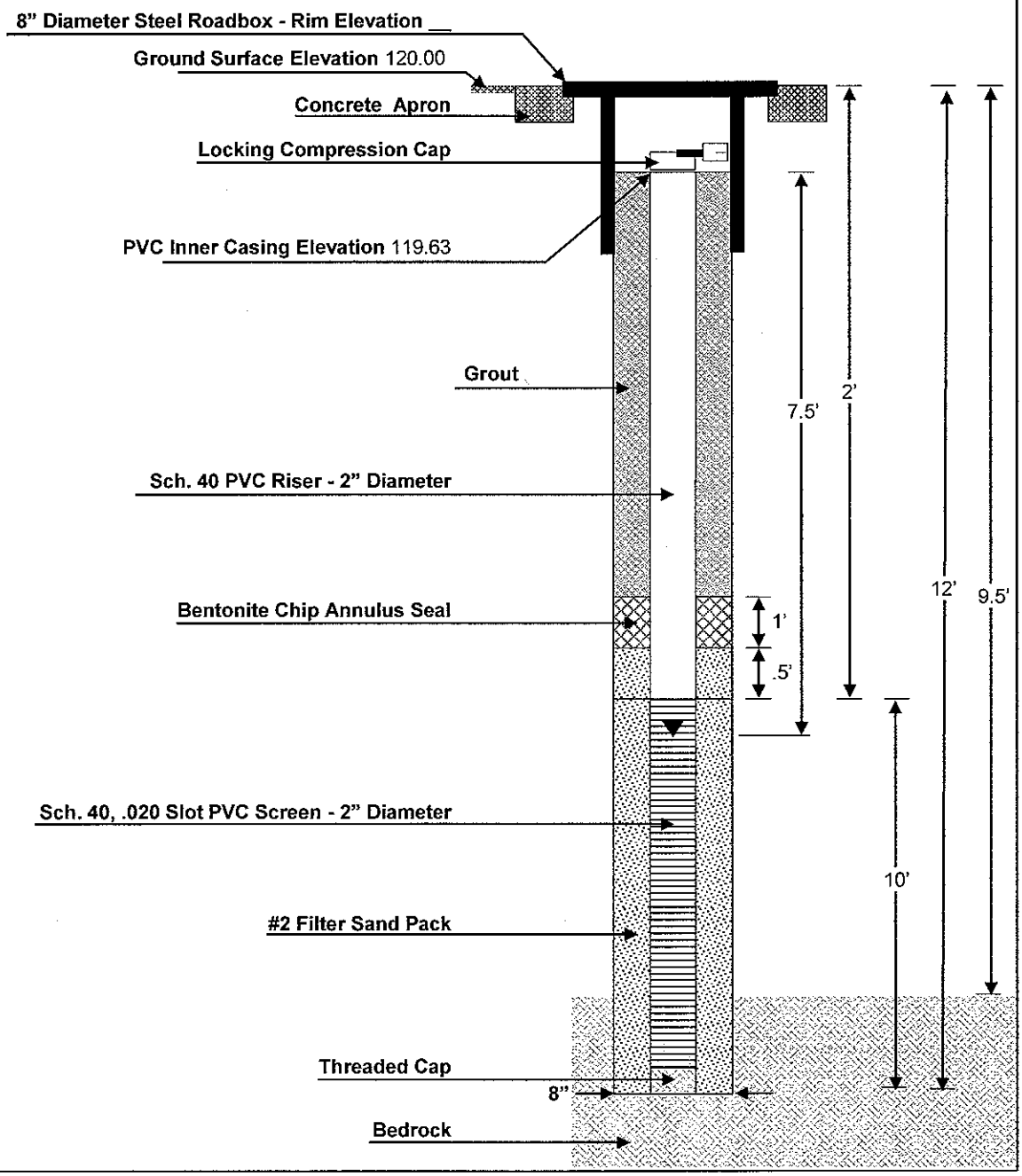
TRC

Flush Mount Overburden/ Bedrock Monitoring Well Construction Log

Well No. MW-32

Project: Staff Gauge Plan **No.:** 204470100
Client: Hoffmann LaRoche **Date Completed:** 5/06/99
Location: Southern Side of Building 104 near MHD-2013S
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 119.63
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653317
Development Date: 5/18/99
Development Method: Whale pump



AF-378

SERIAL # 017073

DWR-133M (10/96)

MW-33

Mail to

NJDEP
Bureau Water Allocation
126
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

16

Permit No 26 56730

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D E P

COORD # 26.12.323

Owner HOFFMANN - LAROCHE INC.
Address 340 KINGSLAND STREET
NUTLEY NJ 07110

Name of Facility - SAME -
Address - SAME -
- SAME -

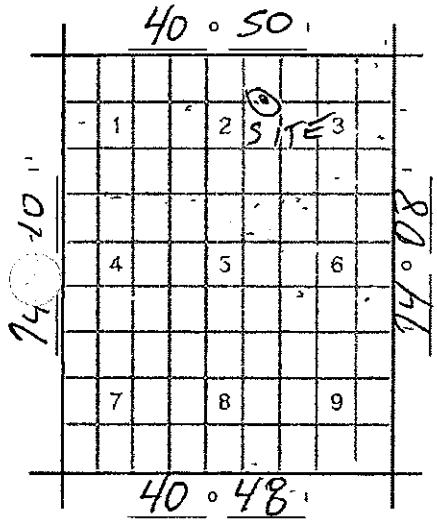
Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	20 Feet
# of Wells Applied for (max 10)	1	Will pumping equipment be installed?	YES ☐ NO ☒
Type of Well (see reverse)	MONITORING	If Yes give pump capacity	cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1,2,3	292	NUTLEY	ESSEX

State Atlas Map No 26



Draw sketch of well(s) nearest roads, buildings, etc with marked distances in feet Each well MUST be labeled with a name and/or number on the sketch

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I D Number

This Space for Approval Stamp

WELL PERMIT APPROVED
NJDEP
MAR 1 2000
BUREAU OF WATER ALLOCATION

FOR D.E P USE

- ☐ Issuance of this permit is subject to the conditions attached (see next page)
- ☒ For monitoring purposes only
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole
- ☐ ____

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

In compliance with N J S A 58 4A-14, application is made for a permit to drill a well as described above

Date 2-24-00 Signature of Driller Albert Bambace Registration No M13751

Signature of Owner Paul Hughes (MS) FOR

COPIES Water Allocation — White Health Dept — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. [illegible]

Atlas Sheet Coordinates [illegible]

OWNER IDENTIFICATION - Owner [illegible]
Address [illegible]
City [illegible] State [illegible] Zip Code [illegible]

WELL LOCATION - If not the same as owner please give address. Owner's Well No. [illegible]
County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address [illegible]

DATE WELL STARTED [illegible]
DATE WELL COMPLETED [illegible]

TYPE OF WELL (as per Well Permit Categories) [illegible]
Regulatory Program Requiring Well [illegible] Case I.D.# [illegible]

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) [illegible] Tele. # [illegible]

WELL CONSTRUCTION

Total depth drilled [illegible] ft.
Well finished to [illegible] ft.

Borehole diameter:
Top [illegible] in.
Bottom [illegible] in.

Well was finished: ☐ above grade
☐ flush mounted

Finished above grade, casing height (stick up) above land surface [illegible] ft.

Was steel protective casing installed?
☐ Yes ☐ No

Static water level after drilling [illegible] ft.

Water level was measured using [illegible]

Well was developed for [illegible] hours at [illegible] gpm

Method of development [illegible]

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	[illegible]	[illegible]	[illegible]	PVC	Sch. 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	[illegible]	[illegible]	[illegible]	PVC	[illegible] Sch. 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	[illegible]	[illegible]		[illegible]	
Grout	[illegible]	[illegible]		Neat Cement Bentonite	[illegible] lbs. [illegible] lbs.

Grouting Method [illegible]
Drilling Method [illegible]

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity [illegible] gpm

Pump type [illegible]

Drilling Fluid [illegible] Type of Rig [illegible]

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) [illegible]

Driller's Signature [illegible]

Registration No. [illegible] Date [illegible]

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

[illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

USE OF WELL:

- Boring/Probe Hole
- Cathodic Protection
- Gas Vent
- Inclinometer
- Injection
- Monitoring/Observation
- Oil/Gas Exploration
- Piezometer
- Recharge
- Recovery
- Replacement/Type of Well (Specify)

NOTE
A Replacement Well for any of these ten (10) categories may be applied for with this permit application.

Make Checks Payable to: TREASURER-STATE OF NEW JERSEY

In accepting this permit the Owner and Driller agree to abide by the following terms and conditions:

1. This permit conveys no rights, either expressed or implied, to divert water.
2. Well permits, submitted incomplete and/or illegible will be returned without approval for modification.
3. If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Allocation.
4. Once this well is abandoned, the Owner will assume full responsibility for having the well decommissioned in a manner satisfactory to the Department, in accordance with the provisions of N.J.S.A. 58:4A-4.1.
5. This permit shall be valid for (1) year from date of approval. Department must be notified in writing of permit cancellation.
6. A well record must be filed with the Bureau of Water Allocation within ninety (90) days after the well is completed.
7. This permit is NONTRANSFERABLE.
8. If the use of the well is to be changed, a well permit for the proposed use of the well must be submitted for review and approval. The existing well permit number must be referenced on the application form.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600056730
2. Site Well Number as shown on application or plans):	MW-33
3. Well Completion Date:	03/08/2000
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	2'
5. Total Depth of Well to the nearest ½ foot:	23.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	8.0
7. Screen Length (or length of open hole) in feet:	15.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	7
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600056730
2. Site Well Number (As shown on application or plans): MW-33
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 23.1" Latitude: North 40° 49' 53.8"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728032.9 East 587198.4
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 103.69
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

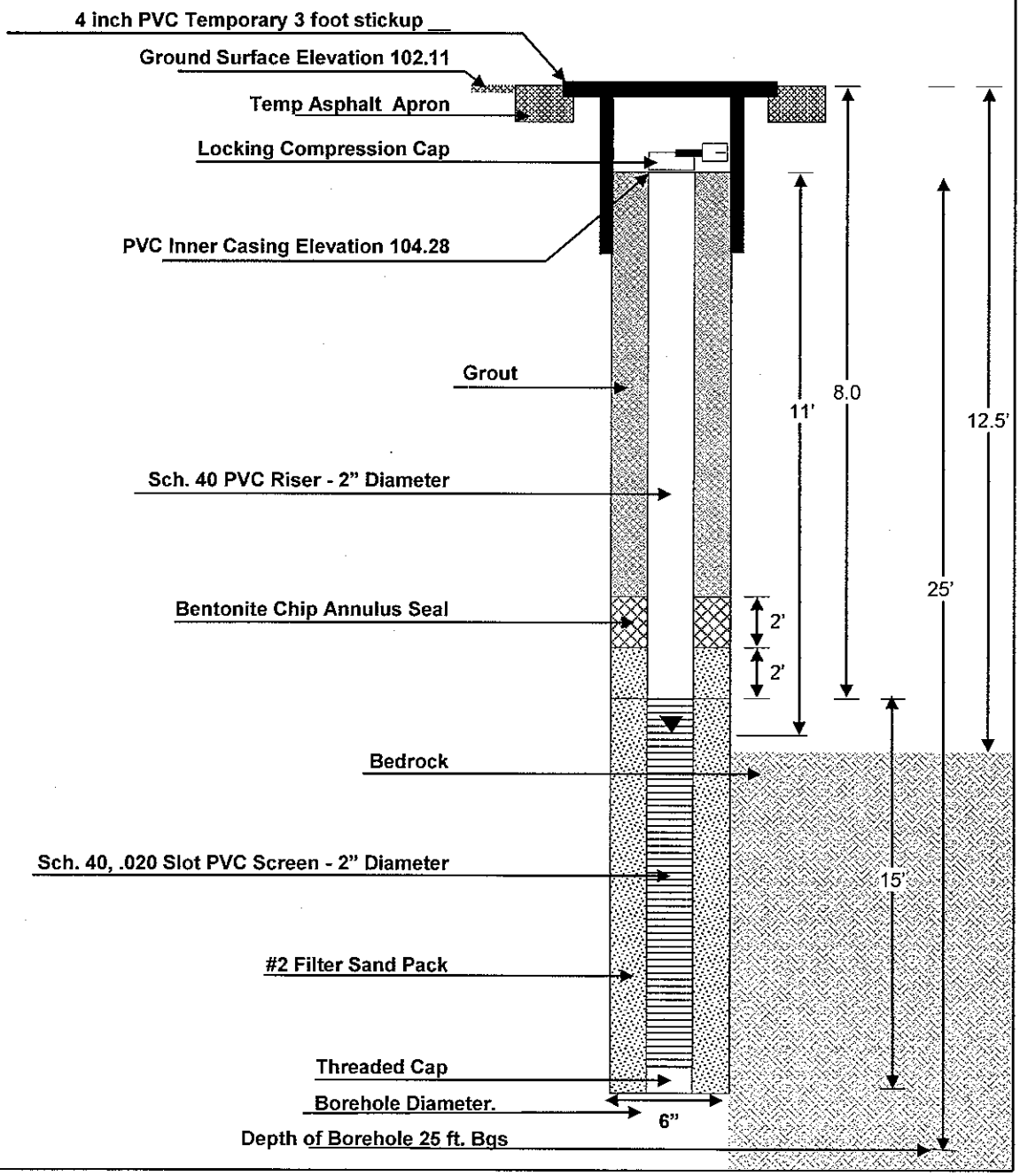
TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-33

Project: Lot 903 Investigation **No.:** 20447-0100
Client: Hoffmann LaRoche **Date Completed:** 03/08/00
Location: Southeast corner of Lot 903
Drilling Contractor: Summit **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 104.28
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2656730
Development Date: 03/09/00
Development Method: Surging and Pumping



AF-375/

TRC

Soil Boring Log

Project/Client Lot 903/ Hoffmann LaRoche	**Project No.** 20447-0100-00000	**Boring No.** MW-33 / **Well No.** MW-33	**Sheet** 1 of 1
Location Description Southern Edge of Parking Lot 903		**TRC Geologist** Charles Foster	
Drilling Contractor/Foreman Summit / John Vogt	**Drill Rig Make/Model** Mobile B-57	**Auger/Drive Casing Size/Type** NA	
Sampler Description 2' Split Spoon	**Drilling Method** HSA Continuous	**Coordinates** X= Y=	
Filter Seal Amount/Type: NA	**Drill Bit/Auger Diameter:** NA	**Ref. El.:** NA	
Sand Pack Amount/Type: NA	**Hammer Weight/Fall:** 140 / 30"	**Riser Stick Up:** NA	
Screen Length/Type: NA	**Water Table Depth:** 11 ft bgs	**Surface Elevation:** 106.06	
Riser Length/Type: NA	**Total Depth:** 25 ft bgs.	**Date Start:** 3/8/00	**Date Finish:** 3/8/00

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1		3	24/10"	2 in. ASPHALT.				
		4		8 in. red-brown SILT, some fine sand, trace fine gravel. Moist.				
		2						
2		8						
		3	24/18"	18 in. red-brown fine SAND and SILT, trace clay mottling. Wet.				
3		4						
		10						
4		11						
		17	24/10"	10 in. red-brown fine SAND and SILT, trace clay, trace fine gravel. Dry.				
5		19						
		20						
6		35						
		20	24/8"	8 in. red-brown fine SAND, trace silt, trace fine gravel. Dense and dry.				
7		22						
		25						
8		36						
		21	24/20"	20 in. red-brown fine SAND and SILT, trace clay, trace fine gravel. Dense and dry.				
9		28						
		32						
10		53						
		47	24/8"	8 in. red-brown SILT and fine SAND, trace tan SAND, trace fine gravel. Dry.				
11		65						
		100/5"						
12								
		100/5"	5/5"	4 in. red-brown SILT and fine SAND, trace tan SAND, trace fine gravel.				
13				1 in SANDSTONE in nose. Spoon refusal				
				Augered into rock to achieve first water/well.				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201315953

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: DENNIS MOORE, JOURNEYMAN LICENSE # 0001214

Permit Issued to: AMERIDRILL INC

Company Address: 1201 EDGELY RD LEVITTOWN, PA 19057

PROPERTY OWNER

Name: HOFFMAN-LA ROCHE HOFFMAN-LA ROCHE

Organization: Hoffman-La Roche

Address: 340 Kingsland Street

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman-La Roche

Address: 340 Kingsland Street

County: Essex Municipality: Nutley Twp Lot: 1 Block: 300

Easting (X): 587190 Northing (Y): 728030
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-33A

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary/HSA

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: October 30, 2013
Expiration Date: October 30, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201315953

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# _____ Lot # _____

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):.. E201315953
2. Site Well Number as shown on application or plans): MW-33A
3. Well Completion Date: .....
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): ..... Flush mount
5. Total Depth of Well to the nearest ½ foot: .....
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....
7. Screen Length (or length of open hole) in feet: .....
8. Screen or Slot Size: .....
9. Screen or Slot Material: .....
10. Casing Material (PVC, steel, or other – specify): .....
11. Casing Diameter (inches): .....
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): .....
13. Yield (gallons per minute): .....
14. Development Techinque (specify): .....
15. Length of Time well is developed/pumped or bailed (hours and minutes): .....

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201315952

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: DENNIS MOORE, JOURNEYMAN LICENSE # 0001214

Permit Issued to: AMERIDRILL INC

Company Address: 1201 EDGELY RD LEVITTOWN, PA 19057

PROPERTY OWNER

Name: HOFFMANN-LA ROCHE HOFFMANN-LA ROCHE

Organization: Hoffmann-La Roche

Address: 340 Kingsland Street

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffman-La Roche

Address: 340 Kingsland Street

County: Essex Municipality: Nutley Twp Lot: 1 Block: 300

Easting (X): 587195 Northing (Y): 728030
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-33B

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 4

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: Y

Drilling Method: Air Rotary/HSA

Attachments: 13292-3 Variance.pdf

SPECIFIC CONDITIONS/REQUIREMENTS

Well must be built in accordance with submitted deviation [N.J.A.C. 7.9D-2.8]

Approval Date: October 31, 2013
Expiration Date: October 31, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201315952

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	Monitoring Well
Unusual Conditions:	Ground Water exists at bedrock interface
Reason for Deviation:	water and potential contamination encountered near (within 10') of bedrock interface the minimum 10' of casing into competent bedrock will not enable us to monitor potential floating contamination
Proposed Well Construction	See Attached, For remediation monitoring purposes, it is important that this monitoring well are screened between 15 feet to 25 feet below grade within the transition zone of the weathered bedrock.

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# _____ Lot # _____

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):.. E201315952
2. Site Well Number as shown on application or plans): MW-33B
3. Well Completion Date: .....
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): ..... Flush mount
5. Total Depth of Well to the nearest ½ foot: .....
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....
7. Screen Length (or length of open hole) in feet: .....
8. Screen or Slot Size: .....
9. Screen or Slot Material: .....
10. Casing Material (PVC, steel, or other – specify): .....
11. Casing Diameter (inches): .....
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): .....
13. Yield (gallons per minute): .....
14. Development Techinque (specify): .....
15. Length of Time well is developed/pumped or bailed (hours and minutes): .....

SERIAL # U14965

DWR-133M (10/96)

MW-34

Mail to

NJDEP
Bureau Water Allocation
CN 426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

2

- THRU -

Permit No. 2653364

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD # 26 .02. 981

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility STORE

Address

Driller AQUIFER DRILLING & TESTING INC

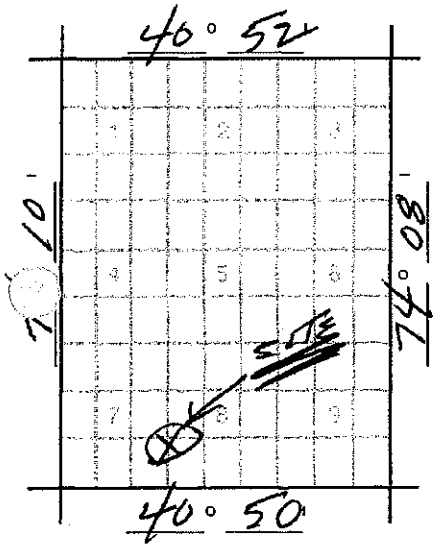
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PK. N.Y. 11040

Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	8	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA cumulative GPM

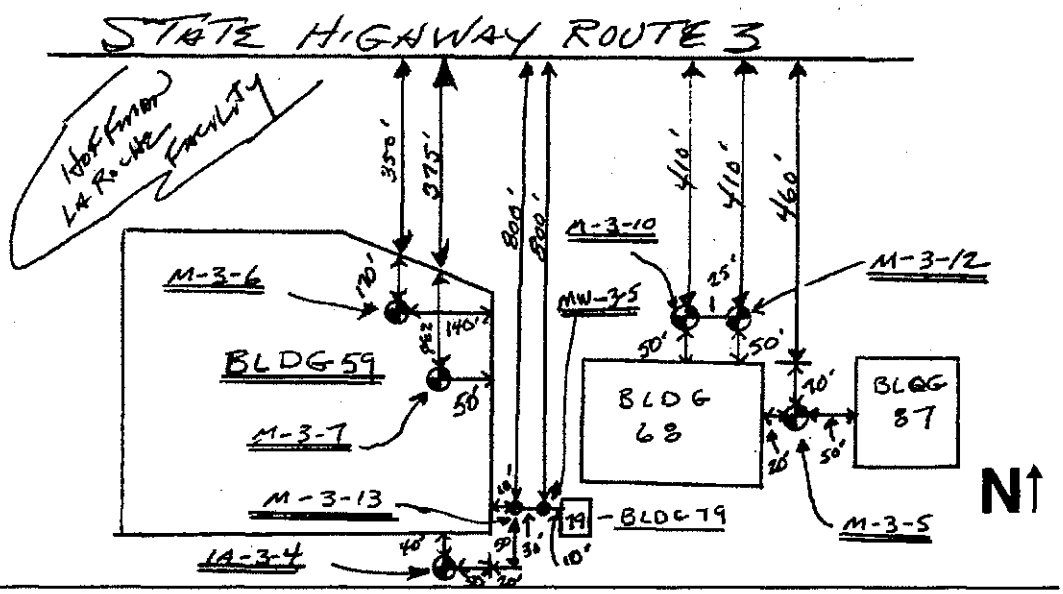
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80.002	CLIFTON	PASSAIC

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

Compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/15/99 Signature of Driller [signature] Registration No. JD-1494

Signature of Owner [signature] FOR PAUL NUGENT AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 55357

Atlas Sheet Coordinates 26 02 287

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-34
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 4 / 30 / 99
DATE WELL COMPLETED 5 / 3 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele. # 978 970 2700

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 21 ft.

Water level was measured using Tape

Well was developed for — hours
at — gpm

Method of development —

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B90

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	30	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	0'	28	6"	Steel	Sch 40
Open Hole or Screen (No. Used)	30	50	2"	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	28	50'	6"	Morie #2	
Grout	0	28	6"	Neat Cement Bentonite	550 lbs. 60 lbs.

Grouting Method Tremie
Drilling Method HSA / Air Rotary.

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6 / 10 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Red Brown Med Fine Silty Sand
8	
10	Weathered Rock
20	Red Bedrock Water @ 21'
30	
40	
50	EOH 50'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053357
2. Site Well Number as shown on application or plans):	MW-34
3. Well Completion Date:	04/30/99
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	49.4
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	29.4
7. Screen Length (or length of open hole) in feet:	20.0
8. Screen or Slot Size:	0.020"
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	21
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053357
2. Site Well Number (As shown on application or plans): MW-34
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 07.9" Latitude: North 40° 50' 02.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728965.5 East 588359.9
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 149.71
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	IA-3-1	1 of 1
		Well No. MW-34	

Location Description	TRC Geologist
North East of AOC 170.	Todd Majer

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	3 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: 2' Bentonite Chips	Drill Bit/Auger Diameter: 3 1/4" ID	Ref. El.:
Sand Pack Amount/Type: 20' /# 2 Filter Sand	Hammer Weight/Fall: 140/30	Riser Stick Up: NA
Screen Length/Type: 20' /Sch 40 PVC	Water Table Depth: ~21'bgs	Surface Elevation: 147.86
Riser Length/Type: 30' /Sch 40 PVC	Total Depth: 8'bgs	Date Start: 4/8/99 Date Finish: 4/899

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1	20	24/18	4"Asphalt/trap rock.				
		14		Red-brown fine SAND, some silt, trace angular gravel.		OS2=bkg		
		15				OS3=bkg		
2		14				OS4=bkg		
	S-2	15	24/12	Same as above, trace clay.		OS1=bkg		
3		100/6		Weathered rock fragments.		OS2=bkg		
		100/3						
4								
	S-3	20	24/18			OS1=bkg		
		29		Red-brown fine SAND, some silt, trace angular gravel, trace clay.		OS2=bkg	IA3-1	
5		69		Weathered rock fragments.		OS3=bkg	5-5.5'bgs	
		110					HS=bkg	
6	S-4	1	24/12	Red-brown fine SAND, trace silt, trace clay, trace		OS1=bkg		
		w.o.h		angular gravel.		OS2=bkg		
7		45		Weathered rock fragments.				
		100/4		Auger refusal at 8'bgs - End of Soil Boring.				
8								
9				Inter-bedded sandstone and shale, cored and reamed out to 50'bgs, see rock core.				
10								
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Field screening with OVA FID.
2) Sample depth 5-5.5'bgs.
3) bkg=background.
4) HS=headspace
5) 6"casing grouted in place.
6) woh = weight of hammer.

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 1 **of** 2
Contractor Personnel: ADT INC.		**TRC Personnel:** Charles Foster/Todd Majer	
Boring/Well Number: IA3-1 / MW-34	**Driller/Equipment:** CME-75, HQ /Ken Kutarnia	**Elevation:** 147.86 **Orientation:** **Time Start:** 1440, 0700 **Time Finish:** 1500, 1700	

Depth	Comments Tests Instrumentation Coring Rate and Smoothness Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities RQD	Fractures Per Foot	Description Tightness Planarity Smoothness Filling, Staining Orientation	Lithology Mineralogy Classification Color / Cementation Grain Size / Hardness Alteration / Weathered State	Graphic Log
10	1min 55sec/ft	10-15' 5' 68.3%			56.6%	1		Red-brown,horizontally bedded fine grained sandstone.	
11	2min 5sec/ft, 50gallons H_2O loss.		X			1	Clay filling 11-14 feet	Highly weathered sandstone	
12	6min 30sec/ft, 50 gallons H_2O loss.		X						
13	4min 45sec/min					1		Possible void/washed out clay	
14	7min 45sec/ft, 50gallons H_2O loss.					1		Red-brown, fine grained, siltstone.	
15	7min/ft	15-20' 5' 96%			61%	2		Red-brown, fine grained shale.	
16	9min/ft					4		Red-brown, fine grained siltstone, weathered.	
17	8min 30sec/ft					2		Red-brown, fine grained siltstone, inter-bedded with shale.	
18	7min/ft					3		Red-brown, fine grained siltstone, weathered within fractures	
19	8min/ft					5		Fracture spacing of 2 to 6 inches	
20	5min/ft	20-25' 5' 99%			36.3%	2		Red-brown, fine grained siltstone inter-bedded	
21	6min 30sec/ft					4		with sandstone.	
22	4min 30sec/ft					2		High angle vertical fracture, to 22 to 23.5'.	
23	4min 15sec/ft					3		Red-brown,fine grained, sandstone, weathering in fracture.	
24	3min 15sec/ft					1		Red-brown,fine grained sandstone.	
25									

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 2 **of** 2
Contractor Personnel: ADT INC.		**TRC Personnel:** Charles Foster	
Boring/Well Number: IA3-1 / MW-34	**Driller/Equipment:** CME-75, HQ /Ken Kutarnia	**Elevation:** 147.86 **Orientation:** **Time Start:** 1440, 0700 **Time Finish:** 1500, 1700	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
25	9min/ft	25-30' 5' 100%			46%	3		Red-brown, fine grained, sandstone, horizontally bedded.	
26	9min 30sec/ft		X			2		Red-brown, fine grained, sandstone, horizontally bedded, several weathered fractures.	
27	8min 55sec/ft		X			>5		High angle vertical fractures with calcification.	
28	7min 30sec/ft					>5		↓	
29	9min 30sec/ft					9		Traces of Blue chalk within shale.	
30									

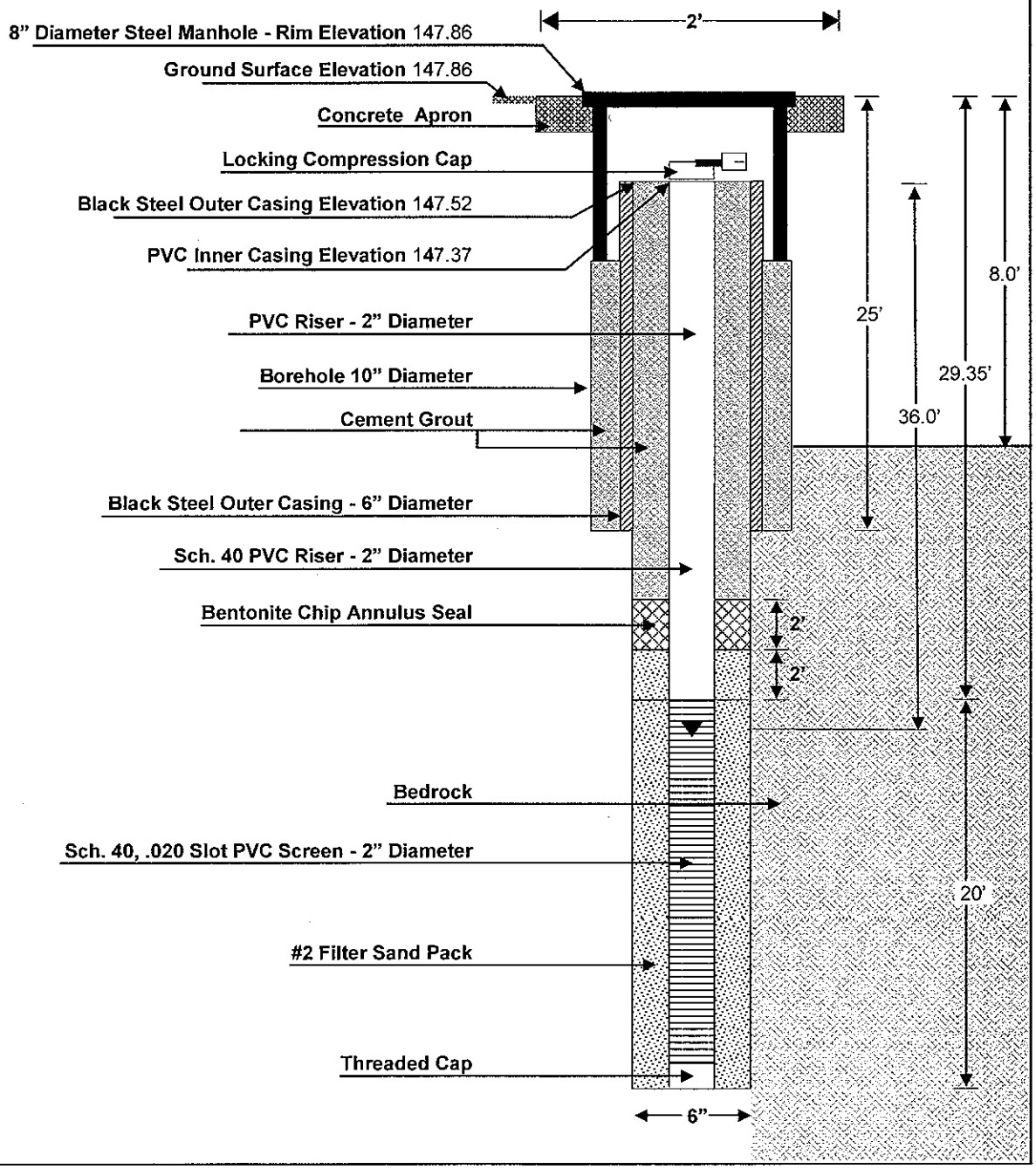
TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-34

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Hoffmann-La Roche Inc. **Date Completed:** 04/30/99
Location: North Side of former building 87 across from guardrail
Drilling Contractor: ADT **Method:** HSA/Air Rotary
TRC Geologist: Todd Majer / Charles Foster

Reference Elevation: 147.37
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653357
Development Date: 05/05/99
Development Method: Surging and Pumping



SERIAL # 014964

DWR-133M (10/96)

Mail to MW 35

2

26 53353
26 53354

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

Permit No. _____

NJDEP
Bureau Water Allocation
CN 426
nton, NJ 08625-0426

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 24.02.987

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address _____

Driller AQUIFER DRILLING & TESTING, INC.

Address 150 NASSAU TERMINAL RD.
NEW HYDE PK, N.Y. 11040

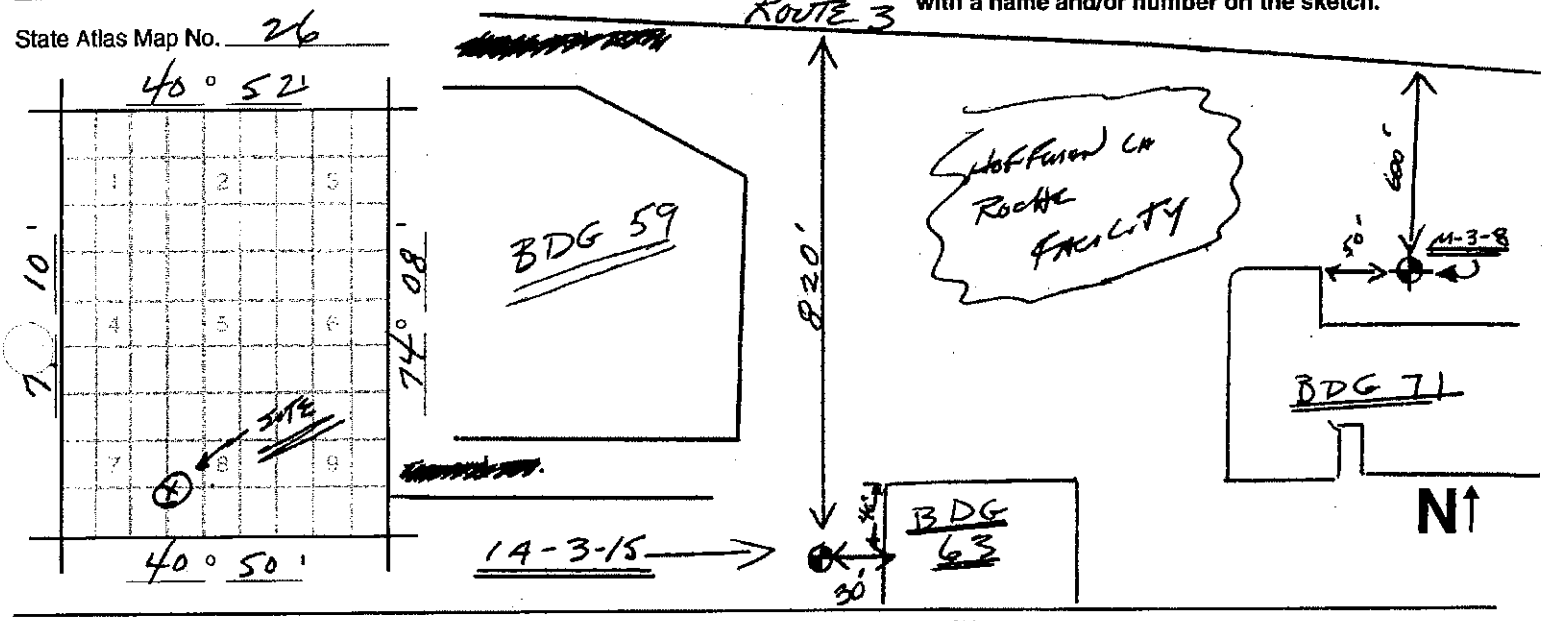
Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	2	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity NA	cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80-002	CLIFTON	PASSAIC

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐ _____
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

Compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/15/99 Signature of Driller _____ Registration No. JD-1494

Signature of Owner _____ FOR PAUL HUGHES AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 | 53353

Atlas Sheet Coordinates 26 | 02 | 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 35
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 4 / 12 / 99
DATE WELL COMPLETED 4 / 14 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele # 9789702700

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 24 ft.

Water level was measured using Tape

Well was developed for — hours
at — gpm

Method of development —

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B90

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	30	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	0	30	6"	Steel	Sch 40
Open Hole or Screen (No. Used)	30	50	2"	PVC	0.20
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	28	50	6	Morie # 2	
Grout	0	28	6	Neat Cement Bentonite	500 lbs. 55 lbs.

Grouting Method Tremie
Drilling Method HSA / Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Med Brn Sand + Gr Fill
10
12 ↓ Water at 24'
20 Bedrock
30 Siltstone & Sandstone
40
50 EOH 50'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 10 / 99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053353
2. Site Well Number as shown on application or plans):	MW-35
3. Well Completion Date:	04/30/99
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	50.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	30.0
7. Screen Length (or length of open hole) in feet:	20.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	24
13. Yield (gallons per minute):	
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053353
2. Site Well Number (As shown on application or plans): MW-35
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 10.0" Latitude: North 40° 50' 02.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728946.2 East 588200.1
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 144.72
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	IA-3-8	1 of 1
		Well No. MW-35	

Location Description: Upper Tier, on Soil Gas Point 73.

TRC Geologist: Kimberly Berry

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Tony Martin	CME LC-60	4 1/4 HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: 2' /Bentonite Chips	**Drill Bit/Auger Diameter:** 41/4" HSA	**Ref. EL:**
Sand Pack Amount/Type: 20' /#2 Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: 20' /Schedule 40 PVC	**Water Table Depth:** ~24'bgs	**Surface Elevation:** 146.21
Riser Length/Type: 30' /Schedule 40 PVC	**Total Depth:** 50'bgs	**Date Start:** 4/12/99 **Date Finish:** 4/12/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1		78	21/14	6" Asphalt				
		30		4" Weathered concrete.				
		34		4"Red-brown fine to medium SAND, some gravel, dry.		OS3=bkg		
		56/3		2"Concrete.				
2		11	24/18			OS1=bkg		
		9		16"Red-brown fine to medium SAND, some silt, little gravel.		OS2=bkg		
3		11				OS3=bkg		
		14						
4		5	24/16			OS1=bkg		
		11		Red-brown fine to medium SAND, some silt, some angular gravel, dry.		OS2=bkg		
5		12				OS3=bkg		
		14						
6		16	24/20	Same as above.		OS1=bkg		
		12				OS2=bkg		
7		17				OS3=bkg		
		21						
8		24	24/24	Red-brown fine SAND, some silt, trace clay, little		OS1=bkg		
		31		angular gravel, little weathered sandstone		OS2=bkg		
9		19		fragments.		OS3=bkg		
		31				OS4=bkg		
10		12	15/15	5" Same as above.		OS1=bkg		
		50		3" Granite features.		OS2=bkg		
11		50/3		7"Red-brown fine SAND and rock fragments.				
12				End of Soil Boring				
				See rock core log.				
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Field screening results with OVA FID.
2) bkg =background
3)Rock hole is cased to 25'bgs with 6"steel casing grouted in place.

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 1 **of** 3
Contractor Personnel: ADT INC.		**TRC Personnel:** Charles Foster	
Boring/Well Number: IA3-8 / MW-35	**Driller/Equipment:** LC-60, HQ, Tony Martin	**Elevation:** 146.21 **Orientation:** **Time Start:** 1400 **Time Finish:** 1540	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
11	1min/ft	11-16' 5' 71.6%			55.8%	4		Fine to medium grained sandstone, horizontally bedded.	
12	1min/ft					2			
13	2min 45sec/ft					2		Fracture spacing of 8 "	
14	3min/ft					1			
15	5min/ft					1			
16	4min/ft	16-21' 5' 88.3%			71.6%	1		Horizontally bedded fine grained sandstone, weathered	
17	3min/ft.					2		Fracture Spacing of 10 "	
18	3min 30sec/ft					2			
19	3min/ft					1			
20	3min 30sec/ft		X				Clay filled @ 20.5 ft.	High angle fracture at 20 ft.	
21	*								
	*								
	*								
	*								
	*								

O:/geo_sci/rock.ppt

* Due to NJDEP well casing & length of screen limitations, rock cores were not collected from to 21 to 26 ft bgs.

TRC Rock Core Log	Project: IA-3 RI/Roche	Project No. 20447-0100-00000	Date/Time	Sheet 2 of 3
	Contractor Personnel: ADT INC.		TRC Personnel: James Leonard	
Boring/Well Number: IA3-8 / MW-35	Driller/Equipment: CME-75, HQ /Ken Kutarnia		Elevation: 146.21 Orientation: Time Start: 1230, 0710 Time Finish: 1435, 1250	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
26	5min/ft, no H_2O loss.	26-31' 5' 99.2%			76.6%	2		Red-brown, fine grained, sandstone, horizontally bedded.	
27	5min 30sec/ft, no H_2O loss.					5		Weathered fractures spaced at 3 " with minor calcification	
28	5min 20sec/ft, no H_2O loss.					2			
29	5min/ft, no H_2O loss.					2		Fracture spacing of 6-8"	
30	5min/ft, no H_2O loss.					4			
31	3min 30sec/ft, no H_2O loss.	31-36' 5' 89.2%			46.7%	5		High angle fracture with minor calcification	
32	6min/ft, no H_2O loss.		X			>10		Red-brown, fine grained, sandstone fragments.	
33	19min/ft, no H_2O loss.		X			4		Fracture spacing of 4-6"	
34	26min/ft, no H_2O loss.					2		Red brown, fine grained, sandstone with calcified	
35	5min 30sec/ft , no H_2O loss.					1		weathered fractures.	
36	6min/ft, no H_2O loss.	36-41' 5' 99.2%			82%	8		Fracture spacing 1-3"	
37	7min/ft, no H_2O loss.					1			
38	7min/ft, no H_2O loss.					3		Red brown, fine grained, sandstone, calcification present in fractures.	
39	7min/ft, no H_2O loss					1		Red-brown, fine grained shale to sandstone, high angle vertical fracture from 40-41'.	
40	10min/ft, no H_2O loss.					1			
41									

TRC

Rock Core Log

	Project: IA-3 RI/Roche **Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 3 **of** 3
	Contractor Personnel: ADT INC.	**TRC Personnel:** James Leonard	
Boring/Well Number: IA3-8 / MW-35	**Driller/Equipment:** CME-75, HQ /Ken Kutarnia	**Elevation:** 146.21 **Orientation:** **Time Start:** 0950 **Time Finish:** 1250	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
41	7min/ft, 20gallons H_2O loss.	41-46' 5' 99.1%			90.1%	2		Red-brown, fine grained, sandstone, horizontally bedded.	
42	7min/ft, no H_2O loss.					0			
43	9min/ft, 10gallons H_2O loss.					1			
44	7min/ft, no H_2O loss.					2			
45	6min/ft, no H_2O loss.					2			
46	5min/ft, no H_2O loss.	46-51' 5' 99.2'			73.3%	3		Red-brown, fine grained, sandstone, horizontally bedded	
47	4min 30sec/ft, no H_2O loss.					3		with vertical fracturing at 47 ft.	
48	2min 30sec/ft, no H_2O loss.					4	Clay filling at 48 feet	Red-brown medium to coarse sandstone, horizontally bedded.	
49	2min 20sec/ft, no H_2O loss.					0		Same as above,vertical fracture present.	
50	2min 30sec/ft , no H_2O loss.		X			2		Red-brown, medium to coarse, weathered sandstone.	
51									

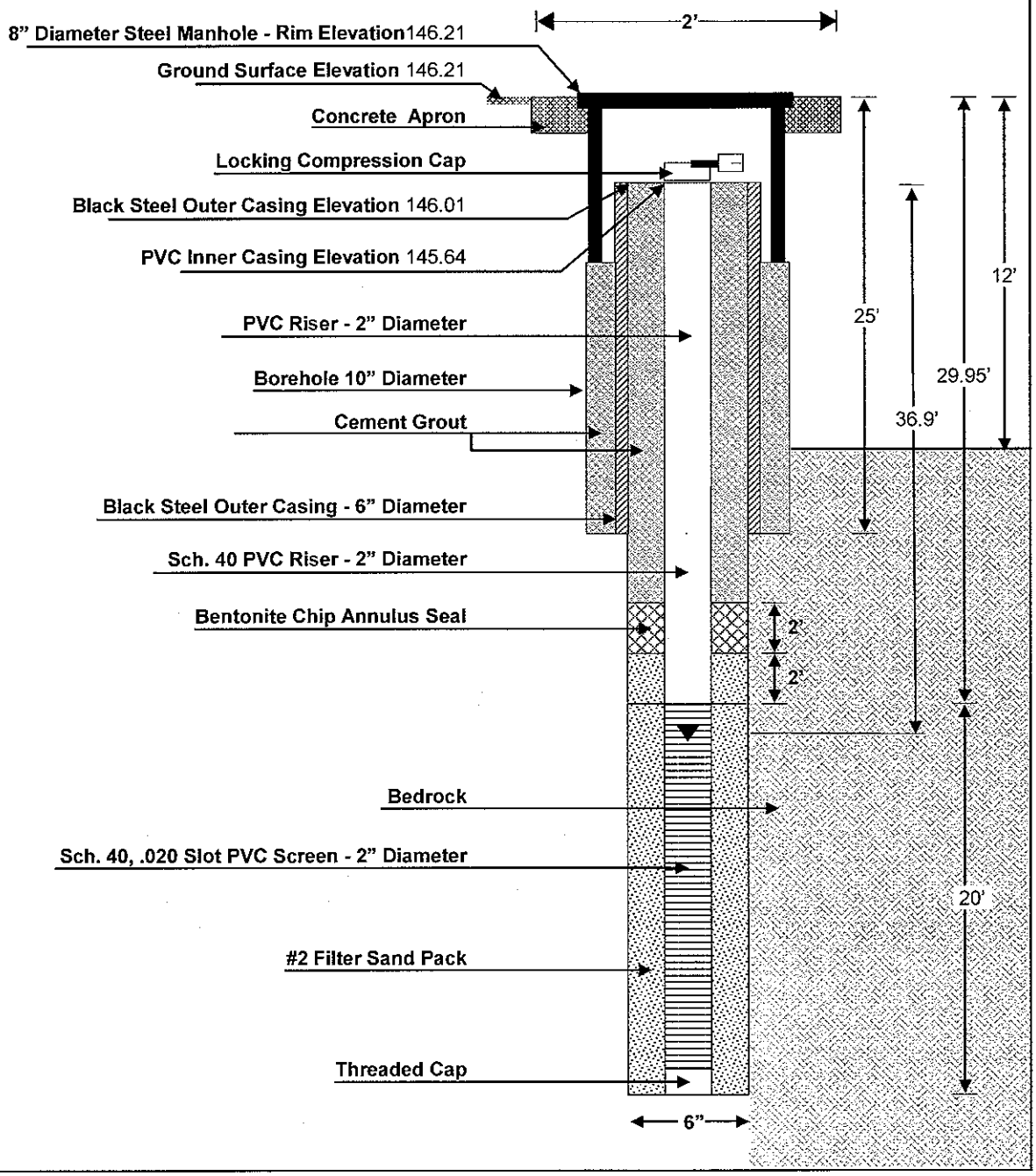
TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-35

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Hoffmann-La Roche Inc. **Date Completed:** 04/30/99
Location: West Side of former building 87 footprint
Drilling Contractor: ADT **Method:** HSA/Air Rotary
TRC Geologist: Todd Majer / Charles Foster

Reference Elevation: 145.64
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653353
Development Date: 05/03 - 5/04/99
Development Method: Surging and Pumping



SERIAL # U14965

DWR-133M (10/96) MW-36

Mail to

NJDEP
Bureau Water Allocation
CN 426
ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

2 - THRU - 26

Permit No. 26533364

COORD # 26 .02. 987

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING INC

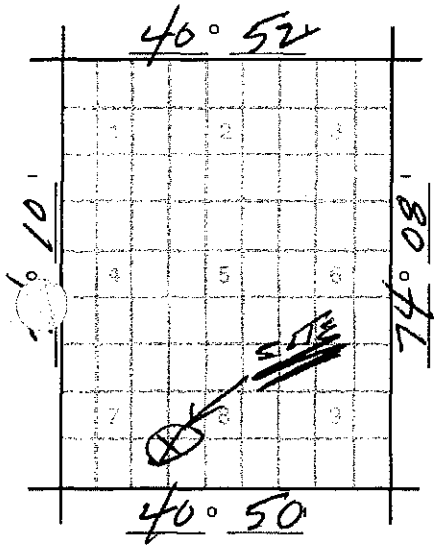
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PK. N.Y. 11040

Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	8	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity NA	cumulative GPM

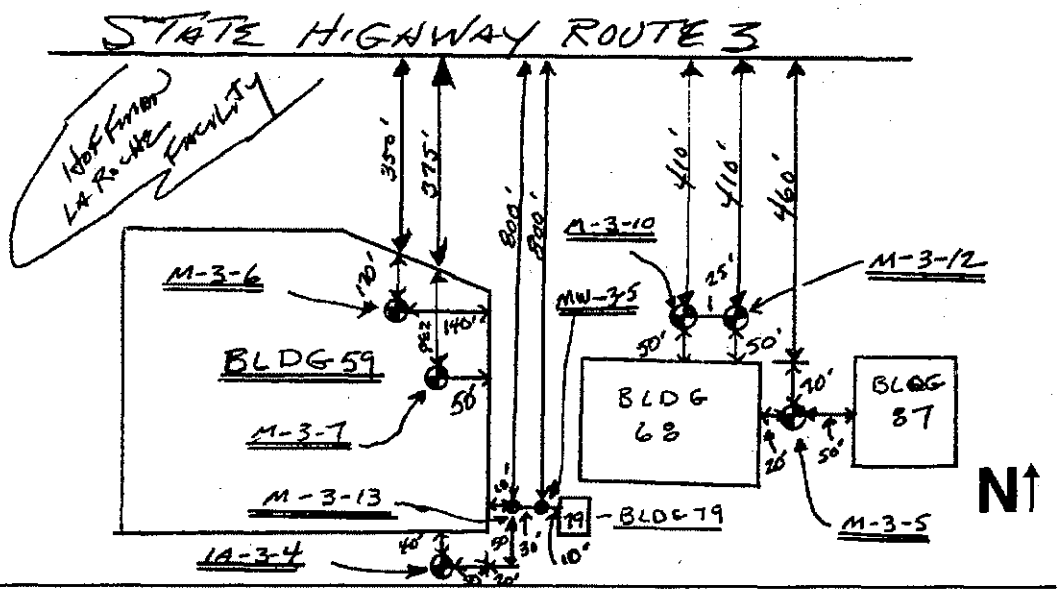
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80.002	CLIFTON	PASSAIC

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐

☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

I npliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/15/99 Signature of Driller [signature] Registration No. JD-1494

Signature of Owner [signature] FOR PAUL HUGHES AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/96

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53759

Atlas Sheet Coordinates 26 : 02 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 36
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 4 / 12 / 99
DATE WELL COMPLETED 4 / 12 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele. # 978 970 2700

WELL CONSTRUCTION

Total depth drilled 50 ft.
Well finished to 50 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

W steel protective casing installed?
es ☐ No

Static water level after drilling 25.4 ft.
Water level was measured using Tape
Well was developed for — hours
at — gpm
Method of development —

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —

Drilling Fluid — Type of Rig Mobile B90

Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	30	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	0	26	6	Steel	Sch 40
Open Hole or Screen (No. Used .020)	30	50	2"	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	28	50	6	Morie #2	
Grout	0	28	6	Neat Cement Bentonite	580 lbs. 40 lbs.

Grouting Method Tremie
Drilling Method HSA / Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Red Brn Fine Sand Tr Silt
10	↓
12	
20	Red Brn Fine Sand + Gravel
21	
30	Bedrock
40	Sand Stone + Shale
50	EOH 50'

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6/10/99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053359
2. Site Well Number as shown on application or plans):	MW-36
3. Well Completion Date:	05/03/99
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	50.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	30.0
7. Screen Length (or length of open hole) in feet:	20.0
8. Screen or Slot Size:	0.020"
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	25.4
13. Yield (gallons per minute):	
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

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1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053359
2. Site Well Number (As shown on application or plans): MW-36
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 09.8" Latitude: North 40° 50' 01.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728776.3 East 588216.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 146.67
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

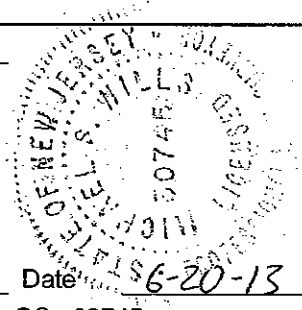
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 6-20-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

ity/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	1A-3-9	1 of 1
		Well No. MW-36	

Location Description: 25'North of Bldg. 71, Survey Point-401

TRC Geologist: Todd Majer

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	3 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: 2' /Bentonite Chips	**Drill Bit/Auger Diameter:** 3 1/4" ID	**Ref. El.:**
Sand Pack Amount/Type: 20'/#2 Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: 20'/Sch 40 PVC	**Water Table Depth:** ~26'bgs	**Surface Elevation:** 47.92
Riser Length/Type: 30' /Sch 40 PVC	**Total Depth:** 13.3'bgs	**Date Start:** 4/12/99 **Date Finish:** 4/12/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1	6	24/18	1' Asphalt/Trap rock				
		15						
		16		Red-brown fine SAND, trace silt, trace angular gravel, weathered rock fragments.		OS3=bkg		
2		55				OS4=bkg		
	S-2	9	24/12			OS1=bkg		
3		19				OS2=bkg		
		17		Red-brown fine SAND, some silt, trace angular gravel.				
4		20						
5								
	S-3	14	24/20	Same as above.		OS1=bkg		
6		16				OS2=bkg		
		16				OS3=bkg		
7		16				OS4=bkg		
	S-4	9	24/16	Same as above, moist.		OS1=bkg		
8		10				OS2=bkg		
		9				OS3=bkg		
9		11						
	S-5	16	24/14	Red-brown fine SAND, some silt, trace clay,		OS3=bkg		
10		31		trace angular gravel, saturated.		OS4=2		
		20						
11		32						
	S-6	7	8/8	Same as above, saturated.		OS1=bkg		
12		15				OS2=bkg		
		45				OS3=bkg		
13			100/5	Same as above, dry.		OS4=bkg		
			100/3	Auger refusal at 13.3'bgs - End of Soil Boring.				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Field screening with OVA FID.
2) bkg = background.
3) Rock is cased to 26' and grouted 6" in place.
4) See rock core log for continuation.

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 1 **of** 2
Contractor Personnel: ADT INC.		**TRC Personnel:** Todd Majer	
Boring/Well Number: IA3-9/ MW-36	**Driller/Equipment:** CME-75, HQ /Ken Kutarnia	**Elevation:** 147.92 **Orientation:** **Time Start:** 1215, 0710 **Time Finish:** 1445, 0945	

Depth	Comments Tests Instrumentation Coring Rate and Smoothness Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities RQD	Fractures Per Foot	Description Tightness Planarity Smoothness Filling, Staining Orientation	Lithology Mineralogy Classification Color / Cementation Grain Size / Hardness Alteration / Weathered State	Graphic Log
14	6min 40sec/ft	14-21' 7' 60.7%		5	25%	2		Reddish-brown, horizontally bedded, siltstone to shale.	
15	6min 25sec/ft, loss of 50gallons H_2O.					4			
16	8min 10sec/ft, loss of 50gallons H_2O.					3		Weathered fractures spaced at 4 inch intervals.	
17	7min 10sec/ft, loss of 50gallons H_2O.					4			
18	17min 50sec/ft, loss of 200gallons H_2O.		X					High angle fracture zone above void at 18-19 feet.	
19	25min 25sec/ft, loss of 200gallons H_2O.		X					Fragmented siltstone.	
20	30min 15sec/ft, loss of 100gallons H_2O.		X					↓	
21	8min 35sec/ft, loss of 25gallons H_2O.	21-24' 3' 94%			86%	3		Reddish-brown, horizontally bedded siltstone to shale.	
22	7min 50sec/ftloss of 25gallons H_2O.					1			
23	5min 50sec/ft, loss of 25gallons H_2O.					1			
24	6min 30sec/ft, loss of 50gallons H_2O.	24-33' 9' 91%			52%	>10	Sand, silt and clay filling 24-26 feet.	Highly weathered siltstone	
25	5min 20sec/ft, loss of 50gallons H_2O.					>10		Fracture spacing < 1 inch.	
26	4min 20sec/ft, no H_2O loss.					2			
27	6min 5sec/ft, no H2O loss.					2			
28	6min 15sec/ft, no H2O loss					1		Fine grained, horizontally bedded sandstone. Spacing 8-10 inches	
29									

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 2 **of** 2
Contractor Personnel: ADT INC.		**TRC Personnel:** Todd Majer	
Boring/Well Number: IA3-9 / MW-36	**Driller/Equipment:** CME-75/Ken Kutarnia	**Elevation:** 147.92 **Orientation:** **Time Start:** 1215, 0710 **Time Finish:** 1445, 0945	

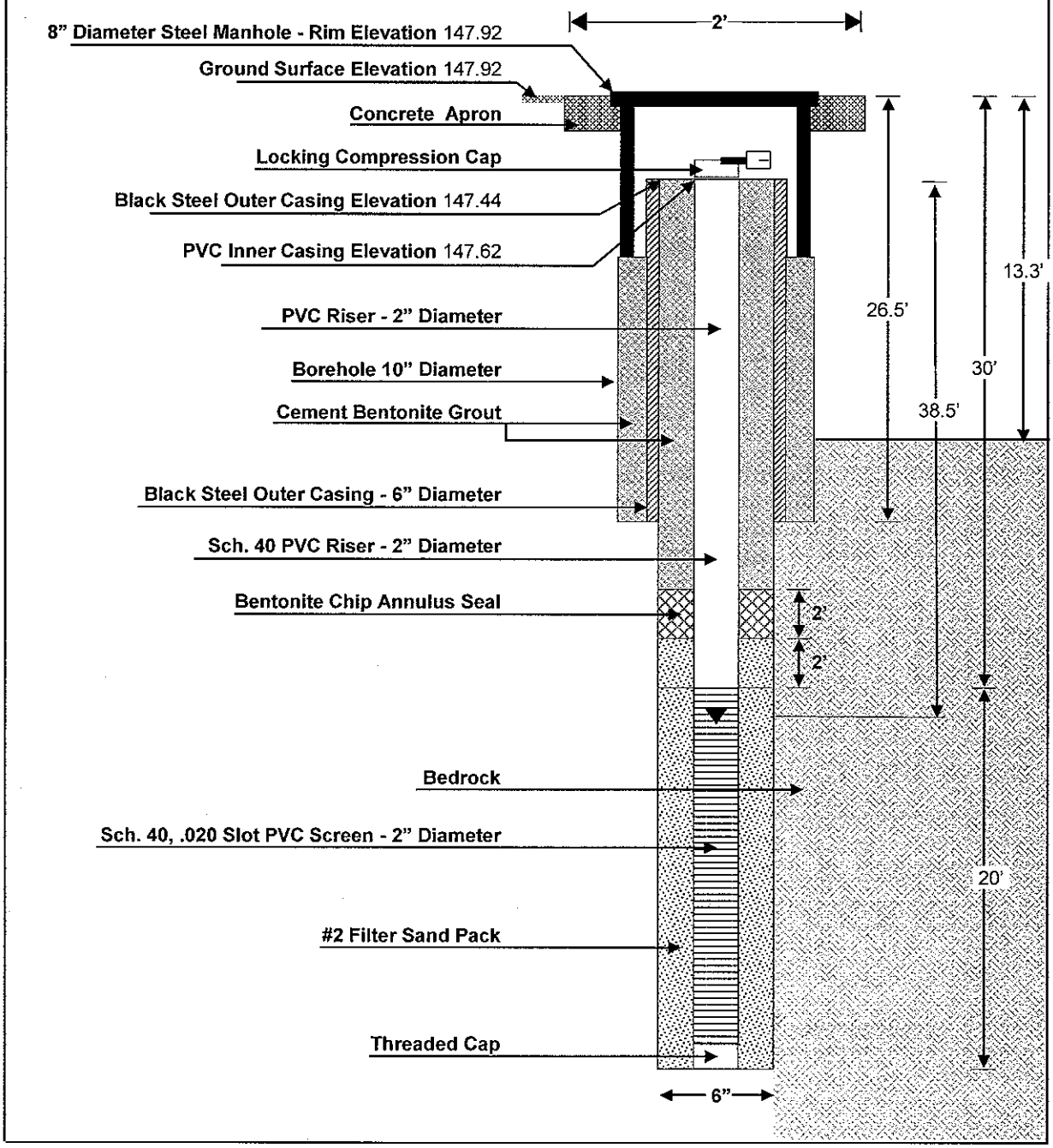
Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
29	6min 15sec/ft, no H_2O loss.				52%	2		Reddish-brown, horizontally bedded, fine grained, sandstone -high angle fractures.	
30	6min 30sec/ft, no H_2O loss.					1		Calcification at 30 feet.	
31	9min 10sec/ft, no H_2O loss					0			
32	10min 40sec/ft, no H_2O loss.					4			
33									

TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-36

Project: IA-3 Remedial Investigation	**No.:** 20447-0100	**Reference Elevation:**	147.62
Client: Hoffmann-La Roche Inc.	**Date Completed:** 04/30/99	**Reference Description:**	Top of PVC Riser
Location: 30 Feet North of Building 71		**NJDEP Permit No.:**	2653359
Drilling Contractor: ADT	**Method:** HSA/Air Rotary	**Development Date:**	05/03/99
TRC Geologist: Todd Majer / Charles Foster		**Development Method:**	Surging and Pumping



SERIAL # U14965

DWR-133M (10/96)

Mail to MW-37

NJDEP
Bureau Water Allocation
CN 426
ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

2

- THRU -

Permit No. 2653364

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD # 26 .02. 987

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC

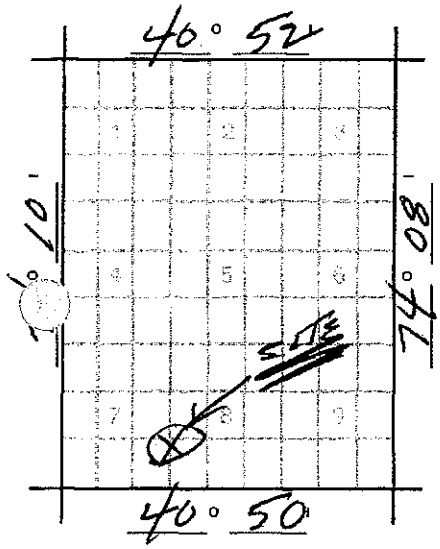
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PK. N.Y. 11040

Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	8	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity NA	cumulative GPM

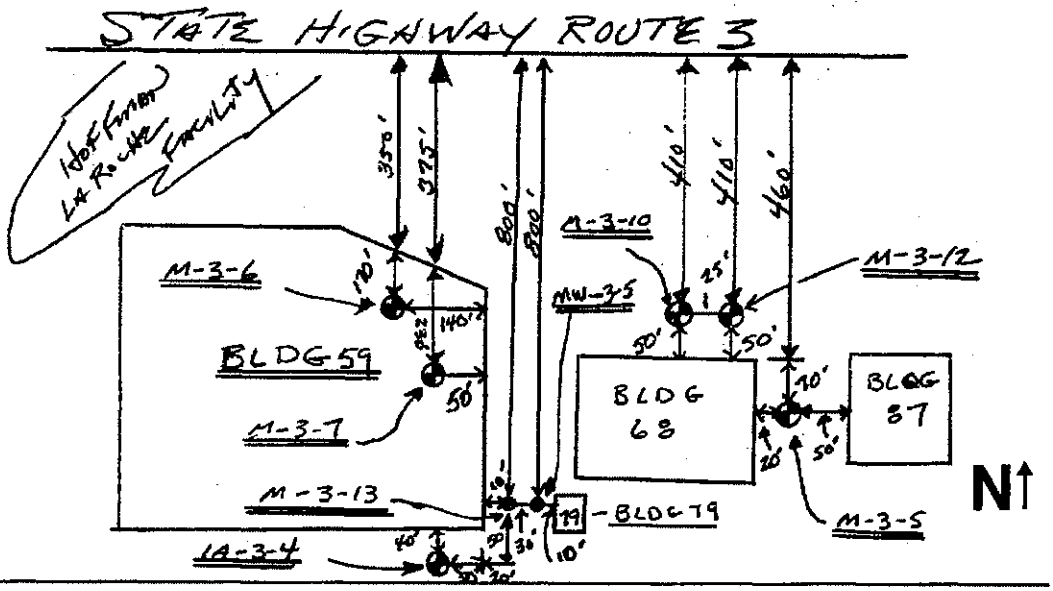
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80.002	CLIFTON	PASSAIC

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

I ...pliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/15/99 Signature of Driller [signature] Registration No. JD-1494

Signature of Owner [signature] FOR PAUL NUGKES AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53360

Atlas Sheet Coordinates 26 : 02 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW 37
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 4 / 13 / 99
DATE WELL COMPLETED 4 / 16 / 99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 35 ft.
Well finished to 35 ft.

Borehole diameter:
Top 10 in.
Bottom 6 in.

Well was finished: ☐ above grade
☑ flush mounted

If finished above grade, casing height (stick up) above land surface – ft.

Was steel protective casing installed?
Yes ☐ No

Static water level after drilling 22.5 ft.

Water level was measured using Tape

Well was developed for – hours
at – gpm

Method of development –

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity – gpm

Pump type: –

Drilling Fluid – Type of Rig Mobile B90

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	21	6"	Steel	Sch 40
Middle Casing (for triple cased wells only)	–	–	–	–	
Outer Casing (largest diameter)	–	–	–	–	
Open Hole or Screen (No. Used)	21	35	6"	Open Hole	
Blank Casings (No. Used)	–	–	–	–	
Tail Piece	–	–	–	–	
Gravel Pack	–	–	–	–	
Grout	0	21	10	Neat Cement Bentonite	450 lbs. 20 lbs.

Grouting Method Tremie
Drilling Method HSA / Air Rotary

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Red Brown Fine Sand + Silt
8	↓
10	Bedrock Shale & Sandstone
20	↓
30	↓
35	T.D. 35

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
Registration No. 1579 Date 6 / 10 / 99

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053360
2. Site Well Number as shown on application or plans):	MW-37
3. Well Completion Date:	04/28/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	35.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	20
7. Screen Length (or length of open hole) in feet:	15
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	22.5
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053360
2. Site Well Number (As shown on application or plans): MW-37
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 10.1" Latitude: North 40° 50' 04.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729148.8 East 588192.4
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 134.73
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	IA-3-10	1 of 1
		Well No. MW-37	

Location Description: On slope of road, North East of Bldg. 59

TRC Geologist: Todd Majer

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	3 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: NA	**Drill Bit/Auger Diameter:** 3 1/4" ID	**Ref. El.:**
Sand Pack Amount/Type: NA	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: NA	**Water Table Depth:** NA	**Surface Elevation:** 136.20
Riser Length/Type: NA	**Total Depth:** 8.5'bgs	**Date Start:** 4/13/99 **Date Finish:** 4/13/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
				6" Asphalt				
				6"Rock- base.				
1	S-1	23	24/8	Red-brown fine SAND, some silt, trace angular gravel.		OS1=bkg		
		27						
2		42						
		30						
3	S-2	4	24/18	Same as above, trace clay.		OS1=bkg OS2=bkg OS3=bkg		
		5						
4		6						
		20						
5	S-3	35	24/6	Same as above.		OS1=bkg		
		35		Weathered rock fragments.				
6		37						
		38						
7	S-4	12	24/7	Weathered rock fragments.		OS1=bkg		
		20						
8		100/5		End of boring 8.5'bgs - End of Soil Boring..				
9				Shale and inter-bedded sandstone cored to ~35'bgs, see associated rock core log.				
10								
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Field screening results with OVA FID.
2) bkg=background.
3) This well was left open hole.

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 1 **of** 1
Contractor Personnel: ADT INC.		**TRC Personnel:** Todd Majer	
Boring/Well Number: IA3-10 / MW-37	**Driller/Equipment:** CME-75, HQ /Ken Kutarnia	**Elevation:** 136.20 **Orientation:** **Time Start:** 0704 **Time Finish:** 0900	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
10	6min 40sec/ft	81 %	X	6	50 %	>10		Reddish-brown, highly weathered shale fragments to 13ft.	
11	6min 25sec/ft		X			>10			
12	8min 10sec/ft		X			>10			
13	7min 10sec/ft					4		Horizontally bedded fine grained sandstone.	
14	17min 50sec/ft					3		High angle and vertical fractures at 14-15 feet.	
15	25min 25sec/ft					4			
16	30min 15sec/ft					0		Red-brown shale inter-bedded with fine grained sandstone.	
17	8min 35sec/ft					5		Fracture spacing of 1-3 inches in highly weathered zone	
18	7min 50sec/ft					0		Fracture spacing is 12-14 inches to 20 feet.	
19	5min 50sec/ft					0			
20									
								NOTE: AIR HAMMER TO 35'BGS.	

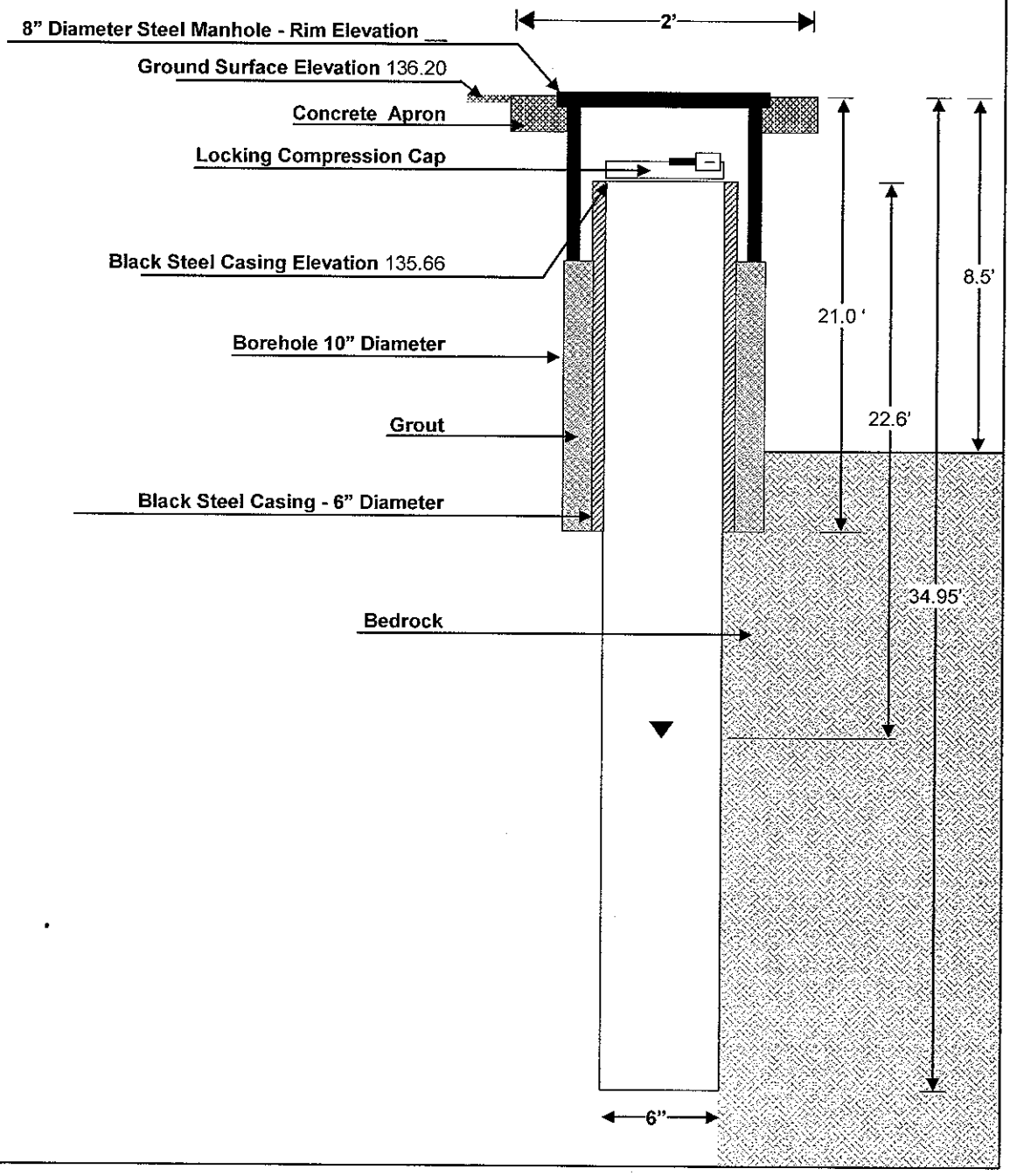
TRC

Flush Mount Open Hole Bedrock Monitoring Well Construction Log

Well No. MW-37

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Hoffmann LaRoche **Date Completed:** 4/28/99
Location: North of building 68 footprint in roadway near NJ R.O.W.
Drilling Contractor: ADT **Method:** HAS/Air Rotary
TRC Geologist: Todd Majer / Charles Foster

Reference Elevation: 135.66
Reference Description: Top of Steel Casing
NJDEP Permit No.: 2653360
Development Date: 05/06/99
Development Method: Surging and Pumping



SERIAL # U14965

DWR-133M (10/96) MW-38

Mail to

NJDEP
Bureau Water Allocation
CN 426
[illegible]ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

2

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

- THRU -

Permit No. 26533364

COORD # 26 .02. 987

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility STAUFFER

Address

Driller AQUIFER DRILLING & TESTING INC

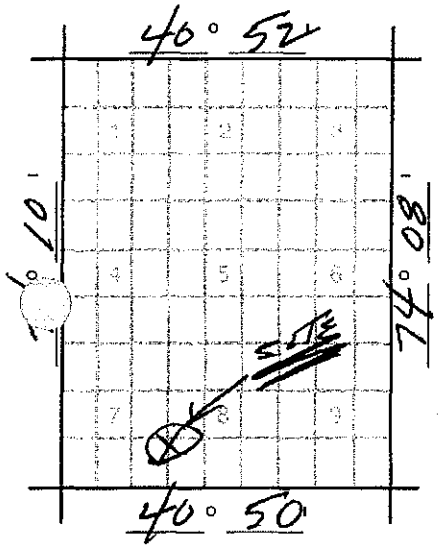
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PK. N.Y. 11040

Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	8	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity NA	cumulative GPM

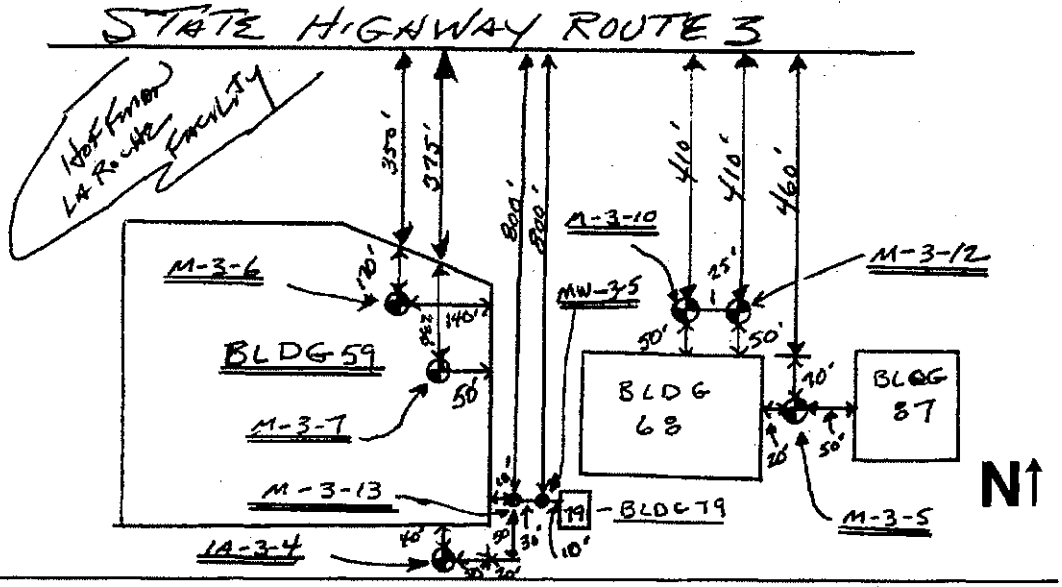
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80.002	CLIFTON	PASSAIC

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

I[illegible]mpliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/15/99 Signature of Driller [signature] Registration No. JD-1494

Signature of Owner [signature] FOR PAUL NUGENT AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/95

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53361

Atlas Sheet Coordinates 26 - 02 - 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-36
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

DATE WELL STARTED 4 / 20 / 99
DATE WELL COMPLETED 4 / 23 / 99

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele.# 978-970 2700

WELL CONSTRUCTION

Total depth drilled 7 ft.
Well finished to 7 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Was steel protective casing installed? ☐ Yes ☐ No

Static water level after drilling 5.2 ft.

Water level was measured using Tape

Well was developed for — hours at — gpm

Method of development —

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	2	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	—	—	—	—	
Open Hole or Screen (No. Used .020)	2	7	2"	PVC	020
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	1	7	8	Morie #2	
Grout	0	1	8	Neat Cement Bentonite	30 lbs. 1 lbs.

Grouting Method Gravity
Drilling Method HSA

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6/11/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Brn Fine Sand + Gravel
2 ↓
4 Red Brown Fine Sand W/ Fractured RK
6 ↓
Weathered Rock
8
EOH 7'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053361
2. Site Well Number as shown on application or plans):	MW-38
3. Well Completion Date:	04/20/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	6.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	1.5
7. Screen Length (or length of open hole) in feet:	5.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.2
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Surging and Bailing
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
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SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053361
2. Site Well Number (As shown on application or plans): MW-38
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 12.7" Latitude: North 40° 50' 02.4"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728907.5 East 587990.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.65
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Boring No.** IA-3-5	**Sheet** 1 of 1
		Well No. MW-38	
Location Description Lower Tier, AOC-1.		**TRC Geologist** James Leonard	
Drilling Contractor/Foreman ADT INC/ Ken Kutarnia	**Drill Rig Make/Model** CME 75	**Auger/Drive Casing Size/Type** 4 1/4 " ID HSA	
Sampler Description 2 ft standard split spoon	**Drilling Method** HSA continuous sampling	**Coordinates** X= Y=	
Filter Seal Amount/Type: 0.5' /Bentonite Chips	**Drill Bit/Auger Diameter:** 4 1/4" ID	**Ref. El.:**	
Sand Pack Amount/Type: 6' /#2 Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA	
Screen Length/Type: 5' /Sch 40 PVC	**Water Table Depth:** NA	**Surface Elevation:** 120.04	
Riser Length/Type: 2' /Sch 40 PVC	**Total Depth:** 4.7'bgs	**Date Start:** 4/20/99	**Date Finish:** 4/20/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1	S-1	16	24/22	4"Asphalt		OS2=bkg		
		16		Red-brown fine to medium SAND, some angular		OS3=bkg		
		37		gravel, little silt.		OS4=bkg		
2		80/6		Last 9"- same as above, some weathered rock.				
	S-2	10	24/9	Red-brown fine to medium SAND, some		OS1=bkg		
3		41		weathered rock fragments.				
		41		3"layer of weathered rock in tip, dry.				
4		25						
	S-3	25	7/7			OS1=bkg		
5		100/1		Red-brown fine to medium SAND and weathered				
				rock fragments.				
6				Split-spoon refusal at 4.7'bgs - End of Boring.				
7								
8								
9								
10								
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% sand 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stuff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Field screening with OVA FID.
2) bkg = background.

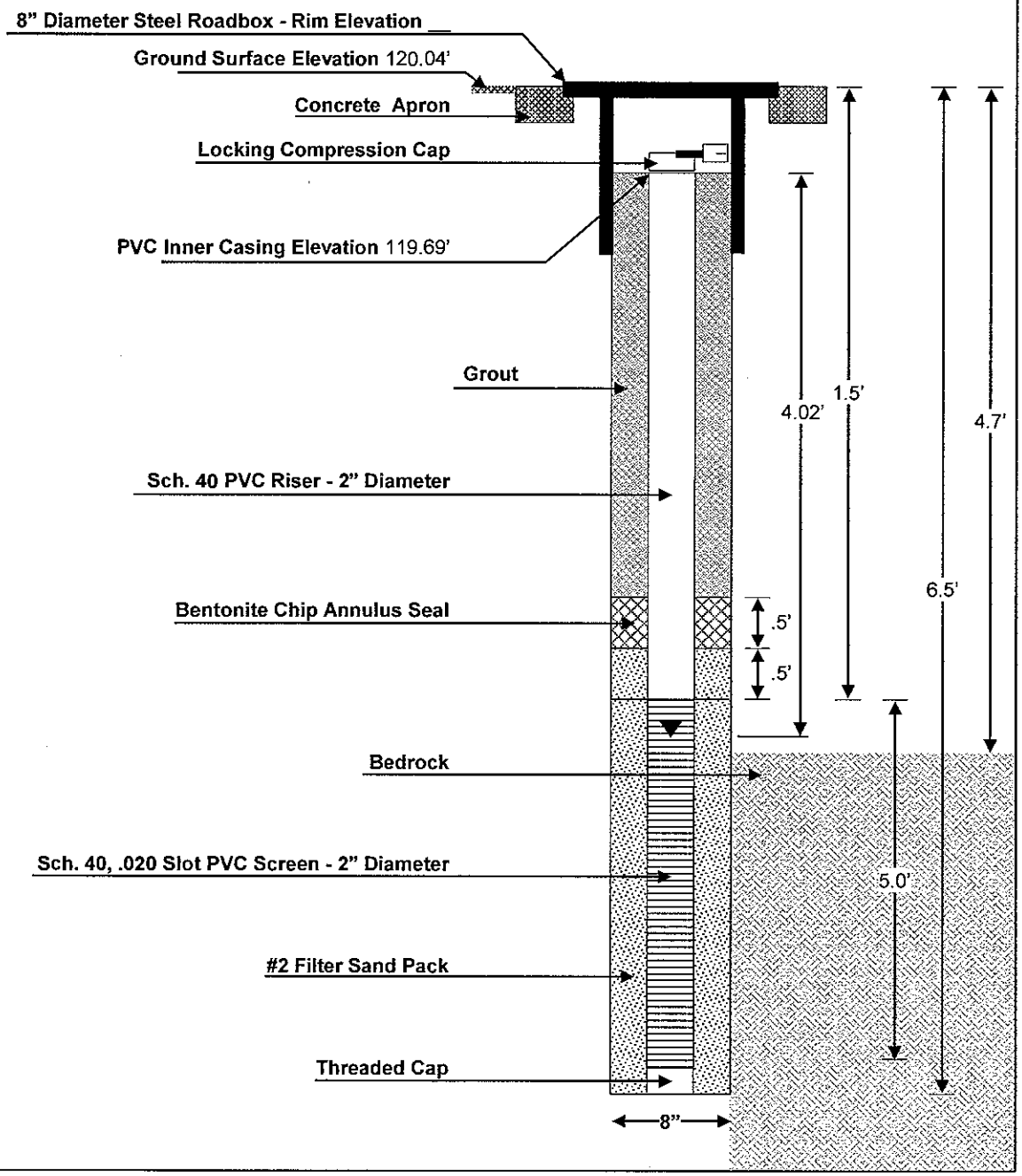
TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-38

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Hoffmann LaRoche **Date Completed:** 04/20/99
Location: 50 feet south of Building 68, 15 ' North of MW-41
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: James Leonard / Charles Foster

Reference Elevation: 119.69'
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653361
Development Date: 05/17/99
Development Method: Surging and Bailing



AF-375/

DWR-133M (7/92) SERIAL # 30997 (MW-39-) STATE OF NEW JERSEY 2

Mail to DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY TRENTON, NJ

Permit No. 26-32777 26-32778

Water Allocation
CN 029
Trenton, N.J. 08625

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

(Hour) COORD #: 26.02.981

Owner Hoffman-LaRoche Inc.
Address 340 Kingsland Ave.
Nutley, N.J. 07110
Name of Facility (Same as owner)
Address Hoffman-LaRoche Inc.
Clifton Facility

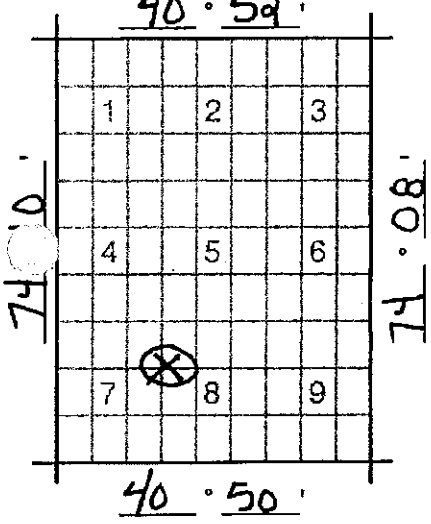
Driller Warren George Inc.
Address P.O.Box 413
Jersey City, N.J. 07303

Diameter of Well(s) 6" (six) Inches	Proposed Depth of Well(s) 40' Feet
# of Wells Applied for (max. 10) 2	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) Monitoring	If Yes, give pump capacity ——— GPM

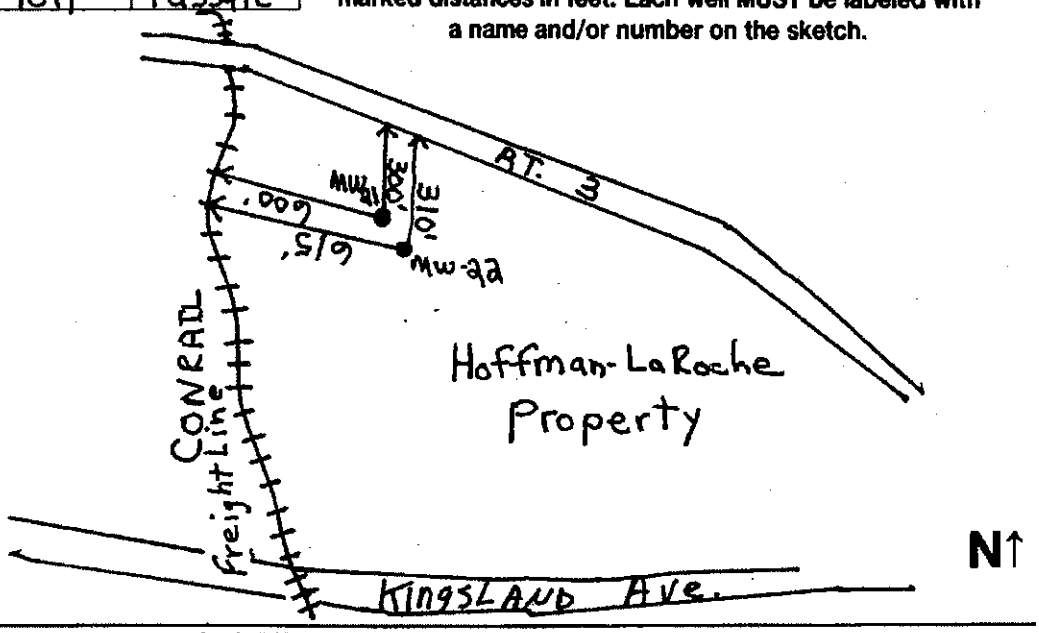
LOCATION OF WELL(S)

Lot #	Block#	Municipality	County
1	8002	Clifton	Passaic

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Fund Case
- ☐ ECRA Case
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☒ Underground Storage Tank
- ☐ NJPDES Municipal Discharge Permit
- ☐ NJPDES Industrial Discharge Permit
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) ———

Case I.D. Number ———

This Space for Approval Stamp

WELL PERMIT APPROVED
Dept. of Environmental Protection
Water Resources, Water Allocation
MAR 2 1993

FOR D.E.P.E. USE

- ☒ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.
- ☐ ———

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/2/93

Signature of Driller Frank Gregory License # 0825

Signature of Owner Mike Conley

COPIES- Water Allocation — White and Pink Health Dept. — Yellow Owner — Blue Driller — White

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

MW-39-1

Well Permit No. 26 - 32778
Atlas Sheet Coordinates ~~26~~ : ~~02~~ : 981

Owner HOFFMAN-LA ROCHE INC.
340 KINGSLAND AVE.
City NUTLEY State NJ Zip Code 07110

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-21
County Passaic Municipality CLIFTON CITY Lot No. 1 Block No. 80.02
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 3/26/93
Regulatory Program Requiring Well Case I.D. #
CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Roux Assoc. Tele. #

WELL CONSTRUCTION

Total depth drilled 23.5' ft.
Well finished to 21.5' ft.
Borehole diameter:
Top 10" in.
Bottom 10" in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface — ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.)	Diameter (inches)	Type and Material
Inner Casing	N/A			
Outer Casing (Not Protective Casing)	.3'	11.5'	4"	PVC.
Screen (Note slot size)	11.5'	21.5'	4"	.020 SLOT
Tail Piece	N/A			
Gravel Pack	9.5'	23.5'		#2 Morie sand
Annular Seal/Grout	0'	9.5'		Cement/Bentonite
Method of Grouting	Tremie			

Static water level after drilling 14.7' ft.
Water level was measured using TAPE
Well was developed for — hours at — gpm
Method of development —
Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —
Drilling Method Auger
Drilling Fluid — Type of Rig Mobil B61
Name of Driller Richard V. Gregory
Health and Safety Plan submitted? ☐ Yes ☐ No
Level of Protection used on site (circle one) None D C B A
N.J. License No. 1296
Name of Drilling Company ~~WARREN GEORGE INC.~~

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

9/8"	Asphalt
8"/4'	Rd. Br silty sand cobbles (Possible Fill)
4'/12.5'	Rd. Br. Silty Sand & Gravel
12.5'/17'	Wheatered Rd. Shale
17'/23.5'	Rd. Shale

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Richard Gregory Date 3/31/93

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	2600032778
2. Site Well Number as shown on application or plans):	MW-39-1
3. Well Completion Date:	03/26/1993
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	21.2
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	11.2
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	4
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	14.7
13. Yield (gallons per minute):	<1
14. Development Techinque (specify):	Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	0.5 hr

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

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County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

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3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 19.4" Latitude: North 40° 50' 11.0"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729782.6 East 587474.9
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.52
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

ROUX ASSOCIATES, INC.
CONSULTING GROUND-WATER GEOLOGISTS

GEOLOGIC LOG

Well No. MW-39-1

Study No. 28302I Date 3/26/93
Project Clifton/Nutley
Client Hoffmann-La Roche Inc.
Page 1 of 1
Logged By J.A. Lucey
Loc. West of Building 39
M.P. Elevation 121.46
Drilling Started 3/25/93 Ended 3/26/93
Driller Warren George Inc.
Type of Rig Auger

WELL DATA

Hole Diam. (in.) 10
Final Depth (ft.) 23.5
Casing Diam. (in.) 4
Casing Interval (ft.) 0.3-11.5
Screen Interval (ft.) 11.5-21.5
Screen Slot & Type 0.020/PVC
Well Status Monitoring

G W READINGS(1)

Date	DTW MP(2)	Elev.W.T.

SAMPLER

Type N/A
Hammer N/A lb.
Fall N/A in.

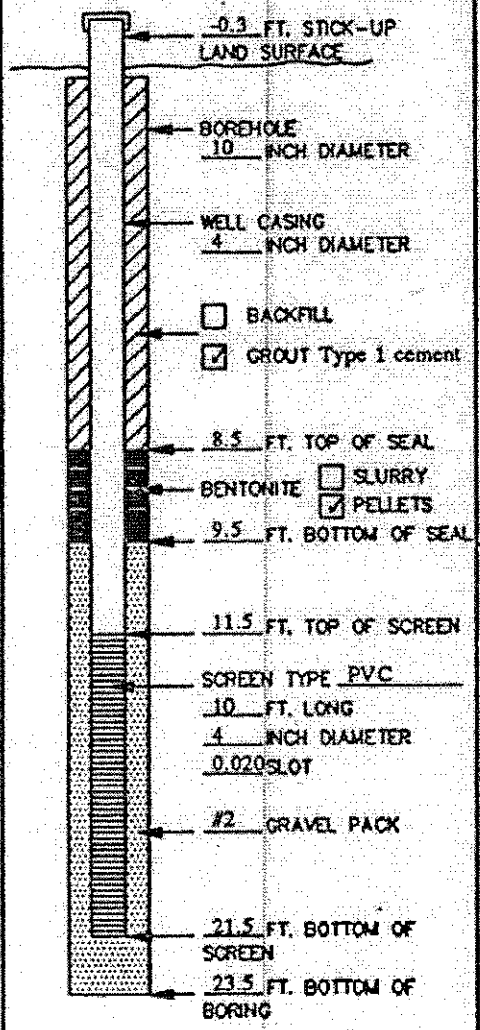
DEVELOPMENT

OVM (ppm)	SAMPLE No.	Rec.(in.)	Depth(ft.)	Blow/6"	Strata Change & Gen. Desc.	Depth (ft.)	SAMPLE DESCRIPTION
0.0					Hot mix	0-2	0-0.75' - Hot mix. 0.75' - Fine-grained, silty sandstone with angular gravel.
0.4					Fill material	2-4	
						4-6	
						6-8	5.0' - Fine-grained, red, silty sandstone with weathered fine-grained, red sandstone pebbles.
						8-10	
0.3					Unconsolidated silty sandstone	10-12	
						12-14	
							12.5' - Weathered, fine-grained, silty sandstone and siltstone.
0.3					Weathered bedrock composed of fine-grained, red, silty sandstone	14-16	
							15.0' - Red, fine-grained, micaceous silty sandstone with some red siltstone.
						16-18	
0.3					Bedrock composed of fine-grained, silty sandstone and red siltstone	18-20	
						20-22	
							23.5' - Auger refusal.

REMARKS:
(1) in feet relative to a common datum
(2) from top of PVC casing
(3) background biogreadings range from 0.0 to 6.5 ppm
(4) PID readings obtained during soil screening never achieved background levels

ROUX ASSOCIATES, INC.
Consulting Ground-Water Geologists

MONITORING WELL
CONSTRUCTION LOG



NOTE:
ALL DEPTHS IN FEET BELOW GROUND SURFACE.

PROJECT NAME Hoffmann/La Roche NUMBER 28302J
WELL NO. MW-39-1 PERMIT NO. 26-32777
TOWN/CITY Clifton/Nutley
COUNTY Passaic/Essex STATE New Jersey
WELL LOCATION West side of Building 39
LAND-SURFACE ELEVATION N/A ☐ SURVEYED ☐ ESTIMATED
MEASURING POINT ELEVATION 121.46 ☑ SURVEYED ☐ ESTIMATED
MEASURING POINT LOCATION Notch on top of PVC casing

INSTALLATION DATE(S) March 25 and 26, 1993
DRILLING METHOD Auger
DRILLING CONTRACTOR Warren George, Inc.
DRILLINGFLUID N/A

DEVELOPMENT TECHNIQUES(S) AND DATE(S)
Well was pumped until it went dry on 3/31/92. Well was pumped until it went dry on 4/2/93 a total of 26.5 gallons were removed from the well.

FLUID LOSS DURING DRILLING N/A GALLONS
WATER REMOVED DURING DEVELOPMENT 26.5 GALLONS
STATIC DEPTH TO WATER 12.32 FEET BELOW M.P.
PUMPING DEPTH TO WATER 19.20 FEET BELOW M.P.
PUMPING DURATION 0.5 HOURS
YIELD <1 GPM DATE
SPECIFIC CAPACITY GPM/FT.
WELLPURPOSE Monitoring

REMARKS

SIGNATURE John C. Heacy

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201117406

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: WILLIAM ELLEFSEN, JOURNEYMAN LICENSE # 0001430

Permit Issued to: SBI ENVIRONMENTAL WELL DRILLING

Company Address: 17 DEMAREST DR WAYNE, NJ 07470

PROPERTY OWNER

Name: HOFFMANN LA ROCHE TAX DEPT

Organization: Owner

Address: 340 Kingsland Street

City: Nutley State: New Jersey Zip Code: 07110

PROPOSED WELL LOCATION

Facility Name: Hoffmann La Roche

Address: 340 Kingsland Street Leave add/block/lot/x/y as is per MS

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587437 Northing (Y): 729665
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-39-2

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Jerry D. Pilawski

Approval Date: October 21, 2011
Expiration Date: October 20, 2012

Approved by the authority of:
Bob Martin
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201117406

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201117406

MONITORING WELL RECORD

PROPERTY OWNER: HOFFMANN LA ROCHE TAX DEPT

Company/Organization: Owner

Address: 340 Kingsland Street Nutley, New Jersey 07110

WELL LOCATION: Hoffmann La Roche

Address: 340 Kingsland Street Leave add/block/lot/x/y as is per MS

County: Passaic Municipality: Clifton City Lot: 1 Block: 80.02

Easting (X): 587474 Northing (Y): 729728
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: October 25, 2011

DATE WELL COMPLETED: October 25, 2011

WELL USE: MONITORING

Other Use(s):

Local ID: MW-39-2

WELL CONSTRUCTION

Total Depth Drilled (ft.): 21.5 Finished Well Depth (ft.): 21.5 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	21.5	6		
Casing	0.3	11.5	2	PVC	Sch. 40
Screen	11.5	21.5	2	PVC v-wrap	0.010"

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0.5	9	6	2	15	282	24
Gravel Pack	9	21.5	6	2	#1 Well Sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Air Rotary

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 14 ft. below land surface
Water Level Measure Tool: m-scope
Well Development Period: 1 hrs.
Method of Development: sub. pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: T3W
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: Gray OT - Other Concrete and gravel
1 - 11: Red/brown SC - Clayey sands, sand-clay mixtures
11 - 21.5: Red WR - Weathered Rock Weathered red shale

ADDITIONAL INFORMATION:

Driller of Record: William Ellefsen, JOURNEYMAN LICENSE # 0001430

Company: SBI ENVIRONMENTAL WELL DRILLING

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201117406
2. Site Well Number as shown on application or plans):	MW-39-2A
3. Well Completion Date:	11/16/2011
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	21.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	11.5
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.010
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	14
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Sub. pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	1 hour

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 1 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201117406
2. Site Well Number (As shown on application or plans): MW-39-2A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 19.4" Latitude: North 40° 50' 10.5"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729728.3 East 587474.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 120.04
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

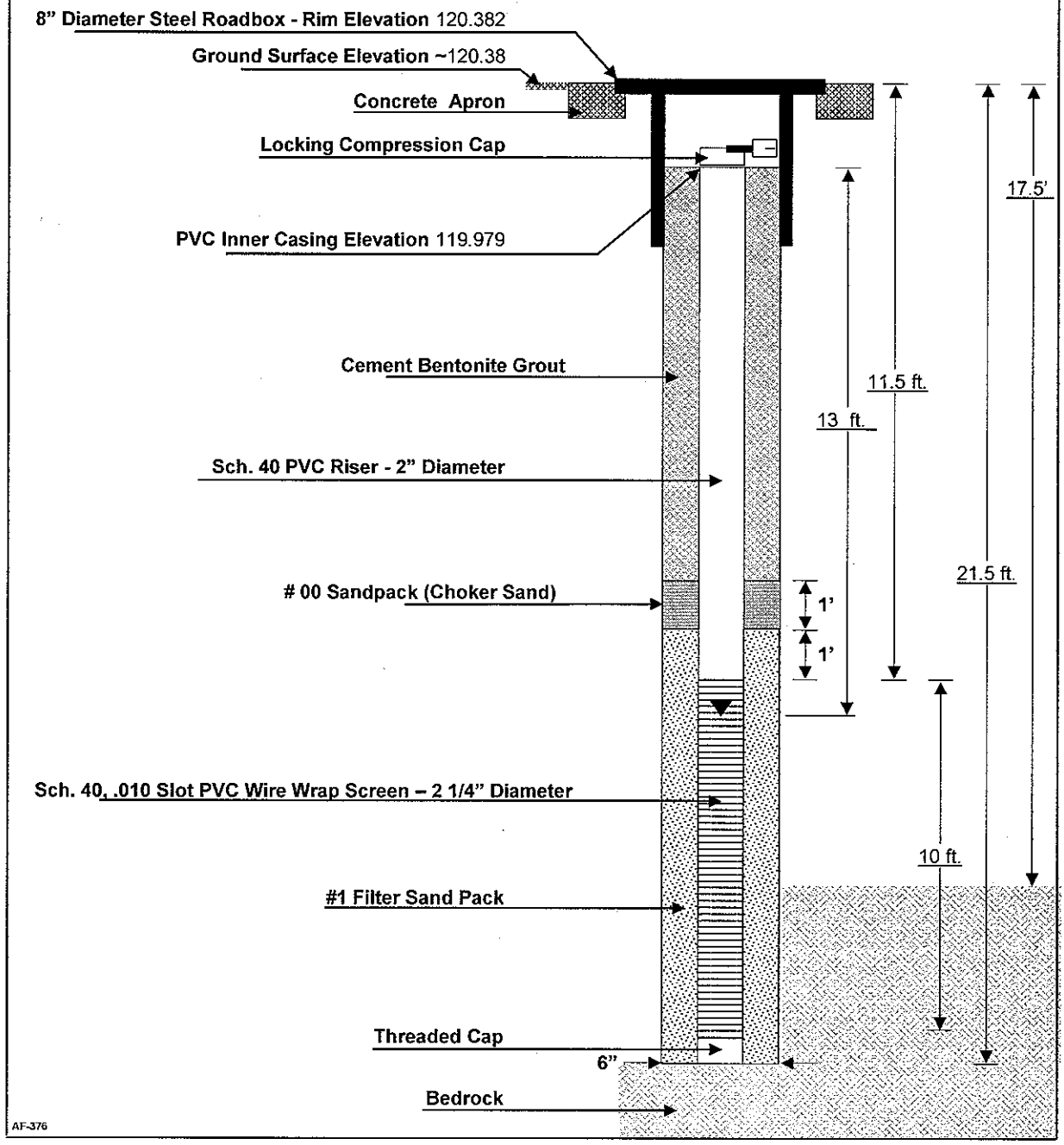
TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-39-2A

Project: HLR LTM **No.:** 105009-000400
Client: Dave Herrmann **Date Completed:** 11/16/11
Location: West of B-39 in Tanks area (~ 10 ft. west of original well)
Drilling Contractor: SBI **Method:** Direct push / Air
TRC Geologist: Charles Foster

Reference Elevation: 119.979
Reference Description: PVC Riser North
NJDEP Permit No.: E201117406
Development Date: 11/17/11
Development Method: Submersible pump



AF-376

MW-39A

DWR-133M
2/00

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT 16

Permit No. _____

Mail To:
NJDEP
BUREAU OF WATER ALLOCATION
PO BOX 426
TRENTON, NJ 08625-0426

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26 • 12 • 3 23

Owner HOFFMAN LAROCHE INC
Address 10 FINDLAND STREET
NUTLEY NJ 07110

Name of Facility _____
Address SAME

Driller Summit Drilling Co., Inc.
Address Central Jersey Industrial Park
Chimney Rock Road, Building 9W
Bound Brook, NJ 08805

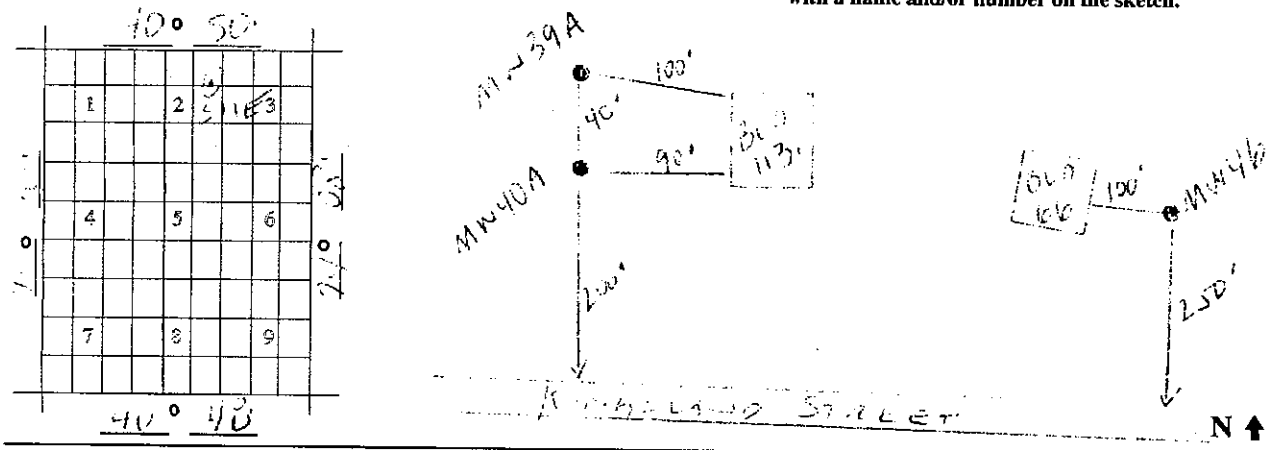
Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	40 Feet
# of Wells Applied for (max. 10)	3	Will pumping equipment be utilized?	YES ☐ NO ☒
Type of Well (see reverse)	MONITOR	If Yes, give pump capacity	— cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1, 2, 3	29.2	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads,buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) ZONE 9 INVESTIGATION

CASE I.D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
APR 5 2001
SUPERVISOR OF WATER ALLOCATION

FOR D.E.P. USE
☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT.
In compliance with N.J.S.A.58:4A-14, application is made for a permit to drill a well as described above.

Date 3-23-01 Signature of Driller _____ Registration No. J1544

Signature of Property Owner _____

COPIES: Water Allocation - White Health Dept. - Yellow Owner - Blue Driller - White

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60828

Atlas Sheet Coordinates 26 : 15 : 12

OWNER IDENTIFICATION - Owner HOFFMAN-LAROCHE, INC.
Address 340 KINGSLAND ST
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW39A
County ESSEX Municipality NUTLEY TWP. Lot No. 1 2 3 Block No. 222
Address 340 KINGSLAND STREET

DATE WELL STARTED 4/9/01
DATE WELL COMPLETED 4/9/01
TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC Environmental Corporation Tele. #

WELL CONSTRUCTION

Total depth drilled 18.5 ft.
Well finished to 18.5' ft.

Borehole diameter:
Top 10" in.
Bottom 6" in.

Well was finished: ☐ above grade
☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

s steel protective casing installed?
☐ Yes ☑ No

Static water level after drilling 10' ft.

Water level was measured using tape

Well was developed for 1/2 hours
at 1/2 gpm

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type: ____

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	13.5'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	0	11'	6"	Steel	19 lbs sch 40
Open Hole or Screen (No. Used)	13.5'	18.5'	2"	PVC	.010 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	11.5	18.5'		Morie #2	
Grout	0'0	11.5'/11'		Neat Cement	94 lbs.
				Bentonite	25 lbs.

Grouting Method Air Rotary
Drilling Method Auger

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

gistration No. M1892 Date 4 / 25 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___ ° ___ ' ___.__ " LONGITUDE: ___ ° ___ ' ___.__ "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): ____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	2600060828
2. Site Well Number as shown on application or plans):	MW-39A
3. Well Completion Date:	04/11/2001
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	18.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	13.5
7. Screen Length (or length of open hole) in feet:	5.0
8. Screen or Slot Size:	0.010
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	10
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pumping and Surging
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

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2. Site Well Number (As shown on application or plans): MW-39A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 12.7" Latitude: North 40° 50' 02.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728901.8 East 587991.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.81
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Hoffmann LaRoche	20447-0010-00000	Well No. MW-39A	1 of 1

Location Description: 5 ft. southeast of existing well MW-38

TRC Geologist: Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
Summit Inc/Todd Naugle	Gus Pech 1100 AR	10 inch air hammer/ 5 7/8" air hammer

Sampler Description	Drilling Method	Coordinates
N/A Air rotary cuttings	Air rotary.	X= Y=
Filter Seal Amount/Type: 2 ft bentonite chips, grout above	**Drill Bit/Auger Diameter:** 5 7/8" ID	**Ref. EL:**
Sand Pack Amount/Type: 7 ft # 1 silica sand	**Hammer Weight/Fall:** N/A	**Riser Stick Up:** TBD
Screen Length/Type: 5 ft. .010 slot sched 40 pvc screen	**Water Table Depth:** ~ 8 ft. bgs	**Surface Elevation:**
Riser Length/Type: 13.5 ft sched 40 pvc riser	**Total Depth:** 18.5 ft. bgs	**Date Start:** 04/09/01 **Date Finish:** 04/11/01

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
2				10 inch Air rotary hammer produced Red-brown fine Sand and Silt and Some fine gravel to 6 ft. where a concrete slab was encountered.	Fill			
4								
6				Bedrock was observed in cuttings beneath the slab at approximately 6.5 ft. bgs.	Bedrock			
8								
10				Set 6 inch casing at 11 ft. bgs and grouted in place for future shallow bedrock well construction.				
11								
12				6-inch Air rotary hammer produced shale and sandstone dust to 16.5 ft. Where a potential seam of ground water was encountered.				
14								
16								
18				End of boring at 18.5 ft. bgs.				
20								
22								
24								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	sand	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stuff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Replacement well installation, observations from air rotary cuttings.

2) MW-39A installed to 18.5 feet bgs.

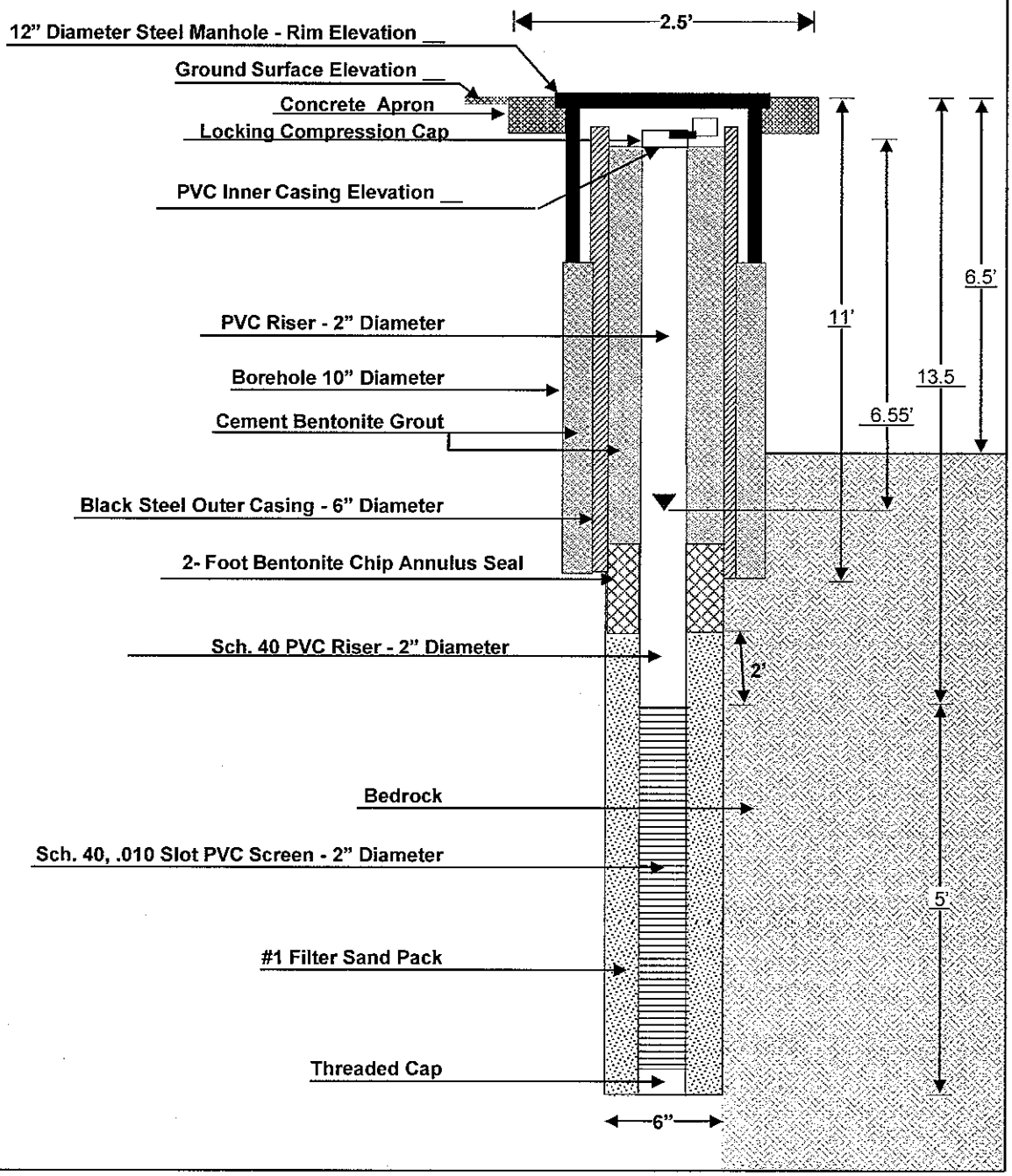
TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-39A

Project: Hoffmann LaRoche **No.:** 20447010000000
Client: Peter Jeuck **Date Completed:** 4/11/01
Location: 5 Feet SE MW-38
Drilling Contractor: Summit Drilling **Method:** Air Rotary
TRC Geologist: Charles Foster

Reference Elevation:
Reference Description:
NJDEP Permit No.: 26-60828
Development Date: 04/11/2001
Development Method: Pumping and surging



DWR-133M MW-40A
2/00

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

2660828
2660829
2660830

MONITORING WELL PERMIT 16

Permit No _____

Mail To
NJDEP
BUREAU OF WATER ALLOCATION
PO BOX 426
TRENTON, NJ 08625-0426

VALID ONLY AFTER APPROVAL BY THE D E P

COORD # 26 · 12 · 3 23

Owner HOFFMAN-LAROCHE INC
Address 340 KINGSLAND STREET
NUTLEY NJ 07110

Driller ~~Summit Drilling Co, Inc.~~
Address ~~Central Jersey Industrial Park~~
~~Chimney Rock Road, Building 9W~~
~~Bound Brook, NJ 08805~~

Name of Facility _____
Address (SAME)

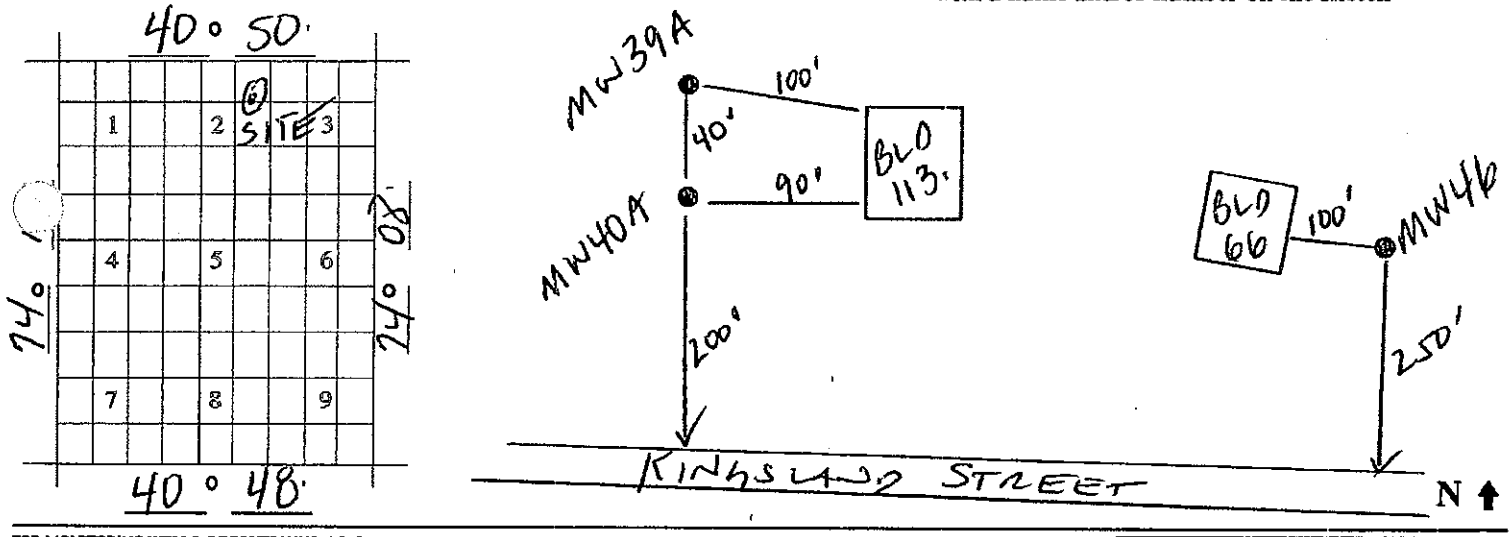
Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	40 Feet
# of Wells Applied for (max 10)	3	Will pumping equipment be utilized?	YES ☐ NO ☒
Type of Well (see reverse)	MONITOR	If Yes give pump capacity	— cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1, 2, 3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc with marked distances in feet Each well MUST be labeled with a name and/or number on the sketch



FOR MONITORING WELLS RECOVERY WELLS OR PIEZOMETERS THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I D Number _____

This Space for Approval Stamp

WELL PLAN APPROVED
N J D E P
APR 5 2001
BUREAU OF WATER ALLOCATION

FOR DEP USE
- ☐ Issuance of this permit is subject to the conditions attached (see next page)
- ☒ For monitoring purposes only
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole

REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT
In compliance with N.J.S.A 58 4A 14, application is made for a permit to drill a well as described above.

Date 3-28-01 Signature of Driller John Vogt Registration No J1544

TRC Signature of Property Owner Paul Hughen (MS)

COPIES Water Allocation White Health Dept Yellow Owner Blue Driller White

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60829

Atlas Sheet Coordinates 26 : 12 : 325

OWNER IDENTIFICATION - Owner HOFFMAN-LAROCHE INC.
Address
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW40A
County ESSEX Municipality NUTLEY TOWN Lot No. 1, 2, 3 Block No. 292
Address 340 KINGSLAND STREET

DATE WELL STARTED 4/9/01
DATE WELL COMPLETED 4/9/01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC Environmental Corporation Tele. #

WELL CONSTRUCTION

Total depth drilled 39 ft.
Well finished to 39 ft.

Borehole diameter:
Top 10" in.
Bottom 6" in.

Well was finished: ☐ above grade
☒ flush mounted

Finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☒ No

Static water level after drilling 10 ft.

Water level was measured using tape

Well was developed for 1/2 hours
at 1/2 gpm

Method of development pump

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	19'	2"	PVC	sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	0	18'	8"	Steel	19 lbs
Open Hole or Screen (No. Used)	19'	39'	2"	PVC	010 sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	18'	39'		Morie #2	
Grout	0'0"	17'6"		Neat Cement Bentonite	47lbs. lbs. 2lbs. lbs.

Grouting Method tremie
Drilling Method Auger

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity ____ gpm

Pump type:

Drilling Fluid ____ Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SUBURBAN WELL DRILLING CO. INC.
Well Driller (Print) Todd Naugle
Driller's Signature Todd Naugle
Registration No. M16082 Date 4/20/01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ EASTING: ____

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600060829
2. Site Well Number as shown on application or plans):	MW-40A
3. Well Completion Date:	04/11/01
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	39.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	19.0
7. Screen Length (or length of open hole) in feet:	20.0
8. Screen or Slot Size:	0.010
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	10
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pumping and Surging
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600060829
2. Site Well Number (As shown on application or plans): MW-40A
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 12.9" Latitude: North 40° 50' 02.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728897.1 East 587980.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.45
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Hoffmann LaRoche	20447-0010-00000	Well No. MW-40A	1 of 1

Location Description	TRC Geologist
5 ft. northeast of existing well MW-41	Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
Summit Inc/Todd Naugle	Gus Pech 1100 AR	10 inch air hammer/ 5 7/8" air hammer

Sampler Description	Drilling Method	Coordinates
N/A, Air rotary cuttings	Air rotary	X= Y=
Filter Seal Amount/Type: 2 ft bentonite chips, grout above	**Drill Bit/Auger Diameter:** 5 7/8" ID	**Ref. El.:**
Sand Pack Amount/Type: 22 ft # 1 silica sand	**Hammer Weight/Fall:** N/A	**Riser Stick Up:** TBD
Screen Length/Type: 20 ft. .010 slot sched 40 pvc screen	**Water Table Depth:** ~ 8 ft. bgs	**Surface Elevation:**
Riser Length/Type: 19 ft sched 40 pvc riser	**Total Depth:** 39 ft. bgs	**Date Start:** 04/09/01 **Date Finish:** 04/11/01

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
3				10 inch Air rotary hammer produced Red-brown fine Sand and Silt and Some fine gravel to 6 ft. where bedrock was encountered.	Fill			
6								
9					Bedrock			
12				A thin seam of water was encountered in rock at 13.5 feet bgs.				
15								
18				Set 6-inch casing at 18 ft. bgs and grouted in place for future bedrock well construction.				
21								
24				6-inch air hammer used in MW-40A to continue with bedrock well drilling and installation.				
27								
30								
33								
36								
39				End of Boring at 39 ft. bgs				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% sand 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stuff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Replacement well installation, observations from air rotary cuttings.
2) MW-40A installed to 39 feet bgs.

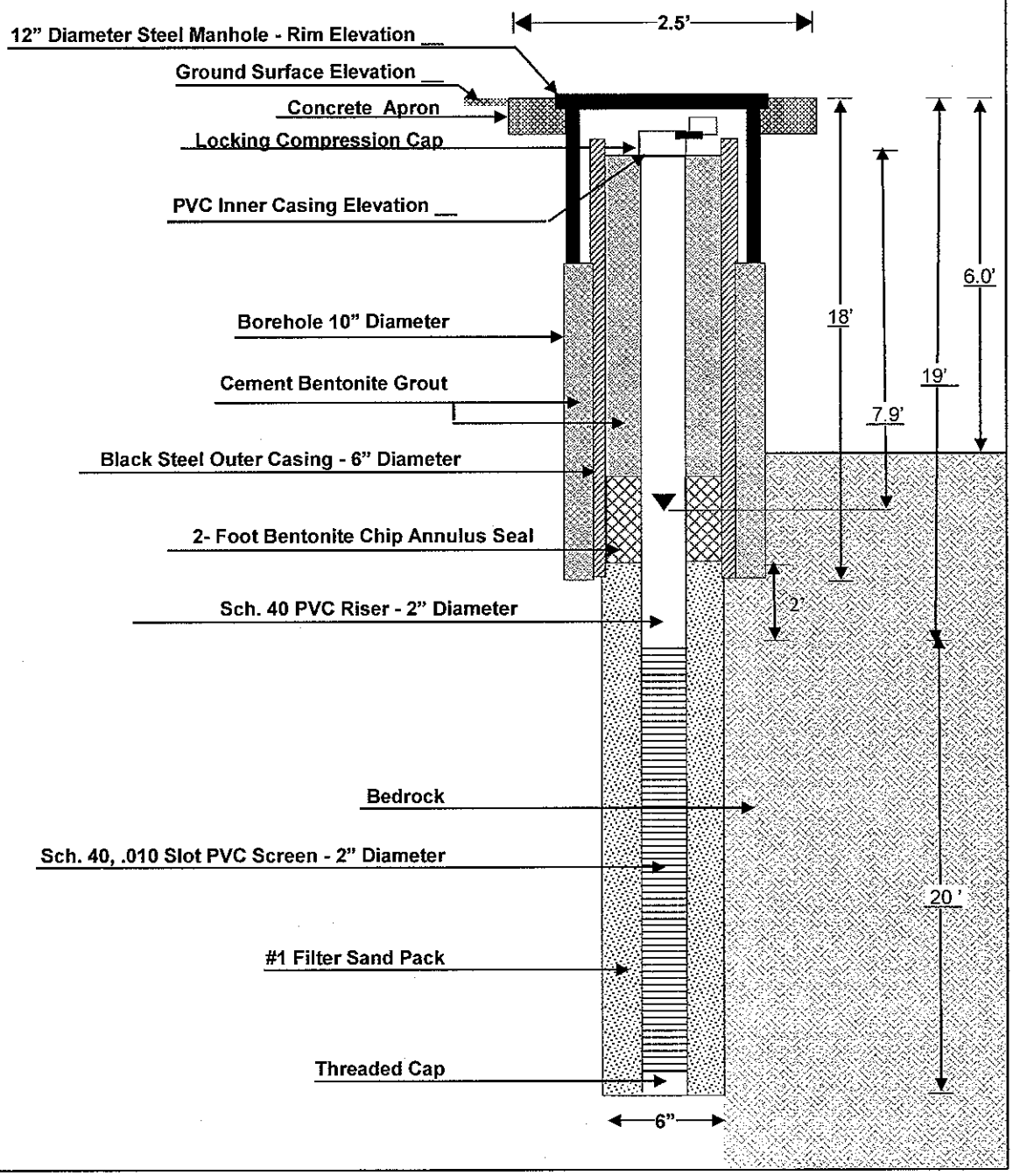
TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-40A

Project: Hoffmann LaRoche **No.:** 20447010000000
Client: Peter Jeuck **Date Completed:** 4/11/01
Location: 5 Northeast of MW-41
Drilling Contractor: Summit Drilling **Method:** Air Rotary
TRC Geologist: Charles Foster

Reference Elevation:
Reference Description:
NJDEP Permit No.: 26-60829
Development Date: 04/11/2001
Development Method: Pumping and surging



Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

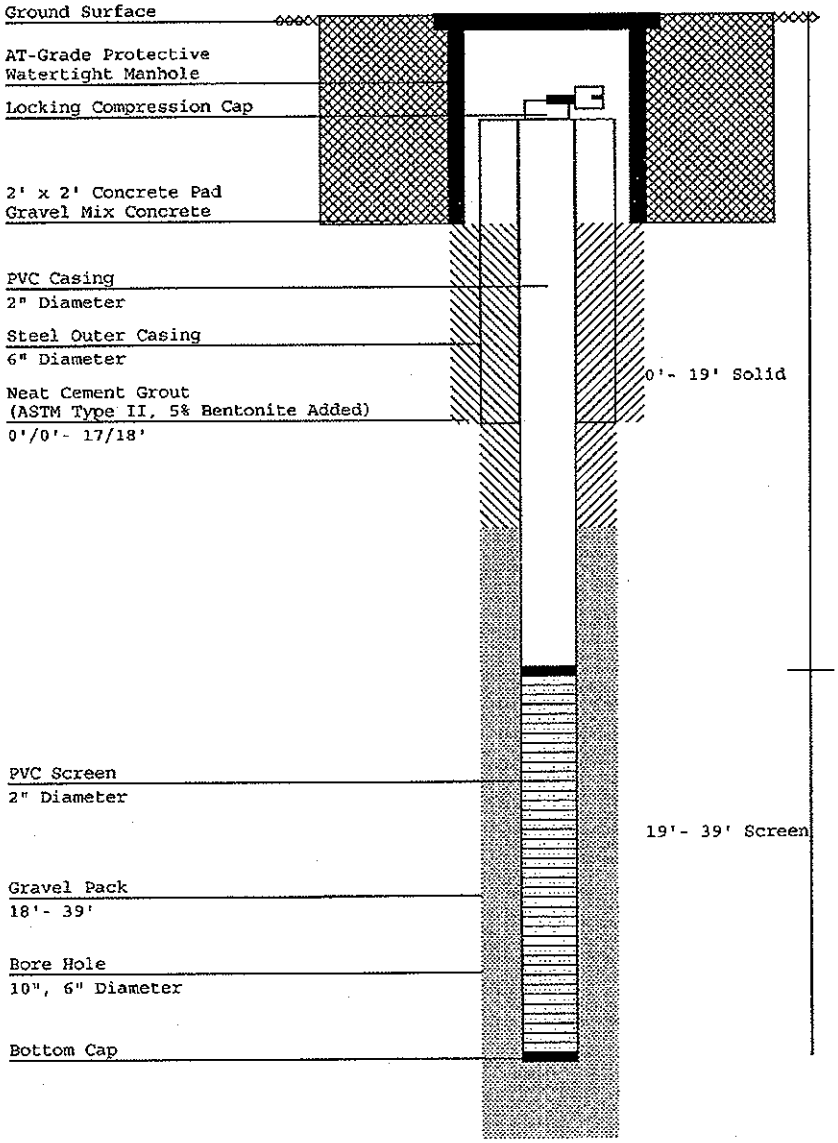
WELL: MW40A DATE DRILLED: 04/09/2001 COORD #1: 26.12.323 PERMIT #1: 26-60829
COORD #2: PERMIT #2: COUNTY: Essex
SITE: Hoffman LaRoche, 340 Kingsland Court, , Nutley, NJ 07110 XSTREET:
OWNER: Hoffman-La Roche, Inc., 340 Kingsland Street, , Nutley, NJ 07110 USE: Monitor

INNER CASING:	PVC	OUTER CASING:	Steel	SCREEN TYPE 1:	PVC	DRILLING METHOD:	Auger
DIAMETER:	2"	DIAMETER:	6"	SCREEN TYPE 2:		SAMPLING METHOD:	
LENGTH:	19'	LENGTH:	18'	DIAMETER:	2"	HOLE DIA:	10", 6"
				LENGTH 1:	20'	TOTAL DEPTH:	39'
SET WELL:	39'	GAL PER MIN:	1/2	LENGTH 2:			
GRAVEL PK SZ:	Morie #2	STAT H2O LVL:	10'	SLOT SIZE:	.010		
DRILLER:	Todd Naugle	DEVELOPMENT METHOD:	pump	CASING SEAL:	Portland		
SURFACE COMPLETION:	M	DEVELOPMENT TIME:	1/2	OPEN HOLE:			

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 6' Asphalt.
6'- 39' Sandstone.



SERIAL # U14965

DWR-133M (10/96)

Mail to MW-41

NJDEP
Bureau Water Allocation
CN 426
ton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

2

- THRU -

Permit No. 26533364

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD # 26 .02. 981

Owner HOFFMAN La ROCHE

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING INC

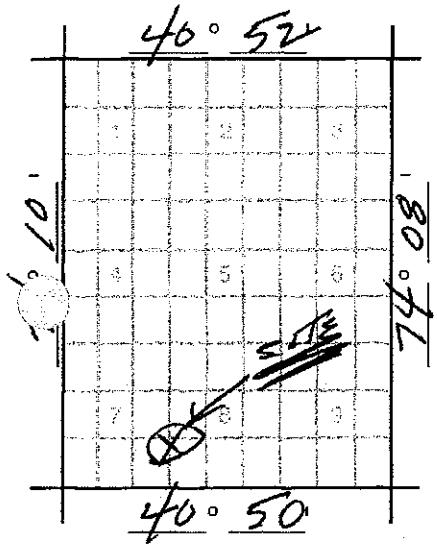
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PK. N.Y. 11040

Diameter of Well(s) 4 Inches	Proposed Depth of Well(s) 25 Feet
# of Wells Applied for (max. 10) 8	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) MONITORING	If Yes, give pump capacity NA cumulative GPM

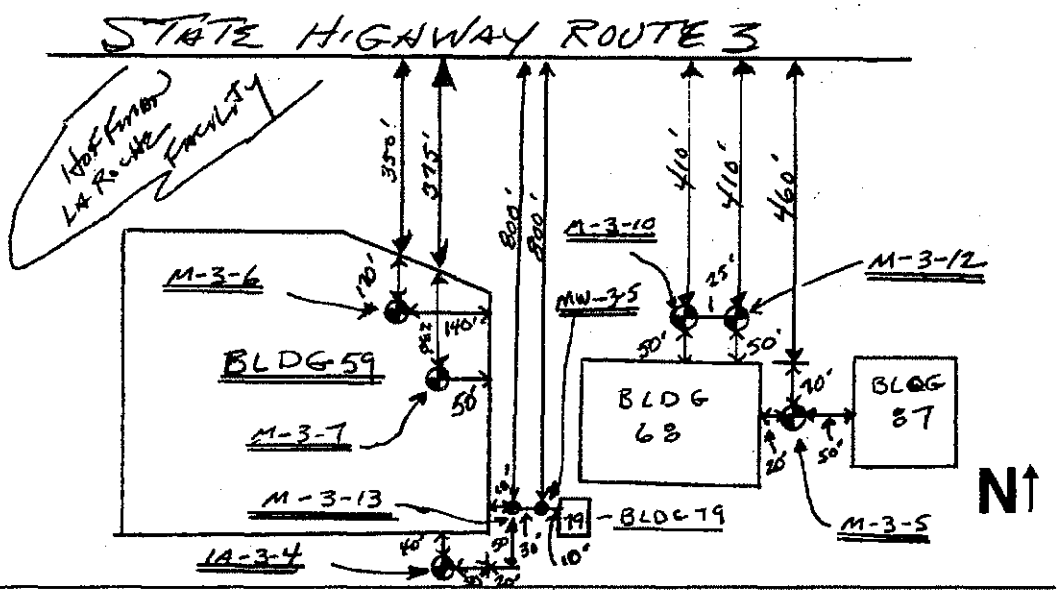
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80.002	CLIFTON	PASSAIC

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐

☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

I ...pliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/15/99 Signature of Driller [signature] Registration No. JD-1494

Signature of Owner [signature] for Paul Hughes agent for owner

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53364

Atlas Sheet Coordinates 26 : 02 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-41
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 4/20/99
DATE WELL COMPLETED 4/30/99

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele.# 9789702700

WELL CONSTRUCTION

Total depth drilled 59 ft.
Well finished to 59 ft.

Borehole diameter:
Top 10" in.
Bottom 6 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Was steel protective casing installed?
☐ Yes ☐ No

Static water level after drilling 10.7 ft.

Water level was measured using Tape

Well was developed for — hours
at — gpm

Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	34'	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	0	34	6"	Steel	Sch 40
Open Hole or Screen (No. Used .020)	34	59	2"	PVC	.020
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	33	59	6	Morie #2	
Grout	0	33	6	Neat Cement Bentonite	600 lbs. 80 lbs.

Grouting Method Tremie
Drilling Method HSA / Air Rotary

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type: —

Drilling Fluid — Type of Rig Mobile B90

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.

Well Driller (Print) Steve Wolf

Driller's Signature Steve Wolf

Registration No. 1579 Date 6/10/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red/Brn Fine med Sand & Gr.
5 ↓
10 Bedrock Water 10.7'
20 Sandstone & Siltstone
30
40
50
60 EOH 59'

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053364
2. Site Well Number as shown on application or plans):	MW-41
3. Well Completion Date:	04/30/99
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	58.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	38.7
7. Screen Length (or length of open hole) in feet:	19.8
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	10.7
13. Yield (gallons per minute):	Not Available
14. Development Techinque (specify):	Surging and Pumping
Length of Time well is developed/pumped or bailed (hours and minutes):	Not Available

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

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County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053364
2. Site Well Number (As shown on application or plans): MW-41
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 12.9" Latitude: North 40° 50' 02.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
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5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.35
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

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   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	IA-3-14	1 of 1
		Well No. MW-41	

Location Description: ~35' East of IA-3-14.

TRC Geologist: James Leonard

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	3 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: 2' Bentonite Chips	**Drill Bit/Auger Diameter:** 3 1/4" ID	**Ref. El.:**
Sand Pack Amount/Type: 12' /#2 Filter Sand	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: 10' Schedule 40 PVC	**Water Table Depth:** NA	**Surface Elevation:**
Riser Length/Type: 20'/Sch 40 PVC	**Total Depth:** 4.7'bgs	**Date Start:** 4/20/99 **Date Finish:** 4/20/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
	S-1	16	24/16	4"Asphalt				
1		16		Red-brown fine to medium SAND.		OS2=bkg		
		37				OS3=bkg		
2		80/6				OS4=bkg		
				Red-brown fine to medium SAND, little weathered rock fragments-sandstone.		OS1=bkg		
3						OS2=bkg		
						OS3=bkg		
4				Red-brown fine SAND, little weathered rock fragments, moist.		OS1=bkg		
5						OS2=bkg		
				See Rock-Core, End of Boring -4.7'bgs.				
6								
7								
8								
9								
10								
11								
12								
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Field screening with OVA/FID.
2) bkg = background

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 1 **of** 4
Contractor Personnel: ADT INC.		**TRC Personnel:** Todd Majer	
Boring/Well Number: IA3-14 / MW-41	**Driller/Equipment:** CME-75, HQ / Ken Kutarnia	**Elevation:** 119.53 **Orientation:** **Time Start:** 0830 **Time Finish:** 1200	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
7	11min/ft, no H_2O loss.	7-12' 5' 28%			0%	>10		Red-brown, fine grained, sandstone fragments	
8	9min 50sec/ft, no H_2O loss.					>10		No recovery.	
9	5min 45sec/ft, 60gallons H_2O loss.		X			>10		Red -Brown clay (weathered rock) deposit within sandstone from 9.5 to 10 ft	
10	6min/ft, 25gallons H_2O loss.		X			>10		No recovery.	
11	6min 10sec/ft, 50gallons H_2O loss.		X			>10		Red-brown fine grained horizontally bedded sandstone. vertical fracture at 11.5	
12	2min 30sec/ft, no H_2O loss.	12-17' 5' 76.6%			56.6%	>10		Red-brown, fine grained horizontally bedded sandstone.	
13	3min 10sec/ft, no H_2O loss.					3		↓	
14	6min/ft, no H_2O loss.		X			2		Red-brown horizontally bedded siltstone.	
15	6min 35sec/ft, no H_2O loss.					3		Fracture spacing every 3-4 "	
16	6min 5sec/ft, no H_2O loss.					3			
17	4min 58sec/ft, no H_2O loss.	17-22' 5' 96.6%			33%	8		Red brown horizontally bedded siltstone.	
18	2min 21sec/ft, no H_2O loss.					4		Shale fragments	
19	5min 57sec/ft, no H_2O loss.					3		Highly weathered horizontally bedded shale.	
20	5min 45sec/ft, no H_2O loss					5			
21	10min 43sec/ft, no H_2O loss.					5			
22									

TRC

Rock Core Log

Project:	Project No.	Date/Time	Sheet 2 of 4
IA-3 RI/Roche	20447-0100-00000		

Contractor Personnel:	TRC Personnel:
ADT INC.	James Leonard

Boring/Well Number:	Driller/Equipment:	Elevation: 119.53 Orientation: Time Start: 0725 Time Finish: 0815
IA3-14 / MW-41	CME-75, HQ /Ken Kutarnia	

Depth	Comments Tests Instrumentation Coring Rate and Smoothness Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities RQD	Fractures Per Foot	Description Tightness Planarity Smoothness Filling, Staining Orientation	Lithology Mineralogy Classification Color / Cementation Grain Size / Hardness Alteration / Weathered State	Graphic Log
22	6min/ft, no H_2O loss.	22-27' 5' 95%			75%			Red-brown horizontally bedded	
23	8min 30sec/ft, no H_2O loss.							siltstone. Interbedded with shale	
24	8min/ft, no H_2O loss.					2		↓	
25	11min/ft, no H_2O loss.					2	Clay filled vertical zone	Red brown horizontally bedded shale, 1/4" Blue shale, vertical fractures present.	
26	17min/ft, no H_2O loss.					6			
27	*								
	*								
	*								
	*								
	*								
	*								
	*								
	*								
	*								
	*								

O:/geo_sci/rock.ppt

* Due to NJDEP well casing & length of screen limitations, rock cores were not collected from 27 to 36 ft. bgs.

TRC

Rock Core Log

	Project: IA-3 RI/Roche **Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 3 **of** 4
	Contractor Personnel: ADT INC.	**TRC Personnel:** James Leonard	
Boring/Well Number: IA3-14 / MW-41	**Driller/Equipment:** CME-75, HQ /Ken Kutarnia	**Elevation:** 119.53 **Orientation:** **Time Start:** 0730 **Time Finish:** 1330	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
36	5min/ft, no H_2O loss.	36-46' 10' 98.3%			93.3%	1		Red-brown, horizontally bedded siltstone.	
37	6min/ft, no H_2O loss.					1			
38	5min/ft, no H_2O loss.					0			
39	3min/ft, 10gallons H_2O loss.		X			1		Red-brown,horizontally bedded medium to coarse	
40	3min/ft, 10gallons H_2O loss.		X			1		grained sandstone.	
41	3min/ft, no H_2O loss.					0			
42	4min/ft, no H_2O loss.					0			
43	4min/ft, no H_2O loss.		X			2		Weathered fractures spaced at 4-5inch intervals.	
44	4min/ft, 10gallons H_2O loss.					2			
45	4min/ft, no H_2O loss.					3		Red-brown siltstone to shale, horizontally bedded.	
46	3min/ft, no H_2O loss.	46-56' 10' 91.2%			69.5%	3		High angle fracture at 46 ft.	
47	6min 30sec/ft, no H_2O loss.					1		Red-brown siltstone, horizontally bedded.	
48	7min 45sec/ft, no H_2O loss.					2			
49	8min/ft, no H_2O loss.					1		Fracture spacing of 8 inches to one foot.	
50	8min/ft, no H_2O loss.					1			
51									

TRC

Rock Core Log

Project: IA-3 RI/Roche	**Project No.** 20447-0100-00000	**Date/Time**	**Sheet** 4 **of** 4
Contractor Personnel: ADT INC.		**TRC Personnel:** James Leonard	
Boring/Well Number: IA3-14 / MW-41	**Driller/Equipment:** CME-75, HQ /Ken Kutarnia	**Elevation:** 119.53 **Orientation:** **Time Start:** 0730 **Time Finish:** 1330	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
51	8min/ft, no H_2O loss.					2		Red-brown horizontally bedded siltstone.	
52	7min/ft, no H_2O loss.					5			
53	7min 30sec/ft, no H_2O loss.					3			
54	5min/ft, 30gallons H_2O loss.		X			1			
55	8min/ft, no H_2O loss.					2			
56	6min 30sec/ft, 10gallons H_2O loss.	56-59' 3' 100%	X		94.4%	3		Red-brown horizontally bedded silstone, calcification present.in	
57	5min 30sec/ft, 10gallons H_2O loss.					1		fractures.	
58	6min/ft, 10gallons H_2O loss.		X			4			
59									

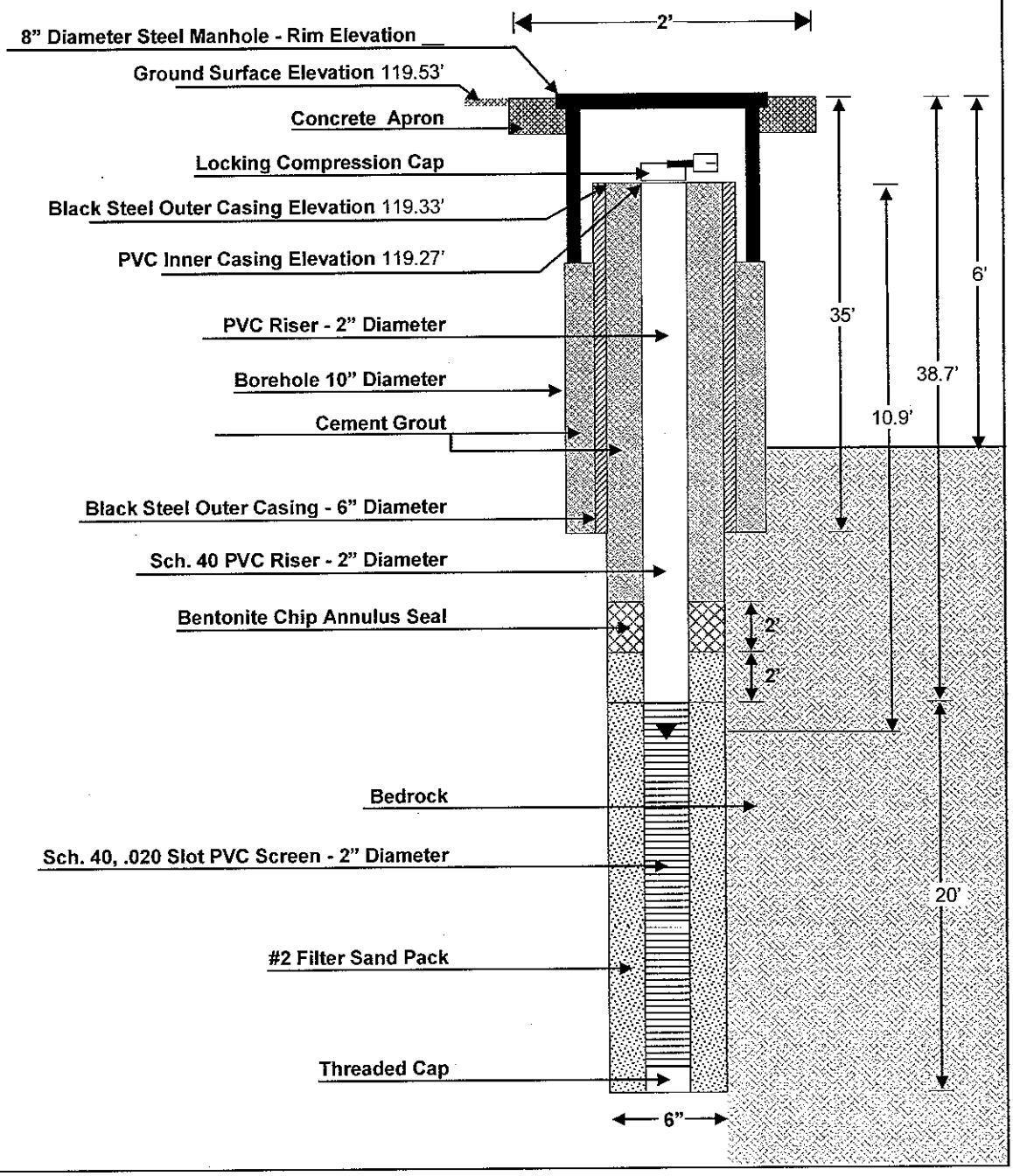
TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-41

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Hoffmann-La Roche Inc. **Date Completed:** 04/30/99
Location: Southern end of IA-3, 40 west of building 59
Drilling Contractor: ADT **Method:** HSA/Air Rotary
TRC Geologist: Todd Majer / Charles Foster

Reference Elevation: 119.27
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653364
Development Date: 05/07/99
Development Method: Surging and Pumping



SERIAL # 014964

2

26 53353
26 53354

DWR-133M (10/96)

Mail to MW-42

NJDEP
Bureau Water Allocation
CN 426
nton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

Permit No. _____

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 24.02.987

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND ST.
NUTLEY, N.J.

Name of Facility SAME

Address _____

Driller AQUIFER DRILLING & TESTING, INC.

Address 150 NASSAU TERMINAL RD.
NEW HYDE PK, N.Y. 11040

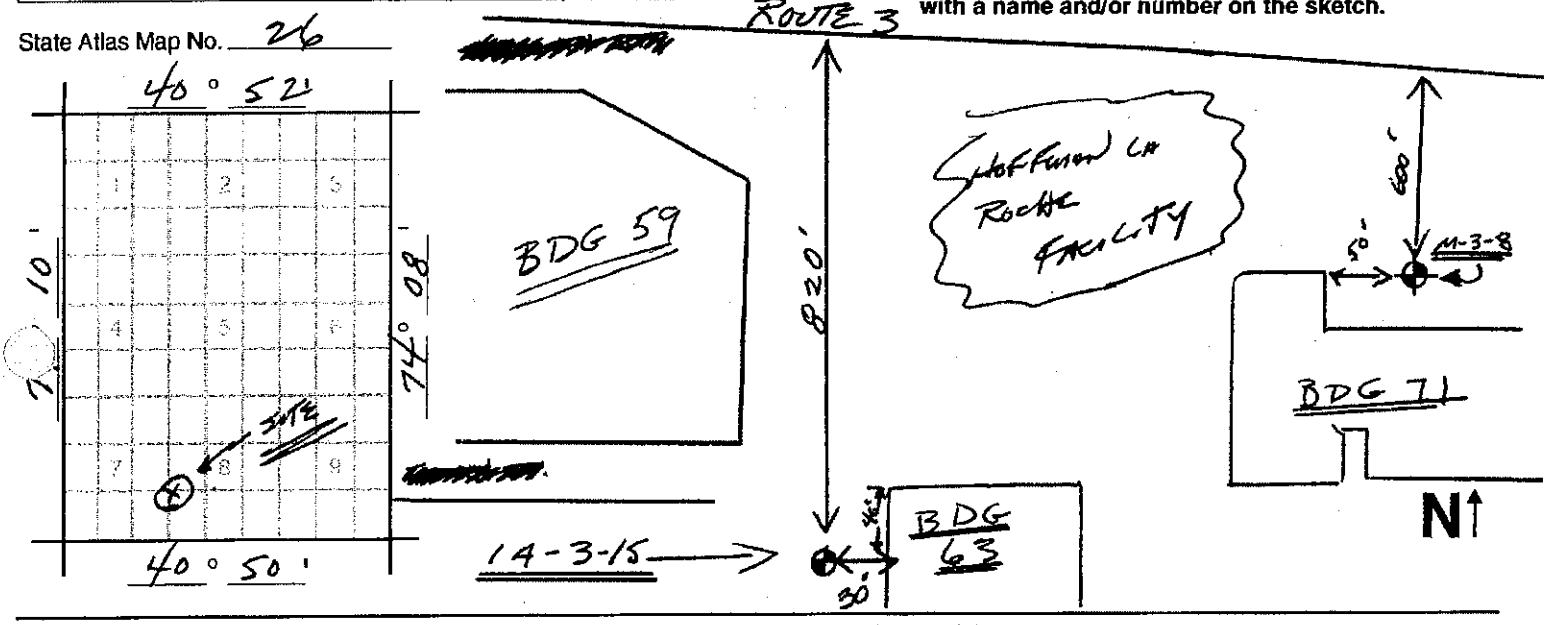
Diameter of Well(s)	4 Inches	Proposed Depth of Well(s)	25 Feet
# of Wells Applied for (max. 10)	2	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes, give pump capacity	NA cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	80-002	CLIFTON	PASSAIC

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I.D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
MAR 17 1999
BUREAU OF WATER ALLOCATION

FOR D.E.P. USE

- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐ _____
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 3/15/99 Signature of Driller H. D. Hardy Jr. Registration No. JD-1494

Signature of Owner H. D. Hardy Jr. FOR PAUL HUGHES AGENT FOR OWNER

COPIES: Water Allocation — White Health Dept. — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 53354

Atlas Sheet Coordinates 26 : 02 : 987

OWNER IDENTIFICATION - Owner HOFFMAN LAROCHE
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-42
County PASSAIC Municipality CLIFTON CITY Lot No. 1 Block No. 80-002
Address 340 KINGSLAND ST.

DATE WELL STARTED 4 / 22 / 99
TYPE OF WELL (as per Well Permit Categories) MONITORING DATE WELL COMPLETED 4 / 29 / 99
Regulatory Program Requiring Well OWNER INVESTIGATION Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC / C. Foster Tele. # 978 970 2700

WELL CONSTRUCTION

Total depth drilled 18 ft.
Well finished to 18 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ flush mounted

If finished above grade, casing height (stick up) above land surface — ft.

Is steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 9.4 ft.
Water level was measured using Tape
Well was developed for — hours
at — gpm
Method of development —

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	6	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	
Outer Casing (largest diameter)	—	—	—	—	
Open Hole or Screen (No. Used)	6'	18'	2	PVC	.020
Blank Casings (No. Used)	—	—	—	—	
Tail Piece	—	—	—	—	
Gravel Pack	4	18'	8	Morie #2	
Grout	0	4	8	Neat Cement Bentonite	60 lbs. 5 lbs.

Grouting Method Gravity
Drilling Method HSA

Was permanent pumping equipment installed? ☐ Yes ☒ No
Pump capacity — gpm
Pump type: —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company H. LEONARD REXRODE, JR.
Well Driller (Print) Steve Wolf
Driller's Signature Steve Wolf
gistration No. 1579 Date 6 / 10 / 99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 Red Brn fine Sand & Gravel
5
10
15
18 Weathered Bedrock
EOH 18

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600053354
2. Site Well Number as shown on application or plans):	MW-42
3. Well Completion Date:	04/27/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	17.2
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	5.2
7. Screen Length (or length of open hole) in feet:	12
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	9.4
13. Yield (gallons per minute):	N/A
14. Development Techinque (specify):	Surging and Bailing
15. Length of Time well is developed/pumped or bailed (hours and minutes):	N/A

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

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1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 80.02 Lot # 4 (Clifton)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600053354
2. Site Well Number (As shown on application or plans): MW-42
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 14.3" Latitude: North 40° 50' 01.7"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 728836.0 East 587866.9
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.02
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

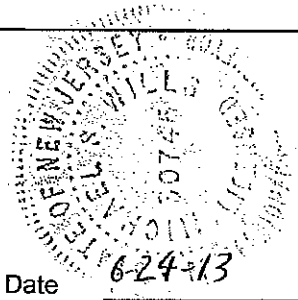
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 6-24-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	20447-0100-00000	IA-3-4	1 of 2
		Well No. MW-42	

Location Description: 25'North of Bldg. 71, Survey Point-401

TRC Geologist: Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Mark St. John	CME B-90	6" Air Hammer

Sampler Description: Off Cuttings	**Drilling Method:** Air Rotary	**Coordinates:** X= Y=
Filter Seal Amount/Type: 2' Bentonite Chips	**Drill Bit/Auger Diameter:** 6"Air	**Ref. El.:**
Sand Pack Amount/Type: 14' /#2 Filter Sand	**Hammer Weight/Fall:** NA	**Riser Stick Up:** NA
Screen Length/Type: 12' /Sch 40 PVC	**Water Table Depth:** ~9'bgs	**Surface Elevation:** 119.28
Riser Length/Type: 6' /Sch 40 PVC	**Total Depth:** 18'bgs	**Date Start:** 4/27/99 **Date Finish:** 4/27/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				4" Asphalt Red-brown fine SAND and silt, trace gravel.				
4				Moist cuttings at top of rock, will await water.				
7				Weathered bedrock at 8'bgs, Dry.				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Set well as a straddle well, overburden and bedrock.
2) First water bearing zone is near rock interface, see monitoring well log.
3) bkg = background.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
IA-3 RI/Roche	204470100	IA-3-4	_2_ of _2_
		Well No. MW-42	

Location Description: 25'North of Bldg. 71, Survey Point-401

TRC Geologist: Charles Foster

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15				Weathered bedrock.				
16								
17								
18				End of Boring 18'bgs.				
19								
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

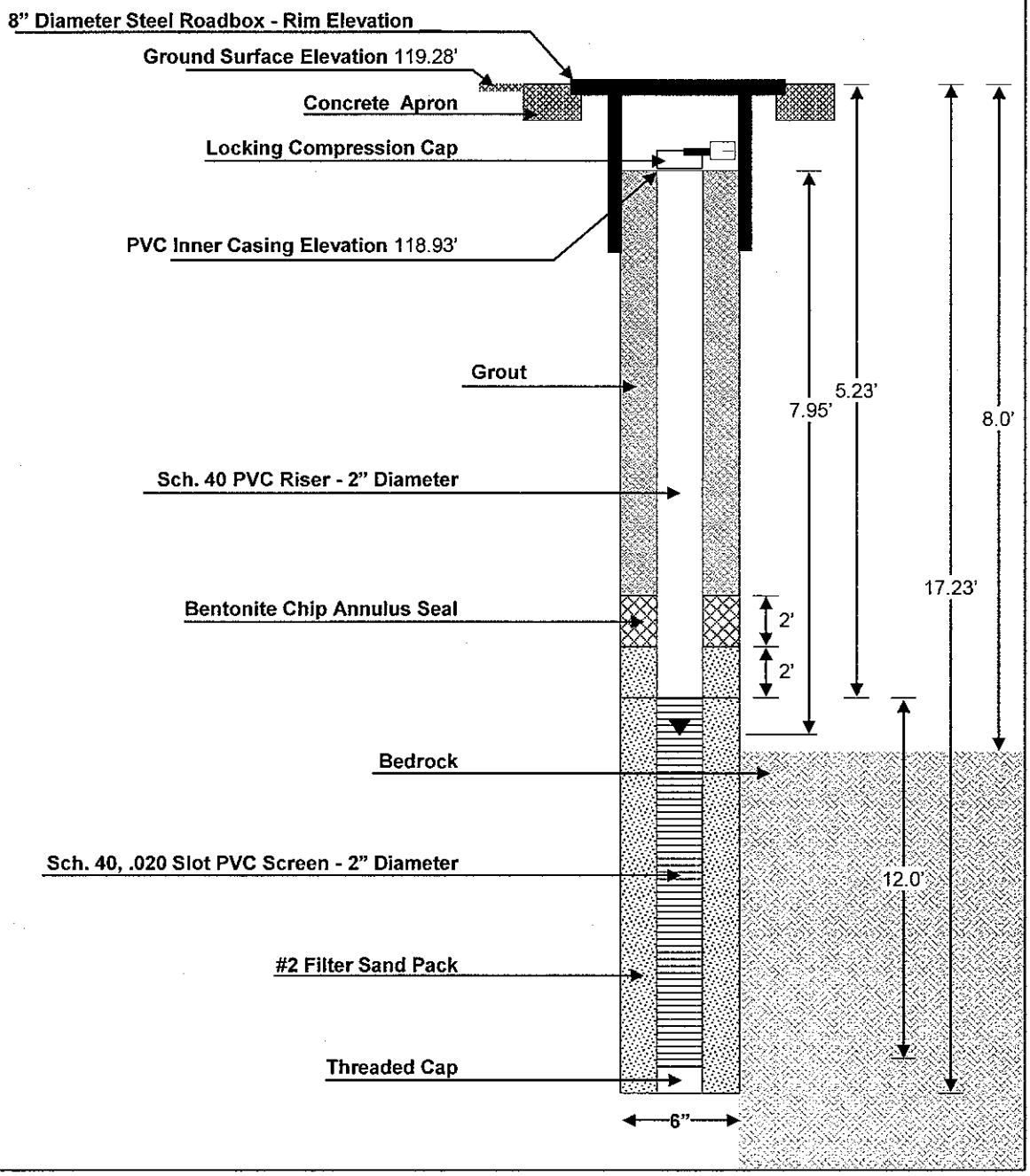
TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-42

Project: IA-3 Remedial Investigation **No.:** 20447-0100
Client: Hoffmann LaRoche **Date Completed:** 04/27/99
Location: 30 feet south of Building 59, center of fourth street
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 118.93'
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2653359
Development Date: 05/17/99
Development Method: Surging and Bailing



AF-375/

SERIAL # 014992

DWR-133M (10/96)

Mail to MW-43

NJDEP
Bureau Water Allocation
126
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT OR

VALID ONLY AFTER APPROVAL BY THE D E P

Permit No 26534720 26534721 26534722

COORD # 26.02.979

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND AVE. NUTLEY N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

Address 150 NASSAU TERMINAL ROAD NEW HYDE PARK, N.Y. 11040

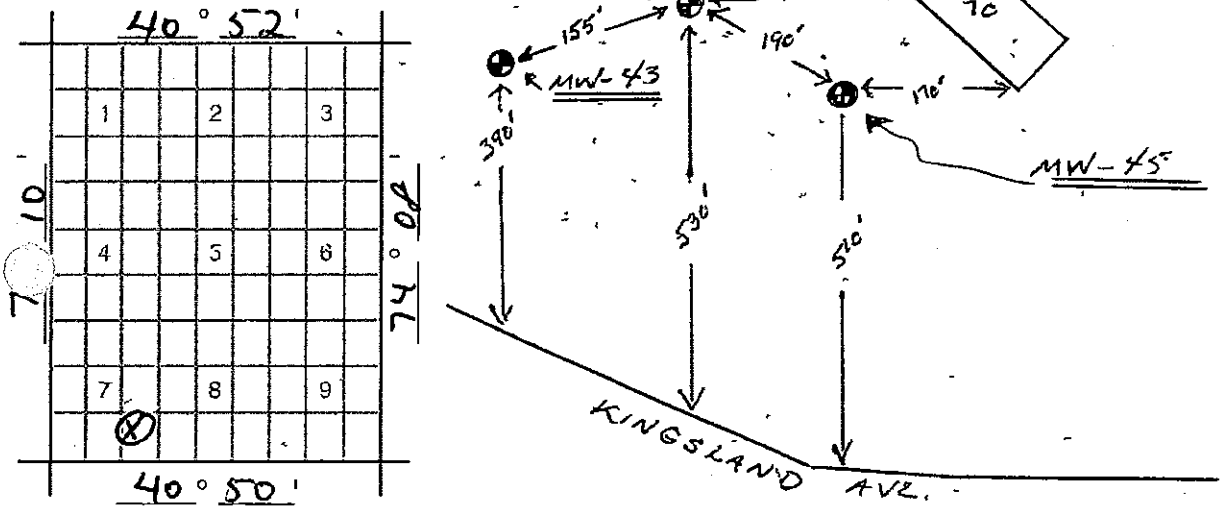
Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	30 Feet
# of Wells Applied for (max 10)	3	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes give pump capacity	NA cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
8, 24	287	CLIFTON	PASSAIC

State Atlas Map No 26

Draw sketch of well(s) nearest roads, buildings, etc with marked distances in feet Each well MUST be labeled with a name and/or number on the sketch



FOR MONITORING WELLS RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I D Number

This Space for Approval Stamp

WELL PERMIT APPROVED
NJDEP
JUL 23 1999
BUREAU OF WATER ALLOCATION

FOR DEP USE

- ☐ Issuance of this permit is subject to the conditions attached (see next page)
- ☒ For monitoring purposes only
- ☐
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

In compliance with N J S A 58 4A-14, application is made for a permit to drill a well as described above

Date 7/21/99 Signature of Driller [signature] Registration No J-1494

Signature of Owner [signature] FOR PAUL HUGHES AGENT FOR OWNER

COPIES Water Allocation — White Health Dept — Yellow Owner — Blue Driller — White

DWR-138 M
11/93

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 54720

Atlas Sheet Coordinates 26 - 02 - 979

OWNER IDENTIFICATION - Owner [illegible]
Address [illegible]
City [illegible] State [illegible] Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. [illegible]
County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address [illegible]

DATE WELL STARTED [illegible]
DATE WELL COMPLETED [illegible]

TYPE OF WELL (as per Well Permit Categories) [illegible]
Regulatory Program Requiring Well _____ Case I.D.# _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) [illegible] Tele. # [illegible]

WELL CONSTRUCTION

Total depth drilled [illegible] ft.
Well finished to [illegible] ft.

Borehole diameter:
Top 12 in.
Bottom [illegible] in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface [illegible] ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling [illegible] ft.

Water level was measured using [illegible]

Well was developed for [illegible] hours at [illegible] gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/inch no.)
Single/Inner Casing	0	15	2"	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	0	14.5	6"	Steel	Sch 40
Open Hole or Screen (No. Used [illegible])	15	25	2"	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	13	26	6	Morie #1	[illegible]
Grout [illegible]	0	14.5	12	Neat Cement	[illegible] lbs. [illegible]
[illegible]	0	13	6	Bentonite	[illegible] lbs. [illegible]

Grouting Method [illegible]
Drilling Method [illegible]

Method of development [illegible]

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity [illegible] gpm

Pump type [illegible]

Drilling Fluid Water Type of Rig [illegible]

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None ☒ C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) [illegible]

Driller's Signature [illegible]

Registration No. [illegible] Date [illegible]

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0
[illegible]
5 [illegible]
10 [illegible]
15
20
25
[illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 200 Lot # 24 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600054720
2. Site Well Number as shown on application or plans):	MW-43
3. Well Completion Date:	08/13/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	24.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	14.50'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	14.29'
13. Yield (gallons per minute):	1 gpm
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

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SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600054720
2. Site Well Number (As shown on application or plans): MW-43
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 34.9" Latitude: North 40° 50' 06.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729302.7 East 586287.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 123.77
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

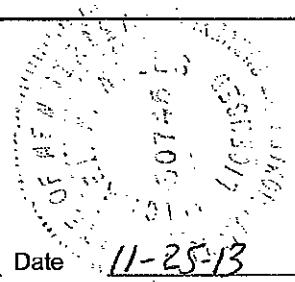
   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
HLR/Peter Jeuck	20447-0100-00000	MW-43	1 of 1
		Well No. MW-43	

Location Description: 20' East of Tank, Southwest Corner of former Bldg. 111.

TRC Geologist: Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	4 1/4 " Ugly Bit

Sampler Description	Drilling Method	Coordinates
Off Augers	HAS until first water	X= Y=
Filter Seal Amount/Type: NA	**Drill Bit/Auger Diameter:** 12" Ugly Bit	**Ref. El.:**
Sand Pack Amount/Type: NA	**Hammer Weight/Fall:** NA	**Riser Stick Up:** NA
Screen Length/Type: NA	**Water Table Depth:** 14.2	**Surface Elevation:**
Riser Length/Type: NA	**Total Depth:** 24.5'bgs	**Date Start:** 8/12/99 **Date Finish:** 8/18/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				3" Asphalt 3" Gravel Red-brown fine to coarse SAND, some gravel.				
2								
3				Brown fine SAND.				
4								
5				Fine grained SANDSTONE, dry.				
6								
7				Some moist cuttings from rock.				
8								
9								
10				Continued in dry bedrock (Sandstone) to find first water bearing unit.				
11								
12								
13				Auger refusal, set casing to 14.5 See Rock Core Log.				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Slit-spoons were driven to the west of this location see PB-01 for description of overburden/fill.
2) Geologic soil descriptions obtained off the flight of augers.

TRC

Rock Core Log

Project: Roche	**Project No.** 20447-0100-00000	**Date/Time** 8/18/99 0815	**Sheet** 1 of 1
Contractor Personnel: ADT INC		**TRC Personnel:** Charles Foster	
Boring/Well Number: MW-43	**Driller/Equipment:** Ken Kutarnia/ CME-75/ HQ-Core Barrel	**Elevation:** 123.23 **Orientation:** **Time Start:** 0830 **Time Finish:** 1000	

Depth	Comments: Tests, Instrumentation, Coring Rate and Smoothness, Coring Fluid Loss	Core Run Length and Recovery (%)	Core Loss Zone	Box Number	Discontinuities: RQD	Fractures Per Foot	Description: Tightness, Planarity, Smoothness, Filling, Staining, Orientation	Lithology: Mineralogy, Classification, Color, Grain Size, Alteration, Cementation, Hardness, Weathered State	Graphic Log
14.5	0.5 min/ft, No H_2O Loss.	14.5-19.5 5' 100%			38.3%	9		Red-brown coarse sandstone, marginal horizontal fractures.	
15.5	5min/ft, ~5 gallons H_2O loss.					10	No minerals were observed	Weathered water bearing fractures.	
16.5	5.5min/ft, ~5gallons H_2O loss.					6	in the fractured area of the core.	Vertical and horizontal fracture zone.	
17.5	6.5min/ft, no H_2O loss.					2		Significant weathered zone in horizontal bed.	
18.5	7min/ft, no H_2O loss.					3		4" bed of shale (inter-bedded)	
19.5	2.5min/ft, ~10gallons H_2O loss.	19.5-24.5 24/36			14/24	4		Red-brown fine grained sandstone.	
20.5	7.5min/ft, minimal H_2O loss.					4			
21.5	7min/ft, no H_2O loss.							NOTE- Lost Last 10" in hole. 57/8 Rollerbit to 24.5'	
22.5	Jammed Barrel							MW-43 installed to 24.5 ft.	
23.5									
24.5									

TRC

Flush Mount Screened Bedrock Monitoring Well Construction Log

Well No. MW-43

Project: Day Care RI **No.:** 20447-0100

Client: Hoffmann-La Roche Inc. **Date Completed:** 08/18/99

Location: 20 feet east / down gradient of former building 111 UST

Drilling Contractor: ADT **Method:** HSA

TRC Geologist: Charles Foster

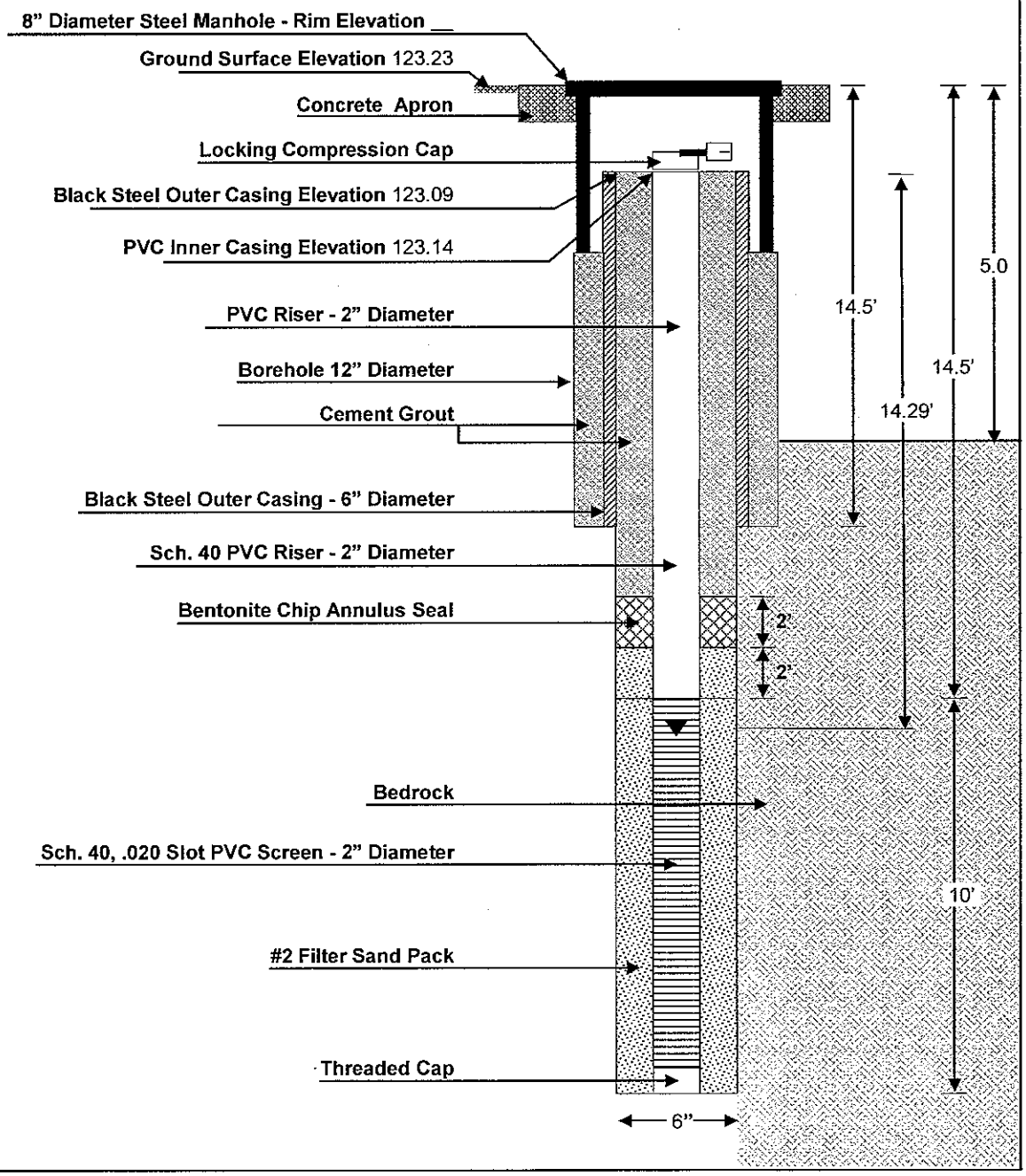
Reference Elevation: 123.14

Reference Description: Top of PVC Riser

NJDEP Permit No.: 2654720

Development Date: 08/18/99

Development Method: Surging and Pumping



SERIAL # 014992

DWR-133M (10/96) MW-44

Mail to

NJDEP
Bureau Water Allocation
[illegible]26
[illegible]nton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT 02

VALID ONLY AFTER APPROVAL BY THE D E P

Permit No 26547 20
26547 21
26547 22

COORD # 26 . 02 . 979

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND AVE.
NUTLEY N. J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

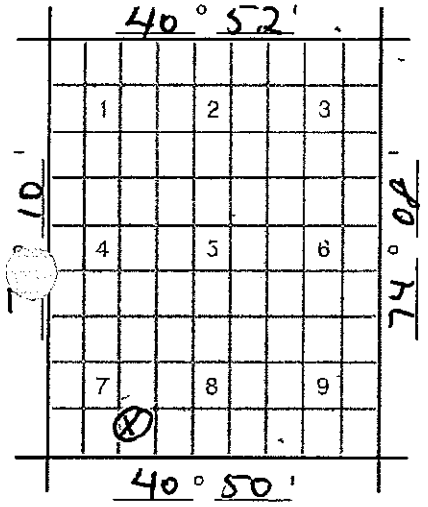
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PARK, N.Y. 11048

Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	30 Feet
# of Wells Applied for (max 10)	3	Will pumping equipment be installed? YES ☐ NO ☒	
Type of Well (see reverse)	MONITORING	If Yes give pump capacity	NA cumulative GPM

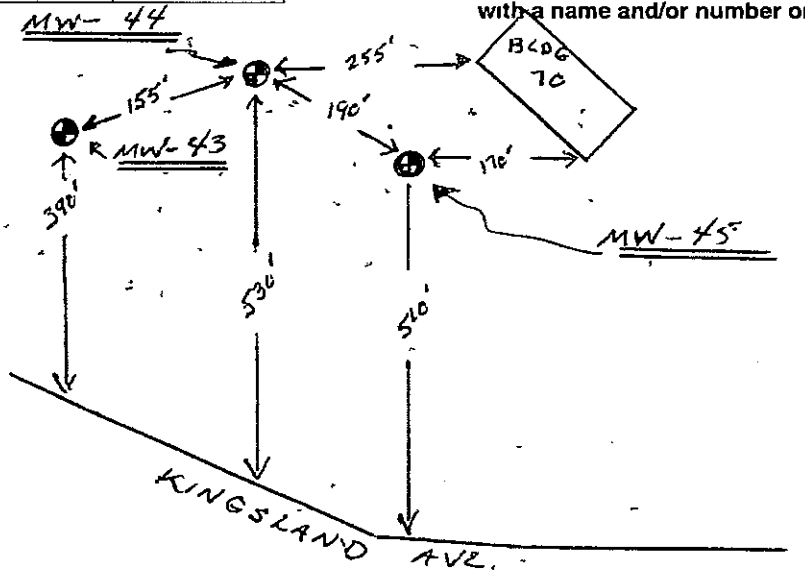
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
8, 24	287	CLIFTON	PASSAIC

State Atlas Map No 26



Draw sketch of well(s) nearest roads, buildings, etc with marked distances in feet Each well MUST be labeled with a name and/or number on the sketch



N↑

FOR MONITORING WELLS RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I D Number

This Space for Approval Stamp

WELL PERMIT APPROVED
NJDEP
JUL 23 1999
BUREAU OF WATER ALLOCATION

FOR DEP USE

- ☐ Issuance of this permit is subject to the conditions attached (see next page)
- ☒ For monitoring purposes only
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

In compliance with N J S A 58 4A-14, application is made for a permit to drill a well as described above

Date 7/21/99 Signature of Driller [signature] Registration No T-1494

Signature of Owner [signature] FOR PAUL HUGHES AGENT FOR OWNER

COPIES Water Allocation — White Health Dept — Yellow Owner — Blue Driller — White

Draft 7/99 ltr
7/1/99

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. _____

Plane Coordinates _____

OWNER IDENTIFICATION - Owner _____

Address _____

City _____ State _____ Zip Code _____

WELL LOCATION - If not the same as owner please give address. Owner's Well No. _____

County _____ Municipality _____ Lot No. _____ Block No. _____

Address _____

DATE WELL STARTED _____

TYPE OF WELL (as per Well Permit Category) _____ DATE WELL COMPLETED _____

Regulatory Program Requiring Well _____ Case I.D.# _____

CONSULTING FIRM/FIELD SUPERVISOR, if applicable _____ Title _____

WELL CONSTRUCTION

Total Depth Drilled _____ ft.

Well Finished to _____ ft.

Borehole Diameter

Top _____ in.

Bottom _____ in.

Well was finished: ☐ above grade
☐ flush mounted

If finished above grade, casing height (stick up) above land surface _____ ft.

Are steel protective casings provided? ☐ Yes ☐ No

Static water level after drilling _____ ft.

Water level was measured using _____

Well was developed for _____ hours

ft _____ gpm

Method of development _____

Was permanent pumping equipment installed? ☐ Yes ☐ No

Pump capacity _____ gpm

Pump type _____

Drilling Fluid _____ Type of Rig _____

Health and Safety Plan submitted? ☐ Yes ☐ No

Level of Protection used on-site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Thickness (inches)	Material	Slot Size (Inch or cm)
Surface/Apron Casing					
Middle Casing (for holes deeper than 100ft)					
Outer Casing (Largest Diameter)					
Open Hole or Screen (Not Used)					
Blank Casings (Not Used)					
Test Pump					
Gravel Pack					
Grout				Neat Cement / Bentonite	___ Bag / ___ Bag

Grouting Method _____

Drilling Method _____

GEOLOGIC LOG

Note each depth where water was encountered or caved during operations.

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company _____

Well Driller (Print) _____

Driller's Signature _____

Registration No. _____ Date _____

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 102 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600054721
2. Site Well Number as shown on application or plans):	MW-44
3. Well Completion Date:	08/11/1999
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	18.5'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	8.50'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	8.75'
13. Yield (gallons per minute):	1 gpm
14. Development Techinque (specify):	Surging and Pumping
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

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County: Essex Zip Code: 07110

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2. Site Well Number (As shown on application or plans): MW-44
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   Longitude: West 74° 09' 36.6" Latitude: North 40° 50' 08.1"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729476.5 East 586150.6
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 126.36
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC	Project/Client	Project No.	Boring No.	Sheet
Soil Boring Log	HLR/Peter Jeuck	20447-0100-00000	Well No. MW-44	1 of 2
	Location Description Southwestern Corner of Annex Lot.		**TRC Geologist** Charles Foster	

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	4 1/4 " HSA

Sampler Description NA		**Drilling Method** HSA	**Coordinates** X= Y=
Filter Seal Amount/Type:	2' Bentonite Chips	**Drill Bit/Auger Diameter** 4 1/4 HSA	**Ref. El.:**
Sand Pack Amount/Type:	12' #1 Filter Sand	**Hammer Weight/Fall:** NA	**Riser Stick Up:** NA
Screen Length/Type:	10' /10 Slot/Sch 40 PVC	**Water Table Depth:** ~12'bgs	**Surface Elevation:**
Riser Length/Type:	8.5'/ Sch 40 PVC	**Total Depth:** 19'bgs	**Date Start:** 8/10/99 **Date Finish:** 8/11/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				6" Asphalt and gravel.				
2				4' Red-brown fine to coarse SAND and GRAVEL, some peastone or gravel fill.				
3								
4								
5				Weathered bedrock.				
6				SANDSTONE.				
7								
8								
9								
10								
11								
12				Wet zone within rock.				
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Installed MW-44 to 18.5'bgs.
2) Geologic soil descriptions obtained off the flight of augers.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
HLR/Peter Jeuck	20447-0100-00000	Well No. MW-44	2 of 2

Location Description: Southwestern Corner of Annex Lot.

TRC Geologist: Charles Foster

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15				Same as above.				
16								
17								
18								
19				End of Boring.				
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

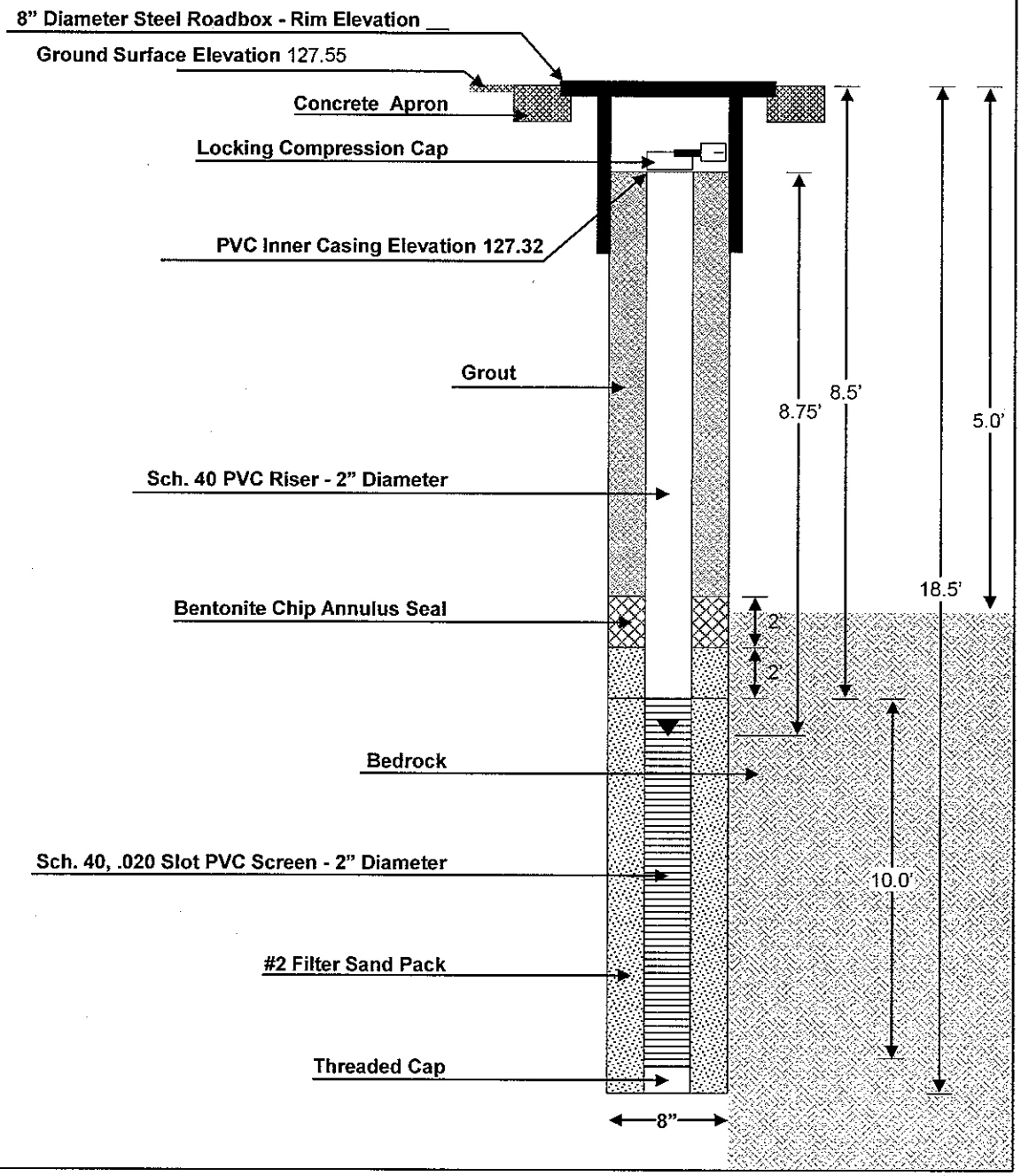
TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-44

Project: Day-Care RI **No.:** 20447-0100
Client: Hoffmann LaRoche **Date Completed:** 08/11/99
Location: Southwestern corner of annex lot
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 127.32
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2654721
Development Date: 08/17/99
Development Method: Surging and pumping



AF-375

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304514

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: H. ROBERT SEYBOLD, JOURNEYMAN LICENSE # 0001348

Permit Issued to: B & B DRILLING INC

Company Address: BOX 8 RT 206 NETCONG, NJ 07857

PROPERTY OWNER

Name: HOFFMANN - LA ROCHE, INC.

Organization: Hoffmann-La Roche, Inc.

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 67110

PROPOSED WELL LOCATION

Facility Name: Hoffmann-La Roche

Address: 340 Kingsland Street Pls process as submitted per HR Seybold

County: Essex Municipality: Nutley Twp Lot: 2 Block: 102

Easting (X): 586120 Northing (Y): 729460
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-44B

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 50

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Air Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 8, 2013
Expiration Date: April 8, 2014

Approved by the authority of:
Bob Martin
Commissioner

Jerry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201304514

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 102 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201304514
2. Site Well Number as shown on application or plans):	MW-44B
3. Well Completion Date:	04/16/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	45.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	35.00'
7. Screen Length (or length of open hole) in feet:	10.0'
8. Screen or Slot Size:	NA
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	5.02'
13. Yield (gallons per minute):	3 - 4 gpm
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 102 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201304514
2. Site Well Number (As shown on application or plans): MW-44B
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 36.6" Latitude: North 40° 50' 07.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729459.4 East 586157.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 126.13
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1969, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 102 Lot # 2 (Nutley)

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2. Site Well Number (As shown on application or plans): MW-44B
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 36.6" Latitude: North 40° 50' 07.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729459.4 East 586157.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 126.13
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monumnents referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hofmann-La Roche
EVENT ID IA-10
TRC GEOLOGIST J. Stapleton
DRILLING CONTRACTOR/FOREMAN HRS/Mark Christianson
DATE DRILLED 4/16/2013
LOCATION Permit #: E201304514
SAMPLING METHOD NA
DRILLING METHOD DR 24 & T-4 Air Rotary
NOTES

BORING/WELL NUMBER MW-44B
SCREEN TYPE/DIAMETER/SLOT NA
FILTER PACK TYPE/SIZE NA
GROUT TYPE NA
DEPTH TO WATER (Approximate Feet) 5.02
TOTAL DEPTH (Feet) 45
GROUND ELEVATION (Feet, NAVD 88) 126.13
REFERENCE ELEVATION (Feet, NAVD 88)

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID
1–10						
11–14			+ + + +	11.5-15' Weathered BEDROCK.		
15				15' Competent BEDROCK.		
16–43						
44			+	43-44' Fracture zone encountered.		
45						

WELL DIAGRAM
- Bentonite Grout (0-31')
- 35', PVC riser (0-35')
- #00 Sand (31-33')
- #2 Sand (33-45')
- 10', 2" PVC screen (35-45')

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201302491

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: H. ROBERT SEYBOLD, JOURNEYMAN LICENSE # 0001348

Permit Issued to: B & B DRILLING INC

Company Address: BOX 8 RT 206 NETCONG, NJ 07857

PROPERTY OWNER

Name: HOFFMANN - LA ROCHE, INC.

Organization: Hoffmann-La Roche, Inc.

Address: 340 Kingsland St.

City: Nutley State: New Jersey Zip Code: 67110

PROPOSED WELL LOCATION

Facility Name: Hoffmann-La Roche

Address: KINGSLAND STREET

County: Essex Municipality: Nutley Twp Lot: 8 Block: 287

Easting (X): 586120 Northing (Y): 729470
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: TW-124 MW-49C

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 80

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Dual Rotary

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: March 1, 2013
Expiration Date: March 1, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Wells
PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201302491

WELL PERMIT

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
In the event that this well is not constructed the well driller shall notify the Bureau of Water Systems and Well Permitting of the permit cancellation. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the Cancellation notification shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Permit Cancellation : by the expiration date of this permit.[N.J.A.C. 7:9D-1]
In the event this well is abandoned, the Owner or Well driller shall assume full responsibility for having the well decommissioned in a manner satisfactory to the New Jersey Department of Environmental Protection in accordance with the provisions of N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
The granting of this permit shall not be construed in any way to affect the title or ownership of property, and shall not make the New Jersey Department of Environmental Protection or the State a party in any suit or question of ownership of property. [N.J.A.C. 7:9D-1]
The issuance of this permit shall not be deemed to affect in any way action by the New Jersey Department of Environmental Protection on any future application. [N.J.A.C. 7:9D-1]
This permit conveys no rights, either expressed, or implied to divert water. [N.J.A.C. 7:9D-1]
This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner: Hoffmann-La Roche Inc.
2. Well Location (Street Address): 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 102 Lot # 2

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201302491
2. Site Well Number as shown on application or plans):	MW-44C
3. Well Completion Date:	04/09/13
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	80.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	60.00'
7. Screen Length (or length of open hole) in feet:	20.0'
8. Screen or Slot Size:	0.01'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	8.95'
13. Yield (gallons per minute):	NA
14. Development Techinque (specify):	NA
15. Length of Time well is developed/pumped or bailed (hours and minutes):	NA

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 102 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201302491
2. Site Well Number (As shown on application or plans): MW-44C
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 36.8" Latitude: North 40° 50' 07.9"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729460.3 East 586139.7
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 126.98
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hofmann-La Roche
EVENT ID IA-10
TRC GEOLOGIST J. Bacon
DRILLING CONTRACTOR/FOREMAN SBI/Eric Ellefson
DATE DRILLED 4/8/2013
LOCATION Permit #: E201302491
SAMPLING METHOD NA
DRILLING METHOD T-3 Air Rotary
NOTES

BORING/WELL NUMBER MW-44C
SCREEN TYPE/DIAMETER/SLOT PVC/2"/0.010
FILTER PACK TYPE/SIZE #2 Sand
GROUT TYPE Bentonite Grout
DEPTH TO WATER (Approximate Feet) 8.95
TOTAL DEPTH (Feet) 80
GROUND ELEVATION (Feet, NAVD 88) 126.98
REFERENCE ELEVATION (Feet, NAVD 88)

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
1–50							Bentonite Grout (0-56') 60', 2" PVC riser (0-60')

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hofmann-La Roche
BORING/WELL NUMBER MW-44C
EVENT ID IA-10
DATE DRILLED 4/8/2013

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
51							
52							
53							
54							
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65							
66							
67							
68							
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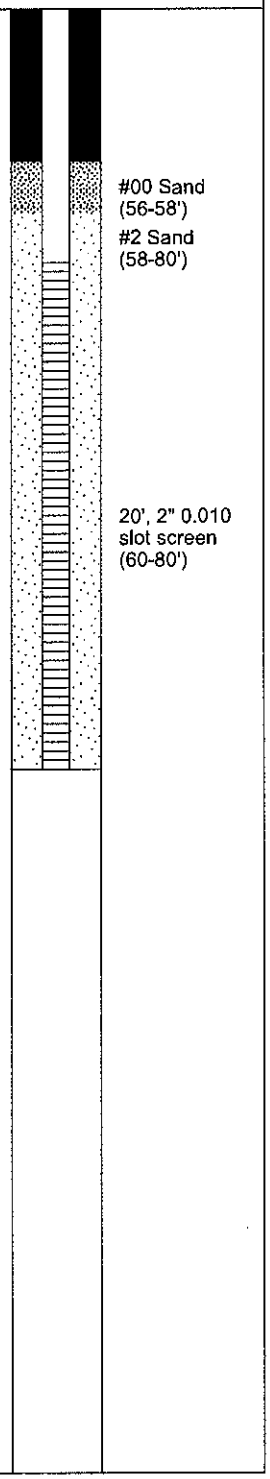
73							
74							
75							
76							
77							
78							
79							
80							



Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hofmann-La Roche
EVENT ID IA
TRC GEOLOGIST J. Stapleton
DRILLING CONTRACTOR/FOREMAN /
DATE DRILLED
LOCATION
SAMPLING METHOD
DRILLING METHOD
NOTES

BORING/WELL NUMBER MW-44C/TW-124
SCREEN TYPE/DIAMETER/SLOT NA
FILTER PACK TYPE/SIZE NA
GROUT TYPE NA
DEPTH TO WATER (Approximate Feet)
TOTAL DEPTH (Feet) 80
GROUND ELEVATION (Feet, NAVD 88) 126.98
REFERENCE ELEVATION (Feet, NAVD 88)

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
1–5				Dry, red, weathered rock, SILTY SAND.			
6–12							
13				Competent ROCK.			
15				Wet cuttings.			
20				Dry, red, very fine to fine grained SANDSTONE, some silt.			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hofmann-La Roche **BORING/WELL NUMBER** MW-44C/TW-124

EVENT ID IA **DATE DRILLED**

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
26							
27							
28							
29							
30				Very fine to fine grained SANDSTONE, some silt.			
31							
32							
33							
34							
35							
36							
37							
38							
39							
40				Very fine to fine grained SANDSTONE, some silt.			
41							
42							
43							
44							
45							
46							
47				Soft zone.			
48							
49							
50				Very fine to fine grained SANDSTONE, some silt.			
51							
52							
53							

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
Telephone: 978-970-5600
Fax: 978-453-1995

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER Hofmann-La Roche
BORING/WELL NUMBER MW-44C/TW-124
EVENT ID IA
DATE DRILLED

DEPTH (ft. bgs)	BLOW COUNTS	PEN/REC (INCHES)	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	PID (ppm)	SOIL SAMPLE ID/ ROCHE ID	WELL DIAGRAM
54							
55							
56							
57							
58							
59							
60				Very fine to fine grained SANDSTONE, some silt.			
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80				Very fine to fine grained SANDSTONE, some silt. End of boring @ 80 feet.			

Note: Soil screened with PID every 6 inches and was non-detect unless otherwise indicated.

SERIAL # 014992

DWR-133M (10/96)

Mail to MW-45

NJDEP
Bureau Water Allocation
426
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT OR

VALID ONLY AFTER APPROVAL BY THE D E P

Permit No 26547 20
26547 21
26547 22

COORD # 26 . 02 . 979

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND AVE.
NUTLEY N. J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

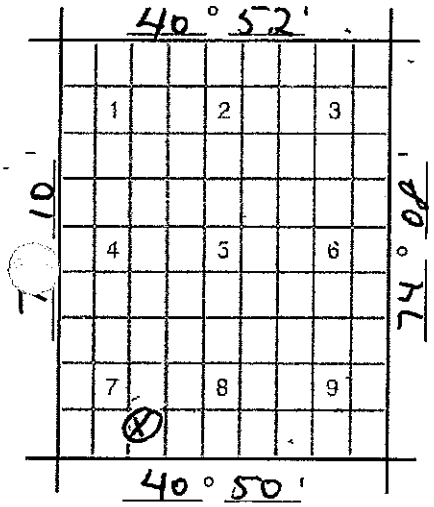
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PARK, N.Y. 11040

Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	30 Feet
# of Wells Applied for (max 10)	3	Will pumping equipment be installed?	YES ☐ NO ☒
Type of Well (see reverse)	MONITORING	If Yes give pump capacity	NA cumulative GPM

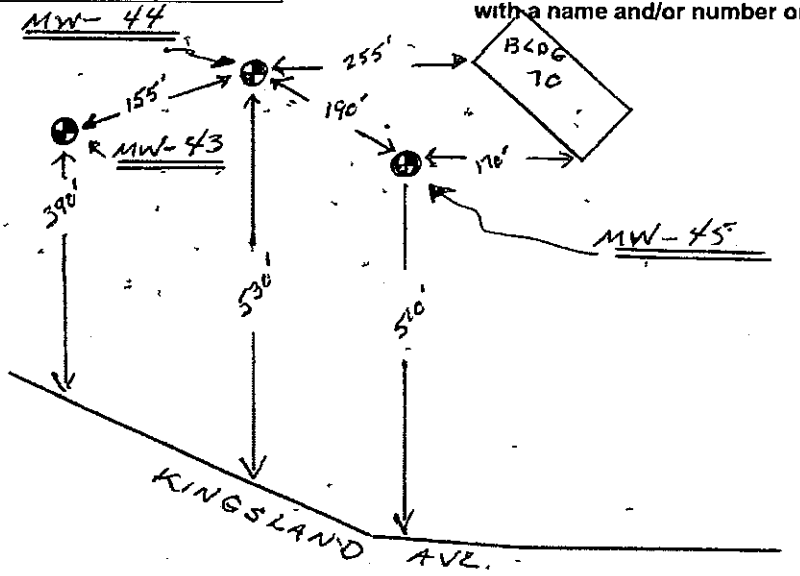
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
8, 24	287	CLIFTON	PASSAIC

State Atlas Map No 26



Draw sketch of well(s) nearest roads, buildings, etc with marked distances in feet Each well MUST be labeled with a name and/or number on the sketch



FOR MONITORING WELLS RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESIGATION

CASE I D Number

This Space for Approval Stamp

WELL PERMIT APPROVED
NJDEP
JUL 23 1999
BUREAU OF WATER ALLOCATION

FOR DEP USE

- ☐ Issuance of this permit is subject to the conditions attached (see next page)
- ☒ For monitoring purposes only
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

In compliance with N J S A 58 4A-14, application is made for a permit to drill a well as described above

Date 7/21/99 Signature of Driller [signature] Registration No J-1494

Signature of Owner [signature] FOR PAUL HUGHES AGENT FOR OWNER

COPIES Water Allocation — White Health Dept — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 36 - 34772

Atlas Sheet Coordinates [illegible]

OWNER IDENTIFICATION - Owner [illegible]
Address [illegible]
City [illegible] State [illegible] Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. [illegible]
County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address [illegible]

DATE WELL STARTED [illegible]
DATE WELL COMPLETED [illegible]

TYPE OF WELL (as per Well Permit Categories) [illegible]
Regulatory Program Requiring Well _____ Case I.D.# _____

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) [illegible] Tele. # [illegible]

WELL CONSTRUCTION

Total depth drilled 17 ft.
Well finished to 18.5 ft.

Borehole diameter:
Top 7 in.
Bottom 11 in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ___ ft.

Was steel protective casing installed? ☒ Yes ☐ No

Static water level after drilling 11.8 ft.

Water level was measured using Tape

Well was developed for 5 hours at 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (Batch no.)
Single/Inner Casing	0	8.5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used [illegible])	8.5	18.5	2"	PVC	Sch 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	7	18.5	7	[illegible]	200 lbs.
Grout	0	7	7	Neat Cement Bentonite	[illegible] lbs. [illegible] lbs.

Grouting Method Tremie
Drilling Method [illegible]

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) Steve Wolf

Driller's Signature [illegible]

Registration No. 1579 Date 9/15/99

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0	Fine Brown Orange
	Sand & Gr
5	
10	Sand & Gravel
15	
18.5	
20	End [illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): S153.29215

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 102 Lot # 2 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):..	2600054722
2. Site Well Number as shown on application or plans):	MW-45
3. Well Completion Date:	08/12/99
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	20.0'
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):.....	10.00'
7. Screen Length (or length of open hole) in feet:	10.0
8. Screen or Slot Size:	0.02'
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2.0"
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	7.75'
13. Yield (gallons per minute):	1 gpm
14. Development Techinque (specify):	surge and pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	0 hr and 30 min

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

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4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 729500.8 East 586304.8
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 118.63
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
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   Datum: N.A.D. 1927 / N.G.V.D. 1929

7. Significant observations and notes:

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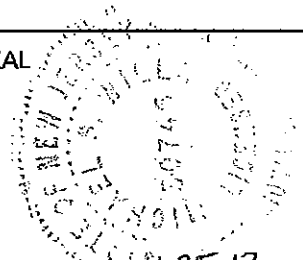
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date 11-25-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
HLR/Peter Jeuck	20447-0100-00000	Well No. MW-45	1 of 2

Location Description	TRC Geologist
Mid eastern edge of annex lot.	Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	4 1/4 " HSA 3 7/8 RB

Sampler Description	Drilling Method	Coordinates
NA	HSA	X= Y=
Filter Seal Amount/Type: 2' Bentonite Chips	Drill Bit/Auger Diameter: 4 1/4"	Ref. El.:
Sand Pack Amount/Type: 12' #1 Filter Sand	Hammer Weight/Fall: NA	Riser Stick Up: NA
Screen Length/Type: 10' 10 Slot/Sch 40 PVC	Water Table Depth: ~16'bgs	Surface Elevation:
Riser Length/Type: 10' Sch 40 PVC	Total Depth: 21'bgs	Date Start: 8/11/99 Date Finish: 8/12/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
				6" Asphalt				
1				Red-brown fine to coarse SAND, some gravel.				
				1' Gray SILT and CLAY.				
2								
3								
4								
5								
				Red-brown fine to coarse SAND, some gravel, weathered sandstone.				
6								
7				SANDSTONE, little moisture at 8'bgs.				
8								
9								
10								
11				SANDSTONE, some shale, dry.				
12								
13				Same as above.				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Drilled to 21'bgs to allow room for collapse.
2) Geologic soil descriptions obtained off the flight of augers.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
HLR/Peter Jeuck	20447-0100-00000	Well No. MW-45	2 of 2

Location Description: Mid-Eastern Side of Annex Lot.

TRC Geologist: Charles Foster

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
15				Wet cuttings at 15-16'bgs.				
16								
17								
18								
19								
20								
21				End of Boring				

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

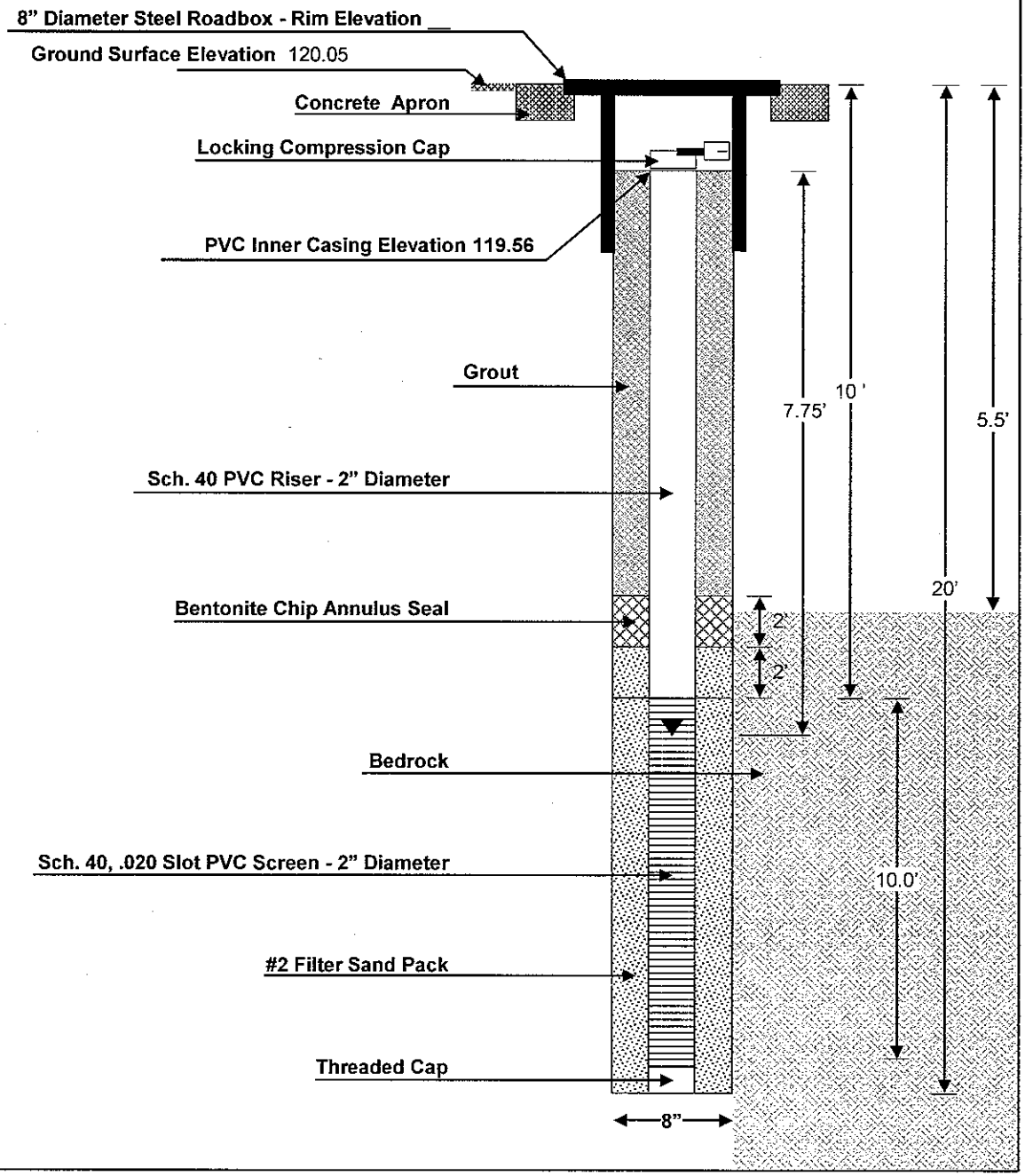
TRC

Flush Mount Overburden/Bedrock Monitoring Well Construction Log

Well No. MW-45

Project: Day Care RI **No.:** 20447-0100
Client: Hoffmann LaRoche **Date Completed:** 08/12/99
Location: Eastern edge and midpoint of Annex lot
Drilling Contractor: ADT **Method:** HSA
TRC Geologist: Charles Foster

Reference Elevation: 119.56
Reference Description: Top of PVC Riser
NJDEP Permit No.: 2654722
Development Date: 08/17/99
Development Method: Surging and pumping



AF-375/

DWR-133M
2/00

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

2660828
2660829
2660830

MONITORING WELL PERMIT 16

Permit No _____

VALID ONLY AFTER APPROVAL BY THE D E P

Mail To MW-46
NJDEP
BUREAU OF WATER ALLOCATION
PO BOX 426
TRENTON, NJ 08625-0426

COORD # 26 · 12 · 3 23

Owner HOFFMAN-LAROCHE INC
Address 340 KINGSLAND STREET
NUTLEY NJ 07110

Name of Facility _____
Address (SAME)

Driller ~~Summit Drilling Co., Inc.~~
Address ~~Central Jersey Industrial Park~~
~~Chimney Rock Road, Building 9W~~
~~Bound Brook, NJ 08805~~

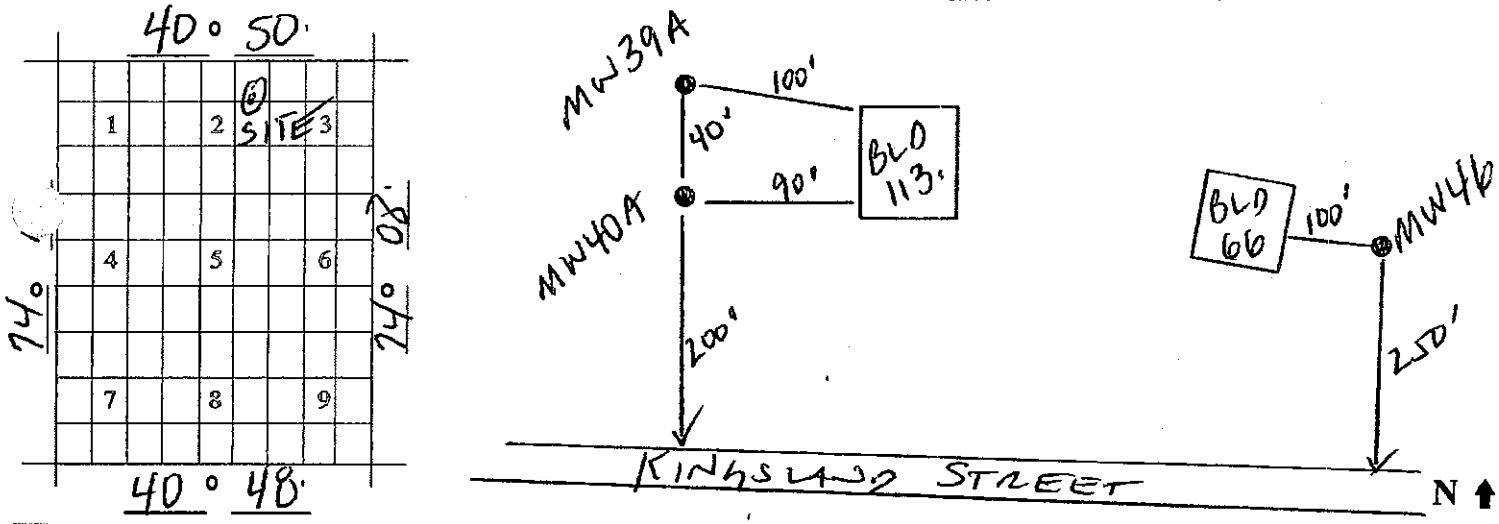
Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	40 Feet
# of Wells Applied for (max 10)	3	Will pumping equipment be utilized?	YES ☐ NO ☒
Type of Well (see reverse)	MONITOR	If Yes give pump capacity	— cumulative GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1, 2, 3	292	NUTLEY	ESSEX

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc with marked distances in feet Each well MUST be labeled with a name and/or number on the sketch



FOR MONITORING WELLS RECOVERY WELLS OR PIEZOMETERS THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNER INVESTIGATION

CASE I D Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
N J D E P
APR 5 2001
BUREAU OF WATER ALLOCATION

FOR DEP USE
- ☐ Issuance of this permit is subject to the conditions attached (see next page)
- ☒ For monitoring purposes only
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole

REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT
In compliance with N.J.S.A 58 4A 14, application is made for a permit to drill a well as described above.

Date 3-28-01
Signature of Driller John Vogt
Registration No J1544
Signature of Property Owner Paul Hughes (MS)

TRC

COPIES Water Allocation White Health Dept Yellow Owner Blue Driller White

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 60830

Atlas Sheet Coordinates 26 : 17 : 323

OWNER IDENTIFICATION - Owner HOFFMAN-LAROCHE INC.
Address 340 KINGSLAND ST.
City NUTLEY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW40
County ESSEX Municipality NUTLEY TOWN Lot No. 1,2,3 Block No. 292
Address 340 KINGSLAND STREET

DATE WELL STARTED 4/ 9/ 01
DATE WELL COMPLETED 4/ 9/ 01

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) TRC Environmental Corporation Tele. #

WELL CONSTRUCTION

Total depth drilled 62' ft.
Well finished to 62' ft.

Borehole diameter:
Top 10" in.
Bottom 6" in.

Well was finished: ☐ above grade ☒ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Was steel protective casing installed? ☐ Yes ☒ No

Static water level after drilling 10' ft.

Water level was measured using Tape

Well was developed for 1/2 hours at 1/2 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	38'	6"	Steel	19 lbs
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	38	62		open hole	~~19 lbs~~
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	0'	38'		Neat Cement Bentonite	564 lbs. 30 lbs.

Grouting Method tremie
Drilling Method Auger

Method of development pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity gpm

Pump type:

Drilling Fluid Type of Rig B-59

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company SMOOTT WELL DRILLING CO INC

Well Driller (Print) Todd Naugle

Driller's Signature Todd Naugle

Registration No. M16992 Date 4 / 26 / 01

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

See Attached

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s): _____

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	2600060830
2. Site Well Number as shown on application or plans):	MW-46
3. Well Completion Date:	04/12/01
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	62.0
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	38.0
7. Screen Length (or length of open hole) in feet:	24.0
8. Screen or Slot Size:	N/A
9. Screen or Slot Material:	Open hole
10. Casing Material (PVC, steel, or other – specify):	Steel
11. Casing Diameter (inches):	6
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	10
13. Yield (gallons per minute):	0.5
14. Development Techinque (specify):	Pumping and Surging
15. Length of Time well is developed/pumped or bailed (hours and minutes):	30 minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann - La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 340 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 300 Lot # 1 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600060830
2. Site Well Number (As shown on application or plans): MW-46
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 13.6" Latitude: North 40° 49' 53.2"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 727976.0 East 587931.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 144.55
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929

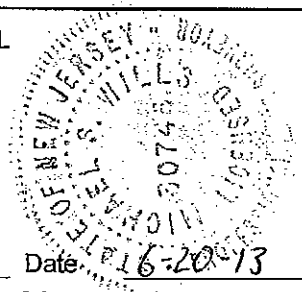
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL



Professional Land Surveyor's Signature: Date: 6-20-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext.: Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Hoffmann LaRoche	20447-0010-00000	Well No. MW-46	1 of 4

Location Description	TRC Geologist
Southeast Corner of Building 102 Lot	Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
Summit Inc/Todd Naugle	Gus Pech 1100 AR	10 inch and 6-inch Air Hammer

Sampler Description	Drilling Method	Coordinates
Air rotary cuttings	Continuous from 10 ft.	X= Y=
Filter Seal Amount/Type: N/A Open Hole	Drill Bit/Auger Diameter: 10/6 inch	Ref. EL:
Sand Pack Amount/Type: N/A Open Hole	Hammer Weight/Fall: 140/30	Riser Stick Up: TBD
Screen Length/Type: N/A Open Hole	Water Table Depth: 48 ft. bgs	Surface Elevation:
Riser Length/Type: 6 Inch steel casing	Total Depth: 62 ft. bgs	Date Start: 04/10/01 Date Finish: 04/11/01

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
1				Red-brown fine Sand and Silt and Some fine Gravel.				
2								
3								
4					Fill			
5								
6								
7								
8								
9								
10								
11				At 13 ft. bgs, some rock cuttings were observed				
12				then changed back to soil.	Fill			
13								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	sand	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stuff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) See log for SB-46-1 conducted 15 ft to the north of well location MW-46 for log of unconsolidated materials.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Hoffmann LaRoche	20447-0010-00000	Well No. MW-46	2 of 4
Location Description: Southeast Corner of Building 102 Parking Lot, 15 ft. N MW-46		TRC Geologist: Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio n	Field Testing	Lab Sample Number	Well Construction
15					Fill			
16				Cuttings showed fine sand and Silt, some fine gravel from 13 to 28 ft where bedrock was encountered				
17								
18								
19								
20								
21					Fill			
22								
23								
24								
25								
26								
27					Bedrock			
28				Competent bedrock encountered at 28 ft. bgs.				
29								
30								
31								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) 6-inch steel casing installed and grouted in place to 38 ft. bgs. For subsequent rock well installation.

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Hoffmann LaRoche	20447-0010-00000	Well No. MW-46	3 of 4

Location Description: Southeast Corner of Building 102 Parking Lot

TRC Geologist: Charles Foster

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio n	Field Testing	Lab Sample Number	Well Construction
34								
35								
36								
37								
38				6-inch air hammer cuttings produced dry red-brown bedrock powder from 38 ft. to 43 ft bgs where a thin seam/water bearing fracture was encountered. Dry rock powder and some shale fragments were produced after 43. ft.				
39								
40								
41								
42					Bedrock			
43								
44								
45								
46								
47				Powdered rock stopped being emitted from borehole at 48 ft. due to another potential water bearing fracture/ seam.				
48								
49								
50								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

TRC

Soil Boring Log

Project/Client	Project No.	Boring No.	Sheet
Hoffmann LaRoche	20447-0010-00000	Well No. MW-46	4 of 4
Location Description: Southeast Corner of Building 102 Parking Lot		TRC Geologist: Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio n	Field Testing	Lab Sample Number	Well Construction
54								
55								
56				Dry rock from 53-58 ft. hole drilled out hole to 62 ft. bgs to assess ground water production.				
57								
58					Bedrock			
59								
60								
61								
62				End of Boring at 62 ft.				
63								
64								
65								
66								
67								
68								
69								
70								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace 0-10% some 20-35%
little 10-20% and 35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) Completed hole to 53 feet bgs to allow potential Seams/fractures found above this depth to produce water.

2) After one hour at 53 ft. 0.2 ft. of water had accumulated I decided to continue the boring to 58 ft. bgs to assess deeper conditions.

3) Open hole well MW-46 completed to 62' bgs.

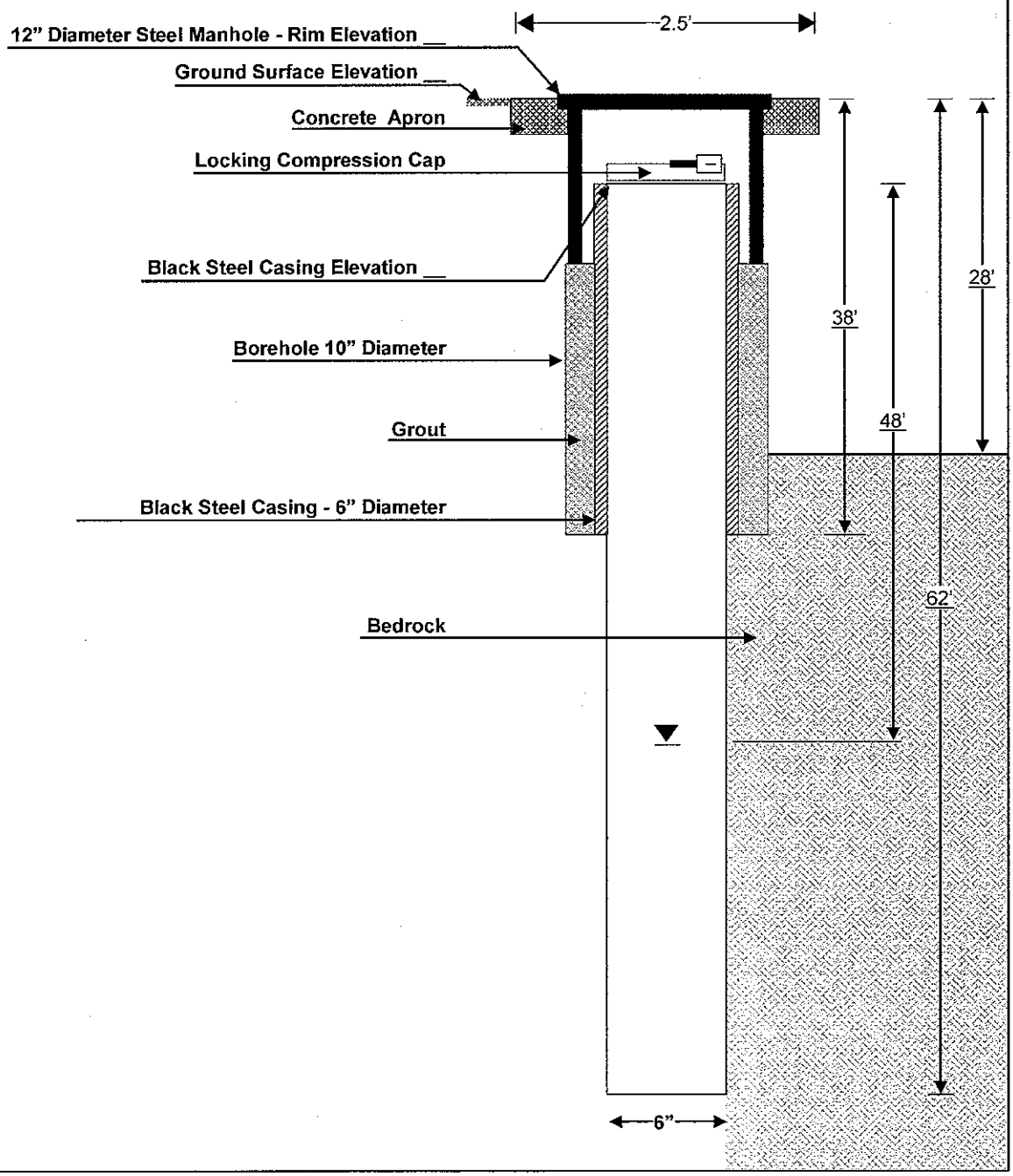
TRC

Flush Mount Open Hole Bedrock Monitoring Well Construction Log

Well No. MW-46

Project: Hoffmann LaRoche **No.:** 20447010000000
Client: Peter Jeuck **Date Completed:** 4/12/01
Location: Southeast Corner of Building 102 Parking Lot
Drilling Contractor: Summit Drilling **Method:** Air Rotary
TRC Geologist: Charles Foster

Reference Elevation:
Reference Description:
NJDEP Permit No.: 26-60830
Development Date: 04/17/01
Development Method: Pumping and Surging



SUMMIT DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: MW46 DATE DRILLED: 04/09/2001 COORD #1: 26.12.323 PERMIT #1: 26-60830
COORD #2: PERMIT #2: COUNTY: Essex
SITE: Hoffman LaRoche, 340 Kingsland Court, , Nutley, NJ 07110 XSTREET:
OWNER: Hoffman-La Roche, Inc., 340 Kingsland Street, , Nutley, NJ 07110 USE: Monitor

INNER CASING: Steel
DIAMETER: 6"
LENGTH: 38'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: open hole
SCREEN TYPE 2:
DIAMETER:
LENGTH 1:
LENGTH 2:
SLOT SIZE:

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 10", 6"
TOTAL DEPTH: 62'

SET WELL: 62'
GRAVEL PK SZ:
DRILLER: Todd Naugle
SURFACE COMPLETION: M

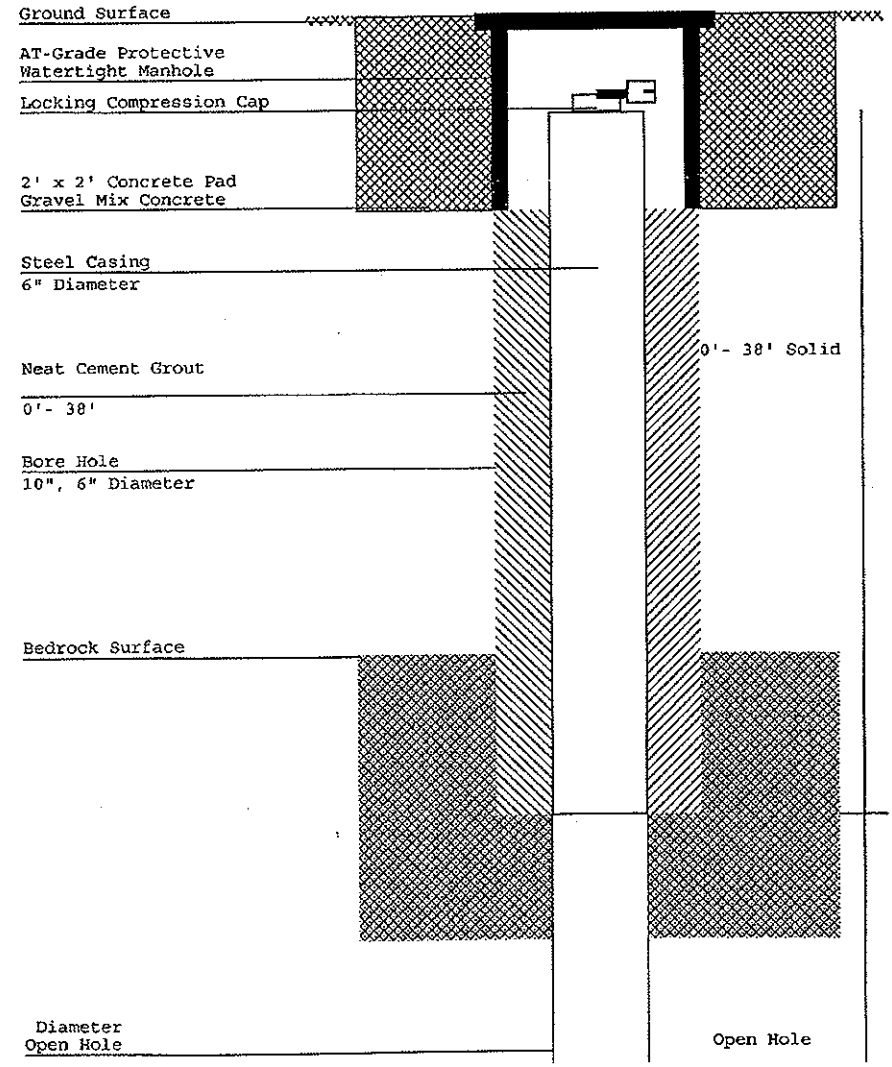
GAL PER MIN: 1/2
STAT H2O LVL: 10'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 28' Silty sand & gravel.
28'- 62' Sandstone.



SERIAL # 014993

DWR-133M (10/96)

MW-47

Mail to

NJDEP
Bureau Water Allocation
126
Trenton, NJ 08625-0426

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT 16

VALID ONLY AFTER APPROVAL BY THE D E P

26534723
26534724
26534725
26534726

Permit No

COORD # 26.12.324

Owner HOFFMAN LA ROCHE

Address 340 KINGSLAND
NUTLEY, N.J.

Name of Facility SAME

Address

Driller AQUIFER DRILLING & TESTING, INC.

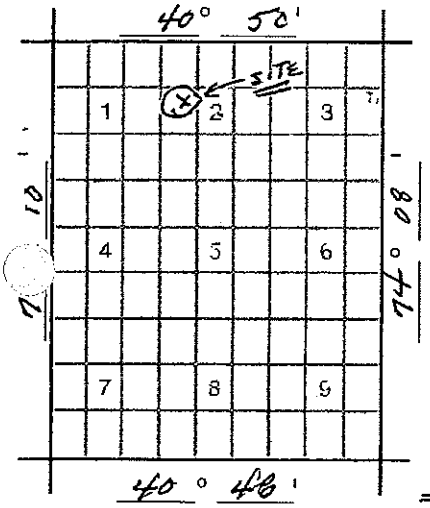
Address 150 NASSAU TERMINAL ROAD
NEW HYDE PARK, N.Y. 11040

Diameter of Well(s)	2 Inches	Proposed Depth of Well(s)	30 Feet
# of Wells Applied for (max 10)	4	Will pumping equipment be installed?	YES ☐ NO ☒
Type of Well (see reverse)	MONITORING	If Yes give pump capacity	NA cumulative GPM

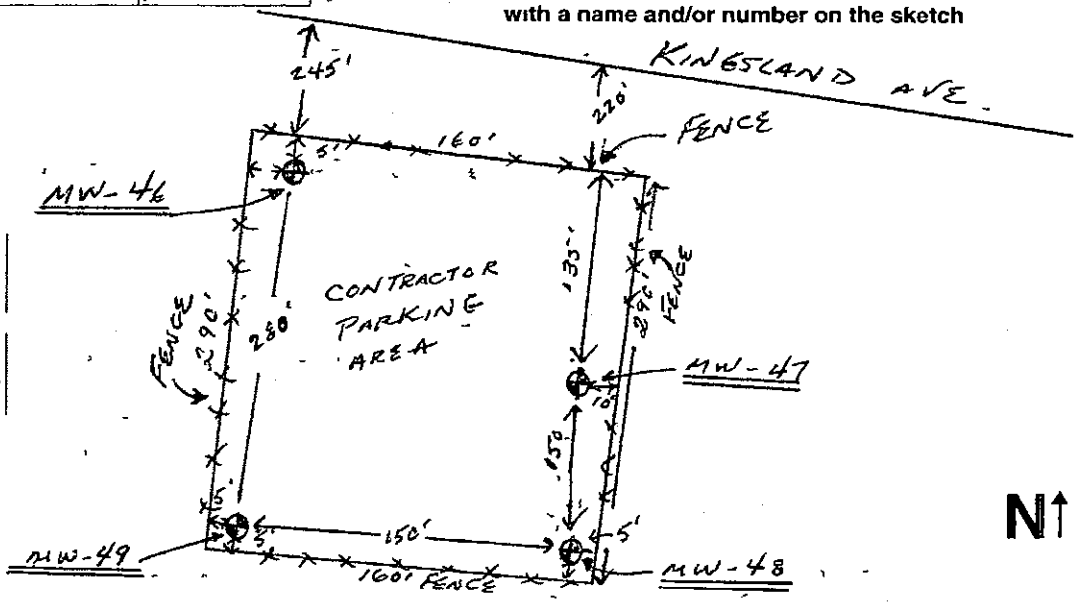
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
4, 5, 10	306	NUTLEY	ESSEX

State Atlas Map No 26



Draw sketch of well(s) nearest roads, buildings, etc with marked distances in feet Each well MUST be labeled with a name and/or number on the sketch



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☒ Other (explain) OWNERS INVESTIGATION

CASE I D Number

This Space for Approval Stamp

WELL PERMIT APPROVED
NJDEP
JUL 23 1999
BUREAU OF WATER ALLOCATION

FOR DEP USE

☐ Issuance of this permit is subject to the conditions attached (see next page)
☒ For monitoring purposes only
☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT

In compliance with N J S A 58 4A-14, application is made for a permit to drill a well as described above

Date 7/21/99 Signature of Driller [signature] Registration No T-1494

Signature of Owner [signature] FOR PAUL HUGHES AGENT FOR OWNER

COPIES Water Allocation — White Health Dept — Yellow Owner — Blue Driller — White

DWR-138 M
11/98

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 20 - 94724

Atlas Sheet Coordinates 26 / 12 NW

OWNER IDENTIFICATION - Owner [illegible]
Address [illegible]
City [illegible] State [illegible] Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. MW-47
County [illegible] Municipality [illegible] Lot No. [illegible] Block No. [illegible]
Address [illegible]

DATE WELL STARTED [illegible]
DATE WELL COMPLETED [illegible]

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well
Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) [illegible] Tele. # [illegible]

WELL CONSTRUCTION

Total depth drilled 20 ft.
Well finished to 20 ft.

Borehole diameter:
Top 8 in.
Bottom 8 in.

Well was finished: ☐ above grade
☒ Flush mounted

If finished above grade, casing height (stick up) above land surface ___ ft.

Was steel protective casing installed?
☒ Yes ☐ No

Static water level after drilling 12.1 ft.

Water level was measured using Tape

Well was developed for 5 hours at 1 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	10	2	PVC	Sch. 40
Middle Casing (for triple cased wells only)	—	—	—	—	—
Outer Casing (largest diameter)	—	—	—	—	—
Open Hole or Screen (No. Used 0.10)	10	20	2"	PVC	Sch. 40
Blank Casings (No. Used)	—	—	—	—	—
Tail Piece	—	—	—	—	—
Gravel Pack	8	20	9	Morie's	500 lbs
Grout	0	8	9	Neat Cement Bentonite	100 lbs. 6 lbs.

Grouting Method Gravity
Drilling Method HSA

Method of development Submersible Pump

Was permanent pumping equipment installed? ☐ Yes ☒ No

Pump capacity — gpm

Pump type —

Drilling Fluid — Type of Rig CME 75

Health and Safety Plan submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company [illegible]

Well Driller (Print) [illegible]

Driller's Signature [illegible]

Registration No. 1579 Date [illegible]

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0 [illegible]
2 [illegible]
5 [illegible]
10 [illegible]
15
20 [illegible]

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann-La Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann-La Roche Inc.
2. Well Location (Street Address) 299 Kingsland Street, Nutley, NJ
3. Well Location (Municipal Block and Lot) Block# 2000 Lot # 5

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	26-54724
2. Site Well Number as shown on application or plans):	MW-47
3. Well Completion Date:	8/5/99
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	Flush mount
5. Total Depth of Well to the nearest ½ foot:	19.5
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	9.5
7. Screen Length (or length of open hole) in feet:	10
8. Screen or Slot Size:	0.020
9. Screen or Slot Material:	PVC
10. Casing Material (PVC, steel, or other – specify):	PVC
11. Casing Diameter (inches):	2
12. Static Water Level from top of casing at the time of installation (nearest 0.01').	9.8
13. Yield (gallons per minute):	1
14. Development Techinque (specify):	Submersible pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	0.5 hour

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hoffmann La - Roche Inc.

List all AKAs: Roche

Street Address: 340 Kingsland Street

Municipality: Nutley (Township, Borough or City)

County: Essex Zip Code: 07110

Program Interest (PI) Number(s): 009949 Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Hoffmann - La Roche Inc.
2. Well Location (Street Address) 299 Kingsland Street, Nutley, NJ 07110
3. Well Location (Municipal Block and Lot) Block# 2000 Lot # 5 (Nutley)

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): 2600054724
2. Site Well Number (As shown on application or plans): MW-47
3. Geographic Coordinate NAD 83 to nearest 1/10 of a second:
   Longitude: West 74° 09' 08.9" Latitude: North 40° 49' 43.3"
4. New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
   North 726978.0 East 588291.2
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 77.02
6. Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

   N.J. Monument No. 6689 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 68.296
   N.J. Monument No. 6690 - Standard N.J.G.C.S. Disk Set in Concrete - Elevation: 79.106
   Datum: N.A.D. 1927 / N.G.V.D. 1929
7. Significant observations and notes:

   The Original Control Survey for the Roche Nutley Facility was accomplished in 1989, using the two N.J.G.C.S. Monuments referenced above. All subsequent surveying at the site has been referenced to N.A.D. 1927 / N.G.V.D. 1929. The NAD 83 Longitude / Latitude & State Plane Coordinates, together with N.A.V.D. 88 Elevations provided above were generated from the 27/29 data using the CORPSCON conversion program from the U.A. Army Corps of Engineers.

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date 4-17-13

Surveyor's Name: Michael S. Wills License Number: GS - 30745

Mailing Address P.O. Box 4422

City/Town: Clifton State NJ Zip Code: 07012

Phone Number 973.235.8514 Ext. Fax: 973.235.2011

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. EB-CT-22	Sheet
HLR/Peter Jeuck	20447-0100-00000	Well No. MW-47	1 of 2

Location Description: Contractor Parking Lot, field screening location CT-22.

TRC Geologist: Charles Foster

Drilling Contractor/Foreman	Drill Rig Make/Model	Auger/Drive Casing Size/Type
ADT INC/ Ken Kutarnia	CME 75	4 1/4 " ID HSA

Sampler Description	Drilling Method	Coordinates
2 ft standard split spoon	HSA continuous sampling	X= Y=
Filter Seal Amount/Type: NA	**Drill Bit/Auger Diameter:** 4 1/4" ID	**Ref. El.:**
Sand Pack Amount/Type: NA	**Hammer Weight/Fall:** 140/30	**Riser Stick Up:** NA
Screen Length/Type: NA	**Water Table Depth:** ~13'bgs	**Surface Elevation:**
Riser Length/Type: NA	**Total Depth:** 19.5'bgs	**Date Start:** 8/5/99 **Date Finish:** 8/5/99

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Description	Field Testing	Lab Sample Number	Well Construction
				4" Asphalt 6" Gravel fill.				
1	S-1	12	12/10	4" White pulverized concrete fill. 6"Dark-brown SILT, some fine SAND, trace fine gravel.		OS1=10 OS2=25		
2	S-2	9	24/18			OS1=500 OS2=300 OS3=200	CT-22-4 pH=6 HS=130	
3		6		Red-brown SILT and fine SAND trace fine gravel.				
4		5						
	S-3	1	24/0	Pushed cobble, no recovery.		NA		
5		2						
		3						
6		1						
	S-4	2	24/12	Red-brown fine SAND and SILT, trace fine gravel, musty odor.		OS1=150 OS2=120	CT-22-8 HS=10 pH=6	
7		1						
		1						
8		2						
	S-5	2	24/18	2" Same as above.		OS1=10		
9		2		16" Gray CLAY and SILT, some roots, trace fine SAND, trace angular gravel, moist.		OS2=5 OS3=15		
		4						
10		5						
	S-6	3	24/18	Gray CLAY and SILT, trace fine SAND, trace angular gravel, moist.		OS1=2 OS2=1 OS3=3		
11		3						
		3						
12		4						
	S-7	1	24/18	12" Gray SILT and CLAY, some fine sand.		OS1=3		
13		2		6" Red-brown fine SAND, some fine angular gravel, wet.		OS2=6		
		6						
		11				OS3=8		

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

1) S-2 composite 2-3'bgs. VOC grabbed from highest area of spoon.

2) OS = Open Spoon

TRC

Soil Boring Log

Project/Client	Project No.	Boring No. EB-CT-22	Sheet
HLR/Peter Jeuck	20447-0100-00000	Well No. MW-47	2 of 2
Location Description: Contractor Parking Lot, field screening location CT-22.		TRC Geologist: Charles Foster	

Depth	Sample Number	Blows/ RQD	Pen/Rec Core Rec	Sample Description	Strati-graphic Descriptio	Field Testing	Lab Sample Number	Well Construction
	S-8	4	24/12	Red-brown fine SAND, some silt, trace sandstone fragments, wet..		OS1=2 OS2=5		
15		8						
		14						
		16						
16	S-9	20	24/18	Red-brown pulverized SANDSTONE, some fine to medium sand, some silt, saturated.		OS1=1 OS2=2 OS3=1		
		40						
17		33						
		35						
18	S-10	30	16/6	Weathered pulverized sandstone. Split-spoon refusal, End of Boring.		OS1=bkg		
		20						
19		50/4						
20								

Granular Soils

Blows/ft	Density
0-4	v. loose
4-10	loose
10-30	m. dense
30-50	dense
>50	v. dense

Proportions

trace	0-10%	some	20-35%
little	10-20%	and	35-50%

Cohesive Soils

Blows/ft	Density
>2	v. soft
2-4	soft
4-8	m. stiff
8-15	stiff
15-30	v. stiff
>30	hard

Grain Size (USCS)

silt/clay	<0.08 mm
f. sand	0.43-0.08 mm
m. sand	2.0-0.43 mm
c. sand	4.8-2.0 mm
f. gravel	19-4.8 mm
c. gravel	75-19 mm
cobble	300-75 mm
boulder	>300 mm

Notes

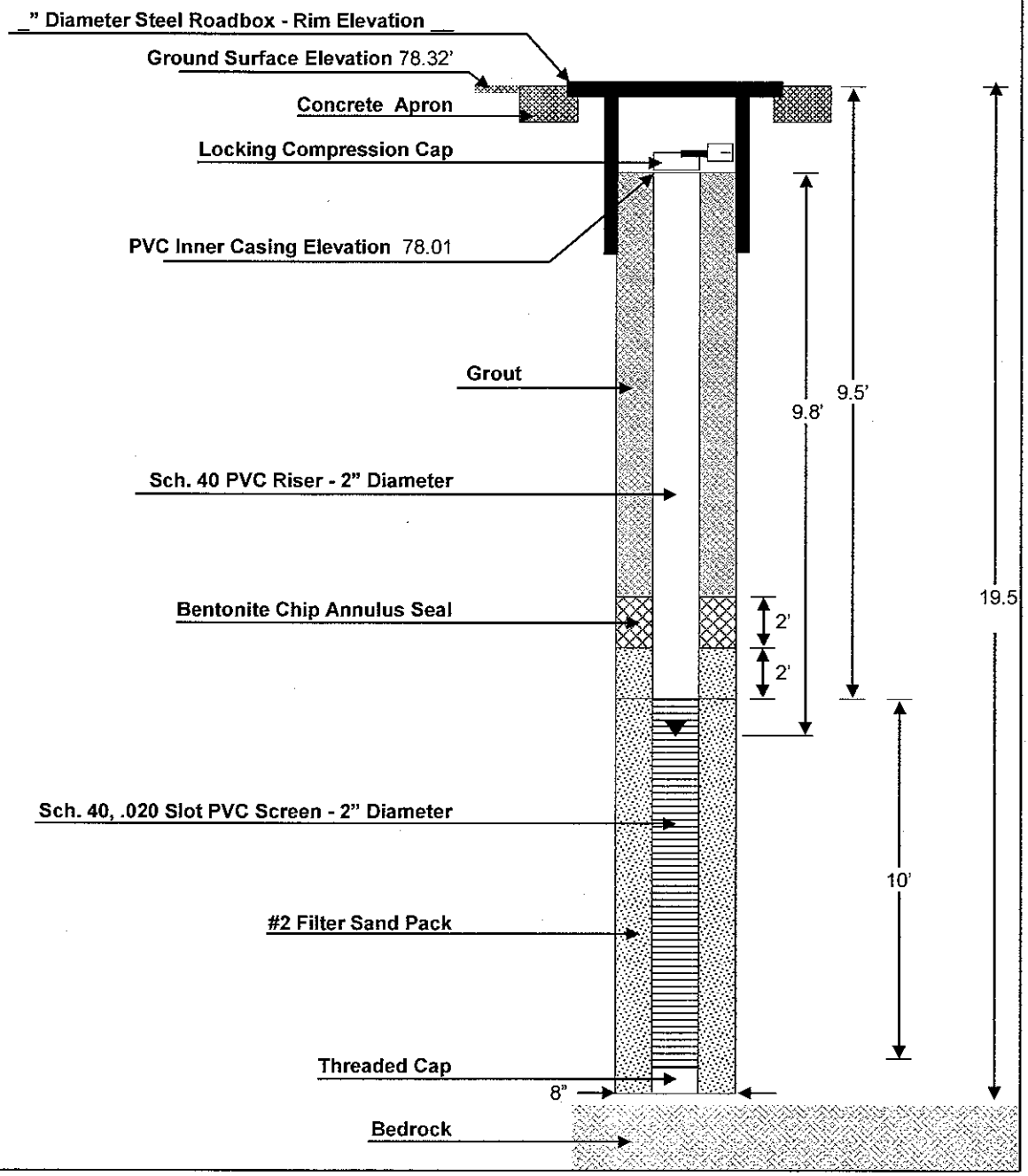
1) OS = Open Spoon

TRC

Flush Mount Overburden Monitoring Well Construction Log

Well No. MW-47

Project: Day Care RI	**No.:** 204470100
Client: Hoffmann LaRoche	**Date Completed:** 08/05/99
Location: Northeast central portion of contractor lot (CT-22)	
Drilling Contractor: ADT	**Method:** HSA
TRC Geologist: Charles Foster	
Reference Elevation: 78.01	
Reference Description: Top of PVC Riser	
NJDEP Permit No.: 2654724	
Development Date: 08/10/99	
Development Method: Pumping /bailing	



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