BACKGROUND:

Leaksite No: 17908 Date: 11/29/10
Site name: Former Sinclair, 9456 Medicine Lake Rd, New Hope

Hydro: John Kaehler
Proj.Mgr: Andy Eddy

Consultants: DELTA

Emergency: no

Site/Release Info:

Mix of commercial and residential with Hwy 169 bordering the site on the W.

The site is associated with 2 previous releases, 2433 (1990, closed in 95) and 10868 (1997, and closed in 99).

The site became a gas station in 1964

A previous release, leak 183, occurred at a gas station across the st to the S.

Numerous other leaks, fuel oil, heating oil, have occurred in the area.

The release was discovered during a Phase II conducted in Feb. Higher levels of contamination detected in GW than reported for Leak 10868.

Tank Info:

Currently 2 active gas USTs remain at the site.

Excavation:

General geology/stratigraphy:
0-18 ft sandy clay
18-32 ft gray stiff clay
GW encountered in seams of sandy silt encountered in the sandy clays

Soil Investigation:

7 soil borings were advanced.

SB-6 and SB-7 found contamination near the 10-15 ft bg level that maxed out the PID.

However, there appear to have some situations in other borings in which the OVM malfunctioned.

Other borings indicated little or no PID contamination.

The value of the PID readings is basically null.

Review of the lab results indicated that the majority of the contamination is present along the southern property boundary.

Contaminated soil was found in this area during previous investigations. It's evident that contaminated soils in this area were present in 2006.

Groundwater investigation:

Previous investigations in which MWs were installed indicated GW beneath the site is perched.

Earlier investigations at the site indicated that the plume extended to the SE portion of the site. The MW is this location found GW approx 10-15 ft bg whereas MWs further N indicated GW approx 43 ft bg.

However, this investigation pretty much detected GW in all 7 borings between 7 and 10 ft bg.

GW samples were collected from all 7 borings.

Contamination of concern was detected in all 3 borings along the southern property boundary.

The other 4 borings were basically clean.

Contamination along the southern property boundary had B between 200 and 3000 ppb, GRO between 34000 and 65000 ppb and DRO between 13,000 and 250,000 ppb. SB-7 had the greatest level of contamination. Consultant is contending that these levels are from Leak 10868 which occurred in 97 and reported as only a 5 to 20 gal release.

The levels of contamination found in MW-2 of leak 2433 (1993) was B between 11,000 and 32,000 ppb, GRO between 60,000 and 250,000, and DRO up to 48,000.

No free product detected at the site

Hydrology:

Depth to GW;

Transmissivity (ft^2/day): <50

GW Flow Direction;

Aquifer ?:

Well Receptor Info:

The property owners within 500 ft of the site were not contacted.

The 500 ft walking survey did not identify any supply wells.

No private wells within 500 were identified

No industrial wells within ½ mi were found

Muni water is supplied to the area

Surface Water Info:

An intermittent stream is located approx 900 ft W of the site, across Hwy 169.

At the time of the investigation the stream was dry.

The strem flows into Medicine Lake approx 1900 ft SW of the site.

A runoff pond is located along the W boundary of the property.

SB-3 is located 20 E of the pond.

DRO @ 340 ppb was found in SB-3, there appears sufficient distance between the pond and SB-3 to keep contamination of the pond at a minimum.

Vapor Intrusion/Risk Info:

Station building is slab-on-grade.

The sanitary sewer to the W is below the WT and the PID did not record any elevated vapors. The WT in this direction appears to be discontinuous.

The other nearby storm and sanitary sewers were surveyed and no elevated PID measurements were recorded.

2 VI borings were advanced, both to around 4 ft bg.

Contaminant concentrations were low in both, even the worst case sample, no further VI work necessary.

Consultant Discussion:

SCM:

The GW present at the site is found in discontinuous sand seams located in the upper 18 ft and within a sandy clay.

The dense clay beneath the sandy clay was relatively dry and appears to act as an aquitard between the sandy clay and the sandy unit found approx 41 ft bg.

Significant amounts of contamination have been removed during previous investigations.

There does not appear to be any contaminant migration into the sewers and the vapors found in the VI borings were low enough to not warrant further vapor investigation.

Free product has not been detected at the site.

No water well receptors were identified.

Medicine Lake is located approx 1900 ft SW of the site.

SMD:

Site closure because

1) Previous dispensers and USTs have been removed from the site
2) A total of 582 cys of contaminated soil was removed during previous investigations
3) The existing USTs and dispensers were installed in 2005
4) The current soil and GW contamination is not significantly different from what was found in previous investigations.
5) No receptors of concern
6) Soil impacts are confined to the upper 20 ft
7) The entire area of soil impacts is capped with either asphalt or concrete
8) No significant vapors detected
9) No free product and GW impacts appear confined to the perched sandy seams.

Hydro Comments:

Consultant didn't define release to the S across Medicine Lake Rd.

Consultant contends the contamination has not migrated to the S because back in 93 when Leak 183 was closed there was no contamination found in MW-9 located along the northern portion of the property to the S.

The property owners within 500 ft of the site were not contacted.

There appears to be significant contamination still present along the southern property boundary. Although this contamination is significant there does not appear to be any receptors of concern and migration would be limited due to the perched nature of the GW.

I still believe that a recent release may have occurred and will request documentation dating back to 1995 that indicates the tank system is tight. **Not sure how far back they need to keep records.**

09/15/10

Spoke with Andy and he's going to contact the RP for the tank tightness info.

He also is going to mention the requirement to notify property owners within 500 ft.

If there isn't any reason to suspect a recent release has occurred because of the site conditions (minimal migration and contamination likely from a previous release) and the receptor information the site can be closed.

11/29/10

Spoke with regarding the results of the tightness testing concerns and the receptor survey.

We looked at the material that was sent and has discussed it with a tank inspector.

It appears that all concerns have been answered and we can close the site.

STATE OF MINNESOTA

Department of Public Safety - Bureau of Criminal Apprehension
1430 Maryland Ave. East St. Paul, MN 55106

MINNESOTA DUTY OFFICER

Bureau of Criminal Apprehension Operations Center

Report #: 109251	Report Date: 2/17/2010	Report Time: 13:10	DO#: 33

CALLER INFORMATION

Contact: Matt Hobson
Company: Delta Consultants - Shoreview
Address: 5910 Rice Creek Parkway Ste 100
City: Shoreview
State: MN Zip: 55126-
Phone: (651) 697-5210 Ext:
Alt phone: Ext:
Have local police and/or fire been notified?

NARRATIVE

This is an active station, unknown if any E85 on site, Holiday just bought the property from Sinclair so they are doing a phase II to see if any environmental issues. Not sure on sizes of the tanks and if they underground steel.

T# 1473 - Holiday
2-12K gas USTs both active
4-6K gas USTs, 2K to UST, 3K used oil UST - all removed

L# 2433 - open 4/90 - closed 3/95
L# 10868 - open 10/97 - closed 2/07 - gasoline

T# 123074 - C&K Auto
150 gal "petrol other" AST - active
300 used oil AST - active

- New L#, issued, higher levels of gw encountered now.
- active Station

INCIDENT REPORT: TANK

RESPONSIBLE PARTY/PROPERTY OWNER

Name: Larry Feldsien
Company: Sinclair Marketing, Inc.
Address: 1001 E. Cliff Rd. #201
City: Burnsville State MN Zip 55337
Phone: Ext
Alt. phone: Ext

SITE LOCATION

Name: Former Sinclair Station #22024
Address: 9456 Medicine Lake Rd
City: NEW HOPE
County HENNEPIN Zip: 55427-

ENTERED

SITE INFORMATION

Discovery date: 2/17/2010 Discovery time: 11:00 Previously reported site? YES Leak #: 10868
Is E85 on site?

RELEASE INFORMATION

Number/Size of Tank(s)	Tank Contents	Age of Tank(s)	Type of Tank
1 @	diesel		U.S.T. - Steel
2 @ 12,000	gasoline		U.S.T. - Steel

Native soil type: silt
Surface water nearby? No
Source of Release: Phase I or II
Site water source: Municipal
Contaminated soil excavated? No Quantity: Able to dig out contamination? No
Ground water encountered? Yes Depth to ground water: approx 15'
Free product found? No Stained soils? Yes Petroleum odors? Yes
Highest vapor reading: 242 ppm Analytical results: pending

ANY QUESTIONS - PLEASE CONTACT THE MN DUTY OFFICER AT 651-649-5451 or 800-422-0798

PM: AJE LH 17908

If not tank related, specify Release Source and Product Type:

MPCA Project Manager: AJE Leak Number: #17708

In:	Out:	Link:	Date:	Time:	Agency:	County:	Method of Contact:
☐	☑	☐	2/17/2010	13:30	MPCA Metro		Fax

Narrative:

ANY QUESTIONS - PLEASE CONTACT THE MN DUTY OFFICER AT 651-649-5451 or 800-422-0798

Minnesota Pollution Control Agency
520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us

December 8, 2010

Mr. Bruce Anthony
Holiday Station Stores
4567 American Boulevard West
Bloomington, MN 55437

RE: Petroleum Tank Release Site File Closure
Site: Former Sinclair Station, 9456 Medicine Lake Road, New Hope, Hennepin
Site ID#: LEAK00017908

Dear Mr. Anthony:

We are pleased to let you know that the Minnesota Pollution Control Agency (MPCA) staff has determined that your investigation and/or cleanup has adequately addressed the petroleum tank release at the site listed above. Based on the information provided, the MPCA staff has closed the release site file.

Closure of the file means that the MPCA staff does not require any additional investigation and/or cleanup work at this time or in the foreseeable future. Please be aware that file closure does not necessarily mean that all petroleum contamination has been removed from this site. However, the MPCA staff has concluded that any remaining contamination, if present, does not appear to pose a threat to public health or the environment under current conditions.

The MPCA reserves the right to reopen this file and to require additional investigation and/or cleanup work if new information, changing regulatory requirements or changed land use make additional work necessary. If you or other parties discover additional contamination (either petroleum or nonpetroleum) that was not previously reported to the MPCA, Minnesota law requires that the MPCA be immediately notified.

You should understand that this letter does not release any party from liability for the petroleum contamination under Minn. Stat. ch. 115C (2002) or any other applicable state or federal law. In addition, this letter does not release any party from liability for nonpetroleum contamination, if present, under Minn. Stat. ch. 115B (2002), the Minnesota Superfund Law.

Please note that as a result of performing the requested work you may be eligible to apply to the Petroleum Tank Release Compensation Fund (Petrofund) for partial reimbursement of the costs you have incurred in investigating and cleaning up this petroleum tank release. The Petrofund is administered by the Petroleum Tank Release Compensation Board (Petro Board) and the Minnesota Department of Commerce. To learn more about who is eligible for reimbursement, the type of work that is eligible for reimbursement, and the amount of reimbursement available, please contact Petrofund staff at 651-297-1119 or 1-800-638-0418.

If future development of this property or the surrounding area is planned, it should be assumed that petroleum contamination may still be present. If petroleum contamination is encountered during future development work, the MPCA staff should be notified immediately.

For specific information regarding petroleum contamination that may remain at this leak site, please call the Petroleum Remediation Program File Request Program at 651-757-2799 or 651-757-2309. The MPCA fact sheet *Request to Bill for Services Performed* must be completed prior to arranging a time for file review.

Thank you for your response to this petroleum tank release and for your cooperation with the MPCA to protect public health and the environment. If you have any questions regarding this letter, please call me at 651-757-2331.

Sincerely,

Andrew Eddy
Project Manager
Petroleum Remediation Section
Remediation Division

AJE: tf

cc: Valerie Leone, City Clerk, New Hope
Scott Crandall, Fire Chief, New Hope
Dave Jaeger, Hennepin County Solid Waste Officer
Matt Hobson, Delta Environmental
Minnesota Department of Commerce Petrofund Staff

Minnesota Pollution Control Agency
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September 17, 2010

Mr. Bruce Anthony
Holiday Stationstores
4567 American Boulevard West
Bloomington, MN 55437

RE: Request For Additional Work
Site: Former Sinclair Station, 9456 Medicine Lake Road, New Hope, Hennepin
Site ID#: LEAK000017908

Dear Mr. Anthony:

The Minnesota Pollution Control Agency (MPCA) staff has reviewed the report titled, "Limited Site Investigation Report", dated August 19, 2010. Based upon the information provided in the report, it has been determined that additional information is required at the above-referenced property. Specifically, the following information should be provided:

1. Please submit your tank tightness testing records. Please include records from the past 10 years.
2. Please complete the required receptor survey by making contact with property owners within 500' of the site.

The MPCA staff request that the information be submitted within 2 months of the date of this letter. Failure to meet this deadline in a timely manner may result in reductions in Petrofund reimbursement or lead to MPCA enforcement actions.

If you have any questions regarding this letter, please contact me at 651-757-2331 or John Kaehler, staff hydrogeologist, at 651-757-2480. If you are calling long distance, you may reach the MPCA by calling 1-800-657-3864.

Sincerely,

Andrew Eddy
Project Manager
Petroleum Remediation Program
Remediation Division

John Kaehler
Hydrogeologist
Petroleum Remediation Program
Remediation Division

AJE: tf

cc: Matt Hobson, Delta Environmental

Eddy, Andrew (MPCA)

From: Matt Hobson [mhobson@deltaenv.com]
Sent: Tuesday, June 29, 2010 9:37 AM
To: Eddy, Andrew (MPCA)
Subject: Re: 17908

Andrew,

No field work has been complete but it is being scheduled. I'll complete the notification as we get closer to doug th work.

Thanks,
Matt Hobson

Sent from my iPhone

On Jun 29, 2010, at 8:58, "Eddy, Andrew (MPCA)" <Andrew.Eddy@state.mn.us> wrote:

> Hi Matt,
>
> I received a letter from Holiday stating that Delta has scheduled the field work for Leaksite 17908. Has this been completed? If not, please do submit a field work notification.
>
> Thanks,
>
> Andy Eddy
> 651-757-2331
>
> Project Manager
> MPCA - Petroleum Remediation
> Email: andrew.eddy@state.mn.us

Eddy, Andrew (MPCA)

From: Matt Hobson [mhobson@deltaenv.com]
Sent: Monday, May 10, 2010 3:56 PM
To: Eddy, Andrew (MPCA)
Subject: Former Sinclair Station 22024, Leak ID Number 17908

Hello Andrew,

We have a file review scheduled to review the two former leak files for this location. Following that review we will complete the drilling on site, likely late in May or June.

Just wanted to let you know where we were with schedule for this site.

If you have any questions about this site please let me know.

Thanks,

Matthew R. Hobson | Project Manager | North American Operations
Delta Consultants, an Oranjewoud N.V. Company
Direct +1 651 697 5210 | Office +1.651.639.9449 | USA Toll Free 800 477 7411
GMT - 5:00
mhobson@deltaenv.com | www.deltaenv.com

Holiday Companies

GEN. OFFICE: 4567 AMERICAN BOULEVARD WEST, BLOOMINGTON, MN 55437 / MAIL ADDRESS: P.O. BOX 1224 MINNEAPOLIS, MN 55440 / PH. 952-830-8700 / FAX 952-830-8864
CREDIT OFFICE MAIL ADDRESS: P.O. BOX 1216 MINNEAPOLIS, MN 55440 / PH. 952-921-5200 / FAX 952-921-5295

Direct Dial: 952-830-8899 Fax: 952-830-1681 Email: bruce.anthony@holidaycompanies.com

May 7, 2010

Mr. Andrew Eddy, Project Manager
Remediation Division
MPCA
520 Lafayette Road North
St. Paul, MN 55155-4194

Re: LEAK00017908
Former Sinclair Station, New Hope, MN

Dear Mr. Eddy:

In response to your letter of April 20 regarding this site, please be informed that Holiday has assumed responsibility for conducting the investigation of petroleum releases that occurred under previous ownership. Delta is the consultant and Matt Hobson is the project manager. Delta is or has scheduled drilling at the site.

If you have any questions about the status of this project, please call Mr. Hobson at 651- 697-5210.

Sincerely,

HOLIDAY COMPANIES

Bruce K. Anthony
Environmental Director

Cc: Matt Hobson, Delta
BKA/nah

Minnesota Pollution Control Agency
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April 20, 2010

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Holiday Stationstores
4567 American Boulevard West
Bloomington, MN 55437

RE: Petroleum Storage Tank Release Investigation and Corrective Action
Site: Former Sinclair Station, 9456 Medicine Lake Road, New Hope, Hennepin
Site ID#: LEAK00017908

Dear Sir/Madam:

On February 17, 2010, the Minnesota Pollution Control Agency (MPCA) staff was notified that a release of petroleum occurred from storage tank facilities that you own and/or operate at the site referenced above. Sinclair notified the MPCA that Holiday Station Stores will be assuming environmental liability.

A recent review of our files indicates that we have not heard from you whether you intend to investigate and if necessary, clean up the petroleum contamination at this site. We again ask that you respond verbally or in writing to this letter and describe the status of your investigation and/or cleanup, or explain why no action has been taken. You must respond within 30 days of receipt of this letter. Failure to do so may result in reduced reimbursement from the Petrofund and/or enforcement action taken against you by the MPCA.

If you have questions regarding the actions requested by the MPCA, or if you conclude that the release is not from any tank which you have owned or operated, please call me at 651-757-2331. Otherwise, I look forward to receiving your reply.

Sincerely,

Andrew Eddy
Project Manager
Petroleum Remediation Program
Remediation Division

AJE: tf

cc: Valerie Leone, City Clerk, New Hope
Scott Crandall, Fire Chief, New Hope
Dave Jaeger, Hennepin County Solid Waste Officer
Matt Hobson, Delta Environmental Consultants

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Leaksite Ownership Form

Petroleum Remediation Program

Doc Type: Standard Letter

Instructions: Please complete this form and return it in the envelope provided within 30 days of receipt.

Site ID#: LEAK 17908

Property Ownership

Do you own the property where the tank is/was located? ☐ Yes ☒ No

If no, list current property owner: Holiday Stationstores ☐ Individual ☒ Corporation

If the tanks have been removed from the site, who was the property owner at the time of tank removal? N/A

Property owner at time of removal: _____ ☐ Individual ☐ Corporation

Corporation name (if applicable): _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Phone: _____ E-mail: _____

Tank Ownership

If the tank owner is different from the property owner, please list tank owner name: Holiday Stationstores

Explain: Property + Tanks + Dispensing equipment sold to Holiday Stationstores on January 13, 2010.

If the tanks have been removed from the site, who was the tank owner at the time of tank removal?

Tank owner at time of removal: N/A ☐ Individual ☐ Corporation

Corporation name (if applicable): _____

Mailing address: _____

City: _____ State: _____ Zip code: _____

Phone: _____ E-mail: _____

Tank Operator

If a separate party operates the tank, please complete the following:

Tank operator: Holiday Stationstores ☐ Individual ☒ Corporation

Corporation name (if applicable): SAA

Mailing address: _____

City: _____ State: _____ Zip code: _____

Phone: _____ E-mail: _____

Environmental Consultant

If you are working with an environmental consultant, please provide the following:

Consultant company name: _____ Contact name: _____

Is the property undergoing development or a property transfer? ☐ Yes ☐ No

Intent to Proceed

Do you intend to proceed with the necessary investigation and potential corrective action as described in the attached letter?

☐ Yes ☒ No If no, please describe why: Sinclair does not own property or Tanks See attached

Print name: L.F. Feldsien Signature: L F Feldsien Date: 4-2-10

Mailing address: 1628 County Highway 10

City: Spring Lake Park State: MN Zip code: 55432

Phone: 763 783 3098 E-mail: LFeldsien@Sinclairoil.com.

14 January 2010

Kate Funk
Leaking Tanks
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Re: 9456 Medicine Lake Road, New Hope, MN

Dear Ms. Funk:

Enclosed please find the executed Real Estate Purchase and Sale Agreement between Sinclair Marking, Inc. and Holiday Stationstores, Inc.. As you can see under sections 7.1 through 7.4, the buyer assumes environmental liability and rights to receive reimbursement for environmental remediation as of the date of closing.

The new owner for the above properties as of 13 January 2010 can be contacted at:

Holiday Stationstores
4567 American Boulevard West
Bloomington, MN 55437
(952) 830-8700

Should you have any questions, please don't hesitate to contact me at (801) 524-5897.

Sincerely,

Steven F. Heil
Corporate Real Estate Manager

each of the parties the funds and documents to which they shall be respectively entitled, together with its Escrow Statement or Statements. In closing this transaction, the Escrow agent shall charge the Seller with:

(a) the full amount of real estate taxes and assessments due and payable up to and including the date of transfer of title,
(b) the title commitment,
(c) the transfers fees, deed taxes or other such similar taxes or fees, and
(d) ½ of the escrow and Closing fees

Immediately thereafter, the Escrow agent shall deliver to the Purchaser any documents due the Purchaser. Upon the Closing, the Escrow Agent shall charge the Purchaser with:

(a) the cost of filing the Deed or other instruments for record, and
(b) ½ of the escrow and Closing fees, and
(c) The cost of Purchaser's owner's policy of title insurance, and
(d) all other charges properly borne by the Purchaser consistent with the terms of this Agreement.

Immediately thereafter, the Escrow Agent shall deliver to the Purchaser the recorded Deed and any other documents due to the Purchaser.

ARTICLE VII
ACCEPTANCE OF PROPERTY "AS IS"

7.1. Environmental Disclosure: Seller has provided a summary of the environmental conditions at the Property to Purchaser. Despite the forgoing, Purchaser is not relying on Seller's summary, Phase I, if performed, or any of Sellers's documentation to perform its due diligence. Purchaser acknowledges that residual contamination is present at the Property, that the Property has had and continues to have underground storage tanks, lines and associated dispensing equipment and that the Property has historically been used for the sale of petroleum products and for automobile repair and service or as a convenience store with petroleum. Seller will transfer to Purchaser its interest if any in the environmental insurance fund to the full extent allowed by law if additional work is required in the future.

If the Property has received a closure, no further action, or equivalent designation regarding required responses to any and all releases for the underground petroleum storage tank, piping, and dispensing facilities from the state agency with jurisdiction over underground storage tank regulations, Seller will provide a copy of such closure notice to Purchaser.

If the Property is undergoing active response to releases from underground petroleum storage tank, piping, and dispensing facilities, the Seller will provide a summary of such response to Purchaser.

Purchaser may at its sole option and expense perform a Phase II environmental audit of the Property within 60 days after Closing. If the Phase II environmental audit indicates a release of any Hazardous Substances into the drainage systems, soils, groundwater, waters or

atmosphere of the Property for which remediation would be required under applicable law, or in the event the State requires further remediation regarding Leak #2433 or Leak#10868, Seller will indemnify Purchaser for Purchaser's actual expenses in conducting such remediation, except to the extent Purchaser is reimbursed under the state petroleum storage tank insurance fund applicable to releases from petroleum storage tanks.

7.2. Acceptance of the Property: Except for Seller's representations in Article II and except as provided in this Article VII, Purchaser accepts the Property "as is where is".

7.3. Environmental Release: Except for the express warranties and representations of Seller contained in this Agreement and the terms and conditions of Section 7.1, Seller is hereby released from all responsibility and liability regarding the operation, condition, valuation, or utility of the Property or its suitability for any purpose whatsoever, including any responsibility or liability with respect to the presence in the soil, air, structures, and surface and subsurface waters, of materials or substances that have been or may in the future be determined to be toxic, hazardous, undesirable or subject to regulation and that may need to be specially treated, handled and/or removed from the Property under current or future federal, state and local laws and regulations ("Hazardous Substances").

7.4. Additional Environmental Requirements: Should Purchaser opt to take the Property "Out of Industry" within thirty (30) days following the Closing, then Purchaser its successors, assigns or leases shall, at their sole cost and expense, and, according to applicable state, local and federal regulations or laws hereinafter ("Regulations") shall complete the following within one hundred eighty (180) days of closing: (i) remove from the Property of all of the underground storage tanks, lines dispensers and associated equipment ("USTs") together with any aboveground storage tanks ("AST(s)") and all containers of any kind and dispose of the items herein described items in compliance with the Regulations and test the soil and ground water for contamination in accordance with the Regulations, (ii) submit a closure report with a copy Seller and to the appropriate agencies, (iii) as required by Regulations, start the process to remediate the soil and groundwater to the levels that are at or below those permitted by the Regulations for residential uses, and (iv) use its best efforts secure petition for a no-further action letter ("NFA") from the appropriate agency in accordance with Regulations. The terms and conditions of this Article VII shall survive Closing.

ARTICLE VIII
TAX DEFERMENT

8.1. Tax Deferred Exchange: In the event either party so elects, the other party agrees to accommodate such party in effecting a tax-deferred exchange under Internal Revenue Code Section 1031 as amended. Either party shall have the right to elect a tax-deferred exchange at any time prior to the Closing Date. If a party elects to effect a tax-deferred exchange, the other party agrees to execute revised or additional escrow instructions, documents, agreements, or instruments to effect the exchange, provided that the other party shall incur no unreasonable costs, expenses, fees or liabilities as a result of or connected with the exchange. Further, in conjunction with the tax-deferred exchange, under no circumstances shall the other party be required to take title to any real property for any period of time whatsoever (except the Property). The exchanging party may assign this Agreement in order to effect such exchange, and thereafter

Minnesota Pollution Control Agency
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March 11, 2010

Mr. Larry Feldsien
Sinclair Marketing, Inc.
1001 E. Cliff Road #201
Burnsville, MN 55337

RE: Storage Tank Release Investigation and Corrective Action
Site: Former Sinclair Station #22024, 9456 Medicine Lake Rd., New Hope, Hennepin County 55427
Site ID#: LEAK 17908

Dear Mr. Feldsien:

Notice of Release
The Minnesota Pollution Control Agency (MPCA) has been informed that a release has occurred or contamination has been encountered from storage tanks and/or storage tank facilities that you own and/or operate. The MPCA appreciates your timely notification so this site can be handled in an efficient manner.

Legal Obligations
State laws require that persons legally responsible for storage tank releases notify the MPCA of the release and/or discovery of contamination, investigate and, if necessary, clean up the release(s) and/or contamination. A person is considered legally responsible for a petroleum tank release if the person owned or operated the tank either during or after the release, unless specifically exempted under the law. *See* Minn. Stat. § 115C.021 (2008). For releases of other substances, a person is considered legally responsible if the substance discharged was under the control of the person at the time of the discharge or release. If you believe that you are not legally responsible for this storage tank release, please contact the project manager listed below.

If development of this property or the surrounding area is planned, State laws require that persons properly manage contaminated soil and/or water uncovered or disturbed even if they are not legally responsible for the storage tank release(s). Developers and other interested parties must also incorporate appropriate response actions to prevent the further spreading of contamination. To receive MPCA review and approval of proposed response actions, please contact the Petroleum Brownfields Program (PBP), http://www.pca.state.mn.us/programs/vpic. If petroleum contamination is encountered during development work, the Minnesota State Duty Office should be notified immediately.

Request to Take Corrective Action
The MPCA requests that you take steps to investigate and, if necessary, clean up the release(s)/contamination in accordance with MPCA guidance documents. The site investigation must fully define the extent and magnitude of the soil and/or groundwater contamination caused by the release(s)/contamination. Unless your site is considered "high priority" (see below), you must submit a report to the MPCA which details the results of the investigation or concludes that excavation was sufficient to clean up the release, within 10 months of the date of this letter. The MPCA reserves the right to reject proposed corrective actions if the requirements of the site investigation have not been fulfilled. Guidance documents and related information are located at the following web site: http://www.pca.state.mn.us/programs/lust_p.html. For sites contaminated by pollutants other than petroleum, contact the MPCA project manager listed below to discuss the investigation and reporting timeline that will be required for your site.

The MPCA considers certain site conditions as high priority, including sites with "free product" (free-floating petroleum) that have affected or that threaten to affect drinking water supplies, sites where pollutants are being released to surface waters such as lakes or wetlands, and sites where petroleum or other vapors have been detected within structures or that pose fire or explosion hazards. If one or more of these situations apply to your site, you must submit an Investigation Report Form (refer to guidance documents) to the MPCA within 90 days. The MPCA reserves the right to reject proposed corrective actions if the requirements of the site investigation have not been fulfilled. In addition, if you know or discover that there is free product in a well, excavation, or borehole, you must notify the MPCA immediately of such a release and as rapidly and thoroughly as possible begin interim free product recovery (refer to guidance documents). If you have any question as to whether your site is high priority, please contact the MPCA project manager listed below.

Please review your insurance plan and contact your insurance carrier immediately after receiving this letter. Your insurance may cover this release. However, your insurance coverage may be affected by how quickly you notify your carrier.

Reimbursement for petroleum sites:
In 1987, the legislature established the Petroleum Tank Release Compensation Fund (Petrofund) to reimburse some responsible persons and volunteers (i.e., property owners not responsible for releases) who take corrective action for a portion of their costs. The Petrofund is administered by the Petroleum Tank Release Compensation Board (Petro Board), which is part of the Minnesota Department of Commerce. To learn more about the Petrofund reimbursement program contact Petrofund staff at 651/215-1775 or 1/800-638-0418 (in greater Minnesota only), or review the information available at the following website, http://www.pca.state.mn.us/programs/lust_p.html. Please be aware that Petrofund reimbursement determinations are made by Petrofund staff at the Department of Commerce. The determinations are based on whether or not the work performed at a leaksite was necessary for investigation and corrective action, which is determined by MPCA staff, and whether or not the costs for that work were reasonable, which is determined by Petrofund staff.

If you have not already done so, the MPCA recommends that you hire a qualified environmental consulting firm to help you investigate and clean up the contamination on your site. A qualified consulting firm should have experience in performing investigations of contaminated sites and in developing and implementing corrective actions. For petroleum investigations, the consultant must be registered with the Petro Board if you wish to have your costs considered for reimbursement. A list of registered contractors is available from the Petrofund staff. Please note that, under the Petro Board's rules, (see Minn. R. ch. 2890), you must solicit a minimum of two written competitive consultant proposals on a form prescribed by the Petro Board to incur costs eligible for reimbursement, and a minimum of two written competitive contractor bids must also be obtained for each contractor service. Again, the MPCA strongly encourages you to contact Petrofund staff for answers to all of your questions about bidding and the other Petrofund reimbursement program requirements.

Required Response
Please provide notification to the MPCA by submitting the enclosed *Leaksite Ownership Form* to the MPCA project manager listed below. The *Leaksite Ownership Form* must be completed and submitted within 30 days of your receipt of this letter to indicate whether you intend to proceed with the requested investigation and/or corrective action. If you do not respond within this time frame, the MPCA will assume that you do not intend to comply. In this case, the MPCA Commissioner may issue an enforceable order that will require you, as responsible party, to take corrective action. Failure to cooperate with the MPCA in a timely manner may result in reduced reimbursement from the Petro Board, see Minn. R. ch. 2890. If you do not cooperate, the MPCA has the option of taking the corrective actions on your behalf and recovering its costs from you.

If you have any questions concerning this letter or need additional information, please contact me at 651-757-2331. Please reference the above LEAK # in all correspondence. If you are calling long distance, you may reach the MPCA by calling 1-800/657-3864.

Sincerely,

Stephen Tege

FOR Andrew Eddy
Project Manager
Petroleum and Closed Landfill Section
Remediation Division

AJE:ls
Enclosures
cc: Valerie Leone, Clerk, New Hope
Scott Crandall, Fire Chief, New Hope
Dave Jaeger, Hennepin County Solid Waste Officer
Matt Hobson, Delta Consultants, Shoreview
Bruce Anthony, Holiday Companies, Inc., Minneapolis

November 5, 2010

Mr. Andrew Eddy
Petroleum Remediation Section
Remediation Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

DELTA

Subject: **Requested Additional Information**
Holiday Service Station #411/Former Snyder SS#422024
3400 Medicine Lake Road
New Hope, Minnesota
MPCA Site ID: LEAK00017608
Delta Project No. NAA1004827

Dear Mr. Eddy:

Enclosed is the requested completed 500' Receptor Survey for which contact was made with property owners and tank tightness testing records (leak test results) for the above referenced site.

If you have any questions regarding this information or the project in general, please contact me at 651-697-5210.

Sincerely,

DELTA CONSULTANTS

Matthew R. Hobson, P.G.
Project Manager

Enclosures

cc: Mr. Bruce Anthony, Holiday Companies

a member of Inogen Environmental Alliance

5910 Rice Creek Parkway Suite 100 St. Paul, Minnesota 55126 USA
Phone 651.639.9449 / 800.477.7411 Fax 651.639.9473 www.deltaenv.com

Tank Leak Test Results by Store Number

(Test Results are sorted by Date & Time from Most Recent to Oldest)

Store: 411 - Medicine Lake Rd

Test Date & Time	Tank	Tank Leak Test Type Description	History Number	Duration Hours	Gallons Nbr	Percent Nbr
11-01-2010 01:47	1	Fullest Monthly Periodic Test (0.2 gph) Passed	53,619	23.00	8,155.75	70.75
11-01-2010 01:37	2	Fullest Monthly Periodic Test (0.2 gph) Passed	53,629	31.00	2,980.98	43.52
11-01-2010 02:28	3	Fullest Monthly Periodic Test (0.2 gph) Passed	53,639	46.00	2,868.20	61.77
10-01-2010 05:10	1	Fullest Monthly Periodic Test (0.2 gph) Passed	71,481	22.00	7,879.17	68.35
10-01-2010 01:46	2	Fullest Monthly Periodic Test (0.2 gph) Passed	67,558	32.00	3,292.62	48.07
10-01-2010 01:19	3	Fullest Monthly Periodic Test (0.2 gph) Passed	67,567	39.00	2,537.34	54.65
09-01-2010 03:37	1	Fullest Monthly Periodic Test (0.2 gph) Passed	53,124	25.00	7,600.99	65.94
09-01-2010 01:17	2	Fullest Monthly Periodic Test (0.2 gph) Passed	51,176	27.00	2,622.05	38.28
09-01-2010 00:41	3	Fullest Monthly Periodic Test (0.2 gph) Passed	51,184	45.00	2,311.71	49.79
08-01-2010 03:50	1	Fullest Monthly Periodic Test (0.2 gph) Passed	14,239	26.00	7,610.75	66.03
08-01-2010 00:44	2	Fullest Monthly Periodic Test (0.2 gph) Passed	12,319	31.00	3,267.77	47.70
08-01-2010 01:15	3	Fullest Monthly Periodic Test (0.2 gph) Passed	12,326	49.00	2,489.40	53.62
07-01-2010 02:40	1	Fullest Monthly Periodic Test (0.2 gph) Passed	6,746	26.00	7,989.37	69.31
07-01-2010 01:32	2	Fullest Monthly Periodic Test (0.2 gph) Passed	6,752	33.00	2,998.58	43.77
07-01-2010 00:13	3	Fullest Monthly Periodic Test (0.2 gph) Passed	6,758	48.00	2,036.42	43.86
06-01-2010 04:25	1	Fullest Monthly Periodic Test (0.2 gph) Passed	8,671	28.00	8,329.51	72.26
06-01-2010 01:22	2	Fullest Monthly Periodic Test (0.2 gph) Passed	8,481	27.00	3,454.89	50.44
06-01-2010 00:55	3	Fullest Monthly Periodic Test (0.2 gph) Passed	8,484	62.00	2,085.61	44.92
05-03-2010 01:35	1	Fullest Monthly Periodic Test (0.2 gph) Passed	7,107	23.00	8,434.86	73.17
05-01-2010 02:58	2	Fullest Monthly Periodic Test (0.2 gph) Passed	6,392	32.00	2,602.41	37.99
05-01-2010 02:48	3	Fullest Monthly Periodic Test (0.2 gph) Passed	6,395	38.00	1,677.02	36.12
04-16-2010 02:04	3	Fullest Monthly Periodic Test (0.2 gph) Passed	1,685	47.00	2,258.46	48.64
04-04-2010 02:21	1	Fullest Monthly Periodic Test (0.2 gph) Passed	1,601	10.00	5,229.66	45.37
04-02-2010 01:42	2	Fullest Monthly Periodic Test (0.2 gph) Passed	4	18.00	3,247.30	47.41

Passing Line Leak Tests by Store Number

(Test Results are sorted by Date & Time from Most Recent to Oldest)

Store: 411 - Medicine Lake Rd

Test Date & Time	Line Nbr	Sensor Type Description	Line Test Type Description
11-2-2010 3:46 AM	1	PLLD Line Leak	3 Gal/Hour Annual
11-1-2010 9:56 PM	2	PLLD Line Leak	3 Gal/Hour Annual
11-1-2010 6:29 PM	3	PLLD Line Leak	3 Gal/Hour Annual
10-31-2010 12:40 AM	1	PLLD Line Leak	0.2 Gal/Hour Periodic
10-31-2010 3:39 AM	1	PLLD Line Leak	3 Gal/Hour Annual
10-31-2010 1:50 PM	3	PLLD Line Leak	3 Gal/Hour Annual
10-30-2010 11:38 PM	2	PLLD Line Leak	3 Gal/Hour Annual
10-29-2010 11:17 AM	2	PLLD Line Leak	0.2 Gal/Hour Periodic
10-27-2010 10:34 AM	3	PLLD Line Leak	0.2 Gal/Hour Periodic
9-30-2010 3:30 AM	1	PLLD Line Leak	3 Gal/Hour Annual
9-30-2010 10:41 PM	2	PLLD Line Leak	3 Gal/Hour Annual
9-30-2010 7:13 PM	3	PLLD Line Leak	3 Gal/Hour Annual
9-29-2010 2:16 AM	1	PLLD Line Leak	0.2 Gal/Hour Periodic
9-29-2010 11:41 PM	2	PLLD Line Leak	0.2 Gal/Hour Periodic
9-27-2010 8:15 AM	3	PLLD Line Leak	0.2 Gal/Hour Periodic
8-31-2010 3:25 AM	1	PLLD Line Leak	3 Gal/Hour Annual
8-31-2010 6:35 PM	3	PLLD Line Leak	3 Gal/Hour Annual
8-30-2010 6:46 PM	2	PLLD Line Leak	0.2 Gal/Hour Periodic
8-30-2010 11:30 PM	2	PLLD Line Leak	3 Gal/Hour Annual
8-30-2010 11:19 AM	3	PLLD Line Leak	0.2 Gal/Hour Periodic
8-28-2010 1:00 AM	1	PLLD Line Leak	0.2 Gal/Hour Periodic
7-31-2010 1:38 AM	1	PLLD Line Leak	0.2 Gal/Hour Periodic
7-31-2010 2:04 AM	1	PLLD Line Leak	3 Gal/Hour Annual
7-31-2010 1:44 AM	2	PLLD Line Leak	3 Gal/Hour Annual
7-30-2010 5:21 PM	3	PLLD Line Leak	3 Gal/Hour Annual
7-29-2010 9:34 AM	2	PLLD Line Leak	0.2 Gal/Hour Periodic
7-29-2010 12:46 PM	3	PLLD Line Leak	0.2 Gal/Hour Periodic
6-30-2010 3:38 AM	1	PLLD Line Leak	3 Gal/Hour Annual
6-30-2010 10:27 PM	2	PLLD Line Leak	3 Gal/Hour Annual
6-30-2010 9:08 PM	3	PLLD Line Leak	3 Gal/Hour Annual
6-29-2010 1:21 AM	1	PLLD Line Leak	0.2 Gal/Hour Periodic
6-29-2010 10:32 PM	2	PLLD Line Leak	0.2 Gal/Hour Periodic
5-31-2010 3:28 AM	1	PLLD Line Leak	3 Gal/Hour Annual
5-31-2010 10:17 PM	2	PLLD Line Leak	3 Gal/Hour Annual
5-31-2010 9:50 PM	3	PLLD Line Leak	3 Gal/Hour Annual
5-28-2010 10:38 PM	2	PLLD Line Leak	0.2 Gal/Hour Periodic
5-26-2010 1:44 AM	1	PLLD Line Leak	0.2 Gal/Hour Periodic
4-30-2010 2:02 AM	1	PLLD Line Leak	0.2 Gal/Hour Periodic
4-30-2010 1:29 AM	1	PLLD Line Leak	3 Gal/Hour Annual
4-30-2010 11:35 PM	2	PLLD Line Leak	0.2 Gal/Hour Periodic
4-30-2010 11:54 PM	2	PLLD Line Leak	3 Gal/Hour Annual
4-30-2010 8:11 PM	3	PLLD Line Leak	3 Gal/Hour Annual

Table 15

Properties Located Within 500 Feet of the Release Source.

Holiday 411/Former Sinclair

New Hope, MN

Property ID[1]	Property Address	Distance from Site	Water Supply Well			Public Water Supply		Basement (Y or N)	Sump (Y or N)	Possible Petroleum Source (Y or N)	Comments (including property use)
			Well Present (Y or N)	How Determined[2]	Well Use[3]	Utilized (Y or N)	Confirmed by City (Y or N)				
1	2701 Hillsboro Av. N.	east- and north-adjoining	N	personal contact	NA	unk	N	Y	unknown	Y[4]	Hillsboro Court Apartments
2	2800 Hillsboro Av. N.	350 feet northeast	N	personal contact	NA	Y	N	Y	unknown	Y[4]	Presidential Estates II Condominiums
3	9398 27th Av. N.	230 feet east	Y	personal contact	no longer in use	Y	N	Y	unknown	N	Single family house. Per homeowner, well no longer in use.
4	9390 27th Av. N.	425 feet east	Y	personal contact	well was sealed approximately 5 years ago	Y	N	Y	unknown	N	State Farm Insurance office
5	2504 Hillsboro Av. N.	325 feet southeast	N	personal contact	NA	unk	N	N	unknown	N	Sunny Hollow Shopping Center, multuple retail and commercial tenants
6	9315 Medicine Lake Rd.	southeast-adjoining	N	personal contact	NA	Y	N	N	unknown	N	McDonald's restaurant
7	9405 Medicine Lake Rd.	south-adjoining	N	personal contact	NA	Y	N	N	unknown	Y[4]	Winner Gas and Wash retail gas station
8	2510 Mendelssohn Av. N.	300 feet south	N	personal contact	NA	Y	N	N	unknown	Y[5]	Verizon satelite station
9	2500 Mendelssohn Av. N.	425 feet south-southwest	N	personal contact	NA	Y	N	N	unknown	N	Multi-tenant commercial: Array Financial Service, Shurpen Group, Specialty Instruments

Notes:

[1]Property IDs correspond to labeled properties on *Figure 5, "500-Foot Potential Receptor Map."*

[2] For example, visual observation, personal contact, telephone, returned postcard, assumed (i.e., no postcard returned).

[3] For example, domestic, industrial, municipal, livestock, lawn/gardening, irrigation.

[4]Closed petroleum leaksite (see Investigation Report Section 1.3).

[5]Registered petroleum tank site (see Investigation Report Section 1.3).

Medicine Lake Road is also known as 27th Avenue North. Addresses obtained from the Hennepin County property website.

CWI - State County Well Index searched for well logs.

Delta Consultants

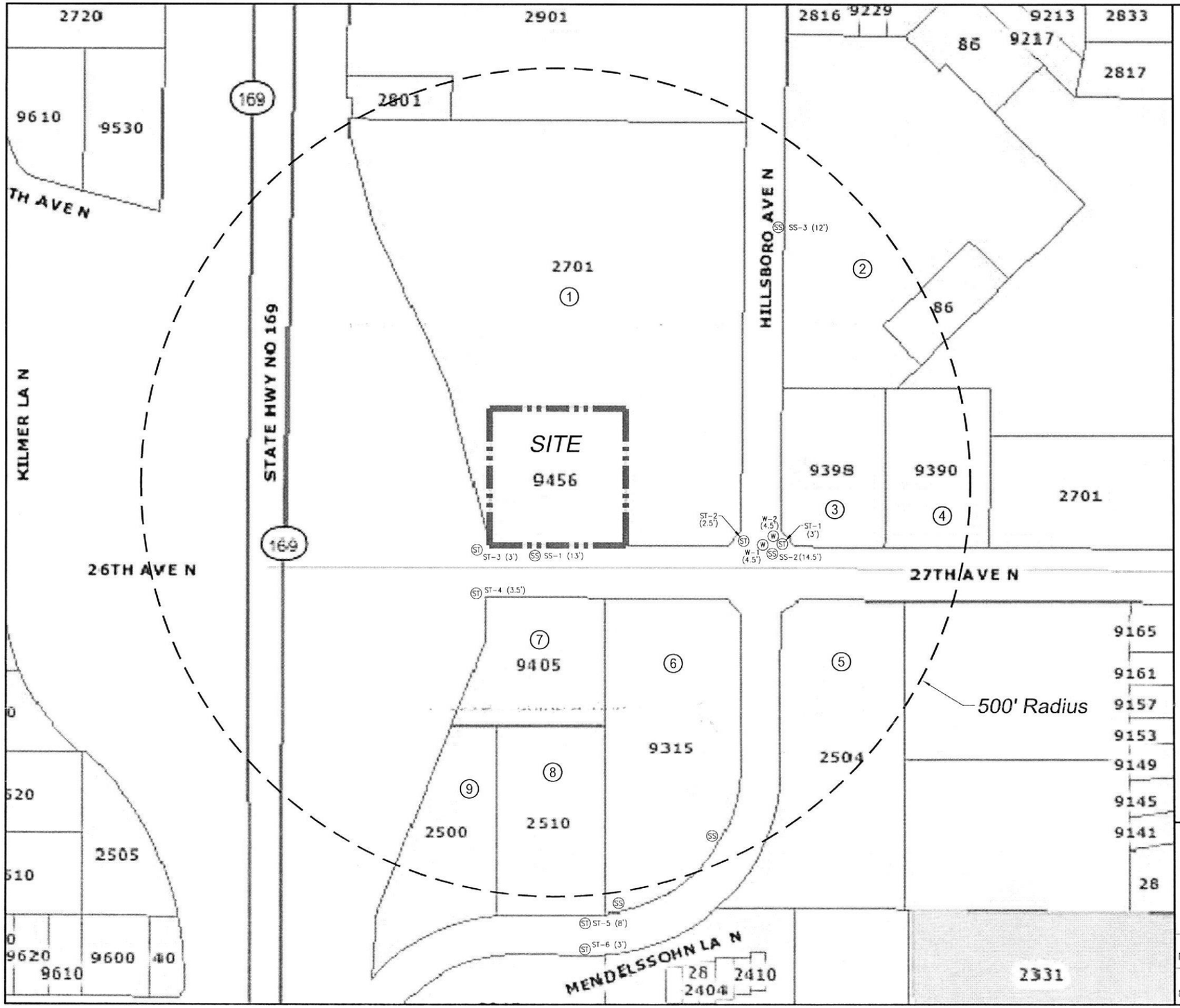

FIGURE 3
500–FOOT POTENTIAL RECEPTOR MAP
HOLIDAY #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/5/10		4827–PRM

DELTA®

L# 17908

Funk, Katherine (MPCA)

From: Matt Hobson [mhobson@deltaenv.com]
Sent: Wednesday, February 24, 2010 11:26 AM
To: Funk, Katherine (MPCA)
Cc: Bruce Anthony
Subject: Holiday/Former Sinclair Station, 9456 Medicine Lake Road, New Hope. Former Leak #2433 and 10868
Attachments: New Hope-1.pdf; SB-1_2.17.2010_pkg.pdf

Hello Katherine,

Per your request during our phone conversation Thursday February 18, I am providing analytical data and a site map for the above referenced site. You indicated you wanted to compare the current analytical data against the historic data for the site.

Please let me know if you need any additional information. We look forward to hearing from you.

Thanks,

Matthew R. Hobson | Project Manager | North American Operations
Delta Consultants, an Oranjewoud N.V. Company
Direct +1 651 697 5210 | Office +1.651.639.9449 | USA Toll Free 800 477 7411
GMT - 5:00
mhobson@deltaenv.com | www.deltaenv.com

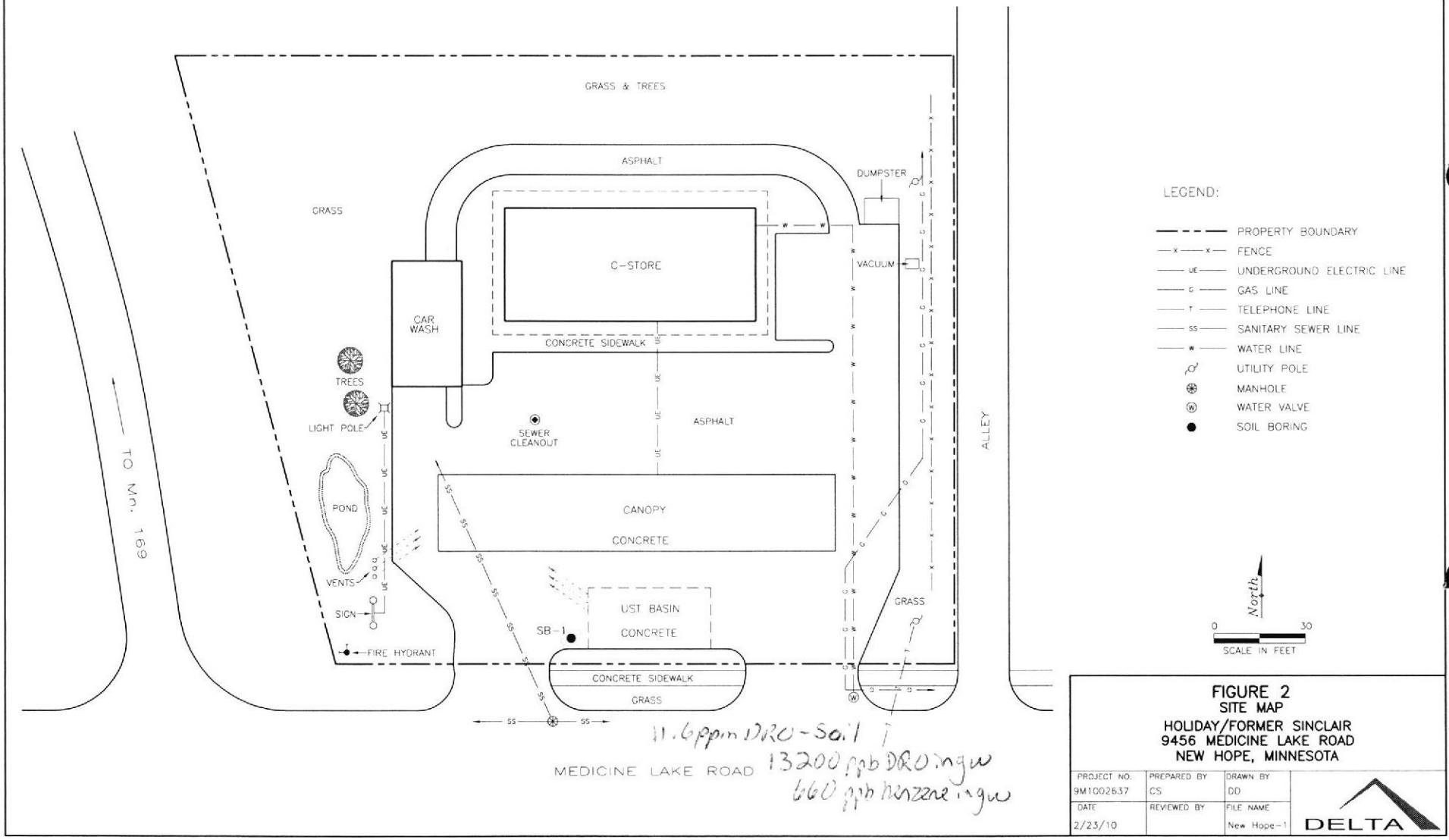

FIGURE 2
SITE MAP
HOLIDAY/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
9M10026.37	CS	DD
DATE	REVIEWED BY	FILE NAME
2/23/10		New Hope-1

DELTA

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

February 24, 2010

Mr. Matt Hobson
Delta Consultants
5910 Rice Creek Parkway
Saint Paul, MN 55126

RE: Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Dear Mr. Hobson:
Enclosed are the analytical results for sample(s) received by the laboratory on February 17, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne Trout

Carolynne Trout

carolynne.trout@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Minnesota Certification IDs
1700 Elm Street SE, Suite 200 Minneapolis, MN 55414
Alaska Certification #: UST-078
Washington Certification #: C754
Tennessee Certification #: 02818
Pennsylvania Certification #: 68-00563
Oregon Certification #: MN200001
North Dakota Certification #: R-036
North Carolina Certification #: 530
New York Certification #: 11647
New Jersey Certification #: MN-002
Montana Certification #: MT CERT0092
Minnesota Certification #: 027-053-137
Michigan DEQ Certification #: 9909
Maine Certification #: 2007029
Louisiana Certification #: LA080009
Louisiana Certification #: 03086
Kansas Certification #: E-10167
Iowa Certification #: 368
Illinois Certification #: 200011
Florida/NELAP Certification #: E87605
California Certification #: 01155CA
Arizona Certification #: AZ-0014
Wisconsin Certification #: 999407970

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10122561001	SB-1-12'	Solid	02/17/10 11:15	02/17/10 16:15
10122561002	SB-1	Water	02/17/10 11:30	02/17/10 16:15
10122561003	MeOH Blank	Solid		02/17/10 16:15
10122561004	Trip Blank	Water		02/17/10 16:15

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10122561001	SB-1-12'	WI MOD DRO	JLR	2
		WI MOD GRO	MJH	6
		% Moisture	JDL	1
10122561002	SB-1	WI MOD DRO	JLR	2
		WI MOD GRO	MJH	6
10122561003	MeOH Blank	WI MOD GRO	MJH	6
10122561004	Trip Blank	WI MOD GRO	MJH	6

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(612)607-1700

ANALYTICAL RESULTS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Sample: SB-1-12' **Lab ID: 10122561001** Collected: 02/17/10 11:15 Received: 02/17/10 16:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**11.6**	mg/kg	9.6	1	02/18/10 14:38	02/18/10 21:53		T7
n-Triacontane (S)	79	%	50-150	1	02/18/10 14:38	02/18/10 21:53		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.065	1	02/18/10 00:00	02/19/10 13:20	71-43-2	
Ethylbenzene	**1.4**	mg/kg	0.065	1	02/18/10 00:00	02/19/10 13:20	100-41-4	
Gasoline Range Organics	**129**	mg/kg	6.5	1	02/18/10 00:00	02/19/10 13:20		
Toluene	**0.074**	mg/kg	0.065	1	02/18/10 00:00	02/19/10 13:20	108-88-3	
Xylene (Total)	**3.4**	mg/kg	0.19	1	02/18/10 00:00	02/19/10 13:20	1330-20-7	
a,a,a-Trifluorotoluene (S)	115	%	80-125	1	02/18/10 00:00	02/19/10 13:20	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**19.9**	%	0.10	1		02/19/10 00:00		

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ANALYTICAL RESULTS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Sample: SB-1 **Lab ID: 10122561002** Collected: 02/17/10 11:30 Received: 02/17/10 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**13.2**	mg/L	1.0	10	02/18/10 14:39	02/19/10 08:45		P8,T7
n-Triacontane (S)	0	%	50-150	10	02/18/10 14:39	02/19/10 08:45		S4
WIGRO GCV	Analytical Method: WI MOD GRO							
Benzene	**660**	ug/L	20.0	20		02/18/10 23:49	71-43-2	
Ethylbenzene	**2070**	ug/L	20.0	20		02/18/10 23:49	100-41-4	
Gasoline Range Organics	**34500**	ug/L	2000	20		02/18/10 23:49		
Toluene	**345**	ug/L	20.0	20		02/18/10 23:49	108-88-3	
Xylene (Total)	**7140**	ug/L	60.0	20		02/18/10 23:49	1330-20-7	
a,a,a-Trifluorotoluene (S)	105	%	80-125	20		02/18/10 23:49	98-08-8	

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1150

10122541

Page: 1 of 1

1347541

Section A Required Client Information:

Company: Delta Consultants
Address: 5910 RiceCreek Pkwy
Shoreview MN 55311
Email To: Mhobson@deltaenv.com
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Matt Hobson
Copy To:
Purchase Order No.:
Project Name: Holiday Stn - New Hope
Project Number: 9M1002637

Section C Invoice Information:

Attention: Matt Hobson
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MN

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX/GRO	DRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-1-12'	SL	G			2-17-10	11:15		5	3						2		X	X		001
2	SB-1	WT	G			2-17-10	11:30		5				5					X	X		002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Cheryl Sorensen / Delta	2-17-10	14:30	Shannon Jones / Pace	2-17-10	1552				
	Shannon Jones / Pace	2-17-10	1615	Shannon Jones / Pace	2-17-10	1615	1.9°c	Y	Y	Y

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ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cheryl Sorensen
SIGNATURE of SAMPLER: Cheryl Sorensen
DATE Signed (MM/DD/YY): 2-17-10

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical

Client Name: Delta Project # 10122561

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals Intact: ☒ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ☒ No ☐

Thermometer Used 80344042 or 119425 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.9°C Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C Comments:

Date and initials of person examining contents: SB 2-17-10

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI DRO (water)	☒Yes ☐No	Initial when completed SB / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☒No ☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☒No ☐N/A	15.
Trip Blank Present:	☒Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☒Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 120709-3(s) 070907-3(w)		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 2/18/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

F-L213Rev.00, 05Aug2009

Pace Analytical Services, Inc.
1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

August 19, 2010

Mr. Andrew Eddy
Petroleum Remediation Section
Remediation Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

DELTA

Subject: **Limited Site Investigation Report**
Holiday Service Station #411/Former Sinclair SS#22024
9456 Medicine Lake Road
New Hope, Minnesota
MPCA Site ID: LEAK00017908
Delta Project No. NAA1004827

Dear Mr. Eddy:

Enclosed is the Limited Site Investigation Report summarizing field activities and data collected for a Limited Site Investigation completed in July 2010. Based on the results of the investigation, no additional work appears to be warranted at this site.

If you have any questions regarding this information or the project in general, please contact me at 651-697-5210.

Sincerely,

DELTA CONSULTANTS

Matthew R. Hobson, P.G.
Project Manager

Enclosure – Limited Site Investigation Report

cc: Mr. Bruce Anthony, Holiday Companies

AUG 24 2010

a member of: Inogen Environmental Alliance

5910 Rice Creek Parkway Suite 100 St. Paul, Minnesota 55126 USA
Phone +1 651.639.9449 / USA Toll Free 800.477.7411
Fax +1 651.639.9473 www.deltaenv.com

Minnesota Pollution Control Agency

Investigation Report Form

Guidance Document 4-06

Complete this form to document site investigation activities, including Limited Site Investigations (LSIs) and Remedial Investigations (RIs). Do not revise or delete any text or questions from this report form. Include any additional information that is important for making a site management decision. If only an LSI is necessary, some questions do not need to be answered and have been identified in the form. Highlighted text contains instructions and references to related guidance documents for that section or question. Refer to Minnesota Pollution Control Agency (MPCA) Guidance Document 1-01 *Petroleum Remediation Program General Policy* for the overall site investigation objectives and to other MPCA guidance documents for details on investigation requirements and methods.

MPCA Site ID: Leak000 17908 Date: August 19, 2010

Responsible Party Information

Name: Holiday Companies Phone #:

Mailing Address: 4567 American Boulevard West

City: Bloomington Zip Code: 55438

Alternate Contact (if any) for Responsible Party: Mr. Bruce Anthony Phone #: 952.830.8899

Leak Site Information

Leak Site Name: Holiday Station 411/Former Sinclair Station #22024 Phone #: 763-546-1922

Leak Site Address: 9456 Medicine Lake Road

City: New Hope Zip Code: 55427 County: Hennepin

Environmental Professional Information

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leak site. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in a reduction in Petrofund reimbursement. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leak site that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 (2007) or Minn. R. 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

MPCA staff are instructed to reject unsigned reports and reports that have been altered.

Name and Title of Report Author(s)	Signature	Date Signed
Nancy Rodning, Project Scientist	Tara Duffy for	8-19-2010

Name and Title of Report Reviewer(s)	Signature	Date Signed
Matt Hobson, Project Manager		8.19.2010

Name(s) of Field Technician(s): Nancy Rodning

Company and Mailing Address: Delta Consultants
5910 Rice Creek Parkway, Suite 100
Shoreview, MN 55126

Project Manager E-mail Address: mhobson@deltaenv.com

Phone: 651-639-9449

Fax: 651-639-9473

Emergency and High Priority Sites

A. Is an existing drinking water well impacted or likely to be impacted within a two-year travel time? ☐ *Yes* ☒ *No*

B. Is a hydrogeologically sensitive aquifer impacted that is tapped by water wells that are within 500 feet from the release source? **If *YES***, explain below. ☐ *Yes* ☒ *No*

C. Has the public water supply risk assessment concluded that the site is a high priority site with respect to a public water supply well (see Guidance Document 4-18 *Public Water Supply Risk Assessment at Petroleum Remediation Sites*)? ☐ *Yes* ☒ *No*

D. Is there an existing surface water impact as indicated by 1) a petroleum sheen on the surface water or 2) a petroleum sheen or volatile organic compounds in the part per million range observed in a ground water sample collected close to the surface water? ☐ *Yes* ☒ *No*

E. Has free product been detected at the site? **If *YES***, attach Guidance Document 2-03 *Free Product Recovery Report Worksheet* in Section 6. ☐ *Yes* ☒ *No*

F. Are there any existing field-detectable vapor impacts (photoionization detector, explosimeter, odors, etc.) to a receptor? ☐ *Yes* ☒ *No*

G. Did the vapor intrusion assessment detect contaminants in excess of acute intrusion screening values (see Guidance Document 4-01a *Vapor Intrusion Assessments Performed during Site Investigations*)? ☐ *Yes* ☒ *No*

If you answered ***YES*** to any of questions A through G above, describe below the actions taken to date to reduce or eliminate the risk posed by the release.

Section 1: Site Assessment

Site and Release Information

Complete Guidance Document 1-03a *Spatial Data Reporting Form*, Guidance Document 2-05 *Release Information Worksheet* if 3-02 *General Excavation Report Worksheet* was not completed, and include in Section 6.

1.1 Describe the land use and pertinent geographic features (e.g., topographic changes, surface waters, etc.) within 1,000 feet of the site. Illustrate these features using the Site Location Map, aerial photographs, and Sanborn Fire Insurance Maps™ for the various time periods they are available in Section 4.

Holiday Station 411/Former Sinclair Station #22024 (the subject site) is located at the northeast corner of Medicine Lake Road and Highway 169 (see **Figure 1, *Site Location Map***). The site is located at UTM Easting -93.3992 and Northing 45.0078 (see MPCA Guidance Document 1-03a, *Spatial Data Report Form* included in **Appendix B**). The Highway 169 corridor located adjacent to and west of the subject site is approximately 160 feet wide (at Medicine Lake Road) and is approximately 20 feet lower in elevation than the site. The land surface elevation at the site is approximately 940 feet above mean sea level (msl). The natural land surface within 1,000 feet of the site slopes down to the south and west. An intermittent stream is located west of the Highway 169 corridor, approximately 875 feet west of the subject site. The intermittent stream extends between an unnamed wetland to the north and Medicine Lake, which is located approximately 1,900 feet to the southwest of the subject site. The elevation of Medicine Lake is approximately 890 feet msl.

Properties west of the Highway 169 corridor are residential. Properties adjacent to the north and east of the subject site are residential apartments. Commercial businesses are located to the south, including the Winner Gas & Wash on the south-adjoining property across Medicine Lake Road. A 2009 aerial photograph of the site and surrounding area obtained from the Hennepin County website is included as **Figure 2, *Aerial Photo of Site and Surrounding Area***. The addresses and uses of properties located within 500 feet of the site are depicted on **Figure 3, *500-Foot Potential Receptor Map.***

A search of the Hennepin County Library's website for historical Sanborn Fire Insurance Maps™ indicates that map coverage is not available for the site or surrounding area. An aerial photograph for the year 1947 was downloaded from the Minnesota DNR website (www.dnr.state.mn.us/maps/landview.html). The 1947 photograph shows the area of the subject property was a farmstead surrounded by cropland. Aerial photographs for the years 1991, 2004 and 2006 were downloaded from the Minnesota NorthStar Mapper (http://geoserver.state.mn.us/northmap/). The 1991 and 2004 photographs show the former layout of the site before a 2005 renovation, including a previous station building and pump islands. The current station building and pump canopy is visible in the 2006 photograph. Copies of the aerial photographs are included in **Appendix N**.

1.2 Briefly describe the history of the site and any past site investigation work that may have been completed. If a Phase I or Phase II report has been prepared for this site, include a copy in Section 6.

Two petroleum releases at the site have been reported to the MPCA, both under the name Sinclair Retail: LEAK #2433 was a release of leaded gasoline discovered and reported in April 1990; and, LEAK #10868 was an unleaded gasoline release discovered and reported in October 1997. Delta reviewed the MPCA files for both LEAK numbers. Based on information and data contained in the LEAK files, the subject site was agricultural farmland until construction of a retail gas station in approximately 1964. The Hennepin County property information website also lists a 1964 date 'build year' for the subject site.

Six underground storage tanks (USTs) were installed in 1964. Four 6,000-gallon gasoline USTs were installed within one tank basin, and the following each were in their own separate tank basins: a 560-gallon waste oil tank, and a 1,000-gallon fuel oil tank. These latter two USTs, and one of the 6,000-gallon gasoline USTs, were removed in April 1990 because they were no longer in use. The locations of the former USTs, dispenser islands and station building are shown on **Figure 4, *Site Map***. A petroleum release was discovered at the time of tank removals, and the release was assigned LEAK #2433. The *UST Excavation Report, Sinclair Service Station* dated August 10, 1990, prepared by EnecoTech Midwest, Inc. (EnecoTech) indicates the following with regard to the three USTs that were removed:

- The bottom third of the 6,000-gallon gasoline UST was moderately corroded and had several one-inch indentations that did not breach the tank wall. Field screening of tank basin soils with an organic vapor monitor (OVM) detected up to 382 parts-per-million (ppm) organic vapors. Approximately 100 cubic yards of impacted soil was removed from the tank basin of the 6,000-gallon gasoline UST, and not all of the impacted soil was removed from the basin due to the proximity of adjacent remaining USTs and underground utilities.
- The 560-gallon waste oil UST was not corroded or pitted. Field screening of tank basin soils with an OVM detected up to 142.1 ppm organic vapors. Approximately 50 cubic yards of impacted soil was removed from the tank basin of the 560-gallon waste oil UST, and not all of the impacted soil was removed from the basin due to the presence of the gasoline UST basin, the station building, and the pump islands.
- A 1/8-inch diameter hole was observed in the bottom of the 1,000-gallon fuel oil UST, but no indications of a release were found in the basin of the 1,000-gallon fuel oil UST. Soil removed during tank excavation was returned to the basin.

Subsequent remedial investigation activities by EnecoTech in 1990 and 1991 were summarized in a *Remedial Investigation/Corrective Action Design Report, Sinclair Station* dated February 5, 1992. Nine soil borings, two of which were completed as monitoring wells MW-1 and MW-2, were advanced at the site. Soil impacts were identified on the southern third of the subject site, and the eastern and northern extent of soil impacts was defined. The depths to groundwater measured at the two monitoring wells were approximately 43 feet below grade surface (bgs) at MW-1, and 10 feet to 16 feet bgs at MW-2. Only relatively low detections of total petroleum hydrocarbons (TPH) as gasoline and as fuel oil were detected in groundwater at MW-1, which was located northeast of the former station building and north of the area of soil impacts. Concentrations of benzene, toluene, ethylbenzene, and xylene (BTEX, collectively), and higher concentrations of TPH as gasoline and fuel oil than detected at MW-1 were detected in groundwater samples collected from MW-2, which was

located near the southeast corner of the subject site. At the request of the MPCA, a third round of groundwater samples were collected from MW-1 and MW-2, in March 1993. Similar contaminant concentrations were found in the groundwater at MW-2, and no petroleum contaminant concentrations were detected at MW-1. The MPCA issued a closure letter for LEAK #2433 in March 1995.

In October 1997 a product line was punctured while a contractor was doing an evaluation of the tank system for corrosion upgrade. An estimated five to twenty gallons of gasoline was released. The release was reported to the State and assigned LEAK #10868. Two soil borings were advanced in the immediate area of the release for the collection of soil and groundwater samples. Soil and groundwater impacts were identified but were presumed to be associated with LEAK #2433. The MPCA closed LEAK #10868 in 1999.

The other three circa 1964 6,000-gallon gasoline USTs were removed in September 2005, along with the pump islands and two hydraulic hoists. A petroleum release was identified during tank removal, and LEAK #10868 was re-opened. An *Excavation Report* dated November 14, 2005, prepared by Peer Engineering, Inc. indicated evidence of petroleum contamination around the former dispensers, but there was reportedly no evidence of a release around the hydraulic lifts. The three USTs were in good condition, with no holes or significant rust. The 2005 Excavation Report pointed to the previous release as the source of identified impacts. Two new 12,000-gallon gasoline USTs and new dispensers were installed in October 2005 in a new tank basin along the south property boundary. Contaminated soil was also encountered during excavations of the new tank basin, the footings for a new canopy, and in trenches for the new fuel piping. A total of 645 cubic yards of impacted soil was removed from the former tank basin, the new tank basin, and areas excavated for new canopy footings and new product pipe trenches. Eight soil borings and five soil vapor probes were advanced across the site in September 2006 as part of the remedial investigation. Groundwater samples were not collected. Soil impacts were again identified across the southern third of the site. Elevated soil vapors were also identified, including one soil vapor probe (SB-6V) located east of the former UST basin where 42 ug/m^3 benzene was detected. Vapor monitoring at manholes along a sanitary sewer line on the south side of the site in February 2007 did not identify any volatile organic vapors. The MPCA closed LEAK #10868 in February 2007.

1.3 List other potential petroleum sources within 500 feet of the site and identify them on the Potential Receptor Map in Section 4.

Based on Delta's review of the LEAK files for the subject site, the south-adjoining gas station is a historical leaksite.

- Mobil Medicine Lake Service, 9405 Medicine Lake Road. LEAK #183 was reported in December 1986 during removal of a 1,000-gallon diesel UST. Fifty cubic yards of impacted soil was removed from the UST basin. A remedial investigation identified soil impacts on the west side of the dispenser islands. Groundwater samples collected from three monitoring wells located along the west and north sides of the property were non-detect for petroleum contaminants, including MW-9 which was located between the subject site and the area of release on the Mobil property. The groundwater flow direction inferred from water table elevation data collected at the three wells was to the southwest. The leaksite file was closed in 1993. The site remains an active gas station.

According to the MPCA's *What's In My Neighborhood*, the below-listed tank and petroleum release sites are located within 500 feet of the site. The sites or site addresses are shown on **Figure 3.**

- Hillsboro Court Apartments, 2731 Hillsboro Avenue, are located adjacent to and east and north of the subject site. LEAK #6312 was a fuel oil release reported in May 1993, apparently during removal of an 8,000-gallon fuel oil UST. A reported 139 tons of impacted soil was removed. Groundwater impacts were identified. The leaksite file was closed in 2001. No active tanks are registered to this site.
- The Presidential Estates II, 2800 Hillsboro Avenue, is located approximately 350 feet northeast of the subject site. LEAK #5577 was a release of fuel oil reported in August 1992. No groundwater contamination was reported, and 23 tons of impacted soil were removed. The leaksite file was closed in December 1993 with contaminated soils remaining. An active 280-gallon fuel oil tank is registered to this site.
- Verizon Wireless – Gv Switch, 2510 Mendelsohn Avenue North, is located approximately 300 feet south of the subject site. A 4,000-gallon diesel above-ground storage tank (AST) is registered to the site. No leaks are reported for this site.
- The Burgundy Apartments, 2901 Hillsboro Avenue, are located approximately 550 feet north of the subject site. LEAK #3768 was a fuel oil release reported in January 1991, when 4,000-gallon and 12,000-gallon fuel oil USTs were removed. No groundwater contamination was reported, and 175 tons of impacted soil were removed. The leaksite file was closed in October 1991 with no contaminated soils reportedly remaining on site.

1.4 Describe the status of the tank system(s) including current and former tanks, piping, and dispensers. Summarize the status and characteristics of all past and present tanks in Table 1 and identify all components on a Site Map.

According to Delta's review of the leaksite files for LEAK #2433 and #10868, the following historical tanks and dispensers were located at the subject site:

- One 1,000-gallon fuel oil UST was installed in 1964 and removed in 1990. The fuel oil UST was located north of the former service station building and fuel oil was presumably piped into the building.
- One 560-gallon waste oil UST was installed in 1964 and removed in 1990. The waste oil UST was located adjacent to and south of the former service station building.
- Four 6,000-gallon gasoline USTs were installed 1964. One of the gasoline USTs was removed in 1990, and the other three were removed in 2005. The former UST basin was located near the southeast corner of the subject site. The associated dispenser islands were located west of this UST basin.
- Two 12,000-gallon gasoline USTs were installed in 2005 in the current UST basin near the south property line. The existing dispensers and piping were also installed in 2005.

Current and historic locations of USTs, dispensers and service station buildings are shown on **Figure 4, *Site Map***. UST information is summarized on **Table 1**.

1.5 Briefly describe the known or suspected source(s) of the release and how it was discovered.

It appears the former gasoline USTs, dispensers, and likely the product piping between the tanks and dispensers, associated with LEAK #10868 is the source of the release at the site.

Based on the detections of DRO in the soil and groundwater, the former fuel oil UST or waste oil UST may also have leaked. Impacted soils and groundwater were again encountered while drilling soil boring SB-1 in February 2010.

1.6 When did the release occur (if known)?

Prior to 2005, when the gasoline USTs and dispensers that were installed in 1964 were used.

1.7 What was the volume and type(s) of petroleum product released (if known)? Unknown
gallons Released product type(s):

When a tank has been excavated, refer to Guidance Documents 3-01 *Excavation of Petroleum Contaminated Soil and Tank Removal Sampling* and 3-02 *General Excavation Report Worksheet* for reporting requirements. If a tank has been excavated or if contaminated soil was removed for off-site treatment prior to this investigation, include Guidance Document 3-02 in Section 6.

1.8 Was soil excavated for off-site treatment? ☐ *Yes* ☐ *No* Not Applicable

Date(s) soil was excavated: Total volume removed: cubic yards

Volume of total soil removed that was petroleum saturated: cubic yards

Soil treatment method:
☐ Land treatment
☐ Thermal treatment
☐ Composting/Biopiling
☐ Other ( )
Name and location of treatment facility:

If you checked "Other", describe how the soil was treated and attach applicable documentation at the end of the reporting form.

Site-Specific Geology and Hydrogeology

1.9 Discuss the soil borings drilled and provide rationale for their locations. Include boring logs in Section 6. Boring logs must include all the information required in Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations*.

Delta advanced a total of seven soil borings (SB-1 through SB-7) via push probe drilling at the subject site. Boring SB-1 was advanced on February 17, 2010, for the purpose of identifying potential soil and/or groundwater impacts. Borings SB-2 through SB-7 were advanced on July 15, 2010 for the purpose of defining the extent of soil and groundwater impacts at the site. The borings were advanced at locations and to depths as described below:

- SB-1 was advanced adjacent to the southwest corner of the current UST basin to a depth of 16 feet, which was 4 feet past the water table.
- SB-2 was advanced north of the west end of the dispenser area to a depth of 20 feet, which was 7 feet past the water table as defined by wet soils during drilling. No stained

soils or other evidence of impacted soils was observed in soil samples collected from SB-2, however, the PID malfunctioned and headspace readings were not taken.

- SB-3 was advanced west of the dispenser islands to a depth of 28 feet, which was 20 feet past the water table, in order to define the site stratigraphy. No elevated PID readings or other evidence of impacts was observed in soil samples from SB-3.
- SB-4 was advanced north of the east end of the dispenser area to a depth of 20 feet, which was 11 feet past gray soils observed at the water table. No elevated PID readings were recorded by field headspace analysis. The soil color turned gray at a wet sand seam at approximately 9.2 feet below grade.
- SB-5 was advanced east of the dispenser islands to a depth of 20 feet, which was 10 feet beyond the deepest contaminated soil interval measured via headspace analysis.
- SB-6 was advanced adjacent east of the current UST basin and south of the pump islands, to a depth of 32 feet, which was 12 feet beyond the deepest contaminated soil interval measured via headspace analysis.
- SB-7 was advanced adjacent to SB-1 in order to define the vertical extent of soil impacts in the area of SB-1. SB-7 was advanced to a depth of 29 feet, where drill refusal was experienced. A soil sample collected at the bottom of the boring exhibited elevated PID readings.

Soil boring logs are included as **Appendix E**. Boring locations are depicted on **Figure 5, *Sample Location Map***.

1.10 Indicate the locations and depths of soil samples submitted for grain size analysis.

Soil samples were inadvertently not submitted for grain size analysis.

1.11 Discuss in detail the site geology based on soil boring data, grain size analyses, cross sections, geologic logs of nearby water wells, and available published information. Include detailed descriptions of more porous lenses or stringers within tighter soil types.

According to the *Geologic Atlas, Hennepin County, Minnesota, County Atlas Series C-4*, published by the Minnesota Geological Survey in 1989, the surficial geology in the area of the subject site is comprised of loamy till, and the top of bedrock elevation is 750 feet msl, or approximately 200 feet bgs. The uppermost bedrock unit is the St. Peter sandstone.

The closest wells to the subject site registered with the State County Well Index are Unique Well Nos. 204372, 204375 and 204376, all located less than 1,000 feet to the west and southwest, with surface elevations ranging from 925 to 930 feet msl. All three well logs list clay/hardpan to depths of 40 to 42 feet bgs, then the geology varies on each log. The log for well no. 204372 lists muddy sand from 42 to 70 feet bgs, and water sand from 70 to 87 feet bgs. Well log no. 204735 lists hardpan below the clay, from 65 to 86 feet bgs, and water sand from 86 to 93 feet bgs. Well log no. 204376 lists clay gravel from 40 to 135 feet bgs, and sandstone at 135 feet bgs. The varying geology between these well logs, and numerous other well logs in the area, are indicative of unstratified drift.

Borings SB-1 through SB-7 were advanced at the subject site to depths ranging from 16 to 32 feet bgs as part of this LSI. Soils encountered are generally as follows: approximately 2 feet of fill over 12 to 18 feet of tan sandy clay over gray stiff (dense) clay. There were varying discontinuous lenses and/or seams of silty clay, sandy silt, sand and clayey sand throughout

the upper tan sandy clay unit; it is in these lenses that groundwater was encountered, and the static water generally rose to a level of 5.6 feet to 8.75 feet bgs. The underlying dense gray clay unit was relatively dry and presumably acts as an aquitard between the perched groundwater encountered during this LSI and the regional sandy aquifer below the clay. Geologic cross sections based on soils encountered in borings SB-1 through SB-7 are included as **Figures 6A and 6B, *Geologic Cross Sections A-A'*** and ***B-B'***. A cross section location map is included as **Figure 6, *Soil Lab Data and Cross Section Location Map***. The static water levels are depicted on **Figures 6A and 6B**.

Based on geologic cross sections included in reports for LEAK nos. 2433 and 10868, a sand unit underlies the gray dense clay unit starting at an approximate depth of 41 feet bgs, which agrees with the geology listed on the well logs for Unique Well Nos. 204372, 204375 and 204376.

1.12 Discuss in detail the local and regional hydrogeology based geologic logs of nearby water wells and available published information.

According to the *Geologic Atlas, Hennepin County, Minnesota, County Atlas Series C-4*, published by the Minnesota Geological Survey in 1989, the regional water table in the quaternary deposits aquifer in the area of the site is at an approximate elevation of 880 to 890 feet msl, or approximately 50 to 60 feet bgs.

The static water level recorded on Unique Well Nos. 204372, 204375 and 204376 is 50 feet bgs, measured in the late 1960s.

Groundwater was encountered in SB-2 through SB-7 at depths ranging from 6 to 9 feet bgs, within sand or clayey sand seams. While drill probes were removed and temporary wells installed into the boreholes, static water levels were attained, which ranged from 5.6 to 8.75 feet bgs. The gray dense clay unit encountered at depths ranging from 16 to 21 feet bgs was relatively dry. As indicated in Section 1.11, this gray clay unit continues to a depth of approximately 41 feet bgs where a sand unit was encountered during previous investigations at the site. Thus, 20 to 25 feet of dense clay aquitard separate the perched water table encountered at the site during this LSI from the regional water table below.

1.13 Discuss site ground water flow direction using soil boring data, monitoring well data if collected, plume geometry, and available published information.

According to the *Geologic Atlas, Hennepin County, Minnesota, County Atlas Series C-4*, the regional groundwater flow direction in the quaternary deposits aquifer in the area of the subject site is to the east-northeast, toward the Mississippi River.

As presented in Section 1.3, three groundwater monitoring wells were located at the south-adjoining leaksite Mobil Medicine Lake Service in the late 1980s. While a quarterly monitoring report indicates a southwesterly groundwater flow direction in January, April and July of 1989, hand-written notes in the margins of the report indicate the differences in water table elevations (ranging from 55 feet to 64 feet to 84 feet) may not have been indicative of the same geologic unit.

Water levels measured in SB-1 through SB-7 are not adequate upon which to base a groundwater flow direction. Monitoring wells were not installed at the site.

Based on the topography in the area of the site, and the pattern of groundwater contaminant concentrations in relation to the former gasoline and waste oil tank basins, the inferred groundwater flow direction in the shallow water table is to the south or southwest.

1.14 Describe any evidence of a fluctuating water table or a seasonal high water table (e.g., mottling, saturated soil color or gleyed soils, monitoring well observations). Also, from other sources of information describe the range of natural water table fluctuations in the area.

Orange or rust colored mottling was observed in the in the following borings: in the silty clay from 2 to 6 feet bgs in SB-2, which was approximately 2 feet above the water table; in sandy clay from 2 to 8 feet bgs, just above the water table, in SB-3; in sandy clay just above the water table from 2.5 to 4 feet bgs in SB-4; and, in sandy clay just above the water table from 2 to 6 feet bgs in SB-6. No other information regarding natural water table fluctuations in the area was found.

Extent and Magnitude of Soil Contamination

1.15 Were soil borings conducted in or adjacent to the following source areas?

Dispensers	☒ *yes* ☐ *no* ☐ *not present*	Piping	☒ *yes* ☐ *no* ☐ *not present*
Transfer areas	☐ *yes* ☐ *no* ☒ *not present*	Remote fill pipes	☐ *yes* ☐ *no* ☒ *not present*
UST basins	☒ *yes* ☐ *no* ☐ *not present*	Valves	☐ *yes* ☐ *no* ☒ *not present*
AST basins	☐ *yes* ☐ *no* ☒ *not present*	Known spill areas	☒ *yes* ☐ *no* ☐ *not present*

1.16 Horizontal Definition: Based on requirements described in Guidance Document 4-01, were a sufficient number of soil borings completed to define the horizontal extent of soil contamination in all directions? ☐ *Yes* ☒ *No*

1.17 Vertical Definition: Based on requirements described in Guidance Document 4-01, were all soil borings completed to the required depth? ☐ *Yes* ☒ *No*

1.18 Site Stratigraphy: Based on requirements described in Guidance Document 4-01, was the stratigraphy boring completed to the required depth? ☒ *Yes* ☐ *No*

If you answered ***NO*** to any of the four previous questions, explain why the borings were not conducted in the required locations or to the required depths. See Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations* regarding exceptions and MPCA approval for depth of drilling.

Soil borings SB-1, SB-6 and SB-7 were advanced near the southern site property boundary. Impacted soils were detected at SB-6 and SB-7. The extent of soil impacts was not defined off-site in a southerly direction. However, as presented in Section 1.3, no impacts were detected in groundwater samples collected from the northern-most monitoring well (MW-9) at the south-adjoining Mobil leaksite, and no impacts were found in soil samples collected from adjacent soil boring B-3 at the Mobil site. Therefore, it appears that soil impacts end at a point beneath Medicine Lake Road between the subject site and the south-adjoining

property. The north, northwest and northeast extent of soil impacts has been defined. The previous site investigation conducted as part of LEAK #10868 advanced two soil borings (S-6 and SB-07) in 1991 to the east of the subject site to define the eastern extent of soil impacts. The western extent of soil impacts toward Highway 169 has not been defined.

Soil boring SB-1 was not advanced ten feet past field-measured soil impacts because the purpose of this boring was to test for the presence of impacts. Boring SB-7 was later advanced within three feet of SB-1.

Soil boring SB-7 was not advanced ten feet past field-measured soil impacts due to drilling refusal at 29 feet bgs. The field headspace reading at this depth was 78 ppm.

1.19 Describe the vertical and horizontal extent and magnitude of soil contamination based on field observations, soil headspace measurements (Table 2), and soil analytical results (Tables 3 and 4). If non-petroleum contaminants are present, discuss the possible sources of these compounds. Provide a map and two cross sections that illustrate both soil headspace and laboratory analytical results in Section 4. Include laboratory analytical reports and soil sampling methodology in Section 6.

Soil samples were collected continuously from soil borings SB-1 through SB-7. Soil descriptions were logged onto soil boring logs, which are included in **Appendix E**. Soil sampling and field screening methodologies are included in **Appendix G**.

Soil samples were field screened for headspace with a Thermo Environmental Model 580B PID equipped with a 10.6 eV lamp. PID readings were recorded onto the soil boring logs (**Appendix E**), and are summarized on **Table 2**. The PID frequently exhibited an "over range" reading for soil samples with high organic vapors, as noted by O.R. on the boring logs.

Soil samples for laboratory analysis were selected from the soil/water table interface, and from the depth with the highest PID reading. For soils at SB-2, SB-3 and SB-4, no field evidence of soil impacts was found, so only soil samples collected at the water table were submitted for laboratory analysis. For soils at SB-1, SB-5, and SB-7, the soil interval with the highest headspace PID reading was at the soil/water table interface, thus only these soil samples were submitted for laboratory analysis. Two soil samples from SB-6 were submitted for laboratory analysis, one from the soil/water table interface, and a deeper soil sample with the higher headspace PID reading. Soil samples were submitted for laboratory analysis of BTEX, MTBE and GRO by Wisconsin Modified GRO Method, and for DRO by Wisconsin Modified DRO Method.

Laboratory analytical results for soil samples collected during this LSI are described below:

- SB-1, 12 feet (PID reading 242 ppm): 0.074 mg/kg toluene, 1.4 mg/kg ethylbenzene, 3.4 mg/kg xylene, 129 mg/kg GRO, and 11.6 mg/kg DRO.
- SB-2, 8.5-9 feet (no PID reading): non-detect for all analytes.
- SB-3, 8-9 feet (PID reading non-detect): 18.6 mg/kg DRO.
- SB-4, 5.5-6 feet (PID reading non-detect): non-detect for all analytes.
- SB-5, 9-10 feet (PID reading 4347 ppm): non-detect for all analytes.
- SB-6, 6-7 feet (PID reading 30 ppm, water table sample): non-detect for all analytes.

- SB-6, 10-12 feet (PID reading 821 ppm, over range): 0.29 mg/kg benzene, 0.11 mg/kg toluene, 1.5 mg/kg ethylbenzene, 7.9 mg/kg xylene, 91.1 mg/kg GRO, and 44.9 mg/kg DRO.
- SB-7, 8.5-10 feet (PID reading 9150 ppm): 1.8 mg/kg benzene, 0.37 mg/kg toluene, 0.77 mg/kg ethylbenzene, 1.4 mg/kg xylene, 241 mg/kg GRO, and 19.1 mg/kg DRO.

Laboratory results are provided on **Table 3**. Laboratory reports are included as **Appendix F**. Headspace and laboratory analyses are depicted on Figures **6, 6A and 6B**.

Based on field observations, field headspace screening and soil analytical results, the area of impacted soils identified during this LSI coincides with the area defined during the remedial investigations for LEAK #2433 and LEAK #10868, which includes the area south of the former station building and extending to the east, west and south property boundaries. The eastern extent of soil impacts was defined during the investigation for LEAK #2433, by borings SB-06 and SB-07. As discussed under Section 1.18, data collected from soil boring B-3 and monitoring well MW-9 on the south-adjoining former Mobil leaksite identified no soil (or groundwater) impacts at the north property boundary of this site. Therefore, it appears that soil impacts end at a point beneath Medicine Lake Road between the subject site and the south-adjoining property.

1.20 Is contaminated soil in contact with ground water? ☒ *Yes* ☐ *No*

If *YES*, or if ground water contamination appears likely, then complete the **Aquifer Determination** section below.

If *NO*, complete question 1.21.

1.21 **a)** What is the distance separating the deepest contamination from the surface of the water table?

b) Was this distance measured during site activities, referenced from geologic information, or estimated based on professional opinion during a site visit?

c) In your judgment, is there a sufficient distance separating the petroleum contaminated soil from the underlying aquifer to prevent contamination of the aquifer? ☐ *Yes* ☐ *No*

Please explain in detail. In your explanation, consider the site-specific geology, the data in this section, and the nature of the petroleum release (i.e., volume, age, released product type).

If *YES*, the **Aquifer Determination** is not necessary as part of the LSI.

If *NO*, complete the **Aquifer Determination** section below.

1.22 Is contaminated surface soil (0-2 feet) present at the site? ☐ *Yes* ☒ *No*

If *YES*, delineate the extent of contaminated surface soil, identify the extent(s) of contaminated surface soil on a Site Map, and propose a corrective action in Section 3 to mitigate the impacts. If borings were used to define the extent, complete Table 5. See Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil and Tank Removal Sampling* for more information regarding contaminated surface soil identification, delineation, and excavation.

Aquifer Determination

Complete this section if ground water has been contaminated or may become contaminated based on questions 1.20 and 1.21. Aquifer determination is made during the LSI. It is based upon the stratigraphy and a hydraulic conductivity measurement calculated from grain size analyses. The site stratigraphy gives the context within which the hydraulic conductivity measurement can be interpreted. Please refer to Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations* for methods and requirements. Provide the results of grain size analyses, calculations, and other information used for the determination of hydraulic conductivity in Section 6. Determine the aquifer thickness (b) from geologic logs of soil borings, water well logs, and available published information.

1.23 Calculate an average hydraulic conductivity value (K). K = 0.028 ft/day

Indicate the calculation method (e.g. Hazen, Masch and Denny, Kozeny-Carmen, etc.).

Groundwater was encountered in discontinuous sand and clayey sand seams within the upper sandy clay unit at the subject site. The average hydraulic conductivity listed above is an average for sandy clay.

Based on Table 2.2, "Range of Values of Hydraulic Conductivity and Permeability," Freeze & Cherry, 1979, the hydraulic conductivity for sand ranges from approximately 10^{-5} to 10^{-3} meters/second, which is equivalent to 2.8 to 283.4 feet/day, and the hydraulic conductivity for clayey sand ranges from approximately 10^{-6} to 10^{-5} meters/second, which is equivalent to 0.28 to 2.8 feet/day. Thus the range of hydraulic conductivity for the soil seams in which groundwater was encountered at the subject site range from approximately 0.28 to 283.4 feet/day.

The sand and clayey sand seams are present within a sandy clay unit. Based on Table 2.2 of Freeze & Cherry, the high end range of hydraulic conductivity for sandy clay (glacial till) ranges from approximately 10^{-8} to 10^{-6} meters/second, which is equivalent to 0.0028 0.28 feet/day.

1.24 Calculate a range for aquifer transmissivity (T) using the equation T = Kb, where b is the thickness of the aquifer.

T_{High} = 4.3 ft^2/day
T_{Low} = 0.043 ft^2/day

A maximum thickness of the sandy clay unit of 15.4 feet was used for b, that is, the shallowest static depth of the water table (5.6 feet bgs) to the deepest depth at which the sandy clay unit was encountered (21 feet bgs). The high and low hydraulic conductivities for sandy clay were used in the calculation, that is, 0.28 and 0.0028 feet/day, respectively.

If the transmissivity of a contaminated hydrogeologic unit is greater than 50 ft^2/day, it is considered an aquifer for the purpose of the Petroleum Remediation Program. If the hydrogeologic unit meets the definition of an aquifer, then monitoring wells are required if any of the following conditions are met: 1) ground water is impacted at or above Minnesota Department of Health (MDH) Health Risk Limits (HRLs) or 1,000 µg/L GRO or DRO; 2) ground water is impacted below the HRLs but levels are likely to reach the HRLs; or 3) there is an insufficient distance separating the petroleum contaminated soil (or an impacted non-aquifer) from an underlying aquifer. If monitoring wells were installed complete the **Aquifer Characterization** section below as part of an RI.

Groundwater monitoring wells were not installed during this LSI.

Aquifer Characterization

1.25 Discuss the drilling and installation of monitoring wells including the rationale for their locations. Summarize their construction in Table 9. Attach boring logs, well construction diagrams, and well logs in Section 6.

1.26 Is there a clean or nearly clean (below HRLs) downgradient monitoring well located along the longitudinal axis of the contaminant plume (approximately 20 degrees plus or minus the axis)? ☐ *Yes* ☐ *No*

1.27 Is there a worst case well completed through the source area(s) of the release? ☐ *Yes* ☐ *No*

If you answered ***NO*** to any of the above two questions, please explain why a well was not completed in the required location.

1.28 Provide an estimate of the longitudinal length of the dissolved contaminant plume: feet

1. 29 Calculate ground water flow velocity (based on Darcy's Law) using the average hydraulic conductivity (K), average horizontal hydraulic gradient (dh/dl), and effective porosity (n). Provide documentation and show calculations in Section 6.

Hydraulic conductivity (K) = ft/day
(Method if different than that used in 1.23:)
Porosity (n) = method/reference
Average horizontal gradient (dh/dl) = (unitless)
Calculated ground water velocity (v) = ft/day

1.30 Using the calculated ground water flow velocity from question 1.29, is there a receptor(s) located within a five-year travel time from the source area? ☐ *Yes* ☐ *No*

If *YES*, describe the location and type of receptor(s).

1.31 Were any deep monitoring wells completed at the site? ☐ *Yes* ☐ *No*

If *YES*, list them and indicate their depths:

Contact the MPCA project hydrologist before installing a deep monitoring well. A deep monitoring well **may** be necessary if: 1) contamination exists more than 10 feet below the water table or 2) the impacted aquifer is a drinking water aquifer or is hydraulically connected to the aquifer(s) presently used by a water supply well located within 500 feet of the release source.

If contamination is present at depth in the aquifer or in deeper aquifers, additional deep wells may be required. Provide the following information if deep wells were installed:

Vertical gradient (dv/dl)
Inferred ground water flow direction

Provide the following information for the deep aquifer unit if it appears to be hydrogeologically distinct from the upper unit.

Porosity (n):
Hydraulic conductivity (K) ft/day

Submit this RI report after completing a minimum of *two quarterly sampling events*. Quarterly ground water monitoring and sampling should continue until MPCA response is received.

Extent and Magnitude of Ground Water Contamination

1.32 Describe the extent and magnitude of ground water contamination based on the analytical results of samples collected as part of an LSI (Tables 6, 7, and 8) and, if applicable, monitoring well samples collected as part of an RI (Tables 10, 11, and 12). Provide Site Maps that illustrate both the laboratory analytical results and, if applicable, ground water gradients in Section 4.

A groundwater sample was collected from boring SB-1 on February 17, 2010, and samples were collected from borings SB-2 through SB-7 on July 15, 2010, via temporary wells in the soil borings. The groundwater sample collected from SB-1 was submitted for laboratory analysis of BTEX and GRO by Wisconsin Modified GRO Method, and DRO by Wisconsin Modified DRO Method. Groundwater samples collected from SB-2 through SB-7 were submitted for laboratory analysis of VOCs by Method 8260, GRO by Wisconsin Modified GRO Method, and DRO by Wisconsin Modified DRO Method. A duplicate groundwater sample was collected from SB-2. The depths to groundwater are presented in **Table 6**. A copy of the laboratory report is included in **Appendix F**. Groundwater sampling methodologies are included in **Appendix G**.

Laboratory analytical results for groundwater samples collected during this LSI are described below:

- SB-1: 660 ug/l benzene, 345 ug/l toluene, 2070 ug/l ethylbenzene, 7140 ug/l xylene, 135 ug/l MTBE, 34500 ug/l GRO, and 13200 ug/l DRO.
- SB-2: 2.0 ug/l toluene, and 2.3 ug/l toluene in SB-2 duplicate sample.
- SB-3: 340 ug/l DRO.
- SB-4: 420 ug/l DRO.
- SB-5: 380 ug/l DRO.
- SB-6: 2950 ug/l benzene, 5800 ug/l toluene, 3390 ug/l ethylbenzene, 18000 ug/l xylene, 57400 ug/l GRO, 64200 ug/l DRO, and other petroleum compounds.
- SB-7: 197 ug/l benzene, 71.8 ug/l toluene, 1040 ug/l ethylbenzene, 2040 ug/l xylene, 36900 ug/l GRO, 247000 ug/l DRO, and other petroleum compounds.

Groundwater analytical results are presented in **Tables 7 and 8**, and are illustrated on **Figure 7, *Groundwater Lab Data***. Groundwater results in **Tables 7 and 8** are compared to the Minnesota Department of Health drinking water standards, including the Health Risk Limits (HRLs), the Health-Based Values (HBVs), and Risk Assessment Advice values (RAAs). The BTEX concentrations detected in groundwater samples collected from SB-1 and SB-6, and the benzene, ethylbenzene and xylene concentrations in the SB-7 groundwater sample, exceeded drinking water standards. The concentrations of naphthalene, and 1,2,4- and 1,3,5-trimethylbenzene at SB-6 and SB-7 also exceeded the drinking water standards. SB-1, SB-6 and SB-7 are located near the south property boundary downgradient of the former gasoline tank basin and former dispensers.

As discussed in Section 1.2, two groundwater monitoring wells were installed at the site as part of the investigation of Leaksite #2433. MW-1 was located near the southeast corner of the current store building, and the depth to groundwater measured at MW-1 was approximately 43 feet, indicating the well was screened in the sand unit below the gray dense clay unit. MW-2 was located southeast of the former tank basin, and the depth to groundwater at MW-2 ranged from approximately 10 to 16 feet bgs, which would be indicative of perched groundwater. Both wells were sampled on three occasions, in

November 1990, July 1991 and March 1993. MW-2 was also sampled in April 1993. BTEX was not detected at MW-1, and 18 ug/l GRO and 680 ug/l DRO were detected in 1990 only. MW-2 had benzene concentrations ranging from 11,000 ug/l to 32,000, GRO concentrations ranging from 60,000 ug/l to 250,000 ug/l, and DRO concentrations ranging up to 48,000 ug/l.

1.33 If non-petroleum contaminants are present, discuss the possible sources of these compounds.

All other detected contaminants are petroleum related.

1.34 Provide a discussion on QA/QC, including information on the samples collected and laboratory analyses performed. Include laboratory analytical reports and ground water sampling methodology in Section 6.

See **Section 1.32** for discussion of groundwater samples collected and analyses performed. Samples were submitted to Pace Analytical Services, Inc. (Pace) for analysis.

The analytical results for the groundwater sample collected from SB-1 are reported under Pace Project No. 10122561. A trip blank provided by the laboratory was analyzed for BTEX and GRO by Wisconsin Modified GRO Method; no analytes were detected in the trip blank. Method blanks and laboratory control samples (LCS) and LCS duplicates (LCSD) were analyzed for BTEX, GRO and DRO using the same methods as used on the site samples. No analytes were detected in the method blanks, and the LCS and LCSDs were within acceptable recovery limits.

The analytical results for the groundwater samples collected from SB-2 through SB-7 are reported under Pace Project No. 10133718. A trip blank provided by the laboratory was analyzed for VOCs by EPA Method 8260; no analytes were detected in the trip blank. Method blanks and laboratory control samples (LCS) and LCS duplicates (LCSD) were analyzed for GRO and DRO using the same methods as used on the site samples. No analytes were detected in the method blanks, and the LCS and LCSDs were within acceptable recovery limits. Method blanks, LCS, and matrix spike (MS) samples were analyzed for VOCs by EPA Method 8260. No VOCs were detected in the method blank, and the LCS and MS samples were within required recovery limits, except for the following: the styrene results in MS sample 824974, and the 2,2-dichloropropane, carbon tetrachloride and tetrachloroethene results in the MS sample 825923 were flagged because the MS recovery was outside laboratory control limits. Since these compounds were not detected in the groundwater samples collected at the site, these issues with the QA/QC samples do not affect our sample results.

1.35 Laboratory certification number:

Pace Analytical Services, Inc. - Minnesota Certification Number: 027-053-137

Evaluation of Natural Attenuation

Refer to the Guidance Document 4-03 *Assessment of Natural Attenuation at Petroleum Release Sites.* **Note**: Evaluation of natural attenuation is not required unless requested by MPCA staff.

Natural attenuation was not assessed at the site.

1.36 Discuss the results of the natural attenuation assessment (Table 13). Specifically, compare the concentrations of the inorganic parameters inside and outside the plume and whether the data indicate natural biodegradation is occurring at the site.

1.37 If active remediation is anticipated, discuss reasons why natural attenuation (including biodegradation) can not adequately remediate the contaminants to acceptable risk levels.

Extent and Recovery of Free Product

If free product is encountered during the investigation, include Guidance Document 2-03 *Free Product Recovery Report Worksheet* in Section 6. See Guidance Document 2-02 *Free Product: Evaluation and Recovery* for additional information.

Free product was not encountered at the site.

1.38 If free product was encountered during the site investigation, describe the work completed to delineate the extent of the free product zone and what efforts were or are being completed to recover it. Tabulate the volume of product recovered in Table 14. Illustrate the estimated horizontal extent of the free product zone on a Site Map in Section 4.

Section 2: Risk Assessment

Well Receptors

List all properties located within 500 feet of the site in Table 15. Identify all properties listed in Table 15 on the Potential Receptor Map in Section 4.

List all wells located within 500 feet of the site and any municipal or industrial wells within ½ mile in Table 16. All water wells within 500 feet of the release source must be listed even if construction information was not obtained or available. Include all available water supply well logs obtained from Minnesota Geological Survey, MDH, drillers, or county well management authorities, and any other well construction documentation in Section 6. Identify all wells listed in Table 16 on the Well Receptor Survey Map in Section 4.

2.1 Were all property owners within 500 feet of the site successfully contacted to determine if water wells are present? ☐ *Yes* ☒ *No*

If *NO*, please explain.

Since groundwater impacts appear to be limited to perched groundwater at the site, and since the groundwater receptor survey (see Section 2.3) did not identify any wells within 500 feet, the property owners within 500 feet of the site were not contacted.

2.2 Discuss any physical limitation to the inspection of properties within the 500-foot survey radius.

Residential properties within 500 feet of the site were observed from the adjacent street. Commercial properties within 500 feet of the site were inspected from their parking lot. No physical limitations impeded inspection of the properties except normal vegetation (shrubs, trees), cars parked on the properties, and equipment stored on the properties. It was not obvious from the exterior whether or not the commercial buildings within 500 feet of the site had basements. Uses of properties located within 500 feet of the site are depicted on **Figure 3** and are described on **Table 15**.

2.3 Discuss the results of the ground water receptor survey. Comment on the risks to water supply wells identified within 500 feet from the site as well as the risk posed by or to any municipal or industrial wells found within ½ mile. Specifically indicate whether identified water supply wells use the impacted aquifer. (Note: an impacted aquifer separated from another aquifer by a clay lens may not be considered a separate aquifer).

The 500-foot walking survey did not identify any water supply wells, monitoring wells or surface waters.

Search of the State County Well Index identified no domestic water wells located within 500 feet of the site, and no industrial water supply wells within ½ mile of the site. The wells shown on **Figure 8** are domestic wells located more than 500 feet from the site; copies of the well logs for these wells are included in **Appendix K**.

The subject site is located on the boundary between the cities of New Hope and Golden Valley. Both cities purchase their water from the City of Minneapolis; there are no municipal wells for either city.

2.4 If water samples were collected from nearby water wells, discuss the analytical results below and tabulate them in Tables 11 and 12.

Not applicable

2.5 Is municipal water available in the area? ☒ *Yes* ☐ *No*

2.6 Based on the public water supply risk assessment, is the site located in a Source Water Assessment Area or Drinking Water Supply Management Area (see Guidance Document 4-18 *Public Water Supply Risk Assessment at Petroleum Remediation Sites*)? ☐ *Yes* ☒ *No*

If *YES*, provide the name of the area and include the required documentation in Section 6.

2.7 Are there any plans for ground water development in the impacted aquifer within ½ mile of the site or one mile downgradient of the site if the aquifer is fractured? ☐ *Yes* ☒ *No*

Provide the name, title and telephone number of the person that was contacted for this information.

Name: City of New Hope, Public Works Title:
Telephone: 763.592.6777

Surface Water Receptors

2.8 Are there any surface waters or wetlands located within ¼ mile of the site? ☒ *Yes* ☐ *No*

If *YES*, list them along with their distance and direction from the site in Table 17.

Also, list below any potential pathways such as ditches, drain tiles, storm sewers, etc., that may lead to the identified surface water features.

An intermittent stream is located west of the Highway 169 corridor, approximately 875 feet west of the subject site, in an inferred side-gradient groundwater flow direction. At the time of the LSI field activities, the intermittent stream was dry. The intermittent stream flows to the southwest into Medicine Lake, which is located approximately 1,900 feet southwest of the site. The Highway 169 corridor is situated between the site and these surface water bodies and should act as a physical barrier between the perched groundwater at the site and the intermittent stream and Medicine Lake. According to the City of New Hope Public Works Department, no utility lines extend across the Highway 169 corridor at Medicine Lake Road.

2.9 If surface water is present downgradient of the site, is there a clean downgradient soil boring or monitoring well located between the site and the surface water?
☐ *Yes*
☒ *No*
☐ *NA*

If *YES*, identify the clean downgradient boring or well, distance to the surface water feature, and discuss the contamination risk potential.

If *NO*, and ground water from a downgradient boring or well is contaminated, we assume that contamination discharges to the surface water. Therefore, provide the following information:

Name of receiving water:	Medicine Lake
Plume width, (W):	150 ft[(a)]
Plume thickness, (H):	15.4 ft[(b)]
Hydraulic conductivity, (K):	1 gal/day/ft^2[(c)]
Horizontal gradient, (dh/dl):	0.023 (unitless)[(d)]
Discharge, (Q) = H*W*K*(dh/dl)/1440	0.037 gal/min

(a) Plume width estimated by adding the distance between the two downgradient points where groundwater impacts have been identified (SB-1 and SB-6), which is 50 feet, and adding an estimated 50 feet to either side of those points.

(b) See Section 1.24 for calculated thickness of aquifer.

(c) Based on Tables 2.2 and 2.3 of Freeze & Cherry (see Section 1.24).

(d) dh/dl = 940 ft (approximate site elevation) – 5.6 ft (shallowest depth to static groundwater) – 890 ft (approximate elevation of Medicine Lake) / 1900 ft (distance from site to Medicine Lake).

Utilities and Subsurface Structures

2.10 Compare the relationship between the distribution of contaminant phases (soil, ground water, vapor, and non-aqueous phase liquid) to the location of all underground utility lines, utility service lines, and nearby basements and sumps. Include all identified utilities in Table 18. Show all utilities, utility service lines, and other subsurface structures on applicable cross sections in Section 4.

The station building on site does not have a basement. The east-adjoining apartment building has a half basement that is approximately four feet below grade. Soil boring SB-5 was advanced at the east property line; no soil impacts were identified at SB-5, and the only analyte detected in the groundwater sample at SB-5 was 380 ug/l DRO. Soil vapor point SVV-1 was advanced at the east property line, and none of the detected petroleum compounds were at or above 10 time the vapor intrusion screening values.

As part of the investigation for LEAK #10868, Peer prepared an underground utility assessment dated February 5, 2007. The assessment included utility maps showing the location and depths of sanitary sewer, storm sewer and water lines in Medicine Lake Road. Copies of the utility maps are included in **Appendix D**.

A sanitary sewer line extends southward from the west end of the site station building to the sanitary sewer line in Medicine Lake Road, near SB-1, SB-7 and SVV-2. The depth to the bottom of the line measured at a manhole where the site sewer line connects with the main line is 13 feet. The depth to water at SB-1 and SB-7 was 8 to 12 feet bgs, so the sanitary sewer line is below the water table. As discussed in Section 2.13, a field vapor survey at this sanitary sewer manhole did not detect any organic vapors.

A natural gas line and the water line for the site station building lie along the east site property boundary, near SB-5. The depth to water at SB-5 was 9 feet, with a static water level of 5.6 feet bgs. The elevation of the water line beneath Medicine Lake Road in front of the site is approximately 943 feet msl, or 7 feet below grade. Thus, the water line is below the static water level. The water line coming into the station is copper, based on visual observation. The depth of the natural gas line is unknown but is likely less than 5 feet.

Storm water catch basins are located on the north and south curbs of Medicine Lake Road in front of the site. The depths of the catch basins measured in the field during LSI activities are 3 feet and 3.5 feet on the north and south curbs, respectively. As discussed in Section 2.13, a field vapor survey of these catch basins did not detect any organic vapors.

Utility lines are shown on **Figures 4 and 5**. Utility line information is summarized on **Table 18**.

2.11 Is there any evidence that free product or contaminated ground water may be traveling off site within the utility corridors? ☐ *Yes* ☒ *No*

If *YES*, a utility backfill investigation is required (refer to Guidance Document 4-01). Discuss the investigation rationale and results.

2.12 Is there a history of field-detectable vapor impacts in the vicinity of the site? ☒ *Yes* ☐ *No*

If *YES*, describe:
Soil vapor sampling was conducted by Peer in 2006 as part of the Leaksite #10868 investigation. Concentrations of benzene, 1,2,4- and 1,3,5-trimethylbenzene and m&p-xylene detected in a soil gas sample (SB-6V) collected between the former tank basin and the east-adjoining apartment building were above the ISV. High concentrations of petroleum compounds were also detected in a soil gas sample (V-5) collected adjacent west of the former UST basin.

Conduct a vapor survey if the vapor receptor survey and risk evaluation indicate a risk of vapor impact or an infiltration risk from contaminated ground water or free product to utilities or subsurface structures. See Guidance Document 4-02 *Potential Receptor Surveys and Risk Evaluation Procedures at Petroleum Release Sites*. Identify all vapor monitoring locations on the Vapor Survey Map by labeling each monitoring location with a number that corresponds to vapor monitoring locations listed in Table 19. Vapor monitoring methods, including instruments used, must be discussed in Section 6.

2.13 Provide a detailed description of each vapor monitoring location and indicate if vapors were detected.

A vapor survey of accessible underground utility lines was conducted on July 19, 2010. Equipment used during the survey included a Thermo Environmental Model 580B PID equipped with a 10.6 eV lamp to measure total organic vapors, and an explosimeter to measure flammable gas as a percentage of the lower explosive limit (%LEL). Manhole covers for sanitary sewer and water lines within 500 feet of the site were removed by the City of New Hope Public Works Department. Storm sewer lines were accessed through open grates. The depths to the bottoms of the utility lines were measured. Measurements of total organic vapors and %LEL were taken at the bottom, mid-level and top of the manholes, except where utility depths were less than 4 feet, in which case readings were taken only at the bottom and top of the manholes.

The vapor survey points are depicted on **Figure 3**. Three sanitary sewer manholes (SS-1 through SS-3), two water line access pits (W-1 and W-2), and six storm sewers (ST-1 through ST-6) located within 500 feet of the subject site were surveyed. No organic vapors or %LEL readings greater than 1 were detected at any of the surveyed points. Vapor survey readings are summarized on **Table 19**.

Two sanitary sewer manholes located south of the site along Mendelssohn Avenue North in Golden Valley were not surveyed. Since the Golden Valley sanitary sewer line is not connected to the New Hope sewer line along Medicine Lake Road, and since the Golden Valley sewer line is located 500 feet south of the subject site, this line is unlikely to be impacted by vapors from the site.

Vapor Intrusion Receptors

When vapor intrusion receptors are present, a preliminary vapor intrusion risk assessment must be completed (see Guidance Document 4-01a *Vapor Intrusion Assessments Performed during Site Investigations*). If completed, include the Vapor Intrusion Assessment Map in Section 4 that identifies all vapor intrusion samples and receptors at and within the 100-foot preliminary assessment area.

2.14 Was a preliminary vapor intrusion risk assessment completed? ☒ *Yes* ☐ *No*

If *NO*, explain why.

2.15 Do any of the soil gas samples from locations near inhabited buildings exceed the ISVs by ten times (10X) for petroleum related compounds? ☐ *Yes* ☒ *No*

If you answered ***YES***, is additional characterization of the vapor intrusion pathway needed for these buildings (e.g. sub-slab soil gas, an indoor building survey, or indoor air sampling)? **If *YES***, complete question 3.4. **If *NO***, explain why. ☐ *Yes* ☐ *No*

2.16 Have sufficient data been collected to propose a Conceptual Corrective Action Design for buildings that are likely to be impacted by petroleum vapors? ☐ *Yes* ☒ *No*

If *YES*, describe your justification for corrective action.

2.17 Based on the horizontal extent of impacted ground water or free product from the release, is additional soil gas sampling required beyond the 100-foot preliminary assessment area near inhabited buildings? ☐ *Yes* ☒ *No*

If *YES*, describe your proposal for additional vapor intrusion sampling.

If *NO*, explain why.
No free product was detected at the subject site. Soil vapor concentrations detected at SVV-2, which was advanced adjacent to the soil boring (SB-7) where high concentrations of petroleum contaminants were detected in soil and groundwater, were below 10X the ISVs. The downgradient south-adjoining property is a retail gasoline station and former leaksite with its own potential source of soil vapors. Therefore, no further soil gas sampling is required.

2.18 Were recommended field sampling procedures and laboratory QA/QC from Guidance Document 4-01a followed? ☒ *Yes* ☐ *No*

If *NO*, explain why and discuss implications on data quality.

Site Conceptual Model Discussion

2.19 Provide a detailed site conceptual model (SCM). The SCM should integrate site-specific geology, hydrogeology, and the contaminant distribution with respect to identified exposure pathways (well receptors, surface water receptors, utilities and subsurface receptors, and vapor intrusion receptors). For additional information on SCM development, see Guidance Document 1-01 *Petroleum Remediation Program General Policy*.

Soils encountered at the site were generally (two feet of fill over) 12 to 18 feet of tan sandy clay over gray, stiff, dense clay. There were varying discontinuous lenses and seams of silty clay, sandy silt, sand and clayey sand throughout the upper tan sandy clay unit; it is in these lenses/seams that groundwater was encountered, and the static water generally rose to a level of 5.6 feet to 8.75 feet bgs. The underlying dense gray clay unit was relatively dry and presumably acts as an aquitard between perched groundwater and the regional sandy aquifer below the clay, which is present at an approximate depth of 41 feet bgs. According to published maps, the groundwater flow direction in the regional sandy aquifer is to the east-northeast toward the Mississippi River. However, based on area topography, the pattern of groundwater contaminant concentrations in relation to the former gasoline and waste oil tank basins, and historical groundwater elevation data collected at a south-adjoining leaksite, the perched groundwater flow direction is generally to the south or southwest.

During previous tank removals at the subject site in 1990, a total of 150 cubic yards of impacted soil was removed from former waste oil and gasoline tank basins. in 2005, a total of 432 cubic yards of soil was removed from the same former gasoline tank basin, the new tank basin, and from around the dispenser islands. Thus, the leaking tanks and dispensers have been removed, and a large portion of the impacted soils at the site have been removed and disposed off-site.

The area of impacted soils at the subject site covers the area south of the former station building and extending to the east property boundary and approximately to the west property boundary. The southern extent of soil impacts appears to end at a point beneath Medicine Lake Road between the subject site and the south-adjoining property, which was a former leaksite. Vertically, the extent of soil impacts appears to largely be limited to the upper sandy clay unit. The sanitary sewer and water lines servicing the site building are located within soils saturated by perched groundwater. The water pipe material is copper. The vapor surveys conducted during this LSI and previously by Peer in 2007 did not detect any organic vapors in the sanitary sewer manhole adjacent to the site, nor in sanitary or storm water sewer manholes within 500 feet of the subject site.

Analysis of two soil vapor samples, one between the former tank basin and the east-adjoining apartment building, and one near SB-1 and SB-7 where elevated soil contaminant concentrations had been identified in SB-1, did not identify any petroleum VOCs at concentrations above ten times the ISVs.

Free product has not been identified at the subject site. Concentrations of BTEX, naphthalene, and 1,2,4- and 1,3,5-trimethylbenzene in groundwater samples collected at SB-6 and SB-7 exceeded State drinking water standards. The concentrations of naphthalene, and 1,2,4- and 1,3,5-trimethylbenzene at SB-6 and SB-7 also exceeded the drinking water standards. SB-1, SB-6 and SB-7 are located near the south property boundary downgradient of the former gasoline tank basin and former dispensers. Groundwater impacts appear to be

confined to the perched groundwater encountered in the sand and clayey sand seams within the upper sandy clay unit which is present at the site to depths ranging from 16 to 21 feet bgs. Based on information presented in Section 1.24, the perched groundwater at the site is not considered an aquifer.

No water well receptors were identified during this LSI or previous investigations conducted at the site. The nearest downgradient surface water, Medicine Lake, is located 1900 feet southwest of the subject site.

2.20 Discuss any other site concerns not included in the above discussion

No other concerns were identified at the site.

Section 3: Site Management Decision

The site management decision should be based on the Program's objectives described in Guidance Document 1-01 *Petroleum Remediation Program General Policy.*

3.1 Recommendation for site:

- ☒ site closure
- ☐ additional ground water monitoring
- ☐ additional field-detectable vapor monitoring
- ☐ additional soil gas/vapor intrusion investigation
- ☐ corrective action

3.2 If closure is recommended, summarize significant investigative events and describe how site-specific exposure pathways identified in question 2.19 have been adequately addressed.

Previous USTs and dispensers were removed from the site in 1990 and 2005. A total of 582 cubic yards of petroleum-impacted soil was removed from the former gasoline and waste oil UST basins, from around former dispenser and product lines, and from the existing tank basin before the current gasoline USTs were installed in 2005. Thus, the source(s) of the release and a large portion of the impacted soils at the site have been removed and disposed off-site. The existing station building, USTs and dispensers were installed in 2005.

Previous investigations have been conducted at the site, by EnecoTech in the early 1990s in association with LEAK#2433, and by Peer in 2005-2007 in association with LEAK #10868. Soil, groundwater and soil vapor concentrations identified during this LSI are not significantly different than those detected previously at the site. Closure was granted to Leaksite #2433 (and to Leaksite #10868), presumably in part based on EnecoTech's 1993 finding that no potential receptors were present in the vicinity, and that contaminant concentrations were relatively stable and limited to the (former) UST basin area and were effectively contained by the low permeability clay unit beneath the perched saturated zone. Based on MPCA comments contained in the file for Leaksite #10868, the leaksite was closed based on the clayey soils at the site, the limited extent of perched groundwater, and a lack of receptors.

Soil impacts appear to be confined to the upper sandy clay unit at the site, which extends to depths of 16 to 21 feet bgs. Soil impacts are largely confined to the site, except that soil impacts appear to extend beneath Medicine Lake Road. The entire area of soil impacts is either capped with asphalt or concrete. Vapor monitoring conducted at sanitary sewer, storm

sewer, and water manholes within 500 feet of the site have not identified any vapor impacts to the utilities. Soil vapor sampling did not identify any petroleum VOCs at concentrations above 10x the ISVs.

Free product has not been identified at the subject site. Groundwater impacts appear to be confined to the perched groundwater encountered in the sand and clayey sand seams within the upper sandy clay unit. The perched groundwater encountered at the site is not considered an aquifer.

No water well receptors were identified during this LSI or previous investigations conducted at the site. The nearest downgradient surface water, Medicine Lake, is located 1900 feet southwest of the subject site. Based on the relatively low permeability of the clayey soils and the distance between the site and Medicine Lake, impacts from the site are unlikely to affect Medicine Lake.

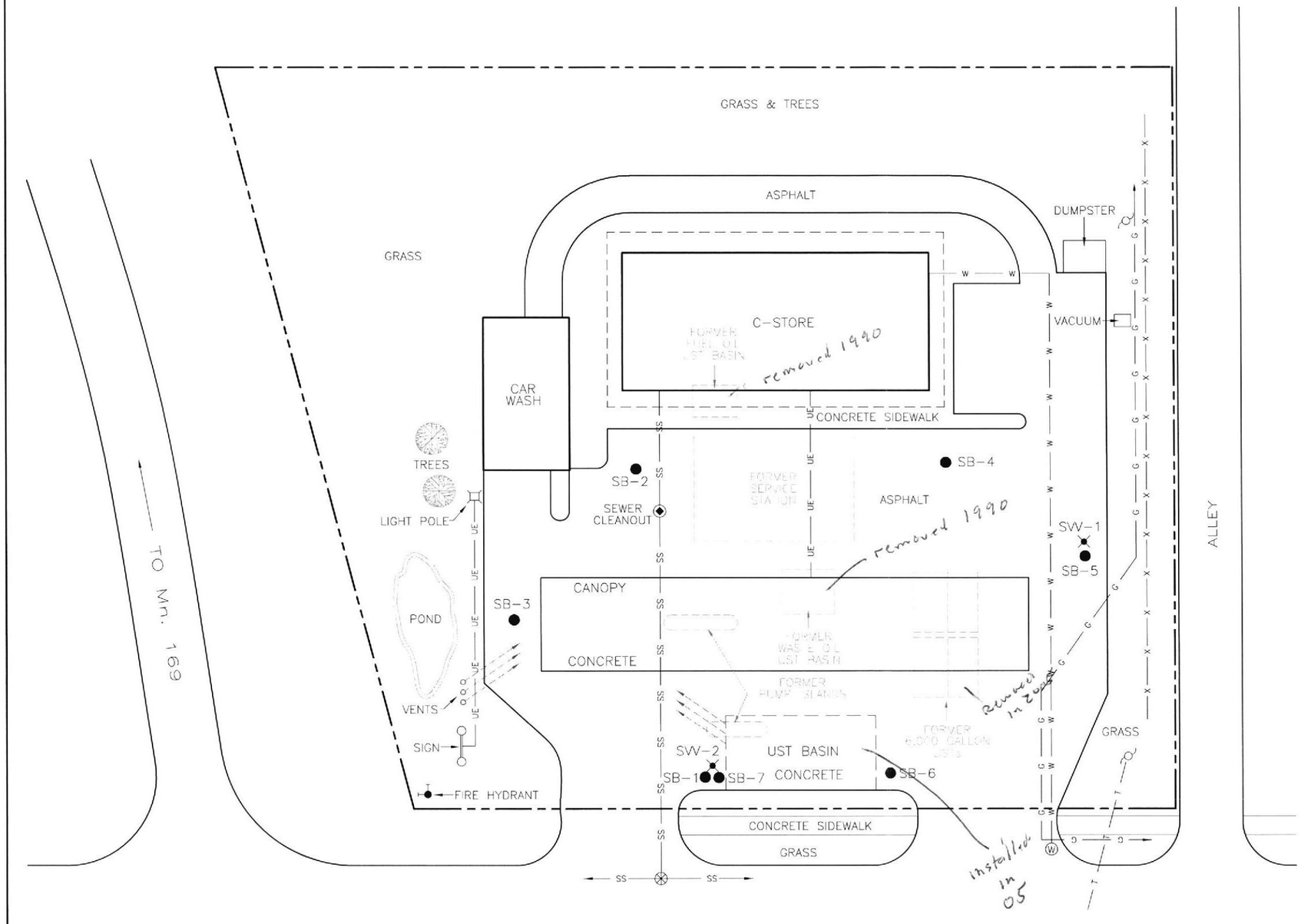
Criteria for requiring a Remedial Investigation upon completion of a LSI are outlined in MPCA Guidance Document 4.01, *Soil and Ground Water Assessments Performed During Site Investigations.* Based on the results of this LSI, a Remedial Investigation is not required at the site due to the following:

- an aquifer has not been, and is not likely to be contaminated by petroleum compounds above drinking water standards or above 1000 ug/l DRO or GRO;
- soil contamination is not likely to significantly leach to groundwater due to the presence of the approximately 20-foot thick dense gray clay unit underlying the impacted sandy clay soils;
- surface water has not been, and is not likely to be contaminated by petroleum compounds above drinking water standards or above 1000 ug/l DRO or GRO; and,
- free product was not encountered at the site.

3.3 If additional ground water or field-detectable vapor monitoring is recommended, indicate the proposed monitoring locations, sampling frequency, and target analytes. Conduct quarterly ground water monitoring and sampling until the MPCA responds to this report.

3.4 If additional vapor intrusion investigation is recommended, provide details of proposed activities such as completing an indoor building survey, sub-slab vapor sampling, indoor air sampling, or locations for additional soil gas sampling.

3.5 If corrective action is recommended, provide a conceptual approach by completing Guidance Document 4-19 *Conceptual Corrective Action Design Worksheet* and include in Section 6. See Guidance Document 4-10 *Elements of the Corrective Action Design* for more information on the corrective action design process and other requirements. (Note: MPCA staff will review this report at a higher-than-normal priority to determine if corrective action is required.)



LEGEND:

- PROPERTY BOUNDARY
- FENCE
- UNDERGROUND ELECTRIC LINE
- GAS LINE
- TELEPHONE LINE
- SANITARY SEWER LINE
- WATER LINE
- UTILITY POLE
- MANHOLE
- WATER VALVE
- SOIL BORING
- SOIL VAPOR POINT LOCATION

North

0 30

SCALE IN FEET

FIGURE 5
SAMPLE LOCATION MAP
HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/6/10		New Hope-1

DELTA

INNER GAS WASH

Section 4: Figures

Attach the following figures in order of discussion in the text. All figures must include a north arrow, scale, and legend. Approximate scales are not acceptable.

☒ Site Location Map using a U.S. Geological Survey 7.5 minute quadrangle map.
Figure 1, Site Location Map

☒ Aerial photos and Sanborn Fire Insurance Maps™ (if available) of the immediate area.
Figure 2, (2009) Aerial Photo of Site and Surrounding Area

☒ One or more Site Maps showing: *Figure 4, Site Map; Figure 5, Sample Location Map; Figure 6, Soil Lab Data and Cross Section Location Map; and Figure 7, Groundwater Lab Data*

- Structures
- Locations and depths of on-site buried utilities
- All past and present petroleum storage tanks, piping, dispensers, and transfer areas
- Extent of soil excavation
- Boring and well locations (including any drinking water wells on site)
- Horizontal extent of soil contamination
- Extent of contaminated surface soil
- Horizontal extent of ground water contamination
- Horizontal extent of NAPL
- Location of end points for all geologic cross sections
- Potential pathways that lead to surface water features within ¼ mile of the site

Distinguish sequential elements of investigations by dates, symbols, etc. in the key.

☒ At least two (2) geologic cross sections depicting stratigraphy, soil headspace results, laboratory analytical results, water table elevation, and underground utilities.
Figure 6, Figure 6A, Geologic Cross Section A-A', and Figure 6B, Geologic Cross Section B-B'

☐ Ground water gradient contour maps (for sites with monitoring wells) for each gauging event.

☒ Potential Receptor Map (scale 1 inch = 50 to 100 feet), centered on the release area, showing property boundaries and roads, and potential receptors such as buildings, water wells, underground utilities (distinguish between water, storm sewer, and sanitary sewer), surface waters, ditches, and any other pertinent items within 500 feet of the release source.
Figure 3, 500-Foot Potential Receptor Map

☒ Well Receptor Survey Map showing ½-mile radius, 500-foot radius, water supply wells, and other potential sources of contamination on a U.S. Geological Survey 7.5 minute quadrangle map. *Figure 8, ½-Mile Well Receptor Map*

☒ Vapor Survey Map showing utilities and buildings with basements and monitoring locations within 500 feet (if a survey was required). If the survey area has been expanded beyond 500 feet, adjust the map to encompass the entire surveyed area. *Figure 3*

☒ Vapor Intrusion Assessment Map showing all vapor intrusion samples and receptors at and within the 100-foot preliminary assessment area. If the assessment area has been expanded beyond 100 feet, adjust the map to encompass the entire assessment area. *Figure 5*

Section 5: Tables

Table 1
Tank Information

Tank #	Tank Material[1]	UST or AST	Capacity (gallons)	Contents (product type)	Year Installed	Tank Status[2]	Tank Condition
	See Attached Table 1						

[1] "F" for fiberglass or "S" for Steel
[2] Indicate: removed (date), abandoned in place (date), or currently in use.
Add additional rows as needed.
Notes:

Table 2
Results of Soil Headspace Screening

Depth (ft)	Soil Boring ID							
	See Attached Table 2							

List instruments used and discuss field methods and procedures in Section 6. Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Table 3
Analytical Results of Soil Samples[1]

Boring ID	Sampled Depth (ft)	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	GRO	DRO	Lab Type[2]
	See Attached Table 3									

[1] Report results in mg/kg. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
Add additional rows as needed.
Notes:

Table 4
Other Contaminants Detected in Soils (Petroleum or Non-petroleum Derived)[1]

Boring ID	Sampled Depth (ft)	Date Sampled								Lab Type[2]
No other contaminant analytes tested.										

[1] Report results in mg/kg. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
Indicate other contaminants (either petroleum or non-petroleum derived) detected in soil collected from borings. Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Table 5
Contaminated Surface Soil Results

Sample ID	Headspace 10 ppm or Greater[1] (Y/N)	Petroleum Saturated (Y/N)
Not applicable.		

[1] As measured with a photoionization detector (PID).
Add additional rows as needed.
Notes:

Table 6
Water Level Measurements and Depths of Water Samples Collected from Borings

	Soil Boring									
Static Water Level Depth[1] (ft)										
Sampled Depth (ft)		See Attached Table 6								
Sampling Method[2]										

[1] Describe the methods used to measure water levels in borings in Section 6.
[2] Refer to Guidance Document 4-05 for acceptable ground water sampling methods.
Notes:

Table 7
Analytical Results of Water Samples Collected from Borings[1]

Boring ID	Date Sampled	Sampled Depth (ft)	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	GRO	DRO	Lab Type[2]
	See Attached Table 7									

[1] Report results in µg/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
[3] See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs and HBVs
Add additional rows as needed.
Notes:

Table 8
Other Contaminants Detected in Water Samples Collected from Borings (Petroleum or Non-petroleum Derived)[1]

Boring ID	Date Sampled	Sampled Depth (ft)								Lab Type[2]
	See Attached Table 8									
Trip Blank										
Equip. Blank										
Lab Blank										
HRL[3]										

[1] Report results in µg/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
[3] See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs.
Indicate other contaminants (either petroleum or non-petroleum derived) detected in water samples collected from soil borings and temporary wells. Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Table 9
Monitoring Well Completion Information[1]

Well Number	MDH Unique Well Number	Date Installed	Surface Elevation	Top of Casing Elevation	Bottom of Well Elevation	Screen Interval (Elev. - Elev.)	Total Well Depth from Surface (ft)
Not Applicable							

[1] Include well construction diagrams and MDH well logs in Section 6.
Add additional rows as needed.
Notes: (location and elevation of benchmark)

Table 10
Water Level Measurements in Wells[1]

Well Number	Date Sampled	Depth to Water from Top of Riser	Product Thickness	Depth to Water Below Grade	Relative Groundwater Elevation	Water Level Above Screen (Y/N)
Not Applicable						

[1] Describe the methods used to measure water levels in Section 6.
Add additional rows as needed.
Notes:

Table 11
Analytical Results of Water Samples Collected from Wells[1]

Well Number	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	GRO	DRO	Lab Type[2]
Not Applicable									
Trip Blank									
Equip. Blank									
Lab Blank									
HRL[3]									

[1] Report results in µg/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
[3] See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs.
Add additional rows as needed.
Notes:

Table 12
Other Contaminants Detected in Water Samples Collected from Wells (Petroleum or Non-petroleum Derived)[1]

Well Number	Date Sampled								Lab Type[2]
Not Applicable									
Trip Blank									
Equip. Blank									
Lab Blank									
HRL[3]									

[1] Report results in µg/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
[3] See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs.
Indicate other contaminants (either petroleum or non-petroleum derived) detected in water samples collected from wells.
Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Table 13
Natural Attenuation Parameters

Well Number	Sample Date	Temp. °C	pH	Dissolved Oxygen (mg/L)	Nitrate (mg/L)	(Fe II) (mg/L)	(H_2S, HS^-) (mg/L)
Not Applicable							

Describe the methods and procedures used in Section 6. Add additional rows as needed
Notes:

Table 14
Free Product Recovery

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative Recovery[4]		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
Not Applicable											

[1] FP = Free Product
[2] GW = Ground Water
[3] Volume recovered during individual recovery event for that location.
[4] Cumulative volume recovered at each recovery location (i.e., keep a running total for each recovery point).
Describe the methods and procedures used in Section 6. Add additional rows as needed.
Notes:

Table 15
Properties Located within 500 feet of the Release Source

Prop ID[1]	Property Address	Distance From Site (ft)	Water Supply Well			Public Water Supply		Base-ment (Y/N)	Sump (Y/N)	Possible Petroleum Sources (Y/N)	Comments (including property use)
			Well Present (Y/N)	How Determined[2]	Well Use[3]	Utilized (Y/N)	Confirmed by City (Y/N)				
	See Attached Table 15										

[1] Property IDs should correspond to labeled properties in the Potential Receptor Map.
[2] For example, visual observation, personal contact, telephone, returned postcard, assumed (i.e., no postcard returned).
[3] For example, domestic, industrial, municipal, livestock, lawn/gardening, irrigation.
Add additional rows as needed.
Notes:

Table 16
Water Supply Wells Located within 500 feet of the Release Source and Municipal or Industrial Wells within ½ mile

Property ID[1]	MDH Unique Well Number	Ground Elevation	Total Depth (ft)	Base of Casing (ft)	Static Elevation	Aquifer	Use	Owner	Distance and Direction from Source (ft)
	None Identified								

[1] Property IDs should correspond to properties listed in Table 15 and labeled properties in the Potential Receptor Map if known or applicable.
Add additional rows as needed.
Notes:

Table 17
Surface Water Receptor Information

Map ID[1]	Name and Type[2]	Distance and Direction from Plume Edge (ft)	Clean Boring/Well Between?[3] (Y or N)
	See Attached Table 17		

[1] Map ID should correspond to a surface water feature ID on the Potential Receptor Map.
[2] Type includes, but is not limited to, lake, retention pond, infiltration pond, ditch, intermittent stream, river, creek, rain garden, etc.
[3] If the surface water feature is upgradient or cross-gradient from the site, indicate so with "NA" for not applicable.
Add additional rows as needed.
Notes:

Table 18
Utility Receptor Information

Utility ID[1]	Description	Construction Material	Depth to Top of Structure	Diameter	Flow Direction (for liquids)	Year Installed	Backfill Material	Distance to Water Table
	See Attached Table 18							

[1] ID should correspond to an identified utility line on the Potential Receptor Map.
Add more rows as needed.
Notes:

Utility ID[1]	Name, title, and telephone number for public entity contacted to obtain information or other source of information

[1] IDs should correspond to the same IDs in the above table.
Add more rows as needed.
Notes:

Table 19
Vapor Survey Results

Location ID[1]	Description[2]	Monitoring Date	PID Reading (ppm)	Percent of the LEL[3]
	See Attached Table 19			

[1] Location IDs must match labeled locations on the Vapor Survey Map.
[2] Provide a brief description of the monitoring point (e.g., sump, basement corner, sanitary sewer manhole, storm sewer basin, etc.).
[3] LEL = Lower Explosive Limit.
Add additional rows as needed.
Notes:

Table 20
Results of Soil Gas Sampling for Vapor Intrusion Screening[1]

Sample ID[2]											
Date											
Depth (feet)											
PID (ppm)											Intrusion Screening Value[3]
COMPOUNDS	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	
See Attached Table 20											

[1] Report results in µg/m^3.
[2] Sample IDs should correspond to labeled locations on the Vapor Intrusion Assessment Map.
[3] The Intrusion Screening Values can be found in Guidance Document 4-01a *Vapor Intrusion Assessments Performed during Site Investigations*.
Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Section 6: Appendices

Attach all required or applicable appendices in the following order. Indicate those appendices that are included in this report by marking the check box. All reproduced data must be legible. Reports missing required documentation are subject to rejection.

☐	*Appendix A*	Guidance Document 3-02 *General Excavation Report Worksheet.*
☒	*Appendix B*	Guidance Document 1-03a *Spatial Data Reporting Form.*
☒	*Appendix C*	Guidance Document 2-05 *Release Information Worksheet.*
☒	*Appendix D*	Copies of applicable Phase I and Phase II reports or supplemental sampling information such as aboveground storage tank (AST) upgrading and decommissioning sampling. *Utility maps from Peer February 2007 report.*
☒	*Appendix E*	Geologic Logs of Soil Borings, Including Construction Diagrams of Temporary and Permanent Wells, and Copies of the Minnesota Department of Health Well Record.
☒	*Appendix F*	Laboratory Analytical Reports for Soil, Soil Gas/Sub-slab Vapor/Indoor Air/Ambient Air, and Ground Water. Include laboratory QA/QC data, Chromatograms, and laboratory certification number.
☒	*Appendix G*	Methodologies and Procedures, Including Field Screening of Soil, Other Field Analyses, Soil Boring, Soil Sampling, Soil Gas/Sub-Slab/Indoor air/Ambient Air Sampling, Vapor Monitoring, Well Installation, and Water Sampling.
☒	*Appendix H*	Field or sampling data sheets (sampling forms, field crew notes, etc.).
☐	*Appendix I*	Grain Size Analysis, Hydraulic Conductivity Measurements, and Other Calculations.
☐	*Appendix J*	Guidance Document 2-03 *Free Product Recovery Report Worksheet.*
☒	*Appendix K*	Copies of Water Supply Well Logs with Legible Unique Numbers.
☐	*Appendix L*	Results of the Public Water Supply Risk Assessment. If the site is within a designated source water protection area, include a copy of the MDH Source Water Assessment and a map from the MPCA Petroleum Remediation Program Maps Online website.
☐	*Appendix M*	Guidance Document 4-19 *Conceptual Corrective Action Design Worksheet.*
☒	*Appendix N*	Aerial Photographs.

Web pages and phone numbers

MPCA staff	http://www.pca.state.mn.us/pca/staff/index.cfm
MPCA toll free	**1-800-657-3864**
Petroleum Remediation Program web page	http://www.pca.state.mn.us/programs/lust_p.html
MPCA Info. Request	http://www.pca.state.mn.us/about/inforequest.html
MPCA VIC program	http://www.pca.state.mn.us/cleanup/vic.html
MPCA Petroleum Brownfields Program	http://www.pca.state.mn.us/programs/vpic_p.html
MPCA SRS guidance documents	http://www.pca.state.mn.us/cleanup/riskbasedoc.html http://www.pca.state.mn.us/cleanup/riskbasedoc.html#surfacewaterpathway
MDH HRLs	http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html
MDH DW hotline	**1-800-818-9318**
Petrofund Web Page	http://www.state.mn.us/cgi-bin/portal/mn/jsp/content.do?id=-536881377&agency=Commerce
Petrofund Phone	**651-215-1775 or 1-800-638-0418**
State Duty Officer	**651-649-5451 or 1-800-422-0798**

Table 1
Tank Information
Holiday 411/Former Sinclair
New Hope, MN

Tank #	Tank Material	UST or AST	Capacity (gallons)	Contents (product type)	Year installed	Tank Status	Condition of Tank[1]
1	uncoated steel	UST	1,000	waste oil	1964	removed 1990	good
2	uncoated steel	UST	560	fuel oil	1964	removed 1990	1/8-inch diameter hole in tank bottom
3	uncoated steel	UST	6,000	gasoline	1964	removed 1990	corrosion, dent
4	uncoated steel	UST	6,000	gasoline	1964	removed 2005	good
5	uncoated steel	UST	6,000	gasoline	1964	removed 2005	good
6	uncoated steel	UST	6,000	gasoline	1964	removed 2005	good
7	fiberglass	UST	12,000	gasoline	2005	active	unknown
8	fiberglass	UST	12,000	gasoline	2005	active	unknown

Notes:
(1) Tank conditions based on reports by other consultants.

Table 2
Results of Soil Headspace Screening
Holiday 411/Former Sinclair
New Hope, MN

Depth (ft)	Soil Boring						
	2/17/2010	7/15/2010					
	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7
1							
2	0.4	NR	0	0			
3							
4	0	NR	0	0	0	0	0
5					0		
6	0.9	NR		0		0	0
7							
8	0	NR	0	0	0	30	0
9				0	0	767OR	
10	0.2		0			767OR	9150OR
11					4347		
12	242	NR	0	0		821OR	2785OR
13					0	767OR	4347OR
14	226	NR	0	0			3232
15						767OR	
16	(EOB)	NR	0	0	0	767OR	418
17							
18			0	0	0		454
19		NR		0	0		
20		(EOB)	0	(EOB)	(EOB)	84	151
21			0				
22						0	139
23							
24			0			0	78
25							
26			0			0	72
27			0				
28			(EOB)			0	78
29							(EOB)
30						0	
31						0	
32						(EOB)	

Notes:

Headspace readings in parts-per-million (ppm), taked with ThermoEnvironmental Model 580B OVM.

NR - No readings, OVM malfunction

OR - Over Range of PID

EOB - End of Boring

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Table 3

Analytical Results of Soil Samples

Holiday 411/Former Sinclair

New Hope, MN

Boring, Depth(ft)	Date Sampled	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	GRO	DRO	Lab Type
SB-1, 12 ft.	2/17/2010	<0.065	**0.074**	**1.4**	**3.4**	<0.32	**129**	**11.6**	Fixed
SB-2, 8.5-9 ft.	7/15/2010	<0.058	<0.058	<0.058	<0.17	<0.29	<5.8	<5.1	Fixed
SB-3, 8-9 ft.	7/15/2010	<0.060	<0.060	<0.060	<0.18	<0.30	<6.0	**18.6**	Fixed
SB-4, 5.5-6 ft.	7/15/2010	<0.054	<0.054	<0.054	<0.16	<0.27	<5.4	<5.2	Fixed
SB-5, 9-10 ft.	7/15/2010	<0.059	<0.059	<0.059	<0.18	<0.29	<5.9	<11.3	Fixed
SB-6, 6-7 ft.	7/15/2010	<0.056	<0.056	<0.056	<0.17	<0.28	<5.6	<4.9	Fixed
SB-6, 10-12 ft.	7/15/2010	**0.29**	**0.11**	**1.5**	**7.9**	<0.31	**91.1**	**44.9**	Fixed
SB-7, 8.5-10 ft.	7/15/2010	**1.8**	**0.37**	**0.77**	**1.4**	<1.5	**241**	**19.1**	Fixed

Notes:

All data reported in milligram per kilogram (mg/kg)

MTBE - methyl tert butyl ether

GRO - gasoline range organics

DRO - diesel range organics

Concentrations detected above the laboratory reporting limit are bolded.

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Table 6

Water Level Measurements and Depths of Water Samples Collected from Borings

Holiday 411/Former Sinclair

New Hope, MN

	Soil Boring						
	2/17/2010	7/15/2010					
	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7
Static Water level depth (ft)		8.75	8.4	5.75	5.6	6.1	6.6
Water Level During Drilling (ft)	12	13	8	5.5	9	6	8
Sampled Depth (ft)	12-15.5	5-10	5-10	5-10	5-10	5-10	5-10

Notes:

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Table 7
Analytical Results of Water Samples Collected from Borings
Holiday 411/Former Sinclair
New Hope, MN

Boring Number	Date Sampled	Sampled Depth (ft)	Benzene	Toluene	Ethyl benzene	Total Xylenes	MTBE	GRO	DRO	Lab Type
SB-1	2/17/2010	12-15.5	**660**	**345**	**2070**	**7140**	**135**	**34500**	**13200**	Fixed
SB-2	7/15/2010	5-10	<2.0	**2.0**	<2.0	<6.0	<2.0	<200	<110	Fixed
Duplicate (SB-2)	7/15/2010	5-10	<2.0	**2.3**	<2.0	<6.0	<2.0	<200	<120	Fixed
SB-3	7/15/2010	5-10	<2.0	<2.0	<2.0	<6.0	<2.0	<200	**340**	Fixed
SB-4	7/15/2010	5-10	<1.0	<1.0	<1.0	<3.0	<1.0	<100	**420**	Fixed
SB-5	7/15/2010	5-10	<1.0	<1.0	<1.0	<3.0	<1.0	<100	**380**	Fixed
SB-6	7/15/2010	5-10	**2950**	**5800**	**3390**	**18000**	<50.0	**57400**	**64200**	Fixed
SB-7	7/15/2010	5-10	**197**	**71.8**	**1040**	**2040**	<25.0	**36900**	**247000**	Fixed
Trip Blank	2/17/2010	--	<1.0	<1.0	<1.0	<3.0	<5.0	<100	NA	Fixed
Trip Blank	7/15/2010	--	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA	Fixed
Lab Blank	2/17/2010	--	<1.0	<1.0	<1.0	<3.0	<5.0	<100	NA	Fixed
Lab Blank	7/15/2010	--	<1.0	<1.0	<1.0	<1.0	<5.0	<100	<100	Fixed
HRL /HBV			2	200	50	300	NE	NE	NE	

Notes:
All data reported in micrograms per liter (ug/L).
MTBE - methyl tert butyl ether
GRO - gasoline range organics
DRO - diesel range organics
HRL/HBV - Lowest Minnesota Department of Health Health Risk Limit or Health Based Value for drinking water.
NA - not analyzed
NE - HRL not established
Concentrations detected above the laboratory reporting limit are bolded.
Concentrations that exceed the HRL are shaded.

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Table 8
Other Contaminants Detected in Water Samples
Collected from Borings (Petroleum or Non-petroleum Derived)

Boring Number	Date Sampled	n-Butylbenzene	sec-Butylbenzene	Isopropylbenzene	p-Isopropyltoluene	Naphthalene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene
SB-1	2/17/2010	NS	NS	NS	NS	NS	NS	NS	NS
SB-2	7/15/2010	<2.0	<2.0	<2.0	<2.0	<8.0	<2.0	<2.0	<2.0
SB-3	7/15/2010	<2.0	<2.0	<2.0	<2.0	<8.0	<2.0	<2.0	<2.0
SB-4	7/15/2010	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
SB-5	7/15/2010	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
SB-6	7/15/2010	**98.9**	<50.0	**145**	<50.0	**835**	**448**	**3460**	**831**
SB-7	7/15/2010	**443**	**101**	**221**	**164**	**487**	**902**	**4070**	**1260**
Trip Blank	7/15/2010	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
Lab Blank	7/15/2010	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
HRL/RAA		NE	NE	NE	NE	300	NE	100	100

Notes:
All data reported in micrograms per liter (ug/L).
HRL/RAA - Lowest Minnesota Department of Health Health Risk Limit or Risk Assessment Advice for drinking water.
NA - not analyzed
NE - HRL not established
Concentrations detected above the laboratory reporting limit are bolded.
Concentrations that exceed the HRL are shaded.

Table 15

Properties Located Within 500 Feet of the Release Source.

Holiday 411/Former Sinclair

New Hope, MN

Property ID[1]	Property Address	Distance from Site	Water Supply Well			Public Water Supply		Basement (Y or N)	Sump (Y or N)	Possible Petroleum Source (Y or N)	Comments (including property use)
			Well Present (Y or N)	How Determined[2]	Well Use[3]	Utilized (Y or N)	Confirmed by City (Y or N)				
1	2701 Hillsboro Av. N.	east- and north-adjoining	N	visual, CWI	NA	unk	N	Y	unknown	Y[4]	Hillsboro Court Apartments
2	2800 Hillsboro Av. N.	350 feet northeast	N	visual, CWI	NA	unk	N	Y	unknown	Y[4]	Presidential Estates II Condominiums
3	9398 27th Av. N.	230 feet east	N	visual, CWI	NA	unk	N	Y	unknown	N	single family house
4	9390 27th Av. N.	425 feet east	N	visual, CWI	NA	unk	N	Y	unknown	N	State Farm Insurance office
5	2504 Hillsboro Av. N.	325 feet southeast	N	visual, CWI	NA	unk	N	N	unknown	N	Sunny Hollow Shopping Center, multuple retail and commercial tenants
6	9315 Medicine Lake Rd.	southeast-adjoining	N	visual, CWI	NA	unk	N	N	unknown	N	McDonald's restaurant
7	9405 Medicine Lake Rd.	south-adjoining	N	visual, CWI	NA	unk	N	N	unknown	Y[4]	Winner Gas and Wash retail gas station
8	2510 Mendelssohn Av. N.	300 feet south	N	visual, CWI	NA	unk	N	N	unknown	Y[5]	Verizon satelite station
9	2500 Mendelssohn Av. N.	425 feet south-southwest	N	visual, CWI	NA	unk	N	N	unknown	N	Multi-tenant commercial: Array Financial Service, Shurpen Group, Specialty Instruments

Notes:

[1]Property IDs correspond to labeled properties on *Figure 5, "500-Foot Potential Receptor Map."*

[2] For example, visual observation, personal contact, telephone, returned postcard, assumed (i.e., no postcard returned).

[3] For example, domestic, industrial, municipal, livestock, lawn/gardening, irrigation.

[4]Closed petroleum leaksite (see Investigation Report Section 1.3).

[5]Registered petroleum tank site (see Investigation Report Section 1.3).

Medicine Lake Road is also known as 27th Avenue North. Addresses obtained from the Hennepin County property website.

CWI - State County Well Index searched for well logs.

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Table 17
Surface Water Receptor Information
Holiday #411/Former Sinclair
New Hope, MN

Map ID	Name and Type	Distance and Direction from Plume Edge (ft)	Clean Boring/Well Between? (Y or N)
--	unnamed creek	875 ft. west	NA - cross gradient
--	Medicine Lake	1900 ft. southwest	N

Notes:
See Figure 8, "1/2-Mile Well Receptor Map".

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Table 18
Utility Receptor Information
Holiday #411/Former Sinclair
New Hope, MN

Utility ID	Description	Construction Material	Depth to Stop of Structure	Diameter	Flow Direction	Year Installed	Backfill Material	Distance to Water Table
--	Sanitary sewer line from site building to Medicine Lake	reinforced concrete pipe, assumed	12 feet or less	unknown	south	unknown	unknown	below water table
--	Sanitary sewer line beneath Medicine Lake Road	reinforced concrete pipe	12 feet	12 inch	east	unknown	unknown	below water table
--	Water line from site building to Medicine Lake Road	copper	7 feet or less	1 to 2 inch	north	~2005	unknown	at or below water table
	Water line under Medicine Lake	cast iron pipe	7 feet	8 inch	unknown	unknown	unknown	at or below water table
--	Natural gas line along east property	unknown	assumed to be less than 5 feet	unknown	unknown	unknown	unknown	less than 5 feet

Notes:
See Figure 4, "Site Map".

Table 19
Results of Field Instrumented Vapor Monitoring
Holiday #411/Former Sinclair
New Hope, MN

Location ID[1]	Description[2]	Utility Depth (ft)	Monitoring Date	Top		Mid Depth		Bottom	
				PID reading (ppm)	Percent of the LEL[3]	PID reading (ppm)	Percent of the LEL[3]	PID reading (ppm)	Percent of the LEL[3]
SS-1	sanitary sewer manhole	13	7/19/2010	0	1	0	1	0	0
SS-2	sanitary sewer manhole	14.5	7/19/2010	0	1	0	1	0	1
SS-2	sanitary sewer manhole	12	7/19/2010	0	1	0	1	0	1
ST-1	storm sewer basin	3	7/19/2010	0	1	0	NA	0	1
ST-2	storm sewer basin	2.5	7/19/2010	0	1	0	NA	0	1
ST-3	storm sewer basin	3	7/19/2010	0	1	0	NA	0	1
ST-4	storm sewer basin	3.7	7/19/2010	0	1	0	NA	0	1
ST-5	storm sewer basin	9	7/19/2010	0	1	0	0	0	1
ST-6	storm sewer basin	3	7/19/2010	0	1	0	NA	0	1
W-1	water line manhole	4.5	7/19/2010	0	1	0	1	0	1
W-2	water line manhole	4.5	7/19/2010	0	1	0	1	0	1

Notes:
PID - Photoionization Detector
LEL - Lower Explosive Limit

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Table 20
Results of Soil Gas Sampling for Vapor Intrusion Screening
Holiday 411/Former Sinclair
New Hope, MN

Sample ID	SVV-1		SVV-2		Intrusion Screening Values (ISVs)	Acute Intrusion Screening Values
Date	7/15/2010		7/15/2010			
Depth (feet)	4		4.5			
PID (ppm)	0		0			
Compounds	Result	Report Limit	Result	Report Limit		
Acetone	**95.9**	15.0	**35.4**	1.4	400	60,000
Benzene	**11.0**	1.2	**10.9**	1.8	4.5	1,000
Benzyl chloride	ND	1.9	ND	3.0	0.2	240
Bromodichloromethane	ND	2.5	ND	3.9	0.6	NA
Bromoform	ND	3.8	ND	5.9	9	NA
Bromomethane	**2.3**	1.4	ND	2.2	5	2,000
1,3-Butadiene	ND	0.81	ND	1.3	0.3	NA
2-Butanone (MEK)	**331**	18.8	**28.0**	1.7	5,000	10,000
Carbon disulfide	**5.2**	1.1	ND	1.8	700	6,000
Carbon tetrachloride	ND	2.3	ND	3.7	0.7	1,900
Chlorobenzene	ND	1.7	ND	2.7	50	NA
Chloroethane	ND	0.97	ND	1.5	10,000	100,000
Chloroform	ND	1.8	ND	2.8	100	150
Chloromethane	ND	0.76	**2.1**	1.2	90	1,000
Cyclohexane	ND	1.2	**58.2**	1.9	6,000	NA
Dibromochloromethane	ND	3.1	ND	4.8	0.4	NA
1,2-Dibromoethane (EDB)	ND	2.9	ND	4.5	0.02	NA
1,2-Dichlorobenzene	ND	2.2	ND	3.4	200	NA
1,3-Dichlorobenzene	ND	2.2	ND	3.4	100	NA
1,4-Dichlorobenzene	ND	2.2	ND	3.4	60	10,000
1,1-Dichloroethane	ND	1.5	ND	2.3	500	NA
1,2-Dichloroethane	ND	1.5	ND	2.3	0.4	NA
1,1-Dichloroethene	ND	1.5	ND	2.3	200	NA
cis-1,2-Dichloroethene	ND	1.5	ND	2.3	40	NA
trans-1,2-Dichloroethene	ND	1.5	ND	2.3	60	800
Dichlorodifluoromethane	**2.7**	1.8	ND	2.8	200	NA
1,2-Dichloropropane	ND	1.7	ND	2.7	4	200
cis-1,3-Dichloropropene	ND	1.7	ND	2.6	20	NA
trans-1,3-Dichloropropene	ND	1.7	ND	2.6	20	NA
Dichlorotetrafluoroethane	ND	2.5	ND	3.9	NA	NA
Ethanol	ND	3.4	ND	5.4	15,000	180,000
Ethyl acetate	ND	1.3	ND	2.1	3,000	40,000
Ethylbenzene	**21.9**	1.6	**22.4**	2.5	1,000	10,000
4-Ethyltoluene	**5.7**	4.5	**11.7**	7.0	NA	NA
n-Heptane	**53.3**	1.5	**8.2**	2.3	NA	NA
Hexachloro-1,3-butadiene	ND	4.0	ND	6.2	0.5	NA
n-Hexane	ND	1.3	**45.4**	2.0	2,000	NA
2-Hexanone	ND	1.5	ND	2.3	NA	NA
Methylene Chloride (Dichloromethane)	ND	1.3	**20.9**	2.0	20	10,000
4-Methyl-2-pentanone (MIBK)	ND	1.5	ND	2.3	3,000	NA
Methyl-tert-butyl ether (MTBE)	ND	1.3	ND	2.1	3,000	7,000
Naphthalene	ND	4.9	ND	7.6	9	NA
2-Propanol (Isopropyl alcohol)	ND	4.5	ND	7.0	7,000	3,200
Propylene	**159**	11.0	ND	0.99	3,000	NA
Styrene	**2.7**	1.6	ND	2.5	1,000	21,000
1,1,2,2-Tetrachloroethane	ND	2.5	ND	3.9	0.2	NA
Tetrachloroethylene (PCE)	**3.2**	2.5	**482**	3.9	20	20,000
Tetrahydrofuran	ND	1.1	ND	1.7	NA	NA
Toluene	**43.4**	1.4	**58.4**	2.2	5,000	37,000
1,2,4-Trichlorobenzene	ND	1.8	ND	2.8	4	NA

Table 20
Results of Soil Gas Sampling for Vapor Intrusion Screening
Holiday 411/Former Sinclair
New Hope, MN

Sample ID	SVV-1		SVV-2		Intrusion Screening Values (ISVs)	Acute Intrusion Screening Values
Date	7/15/2010		7/15/2010			
Depth (feet)	4		4.5			
PID (ppm)	0		0			
Compounds	Result	Report Limit	Result	Report Limit		
1,1,1-Trichloroethane	ND	2.0	ND	3.1	5,000	140,000
1,1,2-Trichloroethane	ND	2.0	ND	3.1	0.6	NA
Trichloroethene (TCE)	ND	2.0	ND	3.1	3	2,000
Trichlorofluoromethane (Freon 11)	ND	2.0	ND	3.1	700	NA
1,1,2-Trichlorotrifluoroethane (CFC-113)	ND	2.9	ND	4.5	30,000	NA
1,2,4-Trimethylbenzene	**19.6**	4.5	**50.6**	7.0	7	NA
1,3,5-Trimethylbenzene	**8.2**	4.5	**14.2**	7.0	6	NA
Vinyl acetate	ND	1.3	ND	2.0	200	NA
Vinyl chloride	ND	0.94	ND	1.5	1	180,000
m&p-Xylene**	**90.6**	3.2	**99.6**	5.0	100	43,000
o-Xylene**	**28.2**	1.6	**46.3**	2.5	100	43,000

NOTES:

All results reported in $\mu g/m^3$

Concentrations detected above the laboratory reporting limit are bolded.

Concentrations that exceed the ISV are shaded.

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OSSEO QUADRANGLE
MINNESOTA
7.5 MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION

North

0 2000

SCALE IN FEET

FIGURE 1
SITE LOCATION MAP
HOLIDAY/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
9M1002637	MH	DD
DATE	REVIEWED BY	FILE NAME
2/24/10		New Hope-S

DELTA®

North

0 300

SCALE IN FEET

FIGURE 2
AERIAL PHOTO OF SITE & SURROUNDING AREA
HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
7/27/10		4827-AER

DELTA®

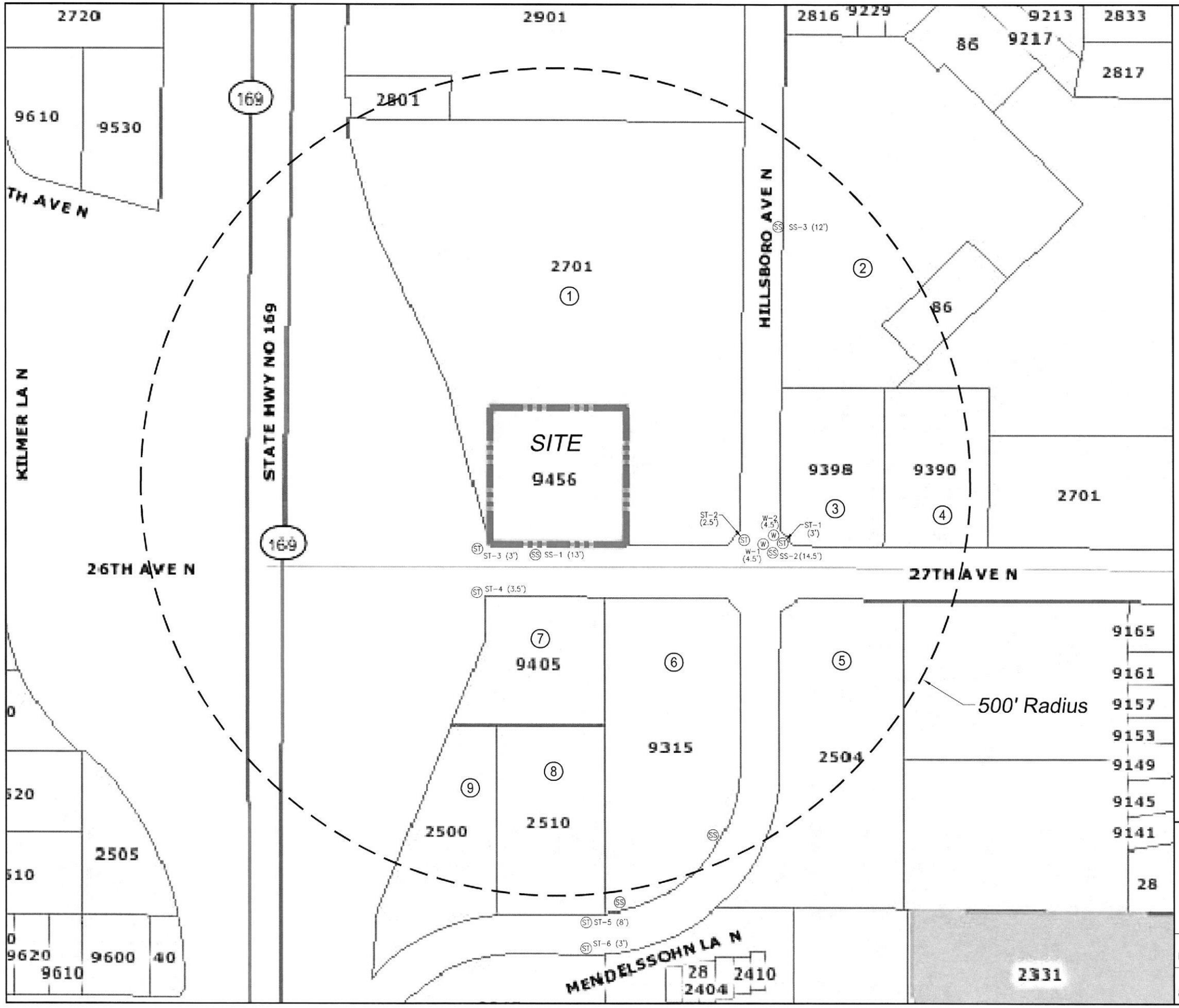
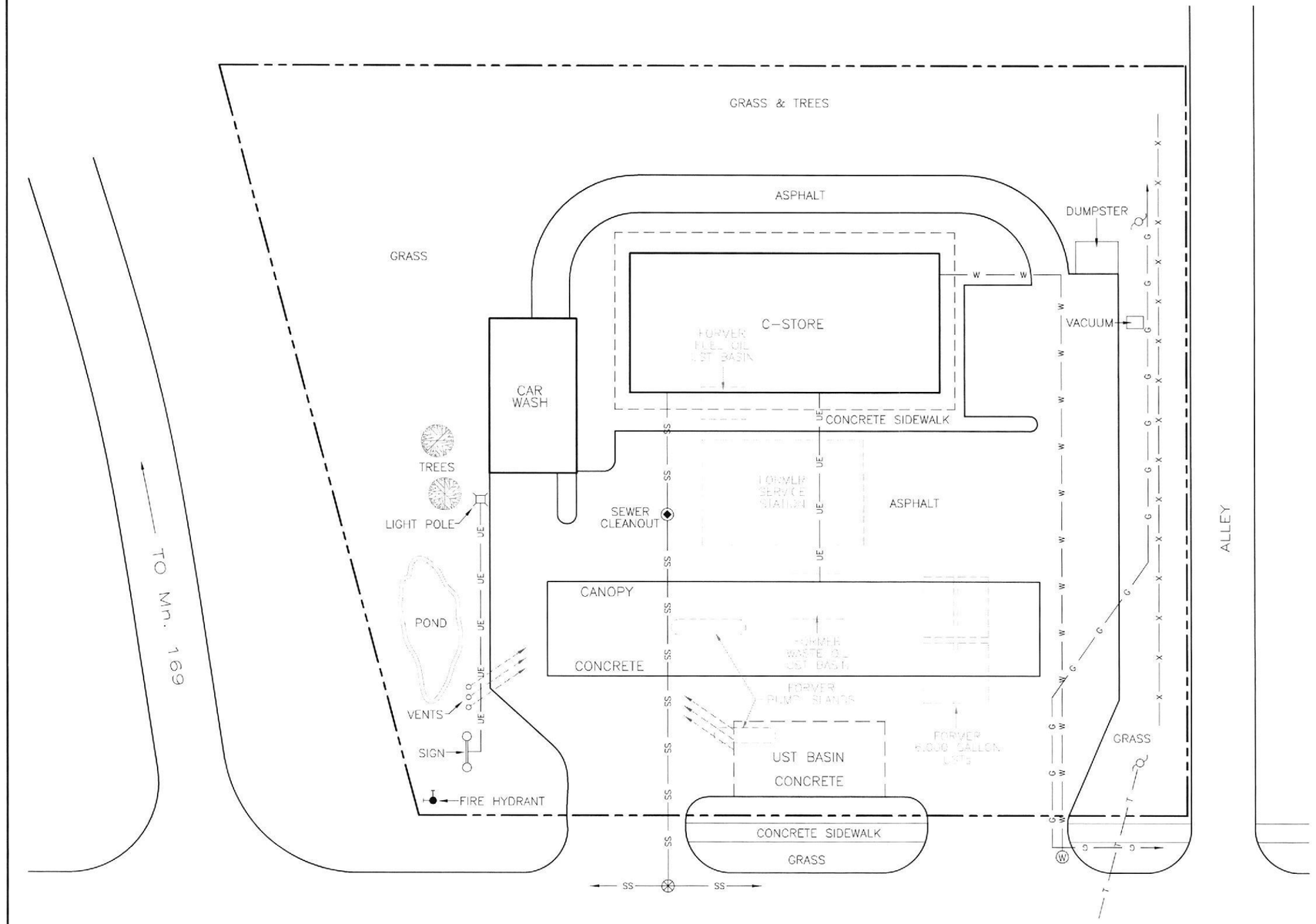


FIGURE 3
500–FOOT POTENTIAL RECEPTOR MAP
HOLIDAY #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/5/10		4827–PRM

DELTA®



LEGEND:

- PROPERTY BOUNDARY
- FENCE
- UNDERGROUND ELECTRIC LINE
- GAS LINE
- TELEPHONE LINE
- SANITARY SEWER LINE
- WATER LINE
- UTILITY POLE
- MANHOLE
- WATER VALVE

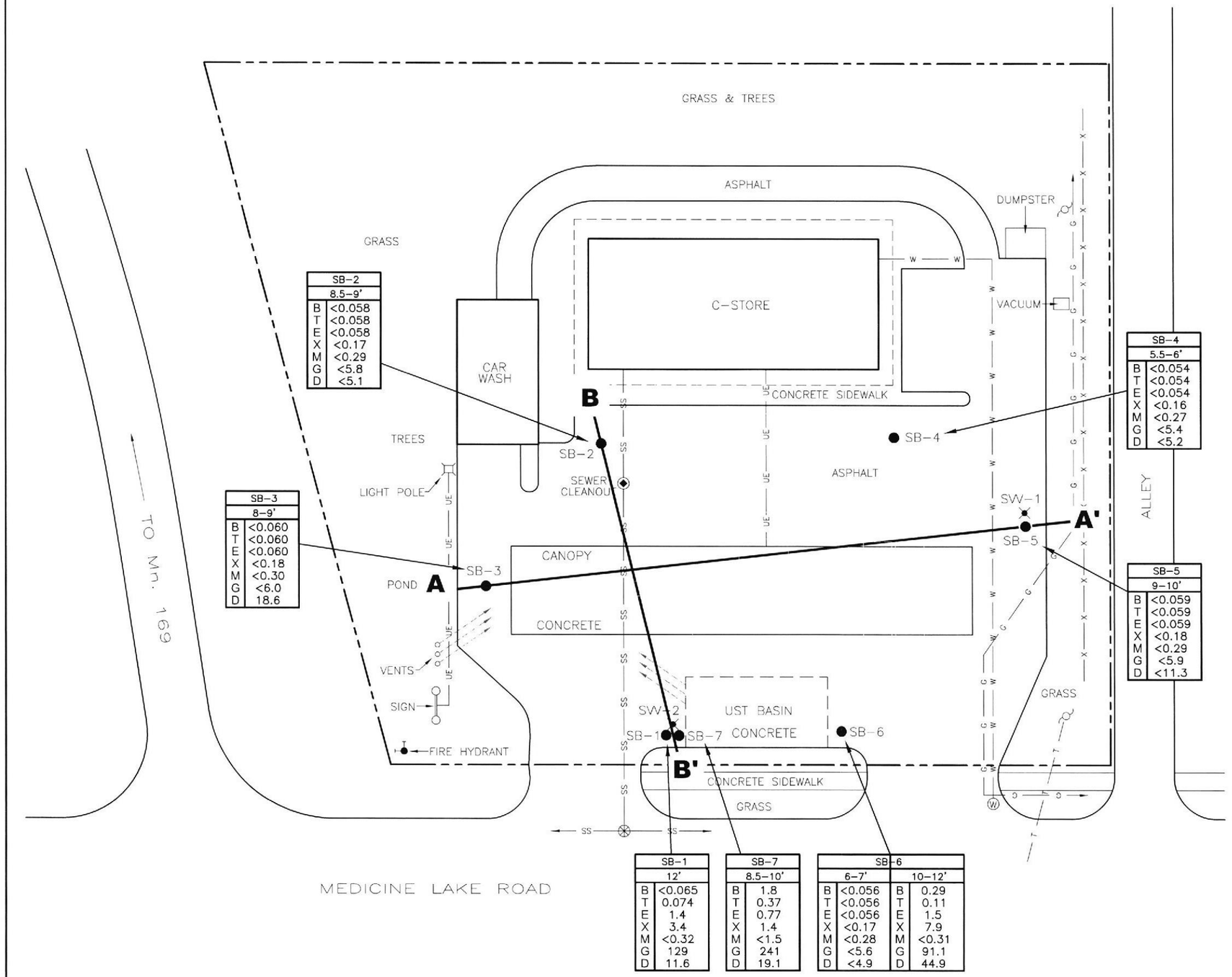
North

0 30

SCALE IN FEET

FIGURE 4
SITE MAP
HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY	
NAA1004827	NR	DD	
DATE	REVIEWED BY	FILE NAME	
8/6/10		New Hope-1	DELTA



SB-2	
8.5-9'	
B	<0.058
T	<0.058
E	<0.058
X	<0.17
M	<0.29
G	<5.8
D	<5.1

SB-3	
8-9'	
B	<0.060
T	<0.060
E	<0.060
X	<0.18
M	<0.30
G	<6.0
D	18.6

SB-4	
5.5-6'	
B	<0.054
T	<0.054
E	<0.054
X	<0.16
M	<0.27
G	<5.4
D	<5.2

SB-5	
9-10'	
B	<0.059
T	<0.059
E	<0.059
X	<0.18
M	<0.29
G	<5.9
D	<11.3

SB-1	
12'	
B	<0.065
T	0.074
E	1.4
X	3.4
M	<0.32
G	129
D	11.6

SB-7	
8.5-10'	
B	1.8
T	0.37
E	0.77
X	1.4
M	<1.5
G	241
D	19.1

SB-6			
6-7'		10-12'	
B	<0.056	B	0.29
T	<0.056	T	0.11
E	<0.056	E	1.5
X	<0.17	X	7.9
M	<0.28	M	<0.31
G	<5.6	G	91.1
D	<4.9	D	44.9

LEGEND:

- PROPERTY BOUNDARY
- FENCE
- UNDERGROUND ELECTRIC LINE
- GAS LINE
- TELEPHONE LINE
- SANITARY SEWER LINE
- WATER LINE
- UTILITY POLE
- MANHOLE
- WATER VALVE
- SOIL BORING
- SOIL VAPOR POINT LOCATION

SB-3		
8-9'		SAMPLE I.D. / SAMPLE DEPTH (FT.)
B	<0.060	BENZENE
T	<0.060	TOLUENE
E	<0.060	ETHYLBENZENE
X	<0.18	TOTAL XYLENES
M	<0.30	METHYL TERTIARY BUTYL ETHER
G	<6.0	GASOLINE RANGE ORGANICS
D	18.6	DIESEL RANGE ORGANICS

ALL VALUES ARE REPORTED IN MILLIGRAMS/KILOGRAM (mg/kg)

North

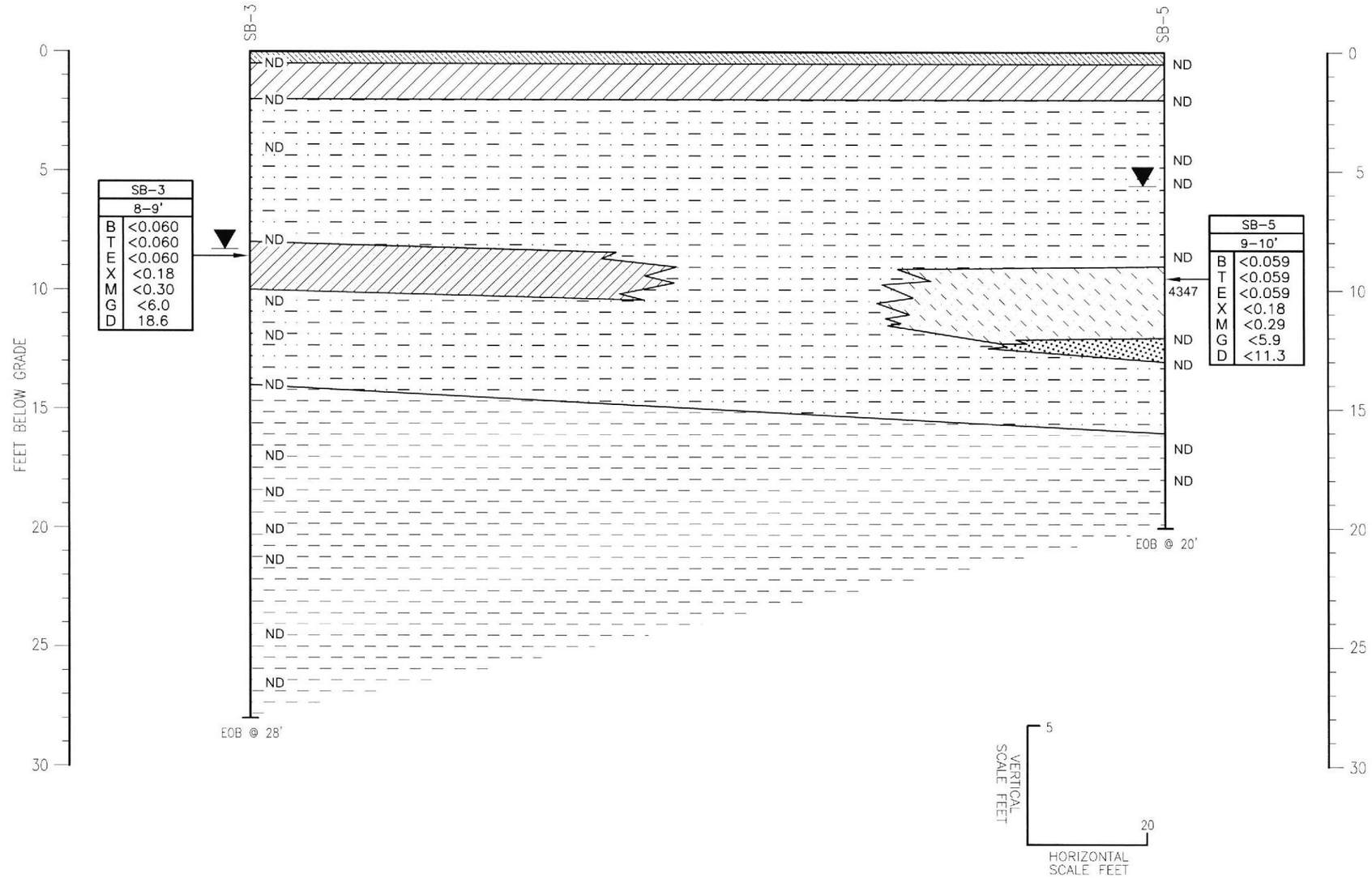
0 30

SCALE IN FEET

FIGURE 6
SOIL LAB DATA AND CROSS SECTION LOCATION MAP
HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/9/10		New Hope-1

DELTA



LEGEND:

SB-3 — SAMPLE LOCATION

ND — PID READINGS IN ppm
ND = NON-DETECT

WATER LEVEL 7/15/10

EOB @ 28' — END OF BORING DEPTH

- ASPHALT
- FILL
- SANDY CLAY
- CLAYEY SAND
- SILTY CLAY
- SAND
- CLAY

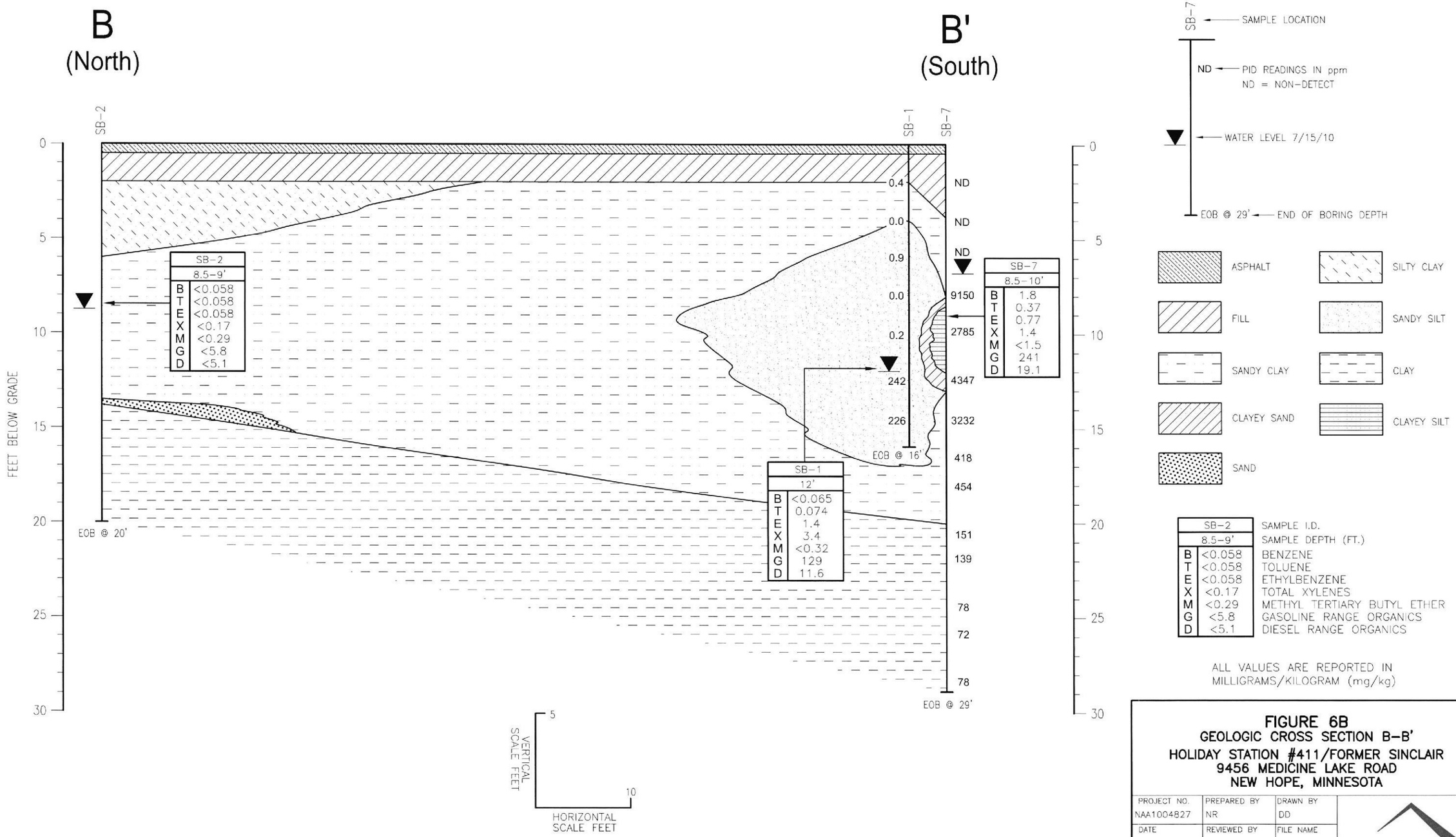
SB-3	SAMPLE I.D.
8-9'	SAMPLE DEPTH (FT.)
B <0.060	BENZENE
T <0.060	TOLUENE
E <0.060	ETHYLBENZENE
X <0.18	TOTAL XYLENES
M <0.30	METHYL TERTIARY BUTYL ETHER
G <6.0	GASOLINE RANGE ORGANICS
D 18.6	DIESEL RANGE ORGANICS

ALL VALUES ARE REPORTED IN MILLIGRAMS/KILOGRAM (mg/kg)

FIGURE 6A
GEOLOGIC CROSS SECTION A-A'
HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/9/10		4827-AA

DELTA®



LEGEND:

SB-7 ← SAMPLE LOCATION

ND ← PID READINGS IN ppm
ND = NON-DETECT

← WATER LEVEL 7/15/10

EOB @ 29' ← END OF BORING DEPTH

- ASPHALT
- FILL
- SANDY CLAY
- CLAYEY SAND
- SAND
- SILTY CLAY
- SANDY SILT
- CLAY
- CLAYEY SILT

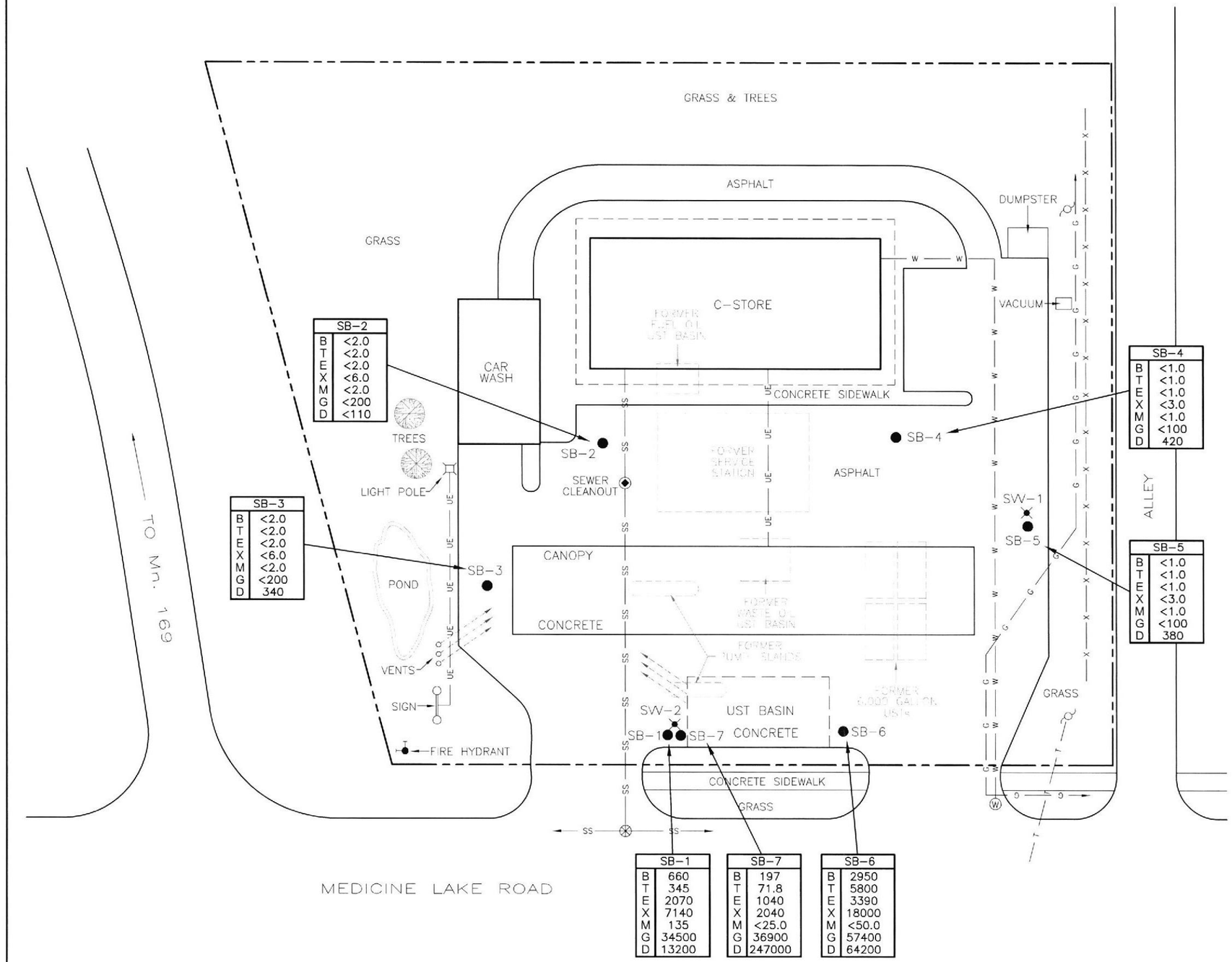
SB-2	SAMPLE I.D.
8.5-9'	SAMPLE DEPTH (FT.)
B <0.058	BENZENE
T <0.058	TOLUENE
E <0.058	ETHYLBENZENE
X <0.17	TOTAL XYLENES
M <0.29	METHYL TERTIARY BUTYL ETHER
G <5.8	GASOLINE RANGE ORGANICS
D <5.1	DIESEL RANGE ORGANICS

ALL VALUES ARE REPORTED IN MILLIGRAMS/KILOGRAM (mg/kg)

FIGURE 6B
GEOLOGIC CROSS SECTION B-B'
HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/19/10		4827-BB

DELTA®



SB-2	
B	<2.0
T	<2.0
E	<2.0
X	<6.0
M	<2.0
G	<200
D	<110

SB-3	
B	<2.0
T	<2.0
E	<2.0
X	<6.0
M	<2.0
G	<200
D	340

SB-4	
B	<1.0
T	<1.0
E	<1.0
X	<3.0
M	<1.0
G	<100
D	420

SB-5	
B	<1.0
T	<1.0
E	<1.0
X	<3.0
M	<1.0
G	<100
D	380

SB-1	
B	660
T	345
E	2070
X	7140
M	135
G	34500
D	13200

SB-7	
B	197
T	71.8
E	1040
X	2040
M	<25.0
G	36900
D	247000

SB-6	
B	2950
T	5800
E	3390
X	18000
M	<50.0
G	57400
D	64200

LEGEND:

- PROPERTY BOUNDARY
- FENCE
- UE — UNDERGROUND ELECTRIC LINE
- G — GAS LINE
- T — TELEPHONE LINE
- SS — SANITARY SEWER LINE
- W — WATER LINE
- UTILITY POLE
- MANHOLE
- WATER VALVE
- SOIL BORING
- SOIL VAPOR POINT LOCATION

SB-3	SAMPLE I.D.
B	<2.0 BENZENE
T	<2.0 TOLUENE
E	<2.0 ETHYLBENZENE
X	<6.0 TOTAL XYLENES
M	<2.0 METHYL TERTIARY BUTYL ETHER
G	<200 GASOLINE RANGE ORGANICS
D	340 DIESEL RANGE ORGANICS

ALL VALUES ARE REPORTED IN MICROGRAMS/LITER (ug/L)

North

0 30

SCALE IN FEET

FIGURE 7
GROUNDWATER LAB DATA

HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/6/10		New Hope-1

DELTA

LEGEND

203937 ● ← WELL LOCATION

↑ UNIQUE WELL NUMBER

North

0 1000

SCALE IN FEET

FIGURE 8
1/2-MILE WELL RECEPTOR MAP
HOLIDAY STATION #411/FORMER SINCLAIR
9456 MEDICINE LAKE ROAD
NEW HOPE, MINNESOTA

PROJECT NO.	PREPARED BY	DRAWN BY
NAA1004827	NR	DD
DATE	REVIEWED BY	FILE NAME
8/6/10		4827-WRM

DELTA®

APPENDIX A

NOT APPLICABLE

Petroleum Remediation Program
Minnesota Pollution Control Agency
http://www.pca.state.mn.us/programs/lust_p.html

Spatial Data Reporting Form

Guidance Document 1-03a
(For complete instructions, see Guidance Document 1-03.)

Part 1. Background

Has a site location data point been submitted for this site (circle/highlight)? YES or NO
If yes, you do not need to complete Part 2 of this form but should complete Part 3 if there are additional site features to report. This form can be submitted electronically if desired (e.g., as an e-mail attachment to the project manager).

MPCA Site ID: LEAK00017908
Site Name: Holiday Station 411/Former Sinclair
Data Collection Date: July 15, 2010
Name of Person Who Collected Data: Nancy Rodning
Organization Name: Delta Consultants
Organization Type: Environmental consultant

Part 2. Site Location (use one of the three spatial data reporting formats provided)

Point Description: Center of site property
Collection Method: Digital map, MPCA *What's In My Neighborhood*
Datum (circle/highlight): WGS84 NAD83
1) Longitude (dd mm ss.ss): Latitude (dd mm ss.ss):
2) Longitude (dd.dddddd): Latitude (dd.dddddd):
3) UTM - X (Easting): -93.3992 UTM - Y (Northing): 45.0078
UTM Zone: 15E

Part 3. Other Site Features

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss): Latitude (dd mm ss.ss):

2) Longitude (dd.dddddd): Latitude (dd.dddddd):

3) UTM - X (Easting): UTM - Y (Northing):

UTM Zone:

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss): Latitude (dd mm ss.ss):

2) Longitude (dd.dddddd): Latitude (dd.dddddd):

3) UTM - X (Easting): UTM - Y (Northing):

UTM Zone:

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss): Latitude (dd mm ss.ss):

2) Longitude (dd.dddddd): Latitude (dd.dddddd):

3) UTM - X (Easting): UTM - Y (Northing):

UTM Zone:

Point Description:

Collection Method:

Datum (circle/highlight): WGS84 NAD83

1) Longitude (dd mm ss.ss): Latitude (dd mm ss.ss):

2) Longitude (dd.dddddd): Latitude (dd.dddddd):

3) UTM - X (Easting): UTM - Y (Northing):

UTM Zone:

Minnesota Pollution Control Agency

Release Information Worksheet

Guidance Document 2-05
Petroleum Remediation Program

The Release Information Worksheet is necessary in order to meet the Public Record Provision of the Energy Policy Act of 2005. Complete the worksheet below to document tank and release information. This form may be included as an appendix in Guidance Document 4-06 or 4-08, or it may be submitted independently. Please type or print clearly. Do not revise or delete text or questions from this form.

A. General information

Site name/city: **New Hope** MPCA Site ID#: LEAK000 **17908**

B. Tank material (check all that apply):

☒ Steel ☐ Fiberglass

C. Piping material (check all that apply):

☒ Steel ☐ Fiberglass ☐ Flexible plastic ☐ Copper ☐ Other (specify): _____

D. Identify the known or suspected source(s) of the release or contamination encountered (check all that apply):

☒ Piping ☒ Tank ☒ Dispenser ☐ Submersible turbine pump ☐ Delivery problem
☐ Other (specify): _____

E. Identify the cause of the release (tank and/or piping) (check all that apply):

☐ Overfill ☒ Mechanical or physical damage ☐ Install problem ☒ Corrosion ☐ Spill ☐ Unknown
☐ Other (specify): _____

F. Identify how the release was detected (check all that apply):

☒ Removal ☐ Line leak detection ☐ Tank leak detection ☒ Visual/Olfactory ☒ Site assessment
☐ Other (specify): _____

G. Has the site ever stored E85 in any former or current tank? ☐ Yes ☒ No

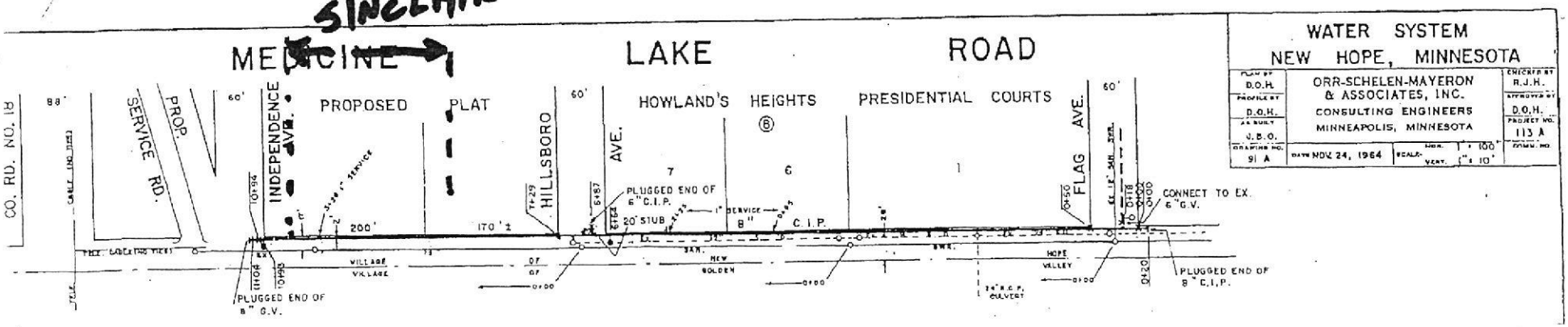
H. Has the site ever stored leaded gasoline in any former or current tank? ☒ Yes ☐ No

Web pages and phone numbers:

MPCA staff:	http://www.pca.state.mn.us/pca/staff/index.cfm
MPCA phone:	**651-296-6300 or 1-800-657-3864**
Petroleum Remediation Program Web page:	http://www.pca.state.mn.us/programs/lust_p.html
MPCA Info. Request:	http://www.pca.state.mn.us/about/inforequest.html
MPCA VIC Program:	http://www.pca.state.mn.us/cleanup/vic.html
MPCA Petroleum Brownfields Program:	http://www.pca.state.mn.us/programs/vpic_p.html
PetroFund Web page:	http://www.state.mn.us/cgi-bin/portal/mn/jsp/content.do?id=-536881377&agency=Commerce
PetroFund phone:	**651-215-1775 or 1-800-638-0418**
State Duty Officer:	**651-649-5451 or 1-800-422-0798**

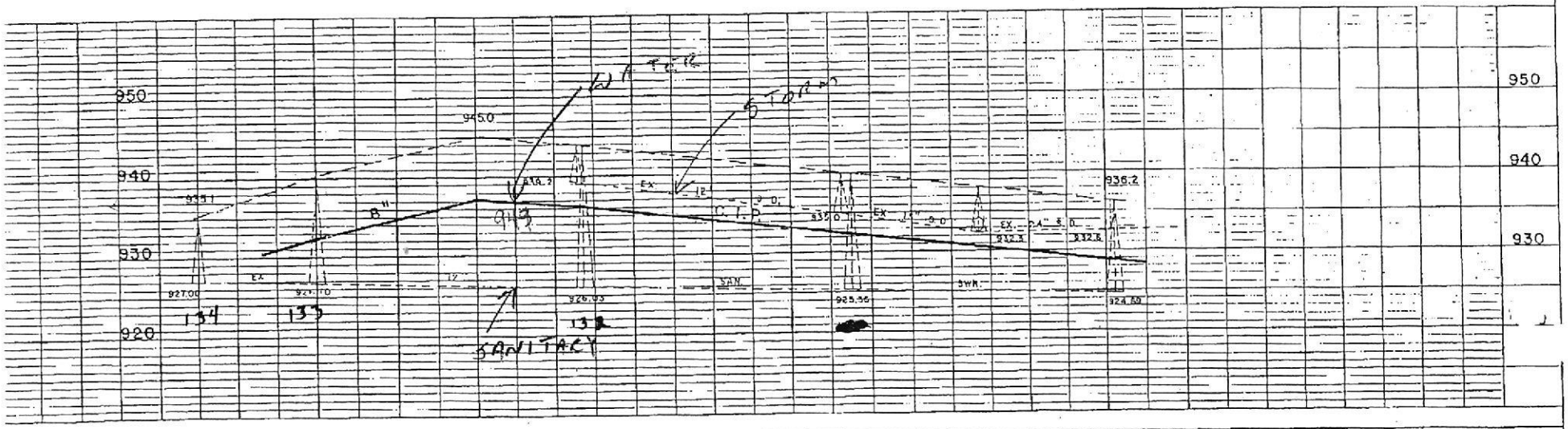
Minnesota Pollution Control Agency • 520 Lafayette Rd. N., St. Paul, MN 55155-4194 • www.pca.state.mn.us
651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats

SINCLAIR



WATER SYSTEM
NEW HOPE, MINNESOTA

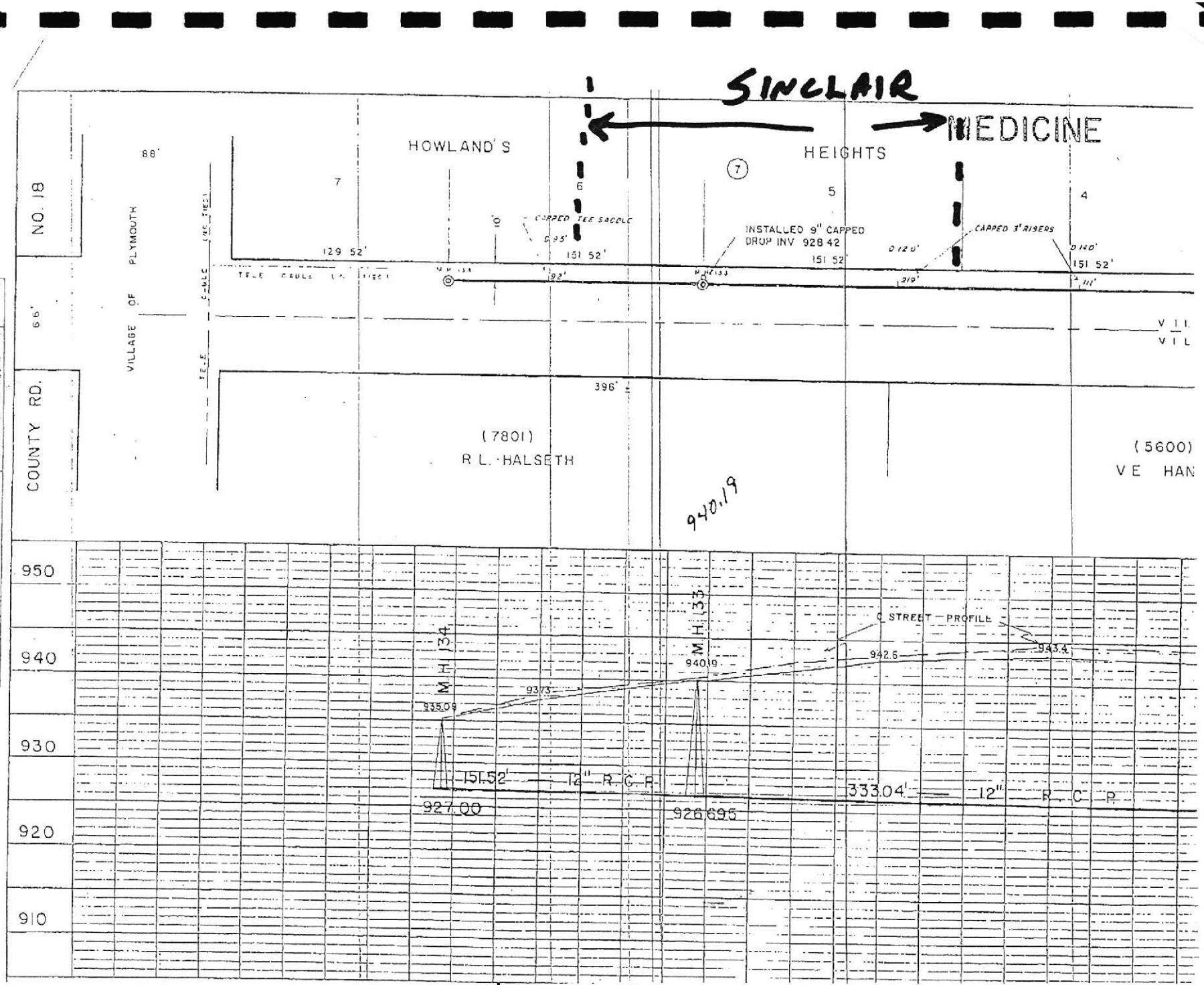
PLAN BY D.O.H.	ORR-SCHELEN-MAYERON & ASSOCIATES, INC. CONSULTING ENGINEERS MINNEAPOLIS, MINNESOTA	CHECKED BY R.J.H.
PROFILE BY D.O.H.		APPROVED BY D.O.H.
AS BUILT J.B.O.		PROJECT NO. 113 A
DRAWING NO. 91 A	DATE NOV. 24, 1964	SCALE: HOR. 1" = 100' VERT. 1" = 10'



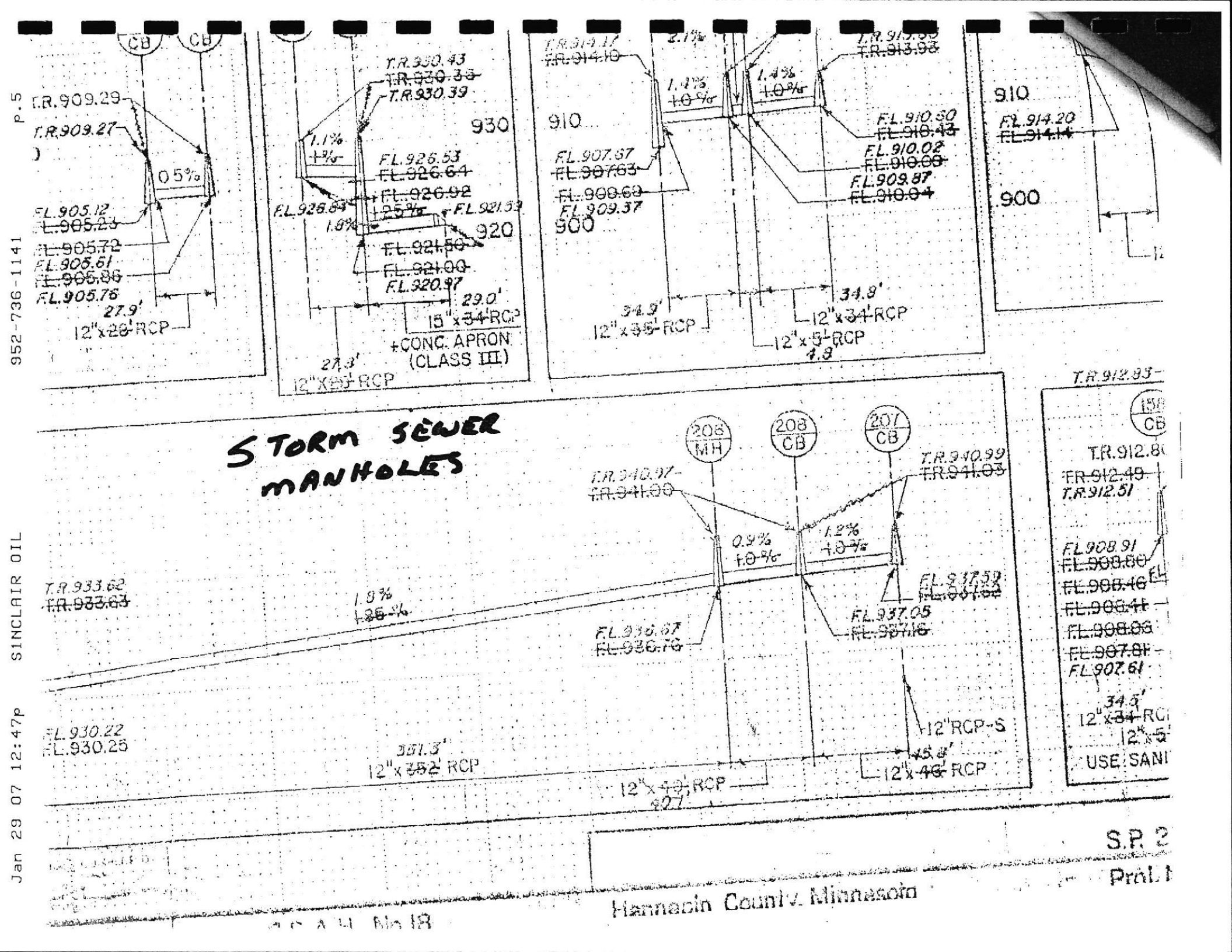
water / Sanitary / Storm

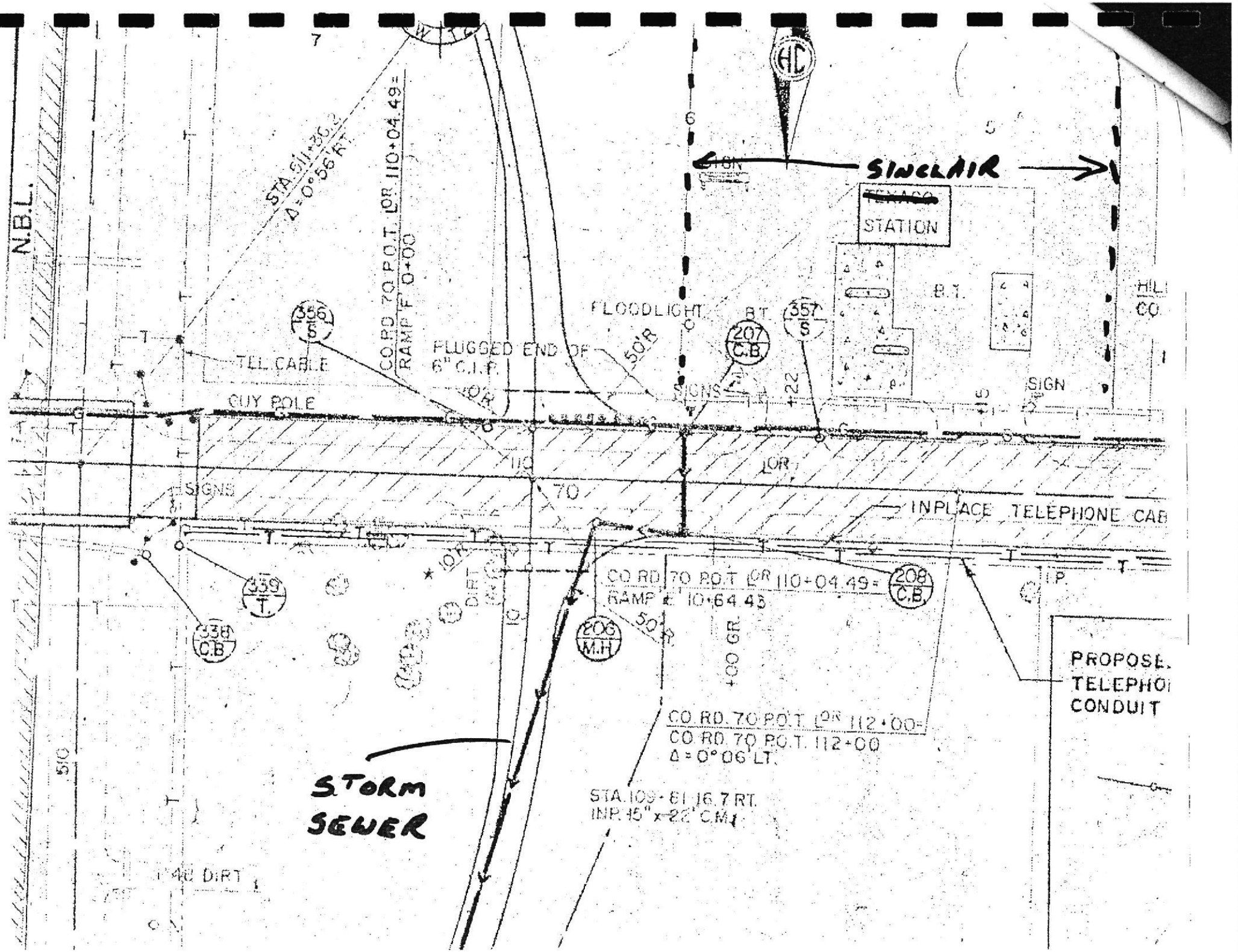
952-736-1141

SINCLAIR OIL



Sanitary Sewer




N.B.L.
SINCLAIR
STATION
STA. 611+26.2
Δ=0°56' RT.
CO. RD. 70 P.O.T. L OR 110+04.49=
RAMP 'F' 0+00
PLUGGED END OF 6" C.I.P.
TEL. CABLE
GUY POLE
FLOODLIGHT
B.T.
SIGNS
SIGN
INPLACE TELEPHONE CAB
CO. RD. 70 P.O.T. L OR 110+04.49=
RAMP 'E' 10+64.43
CO. RD. 70 P.O.T. L OR 112+00=
CO. RD. 70 P.O.T. 112+00
Δ=0°06' LT.
STA. 109+81.16.7 RT.
INP. 15" x 22" C.M.
STORM SEWER
PROPOSE
TELEPHO
CONDUIT
DIRT
207 C.B.
208 C.B.
206 M.H.
338 C.B.
339 T.
356 S.
357 S.

DELTA

5910 Rice Creek Parkway, Suite 100
St. Paul, Minnesota 55126

ENVIRONMENTAL BORING LOG

BORING ID: **SB-1**

TOTAL DEPTH: **16 feet bgs**

PROJECT INFORMATION	DRILLING INFORMATION
Project: **Holiday / Former Sinclair**	Drilling Co.: **Thein Well**
Site Location: **9456 Medicine Lake Rd, New Hope, MN**	Drill Crew Chief: **Nathan Herrboldt**
Job No.: **9M1002637**	Rig Type: **Geoprobe**
Logged By: **C. Sorensen**	Method of Drilling: **Direct Push Probe**
Weather: **Sunny, 23-32 F**	Soil Sampling Method: **4' samplers with liners**
Date Completed: **February 17, 2010**	Surface Elevation (feet): **NA**
⧖ Water Level During Drilling: **12'**	Field Screening Instrument: **PID**

DEPTH	LITHOLOGY	DESCRIPTION	USCS	LAB SAMP.	PID ppm
0		(0.00, 0.50) ASPHALT			
		(0.50, 2.00) GRAVEL AND SAND: light brown, no odor, dry.	SW		0.4
		(2.00, 4.00) SANDY CLAY: with Silt, dark brown, no odor, dry.	CL		0.0
5		(4.00, 16.00) SANDY SILT: with Clay, gray/light brown/dark brown/black organic material, mottling, no odor, slightly moist.			0.9
		at 8' slightly moist.	ML		0.0
10		at 10' green/blue/gray/brown, mottling, moderate to strong odor, moist.			0.2
⧖		at 12' - 16' sample stuck in barrel creating a composite description. Sand, Silt and Clay, gray/green/blue, moderate odor, wet.		Soil Sample Collected @ 12'	242
15					226
				Water Sample Collected @ 15.5'	

Comments: T.O.B. at 16'.

DELTA

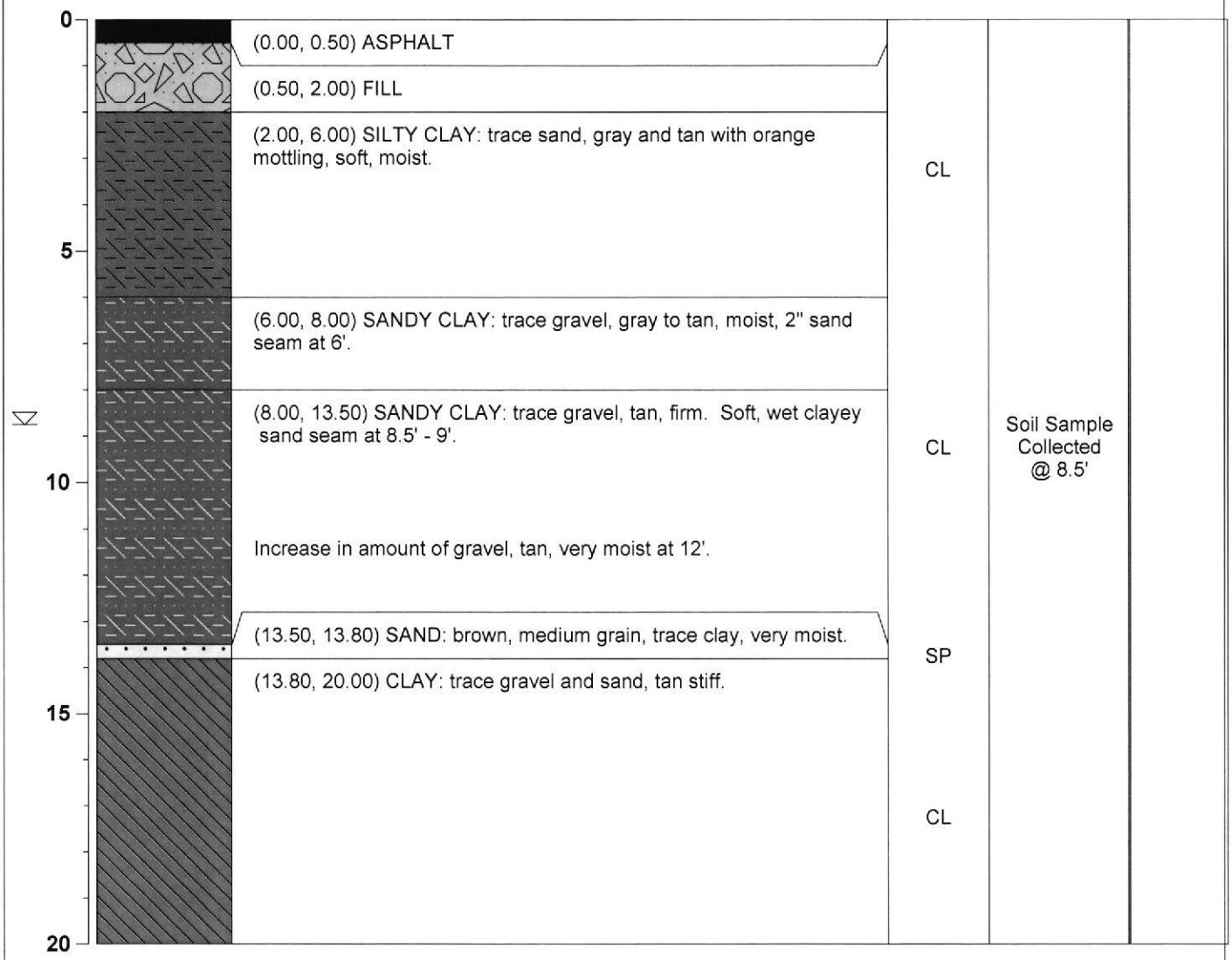
5910 Rice Creek Parkway, Suite 100
St. Paul, Minnesota 55126

ENVIRONMENTAL BORING LOG

BORING ID: **SB-2**

TOTAL DEPTH: **20'**

PROJECT INFORMATION	DRILLING INFORMATION
Project: **Holiday 411/ Former Sinclair**	Drilling Co.: **Bergerson - Caswell Drilling**
Site Location: **9456 Medicine Lake Rd, New Hope, MN**	Drill Crew Chief: **Andy**
Job No.: **NAA1004827**	Rig Type: **Truck-Mounted Geoprobe**
Logged By: **Nancy Rodning**	Method of Drilling: **Direct Push Probe**
Weather: **Sunny 70 F**	Soil Sampling Method: **4' samplers with liners**
Date Completed: **July 15, 2010**	Surface Elevation (feet): **NA**
▽ Water Level During Drilling: **8.5'. Static 8.75'.**	Field Screening Instrument: **PID**



DEPTH	DESCRIPTION	USCS	LAB SAMP.	PID ppm
0	(0.00, 0.50) ASPHALT			
	(0.50, 2.00) FILL			
	(2.00, 6.00) SILTY CLAY: trace sand, gray and tan with orange mottling, soft, moist.	CL		
5	(6.00, 8.00) SANDY CLAY: trace gravel, gray to tan, moist, 2" sand seam at 6'.			
▽	(8.00, 13.50) SANDY CLAY: trace gravel, tan, firm. Soft, wet clayey sand seam at 8.5' - 9'.	CL	Soil Sample Collected @ 8.5'	
10	Increase in amount of gravel, tan, very moist at 12'.			
	(13.50, 13.80) SAND: brown, medium grain, trace clay, very moist.	SP		
	(13.80, 20.00) CLAY: trace gravel and sand, tan stiff.			
15		CL		
20				

Comments: Groundwater sample collected after reaching static level.
E.O.B. at 20'. PID error, not functioning properly. No PID readings.

DELTA

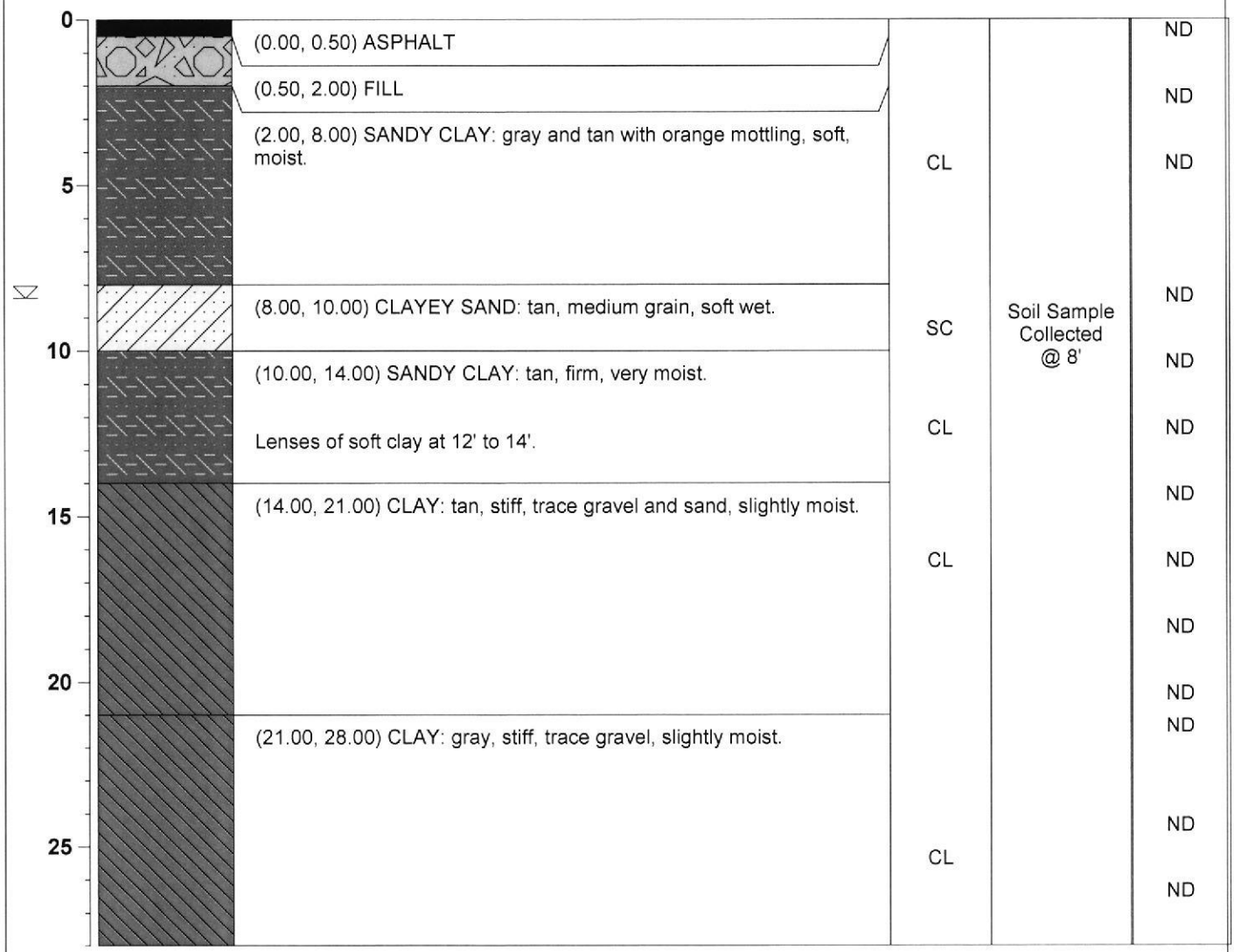
5910 Rice Creek Parkway, Suite 100
St. Paul, Minnesota 55126

ENVIRONMENTAL BORING LOG

BORING ID: **SB-3**

TOTAL DEPTH: **28'**

PROJECT INFORMATION	DRILLING INFORMATION
Project: **Holiday 411/ Former Sinclair**	Drilling Co.: **Bergerson - Caswell Drilling**
Site Location: **9456 Medicine Lake Rd, New Hope, MN**	Drill Crew Chief: **Andy**
Job No.: **NAA1004827**	Rig Type: **Truck-Mounted Geoprobe**
Logged By: **Nancy Rodning**	Method of Drilling: **Direct Push Probe**
Weather: **Sunny 80 F**	Soil Sampling Method: **4' samplers with liners**
Date Completed: **July 15, 2010**	Surface Elevation (feet): **NA**
⧖ Water Level During Drilling: **8'. Static 8.4'.**	Field Screening Instrument: **PID**



DEPTH	DESCRIPTION	USCS	LAB SAMP.	PID ppm
0	(0.00, 0.50) ASPHALT			ND
	(0.50, 2.00) FILL			ND
	(2.00, 8.00) SANDY CLAY: gray and tan with orange mottling, soft, moist.	CL		ND
	(8.00, 10.00) CLAYEY SAND: tan, medium grain, soft wet.	SC	Soil Sample Collected @ 8'	ND
10	(10.00, 14.00) SANDY CLAY: tan, firm, very moist.			ND
	Lenses of soft clay at 12' to 14'.	CL		ND
	(14.00, 21.00) CLAY: tan, stiff, trace gravel and sand, slightly moist.			ND
15		CL		ND
				ND
20				ND
	(21.00, 28.00) CLAY: gray, stiff, trace gravel, slightly moist.			ND
				ND
25		CL		ND

Comments:

E.O.B. at 28'. ND = non-detect. Groundwater sample collected after reaching static level.

DELTA

5910 Rice Creek Parkway, Suite 100
St. Paul, Minnesota 55126

ENVIRONMENTAL BORING LOG

BORING ID: **SB-4**

TOTAL DEPTH: **20'**

PROJECT INFORMATION	DRILLING INFORMATION
Project: **Holiday 411/ Former Sinclair**	Drilling Co.: **Bergerson - Caswell Drilling**
Site Location: **9456 Medicine Lake Rd, New Hope, MN**	Drill Crew Chief: **Andy**
Job No.: **NAA1004827**	Rig Type: **Truck-Mounted Geoprobe**
Logged By: **Nancy Rodning**	Method of Drilling: **Direct Push Probe**
Weather: **Sunny 80 F**	Soil Sampling Method: **4' samplers with liners**
Date Completed: **July 15, 2010**	Surface Elevation (feet): **NA**
▽ Water Level During Drilling: **Static 5.75'.**	Field Screening Instrument: **PID**

DEPTH	LITHOLOGY	DESCRIPTION	USCS	LAB SAMP.	PID ppm
0		(0.00, 0.50) ASPHALT			ND
		(0.50, 2.50) FILL			
		(2.50, 4.00) SANDY CLAY: gray and tan with orange mottling, soft, moist.	CL		ND
		(4.00, 6.00) CLAYEY SAND: brown, medium to coarse grain, wet.	SC		ND
5 ▽		(6.00, 9.00) SILTY CLAY: gray and tan, soft, moist.	CL	Soil Sample Collected @ 5.5'	ND
					ND
		(9.00, 12.00) SAND: medium grain, brown, grade to gray at 9.2', wet.	SP		ND
10		(12.00, 16.00) SANDY CLAY: tan, firm, trace gravel, moist.	CL		ND
		Firm to stiff at 14'.			ND
15		(16.00, 20.00) CLAY: gray, stiff, trace gravel, slightly moist.	CL		ND
20					ND

Comments:

E.O.B. at 20'. ND = non-detect. Groundwater sample collected after reaching static level.

DELTA

5910 Rice Creek Parkway, Suite 100
St. Paul, Minnesota 55126

ENVIRONMENTAL BORING LOG

BORING ID: **SB-5**

TOTAL DEPTH: **20'**

PROJECT INFORMATION	DRILLING INFORMATION
Project: **Holiday 411/ Former Sinclair**	Drilling Co.: **Bergerson - Caswell Drilling**
Site Location: **9456 Medicine Lake Rd, New Hope, MN**	Drill Crew Chief: **Andy**
Job No.: **NAA1004827**	Rig Type: **Truck-Mounted Geoprobe**
Logged By: **Nancy Rodning**	Method of Drilling: **Direct Push Probe**
Weather: **Sunny 80 F**	Soil Sampling Method: **4' samplers with liners**
Date Completed: **July 15, 2010**	Surface Elevation (feet): **NA**
▽ Water Level During Drilling: **9'. Static 5.6'.**	Field Screening Instrument: **PID**

DEPTH	LITHOLOGY	DESCRIPTION	USCS	LAB SAMP.	PID ppm
0		(0.00, 0.50) ASPHALT			ND
		(0.50, 2.00) FILL			
		(2.00, 9.00) SANDY CLAY: gray and tan and dark brown mix, trace gravel, slightly moist.			ND
		Tan, soft, very moist at 4'.			ND
5 ▽		Increase in gravel, firm, moist at 5' to 9'.	CL		ND
					ND
		(9.00, 12.00) SILTY CLAY: gray and tan, soft sand seam at 9', wet, slight petroleum odor.		Soil Sample Collected @ 9'	4347
10		Tan, soft to firm, moist at 11.5'.	CL		
		(12.00, 13.00) SAND: gray, medium to coarse grain, well graded, with silt, wet.	SW		ND
		(13.00, 16.00) SANDY CLAY: tan, stiff, trace gravel, slightly moist.	CL		ND
15					
		(16.00, 20.00) CLAY: gray, stiff, trace gravel, slightly moist.			ND
20			CL	Water Sample Collected	ND

Comments:

E.O.B. at 20'. ND = non-detect. Groundwater sample collected after reaching static level.

DELTA

5910 Rice Creek Parkway, Suite 100
St. Paul, Minnesota 55126

ENVIRONMENTAL BORING LOG

BORING ID: **SB-6**

TOTAL DEPTH: **32'**

PROJECT INFORMATION	DRILLING INFORMATION
Project: **Holiday 411/ Former Sinclair**	Drilling Co.: **Bergerson - Caswell Drilling**
Site Location: **9456 Medicine Lake Rd, New Hope, MN**	Drill Crew Chief: **Andy**
Job No.: **NAA1004827**	Rig Type: **Truck-Mounted Geoprobe**
Logged By: **Nancy Rodning**	Method of Drilling: **Direct Push Probe**
Weather: **Sunny 80 F**	Soil Sampling Method: **4' samplers with liners**
Date Completed: **July 15, 2010**	Surface Elevation (feet): **NA**
▽ Water Level During Drilling: **6'. Static 6.1'.**	Field Screening Instrument: **PID**

DEPTH	LITHOLOGY	DESCRIPTION	USCS	LAB SAMP.	PID ppm
0		(0.00, 0.50) ASPHALT			ND
		(0.50, 2.00) FILL			ND
		(2.00, 6.00) SANDY CLAY: tan and gray with orange mottling, soft slightly moist.	CL		ND
5 ▽		(6.00, 9.00) CL: SILTY, SANDY CLAY, gray, soft, wet, petroleum odor.	CL	Soil Sample Collected @ 6'	30.0 767 O.R.
		(9.00, 10.00) SANDY CLAY: gray and tan, soft, wet, petroleum odor.	CL		767 O.R.
10		(10.00, 12.00) SILTY CLAY: gray with tan mottling at 11.5' - 12', wet, soft, petroleum odor.	CL	Soil Sample Collected @ 10'	821 O.R. 767 O.R.
		(12.00, 13.00) CL: SILTY, SANDY CLAY, tan, soft, moist, petroleum odor.	CL SM		767 O.R.
15		(13.00, 15.50) SANDY SILT: gray, wet, petroleum odor.	CL		767 O.R.
		(15.50, 16.00) CL: SILTY, SANDY CLAY, tan, soft, moist.			
		(16.00, 32.00) CLAY: trace gravel, gray, stiff, slightly moist.			
20					ND
			CL		ND
25					ND
					ND
					ND
30					ND

84

Comments: Groundwater sample collected after reaching static level.
E.O.B. at 32'. ND = non-detect O.R. = over range on PID.

DELTA

5910 Rice Creek Parkway, Suite 100
St. Paul, Minnesota 55126

ENVIRONMENTAL BORING LOG

BORING ID: **SB-7**

TOTAL DEPTH: **29'**

PROJECT INFORMATION

Project: **Holiday 411/ Former Sinclair**
Site Location: **9456 Medicine Lake Rd, New Hope, MN**
Job No.: **NAA1004827**
Logged By: **Nancy Rodning**
Weather: **Sunny 80 F**
Date Completed: **July 15, 2010**
⧖ Water Level During Drilling: **8'. Static 6.6'.**

DRILLING INFORMATION

Drilling Co.: **Bergerson - Caswell Drilling**
Drill Crew Chief: **Andy**
Rig Type: **Truck-Mounted Geoprobe**
Method of Drilling: **Direct Push Probe**
Soil Sampling Method: **4' samplers with liners**
Surface Elevation (feet): **NA**
Field Screening Instrument: **PID**

DEPTH	LITHOLOGY	DESCRIPTION	USCS	LAB SAMP.	PID ppm
0		(0.00, 0.50) ASPHALT			
		(0.50, 2.00) FILL			ND
		(2.00, 3.80) GRAVEL			ND
5		(3.80, 8.00) SANDY CLAY: tan, soft, with gravel, moist.	CL		ND
⧖		sand lens at 8'.			
		(8.00, 8.50) CLAYEY SAND: gray-tan, medium grain, wet, petroleum odor.	SC	Soil Sample Collected @ 8.5	9150
10		(8.50, 12.00) ML: CLAYEY SILT, gray and tan, soft, wet, petroleum odor.	ML		2785
		(12.00, 13.00) CLAYEY SAND: dark gray, medium grain, wet, petroleum odor.	SC		4347
15		(13.00, 20.00) SANDY CLAY: gray and tan, soft, wet, petroleum odor.			3232
		Firm, moist at 14'.	CL		418
		Brown, slightly moist, trace gravel at 16' to 20'.			454
20		(20.00, 29.00) CLAY: brown and gray, stiff, trace gravel, slightly moist.			151
					139
25			CL		78
					72
					78
30					

Comments: Groundwater sample collected after reaching static level.
E.O.B. at 29'. Probe refusal. ND = non-detect

BERGERSON-CASWELL
INCORPORATED

Bergerson - Caswell Inc.
5115 Industrial Street
Maple Plain, MN 55359
(763) 479-3121 Fax: (763) 479-2183

July 16, 2010

Mr. Tony Becker
DELTA ENVIRONMENTAL
5910 Rice Creek Parkway
Suite 100
Shoreview, MN 55126

Bergerson-Caswell Proj.# 10E28072

RE: Drilling services, sampling and well installation at Holiday SS #411, 9456 Medicine Lake Road, New Hope, Minnesota.

Mr. Becker:

Enclosed are copies of the Boring Logs, and MDH Well Records for the above referenced project.

The invoice for this project will be sent to you under separate cover.

If you have any questions regarding the enclosed, please feel free to give me a call at (763) 479-3121.

Sincerely,

BERGERSON-CASWELL, INC.

David J. Lenzmeier
Department Manager

DJL/smg

Enclosures: Boring Logs
MDH Well Records

PROJECT NO. E28072 BORING NO. SB-2 PROJECT Holiday SS #411 WEATHER Sunny 80's BORING LOG: Jeff

Technician: Nancy
Driller: Andy
Helper: Jeff L.
Rig No.: 85

Surface Elevation: —
Boring Started: 7/15/10
Boring Completed: —
Off Set: —

WATER LEVEL OBSERVATION
WL: 8.51' WS or WD
WL: ____ HRS AB

Sheet 1 of 7

SAMPLE NO.	DEPTH OR ELEVATION FROM	TO	SAMPLING METHOD	PENETRATION RECORD Split Spoon Blows 6" 6" 6" 6"	REC. LENGTH	STRATA CHANGE	NOTES
SB-2	0	4	2" MC		3½		BROWN CLAY
	4	8	↓		3½		BROWN & GRAY CLAY
	8	12	Direct MC		4		BROWN SANDY CLAY
	12	16	↓		3½		BROWN SANDY CLAY 'WET'
	16	20	↓		3½		Brown sandy clay

Sample Description: Record Color & Texture

Sample Given To: _____

A.S.: Auger Sample
S.T. Shelby Tube
S.S.: Split Spoon
D.B.: Diamond But
S.A.: Solid Stem Auger
H.S.A.: Hollow Stem Auger
R.B.: Rock Bit
W. S.: While Sampling
W.D.: While Drilling
T.W.: Lined Split Spoon
G.S.: Grab Sample

Final Depth (sampled): 20'
Final Depth (drilled): 20'
Backfill Type: Bentonite
Was Well Set: temp
Depth of Well: 15'
Well Number: MW-2
Auger Size: —
Auger FTG: —
Rotary Size: —
Rotary FTG: —
Fluid Used: —
Fluid Loss: —
Artesion Pressure: —
Depth: —

PROJECT NO. E28072 BORING NO. SB-3 PROJECT Holiday # 411 WEATHER Sunny 80's BORING LOG: Jeff

Technician: Nancy
Driller: Jeff
Helper: Jeff L.
Rig No.: 85

Surface Elevation: —
Boring Started: 7/15/10
Boring Completed: —
Off Set: —

WATER LEVEL OBSERVATION
WL: 7.8 WS or WD
WL: ____ HRS AB

Sheet 2 of 7

SAMPLE NO.	DEPTH OR ELEVATION FROM	TO	SAMPLING METHOD	PENETRATION RECORD Split Spoon Blows 6"	6"	6"	6"	REC. LENGTH	STRATA CHANGE	NOTES
SB-3	0	4	2" MC					3½		BROWN CLAY
	4	8						3½		BROWN & GRAY CLAY
	12	16	Discrete MC					3½		BROWN CLAY & SAND
	16	20	↓					3½		BROWN CLAY
	~~20~~	~~24~~						3½		BROWN & GRAY CLAY
	24	28						3½		GRAY CLAY

Sample Description: Record Color & Texture

Sample Given To: _____

A.S.: Auger Sample
S.T. Shelby Tube
S.S.: Split Spoon
D.B.: Diamond But
S.A.: Solid Stem Auger
H.S.A.: Hollow Stem Auger
R.B.: Rock Bit
W. S.: While Sampling
W.D.: While Drilling
T.W.: Lined Split Spoon
G.S.: Grab Sample

Final Depth (sampled): 28'
Final Depth (drilled): 28'
Backfill Type: Bentonite
Was Well Set: temp.
Depth of Well: 15'
Well Number: TW-3
Auger Size: —
Auger FTG: —
Rotary Size: —
Rotary FTG: —
Fluid Used: —
Fluid Loss: —
Artesion Pressure:
Depth: —

PROJECT NO. E88072 BORING NO. SP-4 PROJECT Holiday SS #411 WEATHER Sunny 80's BORING LOG: JeAP

Technician: Nancy
Driller: Andy
Helper: Jeff L.
Rig No.: 85

Surface Elevation: —
Boring Started: 7/15/10
Boring Completed:
Off Set: —

WATER LEVEL OBSERVATION
WL: 5.75 WS or WD
WL: ____ HRS AB

Sheet 3 of 7

SAMPLE NO.	DEPTH OR ELEVATION FROM	TO	SAMPLING METHOD	PENETRATION RECORD Split Spoon Blows 6"	6"	6"	6"	REC. LENGTH	STRATA CHANGE	NOTES
SP-4	0	4	2" MC					3½		WHITE SAND / BROWN CLAY
	4	8	↓					4		BROWN & GRAY CLAY & GRAVEL
	8	12	Discrete MC					3½		GRAY CLAY & BROWN SAND
	12	16						3½		BROWN CLAY
	16	20	↓					3½		~~BROWN CLAY~~ BROWN CLAY

Sample Description: Record Color & Texture

Sample Given To: _____

A.S.: Auger Sample
S.T. Shelby Tube
S.S.: Split Spoon
D.B.: Diamond But
S.A.: Solid Stem Auger
H.S.A.: Hollow Stem Auger
R.B.: Rock Bit
W. S.: While Sampling
W.D.: While Drilling
T.W.: Lined Split Spoon
G.S.: Grab Sample

Final Depth (sampled) 20'
Final Depth (drilled): 20'
Backfill Type: Bentonite
Was Well Set: temp
Depth of Well: 15
Well Number: tw-4
Auger Size: —
Auger FTG: —
Rotary Size: —
Rotary FTG: —
Fluid Used: —
Fluid Loss: —
Artesion Pressure:
Depth: —

PROJECT NO. E28072 BORING NO. SB-6 PROJECT Holiday SS #411 WEATHER Sunny 80s BORING LOG: Jeff

Technician: Nancy
Driller: Andy
Helper: Jeff L.
Rig No.: 85

Surface Elevation: —
Boring Started: 7/15/10
Boring Completed:
Off Set: —

WATER LEVEL OBSERVATION
WL: 5.61 WS or WD
WL: _____ HRS AB

Sheet 4 of 7

SAMPLE NO.	DEPTH OR ELEVATION FROM	TO	SAMPLING METHOD	PENETRATION RECORD Split Spoon Blows 6"	6"	6"	6"	REC. LENGTH	STRATA CHANGE	NOTES
SB-5										Sample Description: Record Color & Texture Sample Given To: _____ GRAY & BROWN
	0	4	2" MC							~~LIGHT & DARK~~ GRAY CLAY
	4	8	↓							BROWN CLAY
	8	12	Discrete MC							BROWN & GRAY CLAY
	12	16								GRAY CLAY & GRAVEL
	16	20	↓							GRAY CLAY & SAND

A.S.: Auger Sample
S.T. Shelby Tube
S.S.: Split Spoon
D.B.: Diamond But
S.A.: Solid Stem Auger
H.S.A.: Hollow Stem Auger
R.B.: Rock Bit
W. S.: While Sampling
W.D.: While Drilling
T.W.: Lined Split Spoon
G.S.: Grab Sample

Final Depth (sampled) 20'
Final Depth (drilled) 20'
Backfill Type Bentonite
Was Well Set: Temp
Depth of Well: 15'
Well Number: TW-5
Auger Size: —
Auger FTG: —
Rotary Size: —
Rotary FTG: —
Fluid Used: —
Fluid Loss: —
Artesion Pressure:
Depth: —

PROJECT NO. E98072 BORING NO. SP-6 PROJECT Holiday SS #411 WEATHER Sunny 80's BORING LOG: Jeff

Technician: Nancy
Driller: Andy
Helper: Jeff
Rig No.: 85

Surface Elevation: —
Boring Started: 7/15/10
Boring Completed: —
Off Set: —

WATER LEVEL OBSERVATION
WL: 6.1 WS or WD
WL: _____ HRS AB

Sheet 5 of 7

SAMPLE NO.	DEPTH OR ELEVATION FROM	TO	SAMPLING METHOD	PENETRATION RECORD Split Spoon Blows 6"	6"	6"	6"	REC. LENGTH	STRATA CHANGE	NOTES
SB-6	0	4	2" MC					3½		GRAY CLAY
	4	8	↓					4		BROWN SANDY CLAY
	8	12	Discrete MC					3½		BROWN CLAY
	12	16						3½		BROWN CLAY
	16	20						3½		BROWN CLAY
	20	24						3½		GRAY CLAY
	24	28						4		GRAY CLAY
	28	32	↓					4		BROWN CLAY

Sample Description: Record Color & Texture

Sample Given To: _____

A.S.: Auger Sample
S.T. Shelby Tube
S.S.: Split Spoon
D.B.: Diamond But
S.A.: Solid Stem Auger
H.S.A.: Hollow Stem Auger
R.B.: Rock Bit
W. S.: While Sampling
W.D.: While Drilling
T.W.: Lined Split Spoon
G.S.: Grab Sample

Final Depth (sampled): 32'
Final Depth (drilled): 32'
Backfill Type: Bentonite
Was Well Set: temp.
Depth of Well: 15'
Well Number: MW-6
Auger Size: —
Auger FTG: —
Rotary Size: —
Rotary FTG: —
Fluid Used: —
Fluid Loss: —
Artesion Pressure:
Depth: _____

PROJECT NO. E8807 BORING NO. SP-7 PROJECT Holiday SS # 411 WEATHER Sunny 80's BORING LOG: Jeff

Technician: Nancy
Driller: Andy
Helper: Jeff L
Rig No.: 85

Surface Elevation: —
Boring Started: 7/15/10
Boring Completed: —
Off Set: —

WATER LEVEL OBSERVATION
WL: 6.6 WS or WD
WL: ____ HRS AB

Sheet 6 of 7

SAMPLE NO.	DEPTH OR ELEVATION FROM	TO	SAMPLING METHOD	PENETRATION RECORD Split Spoon Blows 6"	6"	6"	6"	REC. LENGTH	STRATA CHANGE	NOTES / Sample Description: Record Color & Texture / Sample Given To:
	0	4	2" NC					3½		CLASS 5 GRAVEL & BROWN CLAY
	4	8	↓					4		BROWN CLAY
	8	12	Discrete					3½		SANDY GRAY CLAY
	12	16	|					3½		BROWN & SANDY CLAY
	16	20	|					3½		BROWN CLAY
	20	24	|					3½		BROWN CLAY
	24	28	|					4		BROWN CLAY
	28	29	↓					1		BROWN CLAY refusal at 29'

A.S.: Auger Sample
S.T. Shelby Tube
S.S.: Split Spoon
D.B.: Diamond But
S.A.: Solid Stem Auger
H.S.A.: Hollow Stem Auger
R.B.: Rock Bit
W. S.: While Sampling
W.D.: While Drilling
T.W.: Lined Split Spoon
G.S.: Grab Sample

Final Depth (sampled): 29'
Final Depth (drilled): 29'
Backfill Type: Bentonite
Was Well Set: temp
Depth of Well: 15'
Well Number: MW-7
Auger Size: —
Auger FTG: —
Rotary Size: —
Rotary FTG: —
Fluid Used: —
Fluid Loss: —
Artesion Pressure: —
Depth: —

PROJECT NO. E8073 BORING NO. V-1,2 PROJECT Holiday SS #411 WEATHER Sunny 80's BORING LOG: Andy

Technician: Nancy
Driller: Andy
Helper: Jeff L.
Rig No.: 85

Surface Elevation: —
Boring Started: 7/15/10
Boring Completed: —
Off Set: —

WATER LEVEL OBSERVATION
WL: — WS or WD
WL: — HRS AB

Sheet 7 of 7

SAMPLE NO.	DEPTH OR ELEVATION FROM	TO	SAMPLING METHOD	PENETRATION RECORD Split Spoon Blows 6"	6"	6"	6"	REC. LENGTH	STRATA CHANGE	NOTES
V-1	0	4	Vapor Point							Vapor
V-2	0	5	Vapor Point							Vapor

Sample Description: Record Color & Texture

Sample Given To: _____

A.S.: Auger Sample
S.T. Shelby Tube
S.S.: Split Spoon
D.B.: Diamond But
S.A.: Solid Stem Auger
H.S.A.: Hollow Stem Auger
R.B.: Rock Bit
W. S.: While Sampling
W.D.: While Drilling
T.W.: Lined Split Spoon
G.S.: Grab Sample

Final Depth (sampled): —
Final Depth (drilled): 5
Backfill Type: Bentonite
Was Well Set: —
Depth of Well: —
Well Number: —
Auger Size: —
Auger FTG: —
Rotary Size: —
Rotary FTG: —
Fluid Used: —
Fluid Loss: —
Artesion Pressure: —
Depth:

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING SEALING RECORD

Minnesota Statutes, Chapter 1031

Minnesota Well and Boring Sealing No.
Minnesota Unique Well No. or W-series No. (leave blank if not known)

H 289553

WELL OR BORING LOCATION

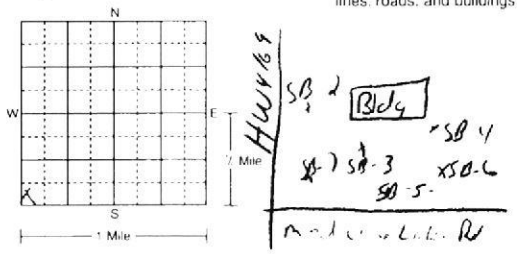
County Name: Hennepin

Township Name	Township No.	Range No.	Section No.	Fraction (sm. → lg.)
New Hope	118	21	19	SW SW SW

GPS LOCATION: Latitude ____ degrees ____ minutes ____ seconds
Longitude ____ degrees ____ minutes ____ seconds

Numerical Street Address or Fire Number and City of Well or Boring Location: 9456 Medicine Lk Rd New Hope

Show exact location of well or boring in section grid with "X"



Sketch map of well or boring location, showing property lines, roads, and buildings.

Date Sealed: 7/15/10
Date Well or Boring Constructed: 7/15/10

Depth Before Sealing: 32 ft.
Original Depth: 32 ft.

AQUIFER(S): Single Aquifer / Multiaquifer

STATIC WATER LEVEL: Measured / Estimated; Date Measured: 7/15/10

WELL/BORING: Water-Supply Well / Monit. Well; Env. Bore Hole / Other Temp

6 ft. / below / above land surface

CASING TYPE(S): Steel / Plastic / Tile / Other

WELLHEAD COMPLETION

Outside: Well House / Pitless Adapter/Unit / Well Pit / Other; At Grade / Buried

Inside: Basement Offset / Well Pit / Buried / Other

PROPERTY OWNER'S NAME/COMPANY NAME: Holiday Company Inc

Property owner's mailing address if different than well location address indicated above: PO Box 1224 Minneapolis MN 55440

WELL OWNER'S NAME/COMPANY NAME: Same as above

Well owner's mailing address if different than property owner's address indicated above:

CASING(S)

Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
in. from	to ft.	Yes / No	Yes / No / Unknown
in. from	to ft.	Yes / No	Yes / No / Unknown
in. from	to ft.	Yes / No	Yes / No / Unknown

SCREEN/OPEN HOLE: Screen from ____ to ____ ft. Open Hole from ____ to ____ ft.

OBSTRUCTIONS: Rods/Drop Pipe / Check Valve(s) / Debris / Fill / No Obstruction

Type of Obstructions (Describe)

Obstructions removed? Yes / No Describe

PUMP: Type; Removed / Not Present / Other

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:

No Annular Space Exists / Annular Space Grouted with Tremie Pipe / Casing Perforation/Removal

in. from	to ft.	Perforated	Removed
in. from	to ft.	Perforated	Removed

Type of Perforator

Other

GROUTING MATERIAL(S) (One bag of cement = 94 lbs., one bag of bentonite = 50 lbs.)

Grouting Material: Bent Grout	from 0 to 32 ft	yards 2/3	bags	
	from ____ to ____ ft	yards	bags	
	from ____ to ____ ft	yards	bags	

OTHER WELLS AND BORINGS: Other unsealed and unused well or boring on property? Yes / No How many?

GEOLOGICAL MATERIAL	COLOR	HARDNESS OR FORMATION	FROM	TO
If not known, indicate estimated formation log from nearby well or boring.				
Clay	Gray	M	0	4
Sandy clay	BRN	M	4	8
Clay	BRN	M	8	32

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING

SB-1 → SB-7

10-E-28072

LICENSED OR REGISTERED CONTRACTOR CERTIFICATION

This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Bergerson Caswell Inc — *Licensee Business Name*
1767 — *License or Registration No.*

Certified Representative Signature
1205 — *Certified Rep. No.*
Date: 7/21/10

Jeff Lombard — *Name of Person Sealing Well or Boring*

IMPORTANT-FILE WITH PROPERTY PAPERS-WELL OWNER COPY — H 289553

HE-01434-12 IC# 140-0423 9-09R

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

February 25, 2010

Mr. Matt Hobson
Delta Consultants
5910 Rice Creek Parkway
Saint Paul, MN 55126

RE: Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Dear Mr. Hobson:
Enclosed are the analytical results for sample(s) received by the laboratory on February 17, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

This report was reissued on 2/25/10 to include MTBE, which was not requested on the Chain of Custody.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne Trout

Carolynne Trout

carolynne.trout@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Minnesota Certification IDs
1700 Elm Street SE, Suite 200 Minneapolis, MN 55414
Alaska Certification #: UST-078
Washington Certification #: C754
Tennessee Certification #: 02818
Pennsylvania Certification #: 68-00563
Oregon Certification #: MN200001
North Dakota Certification #: R-036
North Carolina Certification #: 530
New York Certification #: 11647
New Jersey Certification #: MN-002
Montana Certification #: MT CERT0092
Minnesota Certification #: 027-053-137
Michigan DEQ Certification #: 9909
Maine Certification #: 2007029
Louisiana Certification #: LA080009
Louisiana Certification #: 03086
Kansas Certification #: E-10167
Iowa Certification #: 368
Illinois Certification #: 200011
Florida/NELAP Certification #: E87605
California Certification #: 01155CA
Arizona Certification #: AZ-0014
Wisconsin Certification #: 999407970

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10122561001	**SB-1-12'**	Solid	02/17/10 11:15	02/17/10 16:15
10122561002	**SB-1**	Water	02/17/10 11:30	02/17/10 16:15
10122561003	**MeOH Blank**	Solid		02/17/10 16:15
10122561004	**Trip Blank**	Water		02/17/10 16:15

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10122561001	SB-1-12'	WI MOD DRO	JLR	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10122561002	SB-1	WI MOD DRO	JLR	2
		WI MOD GRO	MJH	7
10122561003	MeOH Blank	WI MOD GRO	MJH	7
10122561004	Trip Blank	WI MOD GRO	MJH	7

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Sample: SB-1-12' **Lab ID: 10122561001** Collected: 02/17/10 11:15 Received: 02/17/10 16:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**11.6**	mg/kg	9.6	1	02/18/10 14:38	02/18/10 21:53		T7
n-Triacontane (S)	79	%	50-150	1	02/18/10 14:38	02/18/10 21:53		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.065	1	02/18/10 00:00	02/19/10 13:20	71-43-2	
Ethylbenzene	**1.4**	mg/kg	0.065	1	02/18/10 00:00	02/19/10 13:20	100-41-4	
Gasoline Range Organics	**129**	mg/kg	6.5	1	02/18/10 00:00	02/19/10 13:20		
Methyl-tert-butyl ether	ND	mg/kg	0.32	1	02/18/10 00:00	02/19/10 13:20	1634-04-4	
Toluene	**0.074**	mg/kg	0.065	1	02/18/10 00:00	02/19/10 13:20	108-88-3	
Xylene (Total)	**3.4**	mg/kg	0.19	1	02/18/10 00:00	02/19/10 13:20	1330-20-7	
a,a,a-Trifluorotoluene (S)	115	%	80-125	1	02/18/10 00:00	02/19/10 13:20	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**19.9**	%	0.10	1		02/19/10 00:00		

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ANALYTICAL RESULTS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Sample: SB-1 **Lab ID: 10122561002** Collected: 02/17/10 11:30 Received: 02/17/10 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**13.2**	mg/L	1.0	10	02/18/10 14:39	02/19/10 08:45		P8,T7
n-Triacontane (S)	0	%	50-150	10	02/18/10 14:39	02/19/10 08:45		S4
WIGRO GCV	Analytical Method: WI MOD GRO							
Benzene	**660**	ug/L	20.0	20		02/18/10 23:49	71-43-2	
Ethylbenzene	**2070**	ug/L	20.0	20		02/18/10 23:49	100-41-4	
Gasoline Range Organics	**34500**	ug/L	2000	20		02/18/10 23:49		
Methyl-tert-butyl ether	**135**	ug/L	100	20		02/18/10 23:49	1634-04-4	CL
Toluene	**345**	ug/L	20.0	20		02/18/10 23:49	108-88-3	
Xylene (Total)	**7140**	ug/L	60.0	20		02/18/10 23:49	1330-20-7	
a,a,a-Trifluorotoluene (S)	105	%	80-125	20		02/18/10 23:49	98-08-8	

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ANALYTICAL RESULTS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Sample: MeOH Blank **Lab ID: 10122561003** Collected: Received: 02/17/10 16:15 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.050	1	02/18/10 00:00	02/18/10 16:41	71-43-2	
Ethylbenzene	ND	mg/kg	0.050	1	02/18/10 00:00	02/18/10 16:41	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.0	1	02/18/10 00:00	02/18/10 16:41		
Methyl-tert-butyl ether	ND	mg/kg	0.25	1	02/18/10 00:00	02/18/10 16:41	1634-04-4	
Toluene	ND	mg/kg	0.050	1	02/18/10 00:00	02/18/10 16:41	108-88-3	
Xylene (Total)	ND	mg/kg	0.15	1	02/18/10 00:00	02/18/10 16:41	1330-20-7	
a,a,a-Trifluorotoluene (S)	100	%	80-125	1	02/18/10 00:00	02/18/10 16:41	98-08-8	

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ANALYTICAL RESULTS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

Sample: Trip Blank **Lab ID: 10122561004** Collected: Received: 02/17/10 16:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO							
Benzene	ND	ug/L	1.0	1		02/18/10 17:11	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		02/18/10 17:11	100-41-4	
Gasoline Range Organics	ND	ug/L	100	1		02/18/10 17:11		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		02/18/10 17:11	1634-04-4	
Toluene	ND	ug/L	1.0	1		02/18/10 17:11	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		02/18/10 17:11	1330-20-7	
a,a,a-Trifluorotoluene (S)	86	%	80-125	1		02/18/10 17:11	98-08-8	

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QUALITY CONTROL DATA

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

QC Batch: OEXT/12389
QC Batch Method: WI MOD DRO
Analysis Method: WI MOD DRO
Analysis Description: WIDRO GCS
Associated Lab Samples: 10122561001

METHOD BLANK: 749336 Matrix: Solid
Associated Lab Samples: 10122561001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	ND	5.0	02/18/10 20:43	
n-Triacontane (S)	%	78	50-150	02/18/10 20:43	

LABORATORY CONTROL SAMPLE & LCSD: 749337 749338

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	80	68.9	75.9	86	95	70-120	10	20	
n-Triacontane (S)	%				81	89	50-150			

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QUALITY CONTROL DATA

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

QC Batch: OEXT/12388 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10122561002

METHOD BLANK: 749323 Matrix: Water
Associated Lab Samples: 10122561002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/L	ND	0.10	02/19/10 08:29	B
n-Triacontane (S)	%	96	50-150	02/19/10 08:29	

LABORATORY CONTROL SAMPLE & LCSD: 749324 749325

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/L	2	2.0	2.0	100	98	66-125	2	20	
n-Triacontane (S)	%				97	92	50-150			

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QUALITY CONTROL DATA

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

QC Batch: GCV/6850 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10122561001, 10122561003

METHOD BLANK: 749412 Matrix: Solid
Associated Lab Samples: 10122561001, 10122561003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.050	02/18/10 15:32	
Ethylbenzene	mg/kg	ND	0.050	02/18/10 15:32	
Gasoline Range Organics	mg/kg	ND	5.0	02/18/10 15:32	
Methyl-tert-butyl ether	mg/kg	ND	0.25	02/18/10 15:32	
Toluene	mg/kg	ND	0.050	02/18/10 15:32	
Xylene (Total)	mg/kg	ND	0.15	02/18/10 15:32	
a,a,a-Trifluorotoluene (S)	%	99	80-125	02/18/10 15:32	

LABORATORY CONTROL SAMPLE & LCSD: 749413 749414

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	mg/kg	5	5.4	5.5	108	109	80-120	1	20	
Ethylbenzene	mg/kg	5	5.3	5.3	107	106	80-120	1	20	
Gasoline Range Organics	mg/kg	50	52.8	56.4	106	113	80-120	7	20	
Methyl-tert-butyl ether	mg/kg	5	5.5	5.6	110	112	80-120	2	20	
Toluene	mg/kg	5	5.2	5.1	104	101	80-120	2	20	
Xylene (Total)	mg/kg	15	16.0	16.2	107	108	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				95	100	80-125			

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QUALITY CONTROL DATA

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

QC Batch: GCV/6853
QC Batch Method: WI MOD GRO
Analysis Method: WI MOD GRO
Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10122561004

METHOD BLANK: 749650 Matrix: Water
Associated Lab Samples: 10122561004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	02/18/10 16:47	
Ethylbenzene	ug/L	ND	1.0	02/18/10 16:47	
Gasoline Range Organics	ug/L	ND	100	02/18/10 16:47	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/18/10 16:47	
Toluene	ug/L	ND	1.0	02/18/10 16:47	
Xylene (Total)	ug/L	ND	3.0	02/18/10 16:47	
a,a,a-Trifluorotoluene (S)	%	86	80-125	02/18/10 16:47	

LABORATORY CONTROL SAMPLE & LCSD: 749651 749652

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	100	97.9	99.3	98	99	80-120	1	20	
Ethylbenzene	ug/L	100	99.9	101	100	101	80-120	1	20	
Gasoline Range Organics	ug/L	1000	1010	1000	101	100	80-120	0	20	
Methyl-tert-butyl ether	ug/L	100	89.2	93.3	89	93	80-120	5	20	
Toluene	ug/L	100	99.1	100	99	100	80-120	1	20	
Xylene (Total)	ug/L	300	303	304	101	101	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				87	87	80-125			

MATRIX SPIKE SAMPLE: 750676

Parameter	Units	10122305004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L		100	99.3	99	50-145	
Ethylbenzene	ug/L		100	100	100	56-138	
Gasoline Range Organics	ug/L	ND	1000	961	96	73-132	
Methyl-tert-butyl ether	ug/L		100	88.4	88	50-150	
Toluene	ug/L		100	99.3	99	66-126	
Xylene (Total)	ug/L		300	289	96	56-134	
a,a,a-Trifluorotoluene (S)	%				85	80-125	

SAMPLE DUPLICATE: 750677

Parameter	Units	10122305006 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L		ND		30	
Ethylbenzene	ug/L		ND		30	
Gasoline Range Organics	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L		ND	0	30	
Toluene	ug/L		ND		30	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

SAMPLE DUPLICATE: 750677

Parameter	Units	10122305006 Result	Dup Result	RPD	Max RPD	Qualifiers
Xylene (Total)	ug/L		ND		30	
a,a,a-Trifluorotoluene (S)	%	86	86	0		

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QUALITY CONTROL DATA

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

QC Batch: GCV/6859
QC Batch Method: WI MOD GRO
Analysis Method: WI MOD GRO
Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10122561002

METHOD BLANK: 750678
Matrix: Water
Associated Lab Samples: 10122561002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	02/18/10 20:42	
Ethylbenzene	ug/L	ND	1.0	02/18/10 20:42	
Gasoline Range Organics	ug/L	ND	100	02/18/10 20:42	
Methyl-tert-butyl ether	ug/L	ND	5.0	02/18/10 20:42	CL
Toluene	ug/L	ND	1.0	02/18/10 20:42	
Xylene (Total)	ug/L	ND	3.0	02/18/10 20:42	
a,a,a-Trifluorotoluene (S)	%	86	80-125	02/18/10 20:42	

LABORATORY CONTROL SAMPLE & LCSD: 750679 750680

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	100	99.3	93.8	99	94	80-120	6	20	
Ethylbenzene	ug/L	100	101	99.6	101	100	80-120	1	20	
Gasoline Range Organics	ug/L	1000	1000	1010	100	101	80-120	0	20	
Methyl-tert-butyl ether	ug/L	100	93.3	82.8	93	83	80-120	12	20	CL
Toluene	ug/L	100	100	97.3	100	97	80-120	3	20	
Xylene (Total)	ug/L	300	304	307	101	102	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%				87	113	80-125			

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QUALITY CONTROL DATA

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

QC Batch: MPRP/19292
QC Batch Method: % Moisture
Associated Lab Samples: 10122561001

Analysis Method: % Moisture
Analysis Description: Dry Weight/Percent Moisture

SAMPLE DUPLICATE: 749871

Parameter	Units	10122561001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.9	19.9	0	30	

SAMPLE DUPLICATE: 749872

Parameter	Units	10122597002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	19.5	40.0	69	30	

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QUALIFIERS

Project: Holiday Stn-New Hope 9M1002637
Pace Project No.: 10122561

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

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U - Indicates the compound was analyzed for, but not detected.

BATCH QUALIFIERS

Batch: GCV/6850

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
P8	Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
T7	Low boiling point hydrocarbons are present in the sample.

Report Date: 19-Feb-2010 08:04

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\021810f.b\049F0080.D

Lab Smp Id: 10122561001

Inj Date : 18-FEB-2010 21:53

Operator : JLR Inst ID: 10gcs5.i

Smp Info : 10122561001

Misc Info : 6446

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\021810f.b\102809WDRO5F.m

Meth Date : 19-Feb-2010 07:41 jries Quant Type: ESTD

Cal Date : 28-OCT-2009 11:54 Cal File: 301F0010.D

Als bottle: 45

Dil Factor: 1.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10SEMIVOL4

Concentration Formula: Amt * DF * Uf * Vt/(Ws * Vi*(100-M)/100) * CpndVariable

Name	Value	Description

DF	1.000	Dilution Factor
Uf	1.000	Correction factor
Vt	1.000	Volume of final extract (mL)
Ws	25.000	Weight of sample extracted (g)
Vi	1.000	Volume injected (uL)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/kg)
S 2 DRO	1.430	2.830		9520189	301.346	12.0
$ 5 n-Triacontane (S)	2.910	2.816	0.094	2522874	98.7602	3.95(aM)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\021810f.b/049F0080.D

Report Date: 02/19/2010

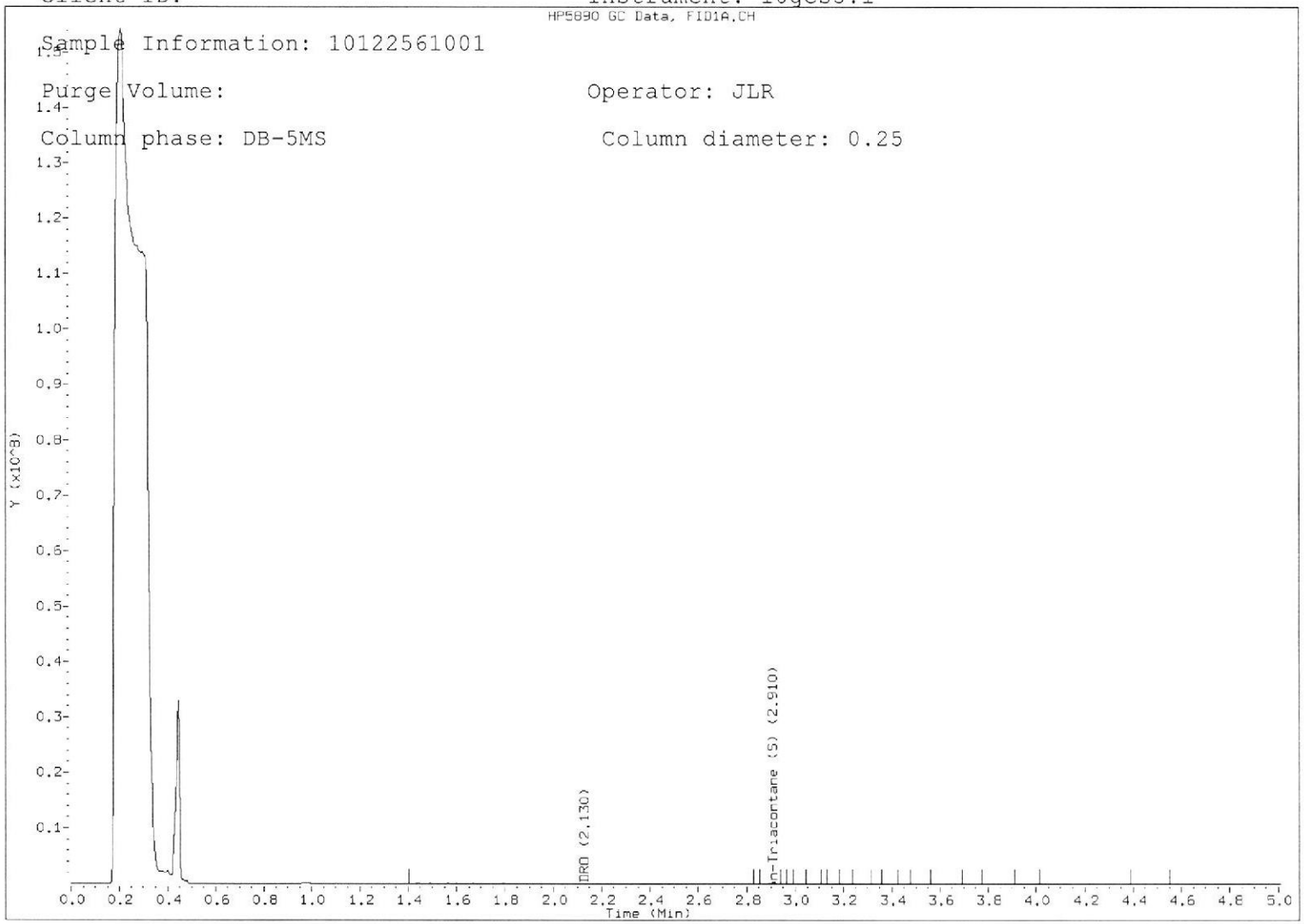
Sample ID: 10122561001

Client ID: Instrument: 10gcs5.i

Sample Information: 10122561001

Purge Volume: Operator: JLR

Column phase: DB-5MS Column diameter: 0.25



Report Date: 19-Feb-2010 15:35

Pace Analytical Services

BTEX - MODIFIED 8021

Data file : \\192.168.10.12\chem\10gcv1.i\021910a.b\p1-05006.d

Lab Smp Id: 10122561001

Inj Date : 19-FEB-2010 13:20

Operator : MJH Inst ID: 10gcv1.i

Smp Info : 10122561001

Misc Info : 6852

Comment : BTEX - MODIFIED 8021

Method : \\192.168.10.12\chem\10gcv1.i\021910a.b\p1-BTEXsoil10013.m

Meth Date : 19-Feb-2010 15:35 10gcv1.i Quant Type: ISTD

Cal Date : 13-JAN-2010 17:39 Cal File: p1-01315.d

Als bottle: 6

Dil Factor: 1.00000

Integrator: Falcon Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total Volume of the methanol extract (mL
Ws	10.000	Weight of the sample extracted
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of the methanol ex

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/L)	(mg/Kg)
	1 Methyl-t-butyl ether	2.443	2.416	(0.275)	680805	3.24783	0.162(M)
	2 Benzene	Compound Not Detected.					
$	3 a,a,a-Trifluorotoluene (S)	5.426	5.403	(0.611)	5326679	23.0192	1.15(M)
	4 Toluene	6.933	6.883	(0.781)	462177	1.13610	0.0568(M)
*	5 Chlorofluorobenzene	8.880	8.866	(1.000)	9040517	20.0000	(M)
	6 Ethylbenzene	9.576	9.566	(1.078)	7269011	22.3584	1.12(M)
	7 m&p-Xylene	9.753	9.746	(1.098)	17005505	46.0450	2.30(M)
	8 o-Xylene	10.260	10.260	(1.155)	2046829	5.79714	0.290(M)
	10 1,3,5-Trimethylbenzene	11.386	11.383	(1.282)	15572857	43.0427	2.15(M)
	11 1,2,4-Trimethylbenzene	11.756	11.750	(1.324)	32666785	110.101	5.50(M)
	12 Naphthalene	13.976	13.973	(1.574)	5420526	16.2477	0.812(M)

QC Flag Legend

M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcv1.i\021910a.b/p1-05006.d

Report Date: 02/19/2010

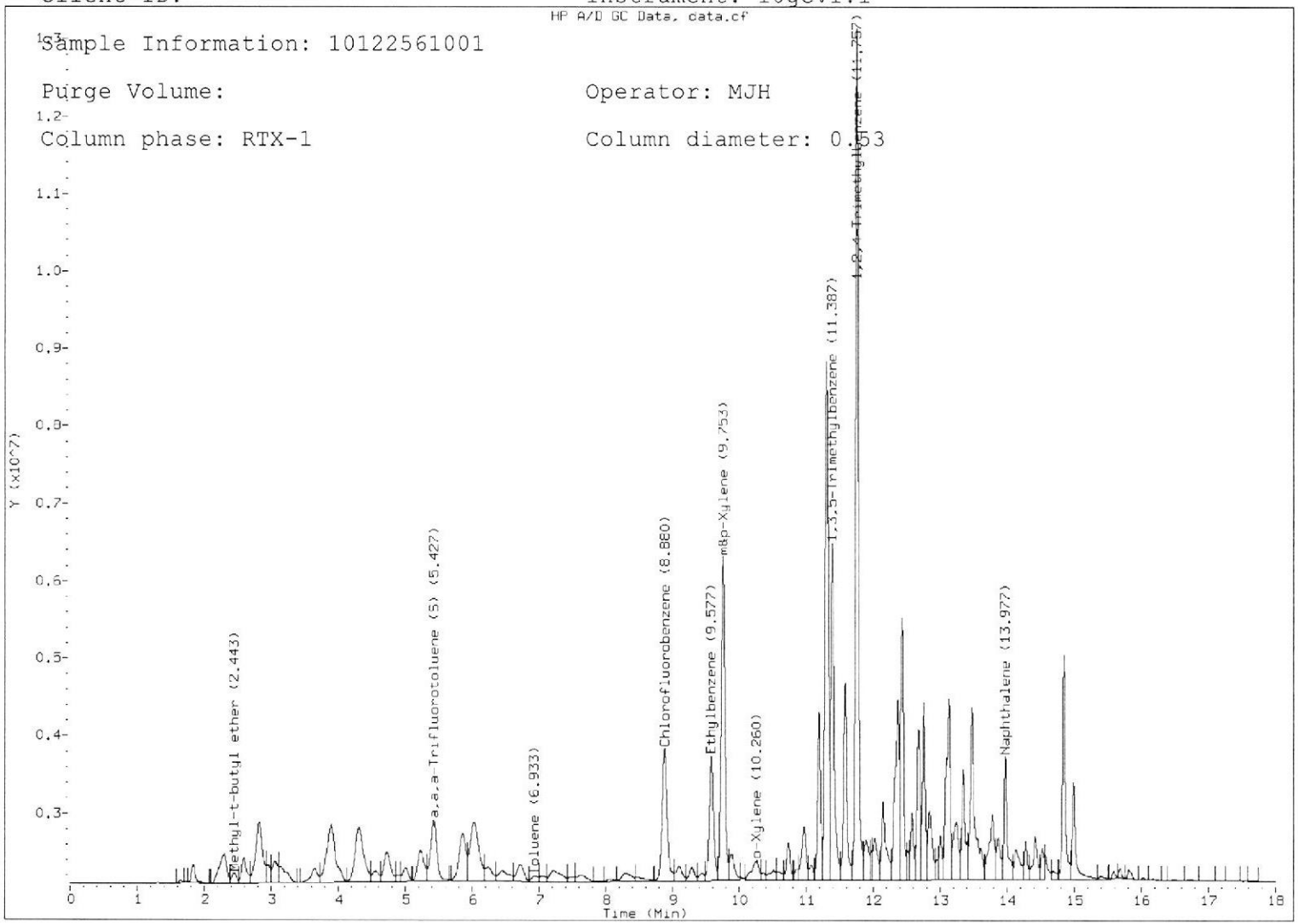
Sample ID: 10122561001

Client ID: Instrument: 10gcv1.i

Sample Information: 10122561001

Purge Volume: Operator: MJH

Column phase: RTX-1 Column diameter: 0.53



Report Date: 19-Feb-2010 15:37

Pace Analytical Services

WI GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv1.i\021910a.b\f1-05006.d

Lab Smp Id: 10122561001

Inj Date : 19-FEB-2010 13:20

Operator : MJH Inst ID: 10gcv1.i

Smp Info : 10122561001

Misc Info : 6852

Comment : GASOLINE RANGE ORGANICS

Method : \\192.168.10.12\chem\10gcv1.i\021910a.b\f1-GROsoil10013.m

Meth Date : 19-Feb-2010 15:37 10gcv1.i Quant Type: ESTD

Cal Date : 13-JAN-2010 17:39 Cal File: f1-01315.d

Als bottle: 6

Dil Factor: 1.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(

Cpnd Variable Local Compound Variable

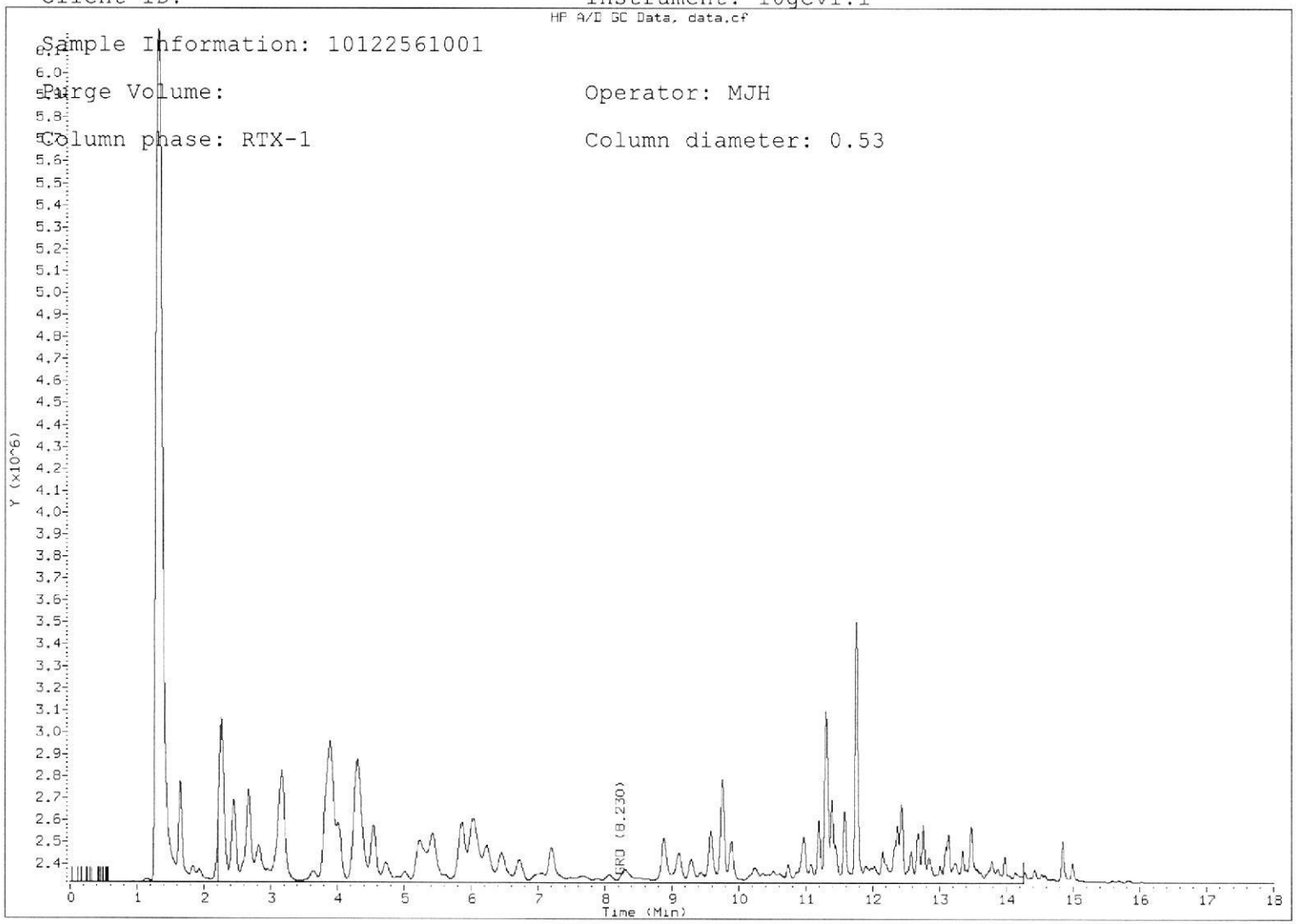
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(mg/Kg)
S 5 GRO	2.210-14.250			386660648	1985.01	99.25

Data File: \\192.168.10.12\chem\10gcv1.i\021910a.b/f1-05006.d

Report Date: 02/19/2010

Sample ID: 10122561001

Client ID: Instrument: 10gcv1.i



Sample Information: 10122561001

Purge Volume: Operator: MJH

Column phase: RTX-1 Column diameter: 0.53

Report Date: 19-Feb-2010 08:50

Pace Analytical Services

WI Dept of Nat. Resources- WIDRO

Data file : \\192.168.10.12\chem\10gcs5.i\021910f.b\050F0007.D

Lab Smp Id: 10122561002

Inj Date : 19-FEB-2010 08:45

Operator : JLR Inst ID: 10gcs5.i

Smp Info : 10122561002,10x

Misc Info : 6444

Comment : C10-C28 DRO

Method : \\192.168.10.12\chem\10gcs5.i\021910f.b\102809WDRO5F.m

Meth Date : 19-Feb-2010 08:37 jries Quant Type: ESTD

Cal Date : 28-OCT-2009 11:54 Cal File: 301F0010.D

Als bottle: 7

Dil Factor: 10.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10SEMIVOL4

Concentration Formula: Amt * DF * Uf * Vt/ (Vo * Vi) * CpndVariable

Name	Value	Description

DF	10.000	Dilution Factor
Uf	1.000	ng unit correction factor
Vt	1.000	Volume of final extract (mL)
Vo	1000.000	Volume of sample extracted (mL)
Vi	1.000	Volume injected

Cpnd Variable Local Compound Variable

					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/mL)	(mg/L)
S 2 DRO	1.430-2.830			38764348	1290.03	12.9(M)
$ 5 n-Triacontane (S)	Compound Not Detected.					

QC Flag Legend

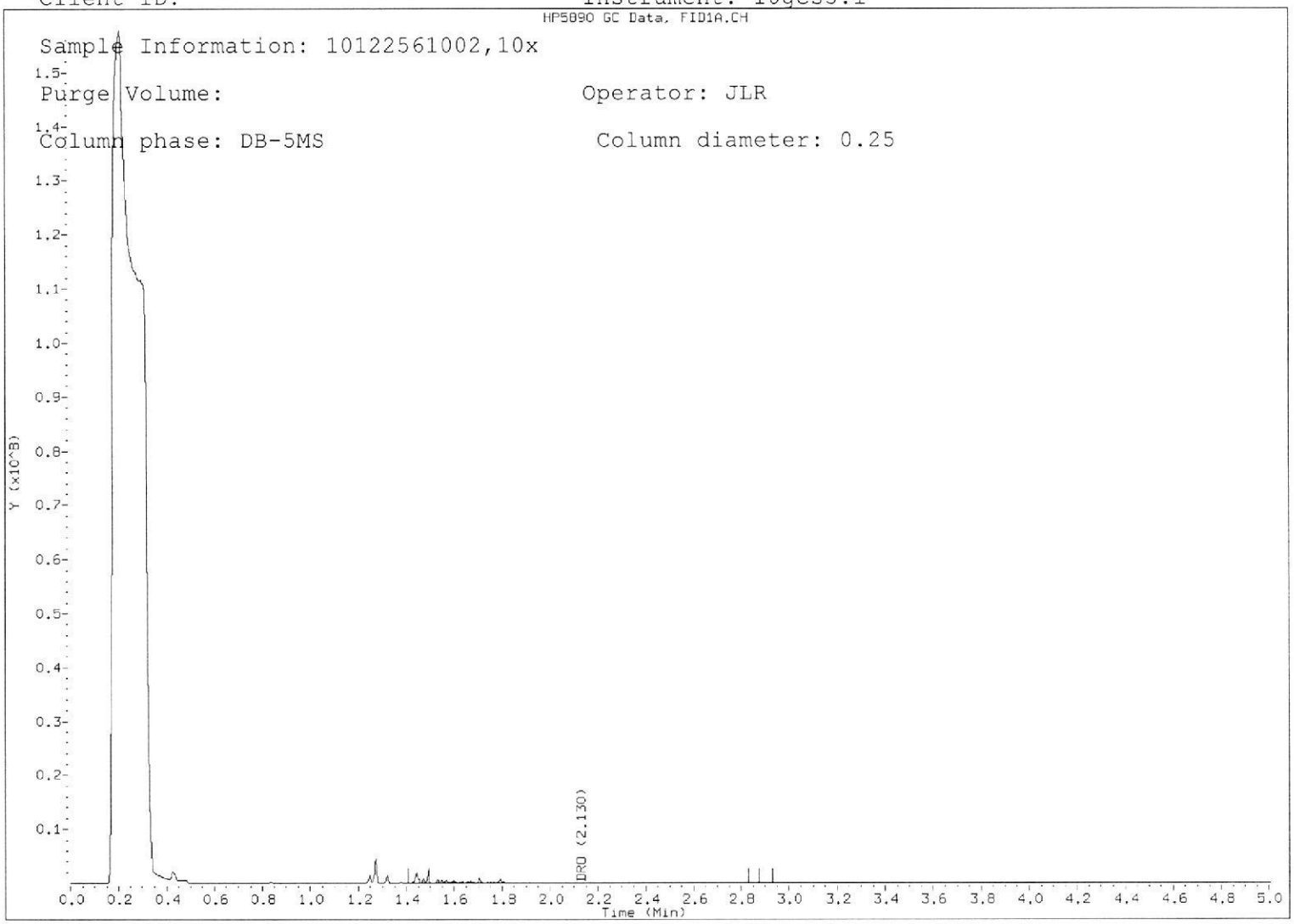
M - Compound response manually integrated.

Data File: \\192.168.10.12\chem\10gcs5.i\021910f.b/050F0007.D

Report Date: 02/19/2010

Sample ID: 10122561002

Client ID: Instrument: 10gcs5.i



Report Date: 22-Feb-2010 14:55

Pace Analytical Services

MBTEX - MODIFIED 8021

Data file : \\192.168.10.12\chem\10gcv3.i\021810c.b\p6-04932.d

Lab Smp Id: 10122561002

Inj Date : 18-FEB-2010 23:49

Operator : MJH Inst ID: 10gcv3.i

Smp Info : 10122561002,20x

Misc Info : 6859

Comment : EPA 8021/MODIFIED WIGRO

Method : \\192.168.10.12\chem\10gcv3.i\021810c.b\p6-10-g3-btex-035.m

Meth Date : 22-Feb-2010 14:55 10gcv3.i Quant Type: ISTD

Cal Date : 04-FEB-2010 19:24 Cal File: p6-03510.d

Als bottle: 32

Dil Factor: 20.00000

Integrator: Falcon Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/L)	(ug/L)
	2 Methyl-t-butyl ether	2.280	2.273	(0.241)	114452	6.76519	135
	3 Benzene	4.156	4.153	(0.439)	1234790	33.0087	660
$	4 a,a,a-Trifluorotoluene (S)	5.553	5.553	(0.586)	267422	21.0651	21.1
	5 Toluene	7.196	7.196	(0.760)	637629	17.2686	345
*	6 Chlorofluorobenzene	9.470	9.470	(1.000)	640506	20.0000	
	7 Ethylbenzene	10.466	10.466	(1.105)	3519217	103.404	2070
	8 m&p-Xylene	10.770	10.773	(1.137)	11774690	296.553	5930
	9 o-Xylene	11.700	11.703	(1.235)	2172317	60.2060	1200
	10 1,3,5-Trimethylbenzene	13.763	13.766	(1.453)	1878773	37.8398	757
	11 1,2,4-Trimethylbenzene	14.323	14.326	(1.512)	5683881	143.345	2870
	12 Naphthalene	17.386	17.390	(1.836)	1555348	34.7155	694

Data File: \\192.168.10.12\chem\10gcv3.i\021810c.b/p6-04932.d

Report Date: 02/22/2010

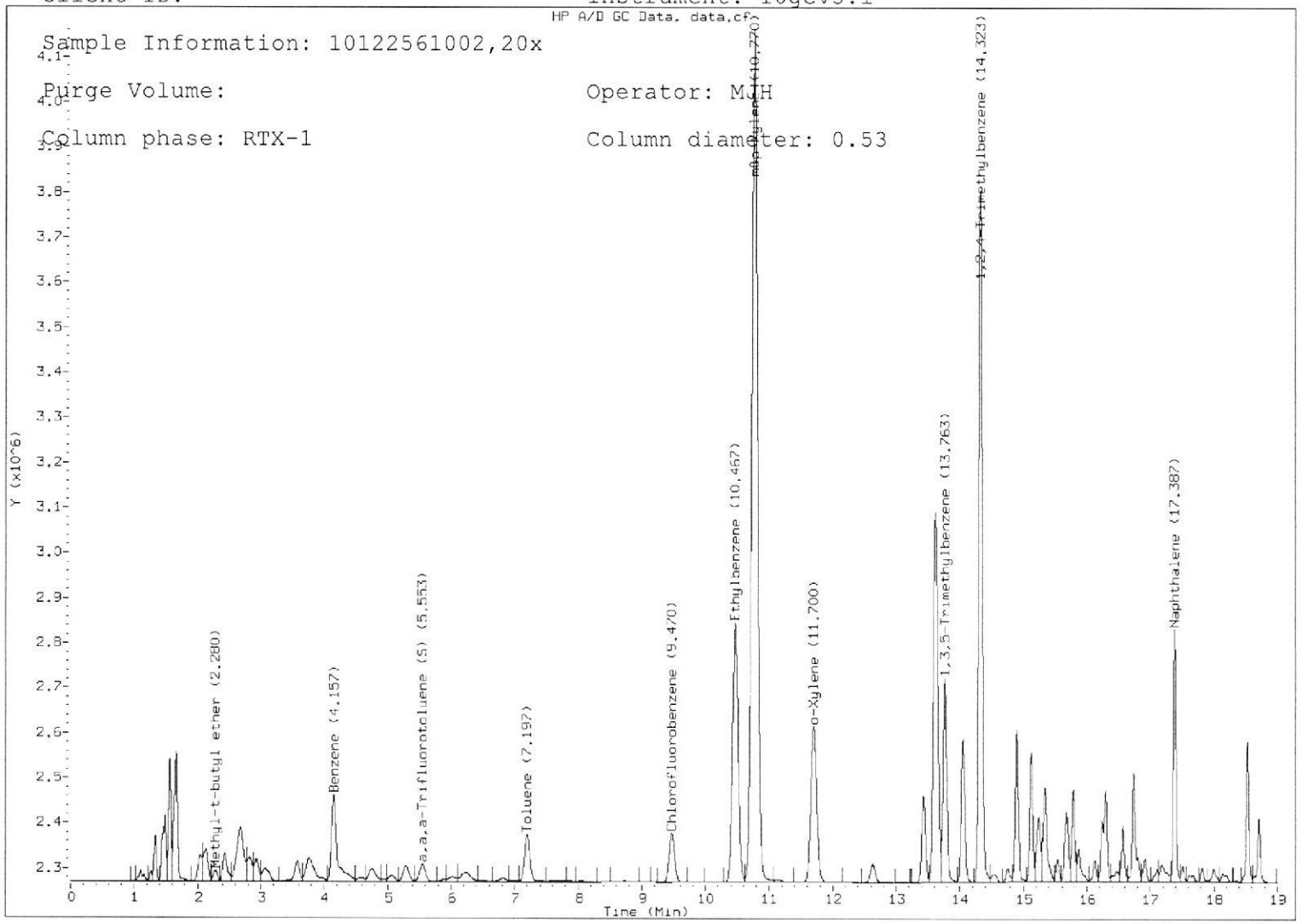
Sample ID: 10122561002

Client ID: Instrument: 10gcv3.i

Sample Information: 10122561002,20x

Purge Volume: Operator: MTH

Column phase: RTX-1 Column diameter: 0.53



Report Date: 22-Feb-2010 14:58

Pace Analytical Services

Wisconsin GAS RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\021810c.b\f6-04932.d

Lab Smp Id: 10122561002

Inj Date : 18-FEB-2010 23:49

Operator : MJH Inst ID: 10gcv3.i

Smp Info : 10122561002,20x

Misc Info : 6859

Comment : Modified WIGRO

Method : \\192.168.10.12\chem\10gcv3.i\021810c.b\f6-10-g3-wigro-035.m

Meth Date : 22-Feb-2010 14:57 10gcv3.i Quant Type: ESTD

Cal Date : 04-FEB-2010 19:24 Cal File: f6-03510.d

Als bottle: 32

Dil Factor: 20.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
S 5 GRO	2.100-17.560			145124062	1726.17	34520

Data File: \\192.168.10.12\chem\10gcv3.i\021810c.b/f6-04932.d

Report Date: 02/22/2010

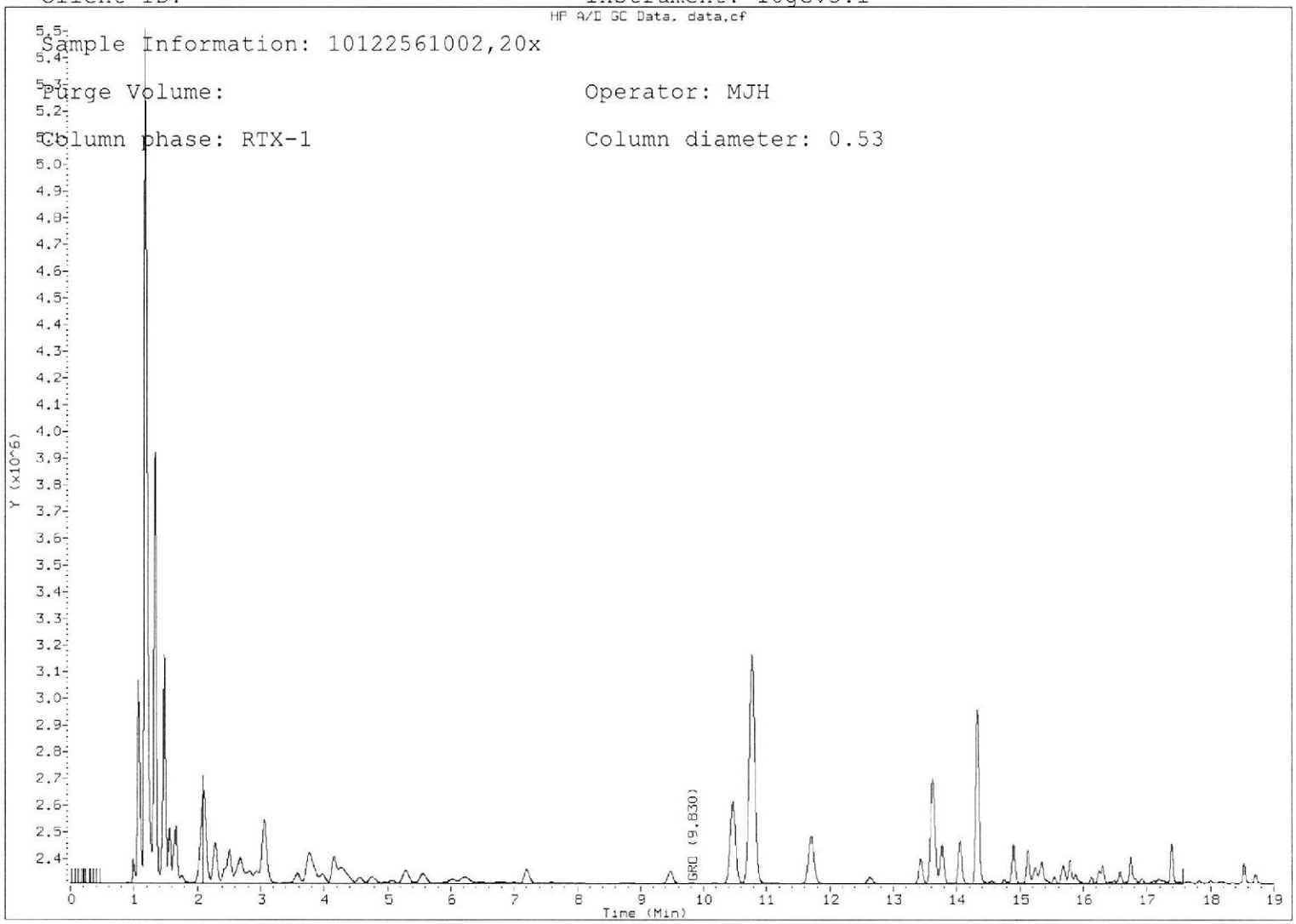
Sample ID: 10122561002

Client ID: Instrument: 10gcv3.i

Sample Information: 10122561002,20x

Purge Volume: Operator: MJH

Column phase: RTX-1 Column diameter: 0.53



Report Date: 19-Feb-2010 15:40

Pace Analytical Services

BTEX - MODIFIED 8021

Data file : \\192.168.10.12\chem\10gcv1.i\021810a.b\p1-04908.d

Lab Smp Id: 10122561003

Inj Date : 18-FEB-2010 16:41

Operator : MJH Inst ID: 10gcv1.i

Smp Info : 10122561003,TB

Misc Info : 6852

Comment : BTEX - MODIFIED 8021

Method : \\192.168.10.12\chem\10gcv1.i\021810a.b\p1-BTEXsoil10013.m

Meth Date : 19-Feb-2010 15:40 10gcv1.i Quant Type: ISTD

Cal Date : 13-JAN-2010 17:39 Cal File: p1-01315.d

Als bottle: 8

Dil Factor: 1.00000

Integrator: Falcon Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total Volume of the methanol extract (mL
Ws	10.000	Weight of the sample extracted
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of the methanol ex

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
Compounds		RT	EXP RT	REL RT	RESPONSE	(ug/L)	(mg/Kg)
	1 Methyl-t-butyl ether	Compound Not Detected.					
	2 Benzene	Compound Not Detected.					
$	3 a,a,a-Trifluorotoluene (S)	5.386	5.400	(0.608)	4313413	19.9578	0.998
	4 Toluene	6.883	6.883	(0.777)	29633	0.07799	0.00390(a)
*	5 Chlorofluorobenzene	8.853	8.866	(1.000)	8443742	20.0000	
	6 Ethylbenzene	9.550	9.566	(1.079)	24884	0.08195	0.00410(a)
	7 m&p-Xylene	9.743	9.746	(1.101)	32515	0.09426	0.00471(a)
	8 o-Xylene	10.270	10.263	(1.160)	17691	0.05365	0.00268(a)
	10 1,3,5-Trimethylbenzene	11.383	11.386	(1.286)	22564	0.06677	0.00334(a)
	11 1,2,4-Trimethylbenzene	11.746	11.753	(1.327)	14000	0.05052	0.00253(a)
	12 Naphthalene	13.976	13.976	(1.579)	19076	0.06122	0.00306(a)

QC Flag Legend

a - Target compound detected but, quantitated amount

Below Limit Of Quantitation(BLOQ).

Data File: \\192.168.10.12\chem\10gcv1.i\021810a.b/p1-04908.d

Report Date: 02/19/2010

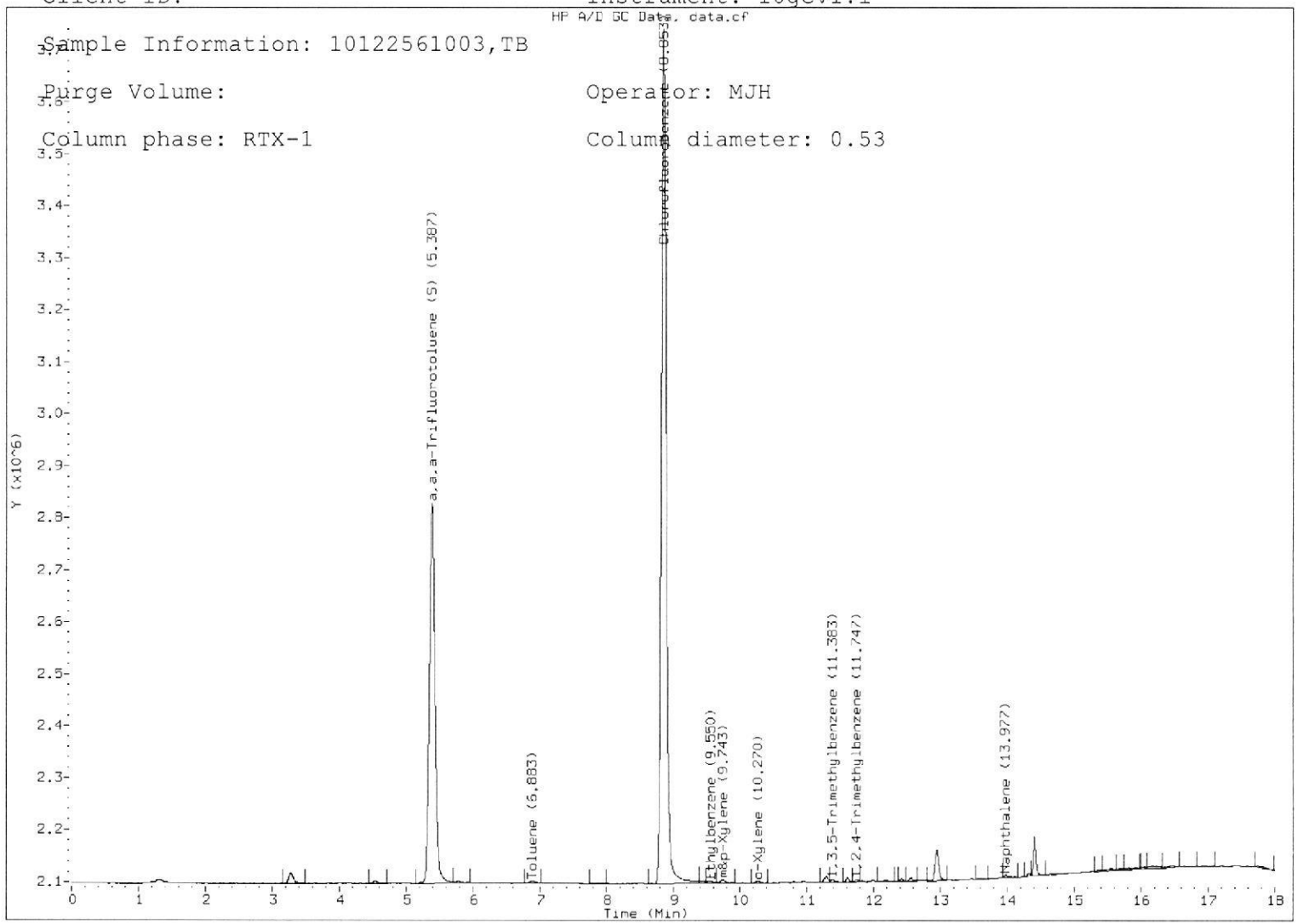
Sample ID: 10122561003

Client ID: Instrument: 10gcv1.i

Sample Information: 10122561003,TB

Purge Volume: Operator: MJH

Column phase: RTX-1 Column diameter: 0.53



Report Date: 19-Feb-2010 15:42

Pace Analytical Services

WI GASOLINE RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv1.i\021810a.b\f1-04908.d

Lab Smp Id: 10122561003

Inj Date : 18-FEB-2010 16:41

Operator : MJH Inst ID: 10gcv1.i

Smp Info : 10122561003,TB

Misc Info : 6852

Comment : GASOLINE RANGE ORGANICS

Method : \\192.168.10.12\chem\10gcv1.i\021810a.b\f1-GROsoil10013.m

Meth Date : 19-Feb-2010 15:42 10gcv1.i Quant Type: ESTD

Cal Date : 13-JAN-2010 17:39 Cal File: f1-01315.d

Als bottle: 8

Dil Factor: 1.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * Uf * Vt / (Va * Ws * (100-M)/100) * CpndVariab

Name	Value	Description

DF	1.000	Dilution Factor
Uf	5.000	Unit correction factor
Vt	10.000	Total volume of methanol extract (mL)
Ws	10.000	Weight of the sample extracted (g)
M	0.00000	% Moisture
Va	100.000	Volume of the aliquot of methanol added(

Cpnd Variable — Local Compound Variable

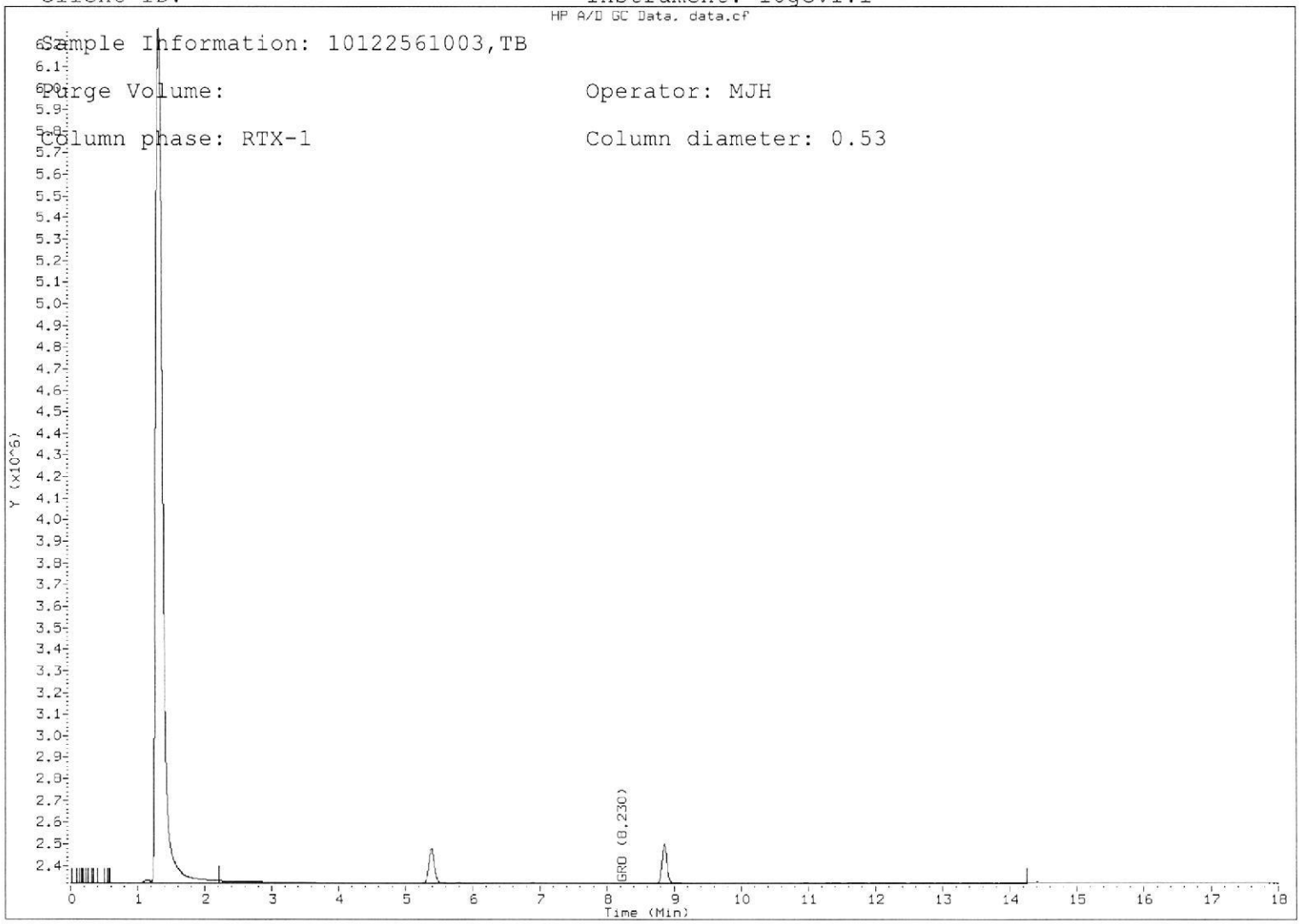
					CONCENTRATIONS	
					ON-COLUMN	FINAL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(mg/Kg)
S 5 GRO	Compound Not Detected.					

Data File: \\192.168.10.12\chem\10gcv1.i\021810a.b/f1-04908.d

Report Date: 02/19/2010

Sample ID: 10122561003

Client ID: Instrument: 10gcv1.i



Sample Information: 10122561003,TB

Purge Volume: Operator: MJH

Column phase: RTX-1 Column diameter: 0.53

Report Date: 22-Feb-2010 15:01

Pace Analytical Services

MBTEX - MODIFIED 8021

Data file : \\192.168.10.12\chem\10gcv3.i\021810b.b\p6-04915.d

Lab Smp Id: 10122561004

Inj Date : 18-FEB-2010 17:11

Operator : MJH Inst ID: 10gcv3.i

Smp Info : 10122561004,tb

Misc Info : 6853

Comment : EPA 8021/MODIFIED WIGRO

Method : \\192.168.10.12\chem\10gcv3.i\021810b.b\p6-10-g3-btex-035.m

Meth Date : 22-Feb-2010 15:01 10gcv3.i Quant Type: ISTD

Cal Date : 04-FEB-2010 19:24 Cal File: p6-03510.d

Als bottle: 15

Dil Factor: 1.00000

Integrator: Falcon Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/L)	(ug/L)
	2 Methyl-t-butyl ether	Compound Not Detected.					
	3 Benzene	Compound Not Detected.					
$	4 a,a,a-Trifluorotoluene (S)	5.550	5.550	(0.586)	198959	17.2256	17.2
	5 Toluene	Compound Not Detected.					
*	6 Chlorofluorobenzene	9.470	9.466	(1.000)	582746	20.0000	
	7 Ethylbenzene	Compound Not Detected.					
	8 m&p-Xylene	10.776	10.770	(1.138)	4955	0.13716	0.137(a)
	9 o-Xylene	Compound Not Detected.					
	10 1,3,5-Trimethylbenzene	13.766	13.763	(1.454)	8622	0.19087	0.191(a)
	11 1,2,4-Trimethylbenzene	14.323	14.323	(1.512)	5310	0.14719	0.147(a)
	12 Naphthalene	17.386	17.386	(1.836)	11884	0.29154	0.292(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\192.168.10.12\chem\10gcv3.i\021810b.b/p6-04915.d

Report Date: 02/22/2010

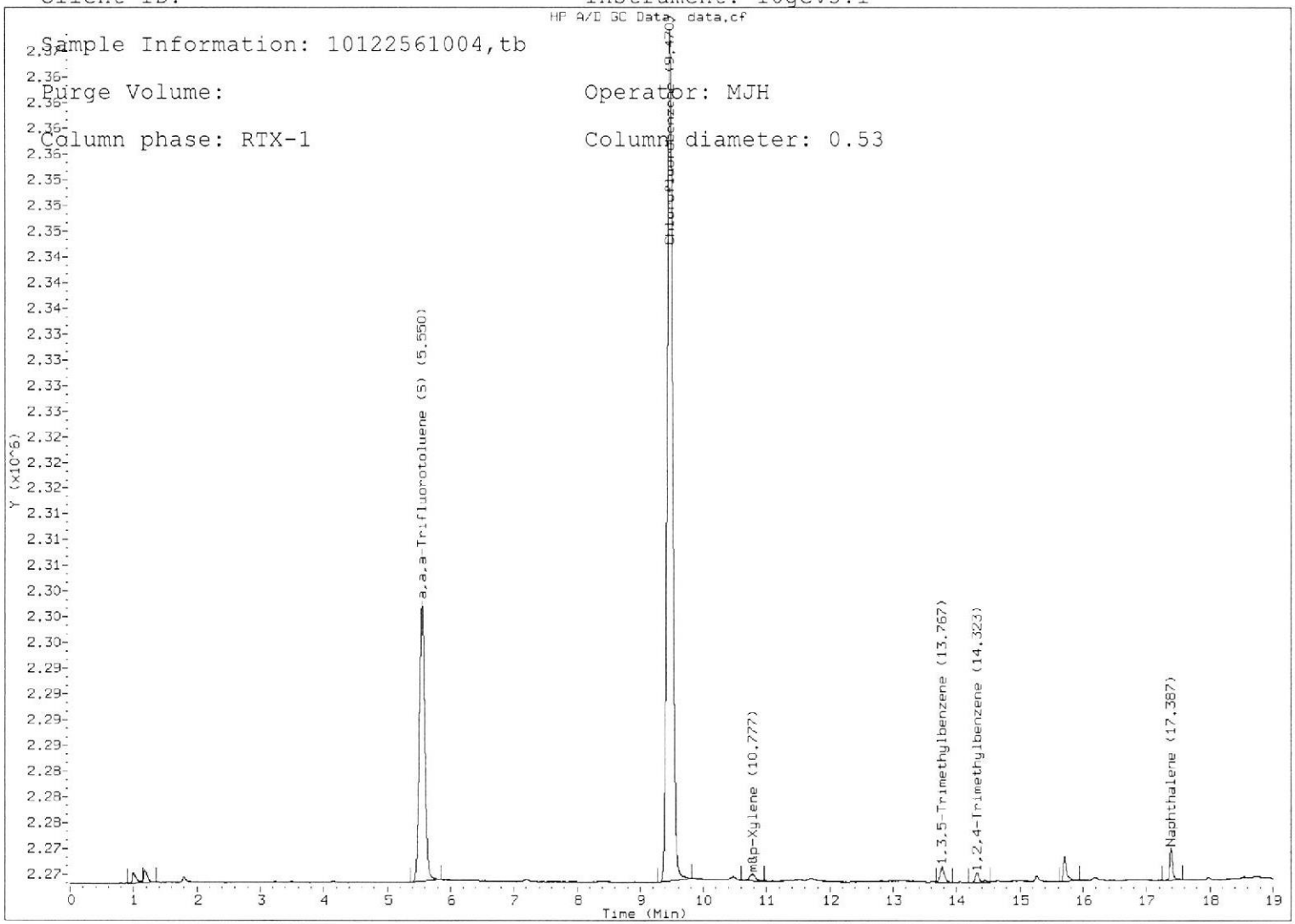
Sample ID: 10122561004

Client ID: Instrument: 10gcv3.i

Sample Information: 10122561004,tb

Purge Volume: Operator: MJH

Column phase: RTX-1 Column diameter: 0.53



Report Date: 22-Feb-2010 15:05

Pace Analytical Services

Wisconsin GAS RANGE ORGANICS

Data file : \\192.168.10.12\chem\10gcv3.i\021810b.b\f6-04915.d

Lab Smp Id: 10122561004

Inj Date : 18-FEB-2010 17:11

Operator : MJH Inst ID: 10gcv3.i

Smp Info : 10122561004,tb

Misc Info : 6853

Comment : Modified WIGRO

Method : \\192.168.10.12\chem\10gcv3.i\021810b.b\f6-10-g3-wigro-035.m

Meth Date : 22-Feb-2010 15:05 10gcv3.i Quant Type: ESTD

Cal Date : 04-FEB-2010 19:24 Cal File: f6-03510.d

Als bottle: 15

Dil Factor: 1.00000

Integrator: HP Genie Compound Sublist: all.sub

Target Version: 4.14

Processing Host: 10MHECKMAN

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
S 5 GRO	Compound Not Detected.					

Data File: \\192.168.10.12\chem\10gcv3.i\021810b.b/f6-04915.d

Report Date: 02/22/2010

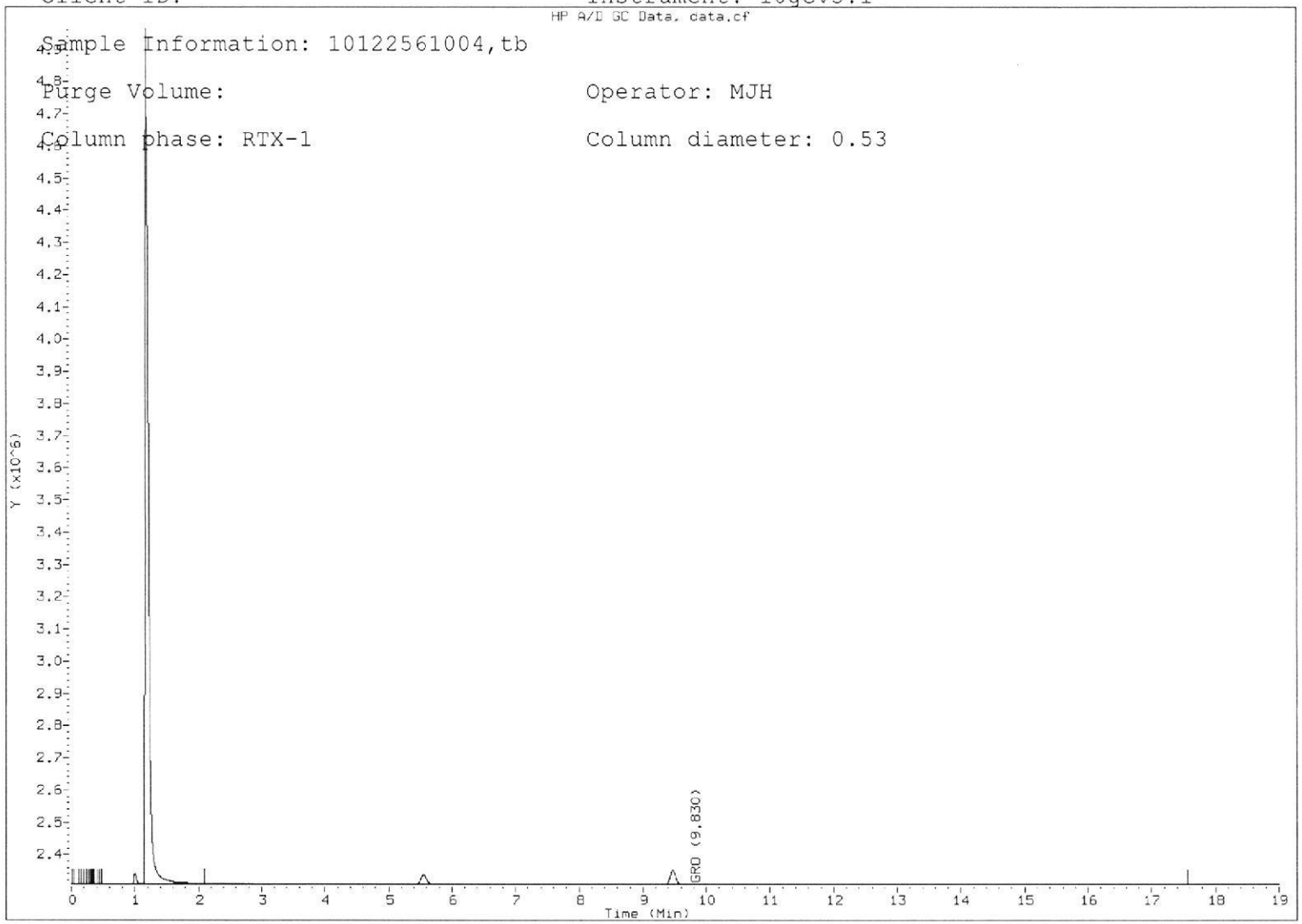
Sample ID: 10122561004

Client ID: Instrument: 10gcv3.i

Sample Information: 10122561004,tb

Purge Volume: Operator: MJH

Column phase: RTX-1 Column diameter: 0.53



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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

1150

1012254.1

Page: 1 of 1

1347541

Section A Required Client Information:

Company: Delta Consultants
Address: 5910 RiceCreek Pkwy
ShorewiewMN 55311
Email To: Mhobson@deltaenv.com
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Matt Hobson
Copy To:
Purchase Order No.:
Project Name: Holiday Stn - New Hope
Project Number: 9M1002637

Section C Invoice Information:

Attention: Matt Hobson
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MN

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: BTEX/GRO	DRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-1-12'	SL	G			2-17-10	11:15		5	3						2		X	X			001
2	SB-1	WT	G			2-17-10	11:30		5				5					X	X			002
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Cheryl Sorensen / Delta	2-17-10	14:30	Shannon Jones / Pace	2-17-10	1552	
	Shannon Jones / Pace	2-17-10	1615	Shannon Jones / Pace	2-17-10	1615	1.9°c Y Y Y

48 of 49

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Cheryl Sorensen

SIGNATURE of SAMPLER: Cheryl Sorensen

DATE Signed (MM/DD/YY): 2-17-10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical

Client Name: Deltre **Project #** 10122561

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other ______

[illegible]

Tracking #: ______

Custody Seal on Cooler/Box Present: ☒ yes ☐ no **Seals intact:** ☒ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other ______ Temp Blank: Yes X No ______

Thermometer Used 80344042 or (179425) **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 1.9°c **Biological Tissue is Frozen:** Yes No

Temp should be above freezing to 6°C

Date and initials of person examining contents: SB 2-17-10

Comments:

Chain of Custody Present:	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☒No	☐N/A	7.
Sufficient Volume:	☒Yes	☐No	☐N/A	8.
Correct Containers Used:	☒Yes	☐No	☐N/A	9.
-Pace Containers Used:	☒Yes	☐No	☐N/A	
Containers Intact:	☒Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC:	☒Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT SL				
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes	☐No	☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☒N/A	Samp #
Exceptions: (VOA) Coliform, TOC, Oil and Grease, WI (DRO (water))	☒Yes	☐No		Initial when completed SB / Lot # of added preservative
Samples checked for dechlorination:	☐Yes	☒No	☐N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☒No	☐N/A	15.
Trip Blank Present:	☒Yes	☐No	☐N/A	16.
Trip Blank Custody Seals Present	☒Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): 120709-3(s) 070907-3(w)				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: ______ Date/Time: ______

Comments/ Resolution: ______

Project Manager Review: CDms **Date:** 2/18/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

F-L213Rev.00, 05Aug2009

Pace Analytical Services, Inc. 1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 28, 2010

Mr. Matt Hobson
Delta Consultants
5910 Rice Creek Parkway
Saint Paul, MN 55126

RE: Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Dear Mr. Hobson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne Trout

Carolynne Trout

carolynne.trout@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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CERTIFICATIONS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Washington Certification #: C754
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10133724001	SB-2, 8.5-9ft.	Solid	07/15/10 09:15	07/16/10 16:16
10133724002	SB-3, 8-9ft.	Solid	07/15/10 10:45	07/16/10 16:16
10133724003	SB-4, 5.5-6ft.	Solid	07/15/10 12:40	07/16/10 16:16
10133724004	SB-5, 9-10ft.	Solid	07/15/10 14:00	07/16/10 16:16
10133724005	SB-6, 6-7ft.	Solid	07/15/10 15:30	07/16/10 16:16
10133724006	SB-6, 10-12ft.	Solid	07/15/10 15:40	07/16/10 16:16
10133724007	SB-7, 8.5-10ft.	Solid	07/15/10 17:30	07/16/10 16:16
10133724008	Trip Blank	Solid		07/16/10 16:16

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SAMPLE ANALYTE COUNT

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10133724001	SB-2, 8.5-9ft.	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10133724002	SB-3, 8-9ft.	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10133724003	SB-4, 5.5-6ft.	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10133724004	SB-5, 9-10ft.	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10133724005	SB-6, 6-7ft.	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10133724006	SB-6, 10-12ft.	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10133724007	SB-7, 8.5-10ft.	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	7
		% Moisture	JDL	1
10133724008	Trip Blank	WI MOD GRO	MJH	7

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: SB-2, 8.5-9ft. **Lab ID: 10133724001** Collected: 07/15/10 09:15 Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	ND	mg/kg	5.1	1	07/20/10 07:38	07/23/10 14:08		L3
n-Triacontane (S)	89	%	50-150	1	07/20/10 07:38	07/23/10 14:08		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.058	1	07/20/10 16:24	07/21/10 09:28	71-43-2	
Ethylbenzene	ND	mg/kg	0.058	1	07/20/10 16:24	07/21/10 09:28	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.8	1	07/20/10 16:24	07/21/10 09:28		
Methyl-tert-butyl ether	ND	mg/kg	0.29	1	07/20/10 16:24	07/21/10 09:28	1634-04-4	
Toluene	ND	mg/kg	0.058	1	07/20/10 16:24	07/21/10 09:28	108-88-3	
Xylene (Total)	ND	mg/kg	0.17	1	07/20/10 16:24	07/21/10 09:28	1330-20-7	
a,a,a-Trifluorotoluene (S)	100	%	80-125	1	07/20/10 16:24	07/21/10 09:28	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**14.3**	%	0.10	1		07/19/10 00:00		

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: SB-3, 8-9ft. **Lab ID: 10133724002** Collected: 07/15/10 10:45 Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**18.6**	mg/kg	11.9	1	07/20/10 07:38	07/23/10 14:22		1M,D5, L1
n-Triacontane (S)	98	%	50-150	1	07/20/10 07:38	07/23/10 14:22		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.060	1	07/20/10 16:24	07/21/10 09:51	71-43-2	
Ethylbenzene	ND	mg/kg	0.060	1	07/20/10 16:24	07/21/10 09:51	100-41-4	
Gasoline Range Organics	ND	mg/kg	6.0	1	07/20/10 16:24	07/21/10 09:51		
Methyl-tert-butyl ether	ND	mg/kg	0.30	1	07/20/10 16:24	07/21/10 09:51	1634-04-4	
Toluene	ND	mg/kg	0.060	1	07/20/10 16:24	07/21/10 09:51	108-88-3	
Xylene (Total)	ND	mg/kg	0.18	1	07/20/10 16:24	07/21/10 09:51	1330-20-7	
a,a,a-Trifluorotoluene (S)	100	%	80-125	1	07/20/10 16:24	07/21/10 09:51	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**16.4**	%	0.10	1		07/19/10 00:00		

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: SB-4, 5.5-6ft. **Lab ID: 10133724003** Collected: 07/15/10 12:40 Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	ND	mg/kg	5.2	1	07/20/10 07:38	07/23/10 13:33		L3
n-Triacontane (S)	90	%	50-150	1	07/20/10 07:38	07/23/10 13:33		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.054	1	07/20/10 16:24	07/21/10 10:14	71-43-2	
Ethylbenzene	ND	mg/kg	0.054	1	07/20/10 16:24	07/21/10 10:14	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.4	1	07/20/10 16:24	07/21/10 10:14		
Methyl-tert-butyl ether	ND	mg/kg	0.27	1	07/20/10 16:24	07/21/10 10:14	1634-04-4	
Toluene	ND	mg/kg	0.054	1	07/20/10 16:24	07/21/10 10:14	108-88-3	
Xylene (Total)	ND	mg/kg	0.16	1	07/20/10 16:24	07/21/10 10:14	1330-20-7	
a,a,a-Trifluorotoluene (S)	101	%	80-125	1	07/20/10 16:24	07/21/10 10:14	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**8.3**	%	0.10	1		07/19/10 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: SB-5, 9-10ft. **Lab ID: 10133724004** Collected: 07/15/10 14:00 Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	ND	mg/kg	11.3	1	07/20/10 07:38	07/23/10 13:40		D5,L3
n-Triacontane (S)	92	%	50-150	1	07/20/10 07:38	07/23/10 13:40		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.059	1	07/20/10 16:24	07/21/10 10:38	71-43-2	
Ethylbenzene	ND	mg/kg	0.059	1	07/20/10 16:24	07/21/10 10:38	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.9	1	07/20/10 16:24	07/21/10 10:38		
Methyl-tert-butyl ether	ND	mg/kg	0.29	1	07/20/10 16:24	07/21/10 10:38	1634-04-4	
Toluene	ND	mg/kg	0.059	1	07/20/10 16:24	07/21/10 10:38	108-88-3	
Xylene (Total)	ND	mg/kg	0.18	1	07/20/10 16:24	07/21/10 10:38	1330-20-7	
a,a,a-Trifluorotoluene (S)	101	%	80-125	1	07/20/10 16:24	07/21/10 10:38	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**14.9**	%	0.10	1		07/19/10 00:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: SB-6, 6-7ft. **Lab ID: 10133724005** Collected: 07/15/10 15:30 Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	ND	mg/kg	4.9	1	07/20/10 07:38	07/23/10 13:47		L3
n-Triacontane (S)	83	%	50-150	1	07/20/10 07:38	07/23/10 13:47		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.056	1	07/20/10 16:28	07/22/10 17:28	71-43-2	
Ethylbenzene	ND	mg/kg	0.056	1	07/20/10 16:28	07/22/10 17:28	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.6	1	07/20/10 16:28	07/22/10 17:28		
Methyl-tert-butyl ether	ND	mg/kg	0.28	1	07/20/10 16:28	07/22/10 17:28	1634-04-4	
Toluene	ND	mg/kg	0.056	1	07/20/10 16:28	07/22/10 17:28	108-88-3	
Xylene (Total)	ND	mg/kg	0.17	1	07/20/10 16:28	07/22/10 17:28	1330-20-7	
a,a,a-Trifluorotoluene (S)	100	%	80-125	1	07/20/10 16:28	07/22/10 17:28	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**11.2**	%	0.10	1		07/19/10 00:00		

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: SB-6, 10-12ft. **Lab ID: 10133724006** Collected: 07/15/10 15:40 Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**44.9**	mg/kg	5.6	1	07/20/10 07:38	07/23/10 13:54		L1,P2,T7
n-Triacontane (S)	92	%	50-150	1	07/20/10 07:38	07/23/10 13:54		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	**0.29**	mg/kg	0.062	1	07/20/10 16:28	07/21/10 19:47	71-43-2	
Ethylbenzene	**1.5**	mg/kg	0.062	1	07/20/10 16:28	07/21/10 19:47	100-41-4	
Gasoline Range Organics	**91.1**	mg/kg	6.2	1	07/20/10 16:28	07/21/10 19:47		
Methyl-tert-butyl ether	ND	mg/kg	0.31	1	07/20/10 16:28	07/21/10 19:47	1634-04-4	
Toluene	**0.11**	mg/kg	0.062	1	07/20/10 16:28	07/21/10 19:47	108-88-3	
Xylene (Total)	**7.9**	mg/kg	0.19	1	07/20/10 16:28	07/21/10 19:47	1330-20-7	
a,a,a-Trifluorotoluene (S)	115	%	80-125	1	07/20/10 16:28	07/21/10 19:47	98-08-8	
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**20.7**	%	0.10	1		07/19/10 00:00		

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: SB-7, 8.5-10ft. **Lab ID: 10133724007** Collected: 07/15/10 17:30 Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**19.1**	mg/kg	5.5	1	07/20/10 07:38	07/23/10 14:01		L1,P2,T7
n-Triacontane (S)	93	%	50-150	1	07/20/10 07:38	07/23/10 14:01		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	**1.8**	mg/kg	0.31	5	07/20/10 16:28	07/22/10 18:37	71-43-2	
Ethylbenzene	**0.77**	mg/kg	0.31	5	07/20/10 16:28	07/22/10 18:37	100-41-4	
Gasoline Range Organics	**241**	mg/kg	30.9	5	07/20/10 16:28	07/22/10 18:37		
Methyl-tert-butyl ether	ND	mg/kg	1.5	5	07/20/10 16:28	07/22/10 18:37	1634-04-4	
Toluene	**0.37**	mg/kg	0.31	5	07/20/10 16:28	07/22/10 18:37	108-88-3	
Xylene (Total)	**1.4**	mg/kg	0.93	5	07/20/10 16:28	07/22/10 18:37	1330-20-7	
a,a,a-Trifluorotoluene (S)	108	%	80-125	5	07/20/10 16:28	07/22/10 18:37	98-08-8	D3
Dry Weight	Analytical Method: % Moisture							
Percent Moisture	**19.1**	%	0.10	1		07/19/10 00:00		

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Sample: Trip Blank **Lab ID: 10133724008** Collected: Received: 07/16/10 16:16 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.							
Benzene	ND	mg/kg	0.050	1	07/19/10 11:53	07/19/10 17:10	71-43-2	
Ethylbenzene	ND	mg/kg	0.050	1	07/19/10 11:53	07/19/10 17:10	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.0	1	07/19/10 11:53	07/19/10 17:10		
Methyl-tert-butyl ether	ND	mg/kg	0.25	1	07/19/10 11:53	07/19/10 17:10	1634-04-4	
Toluene	ND	mg/kg	0.050	1	07/19/10 11:53	07/19/10 17:10	108-88-3	
Xylene (Total)	ND	mg/kg	0.15	1	07/19/10 11:53	07/19/10 17:10	1330-20-7	
a,a,a-Trifluorotoluene (S)	98	%	80-125	1	07/19/10 11:53	07/19/10 17:10	98-08-8	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

QC Batch: OEXT/13363 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10133724001, 10133724002, 10133724003, 10133724004, 10133724005, 10133724006, 10133724007

METHOD BLANK: 825046 Matrix: Solid
Associated Lab Samples: 10133724001, 10133724002, 10133724003, 10133724004, 10133724005, 10133724006, 10133724007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	ND	5.0	07/23/10 13:19	
n-Triacontane (S)	%	92	50-150	07/23/10 13:19	

LABORATORY CONTROL SAMPLE & LCSD: 825047 825048

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	80	73.7	134	92	167	70-120	58	20	C0,L0,R1
n-Triacontane (S)	%				101	90	50-150			

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

QC Batch: GCV/7262
QC Batch Method: TPH GRO/PVOC WI ext.
Analysis Method: WI MOD GRO
Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10133724008

METHOD BLANK: 824811 Matrix: Solid
Associated Lab Samples: 10133724008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.050	07/19/10 16:01	
Ethylbenzene	mg/kg	ND	0.050	07/19/10 16:01	
Gasoline Range Organics	mg/kg	ND	5.0	07/19/10 16:01	
Methyl-tert-butyl ether	mg/kg	ND	0.25	07/19/10 16:01	
Toluene	mg/kg	ND	0.050	07/19/10 16:01	
Xylene (Total)	mg/kg	ND	0.15	07/19/10 16:01	
a,a,a-Trifluorotoluene (S)	%	98	80-125	07/19/10 16:01	

LABORATORY CONTROL SAMPLE & LCSD: 824812 824813

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	mg/kg	5	5.1	5.2	101	103	80-120	2	20	
Ethylbenzene	mg/kg	5	5.0	5.2	101	104	80-120	4	20	
Gasoline Range Organics	mg/kg	50	54.9	59.8	110	120	80-120	9	20	
Methyl-tert-butyl ether	mg/kg	5	5.3	5.4	106	107	80-120	.7	20	
Toluene	mg/kg	5	5.0	5.2	100	104	80-120	4	20	
Xylene (Total)	mg/kg	15	15.3	15.7	102	105	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				100	97	80-125			

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

QC Batch: GCV/7267 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10133724001, 10133724002, 10133724003, 10133724004

METHOD BLANK: 825557 Matrix: Solid
Associated Lab Samples: 10133724001, 10133724002, 10133724003, 10133724004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.050	07/21/10 02:52	
Ethylbenzene	mg/kg	ND	0.050	07/21/10 02:52	
Gasoline Range Organics	mg/kg	ND	5.0	07/21/10 02:52	
Methyl-tert-butyl ether	mg/kg	ND	0.25	07/21/10 02:52	
Toluene	mg/kg	ND	0.050	07/21/10 02:52	
Xylene (Total)	mg/kg	ND	0.15	07/21/10 02:52	
a,a,a-Trifluorotoluene (S)	%	100	80-125	07/21/10 02:52	

LABORATORY CONTROL SAMPLE & LCSD: 825558 825559

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	mg/kg	5	5.7	5.4	115	108	80-120	6	20	
Ethylbenzene	mg/kg	5	5.5	5.2	110	105	80-120	5	20	
Gasoline Range Organics	mg/kg	50	62.2	56.9	124	114	80-120	9	20	L3
Methyl-tert-butyl ether	mg/kg	5	6.1	6.0	122	120	80-120	1	20	L3
Toluene	mg/kg	5	5.7	5.3	113	105	80-120	7	20	
Xylene (Total)	mg/kg	15	16.2	16.0	108	107	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%				99	99	80-125			

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

QC Batch: GCV/7268 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10133724005, 10133724006, 10133724007

METHOD BLANK: 825560 Matrix: Solid
Associated Lab Samples: 10133724005, 10133724006, 10133724007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.050	07/21/10 18:14	
Ethylbenzene	mg/kg	ND	0.050	07/21/10 18:14	
Gasoline Range Organics	mg/kg	ND	5.0	07/21/10 18:14	
Methyl-tert-butyl ether	mg/kg	ND	0.25	07/21/10 18:14	
Toluene	mg/kg	ND	0.050	07/21/10 18:14	
Xylene (Total)	mg/kg	ND	0.15	07/21/10 18:14	
a,a,a-Trifluorotoluene (S)	%	98	80-125	07/21/10 18:14	

LABORATORY CONTROL SAMPLE & LCSD: 825561 825562

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	mg/kg	5	4.7	4.5	95	90	80-120	5	20	
Ethylbenzene	mg/kg	5	4.6	4.4	92	88	80-120	4	20	
Gasoline Range Organics	mg/kg	50	53.7	52.5	107	105	80-120	2	20	
Methyl-tert-butyl ether	mg/kg	5	5.2	4.8	103	96	80-120	7	20	
Toluene	mg/kg	5	4.7	4.5	94	90	80-120	4	20	
Xylene (Total)	mg/kg	15	13.6	13.2	91	88	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%				99	99	80-125			

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

QC Batch: MPRP/21439 Analysis Method: % Moisture
QC Batch Method: % Moisture Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10133724001, 10133724002, 10133724003, 10133724004, 10133724005, 10133724006, 10133724007

SAMPLE DUPLICATE: 824792

Parameter	Units	10133705001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.1	5.2	16	30	

SAMPLE DUPLICATE: 824793

Parameter	Units	10133719016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	3.5	3.4	2	30	

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QUALIFIERS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: GCV/7262

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: GCV/7267

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M	The sample was re-extracted out of hold and the hit was confirmed.
C0	Result confirmed by second analysis.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D5	The sample was re-weighed into a new container because the sample weight in the original container exceeded the method specifications.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
P2	Re-extraction or re-analysis could not be performed due to insufficient sample amount.
R1	RPD value was outside control limits.
T7	Low boiling point hydrocarbons are present in the sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133724

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10133724001	SB-2, 8.5-9ft.	WI MOD DRO	OEXT/13363	WI MOD DRO	GCSV/6987
10133724002	SB-3, 8-9ft.	WI MOD DRO	OEXT/13363	WI MOD DRO	GCSV/6987
10133724003	SB-4, 5.5-6ft.	WI MOD DRO	OEXT/13363	WI MOD DRO	GCSV/6987
10133724004	SB-5, 9-10ft.	WI MOD DRO	OEXT/13363	WI MOD DRO	GCSV/6987
10133724005	SB-6, 6-7ft.	WI MOD DRO	OEXT/13363	WI MOD DRO	GCSV/6987
10133724006	SB-6, 10-12ft.	WI MOD DRO	OEXT/13363	WI MOD DRO	GCSV/6987
10133724007	SB-7, 8.5-10ft.	WI MOD DRO	OEXT/13363	WI MOD DRO	GCSV/6987
10133724001	SB-2, 8.5-9ft.	TPH GRO/PVOC WI ext.	GCV/7267	WI MOD GRO	GCV/7270
10133724002	SB-3, 8-9ft.	TPH GRO/PVOC WI ext.	GCV/7267	WI MOD GRO	GCV/7270
10133724003	SB-4, 5.5-6ft.	TPH GRO/PVOC WI ext.	GCV/7267	WI MOD GRO	GCV/7270
10133724004	SB-5, 9-10ft.	TPH GRO/PVOC WI ext.	GCV/7267	WI MOD GRO	GCV/7270
10133724005	SB-6, 6-7ft.	TPH GRO/PVOC WI ext.	GCV/7268	WI MOD GRO	GCV/7271
10133724006	SB-6, 10-12ft.	TPH GRO/PVOC WI ext.	GCV/7268	WI MOD GRO	GCV/7271
10133724007	SB-7, 8.5-10ft.	TPH GRO/PVOC WI ext.	GCV/7268	WI MOD GRO	GCV/7271
10133724008	Trip Blank	TPH GRO/PVOC WI ext.	GCV/7262	WI MOD GRO	GCV/7263
10133724001	SB-2, 8.5-9ft.	% Moisture	MPRP/21439		
10133724002	SB-3, 8-9ft.	% Moisture	MPRP/21439		
10133724003	SB-4, 5.5-6ft.	% Moisture	MPRP/21439		
10133724004	SB-5, 9-10ft.	% Moisture	MPRP/21439		
10133724005	SB-6, 6-7ft.	% Moisture	MPRP/21439		
10133724006	SB-6, 10-12ft.	% Moisture	MPRP/21439		
10133724007	SB-7, 8.5-10ft.	% Moisture	MPRP/21439		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10133724
1125

Page: 1 of 1

1233220

Section A Required Client Information:
- Company: Delta Consultants
- Address: 5910 Rice Creek Pkwy, Shoreview MN
- Email To: mhobson@deltaenv.com
- Phone: 651 639 9449 Fax: 651 639 9473
- Requested Due Date/TAT: std

Section B Required Project Information:
- Report To: Matt Hobson
- Copy To:
- Purchase Order No.:
- Project Name: Holiday 411
- Project Number: NAA 1004827

Section C Invoice Information:
- Attention: Matt Hobson
- Company Name: Delta Consultants
- Address:
- Pace Quote Reference:
- Pace Project Manager: Carolynne Trout
- Pace Profile #:

REGULATORY AGENCY
- NPDES
- GROUND WATER
- DRINKING WATER
- [X] UST
- RCRA
- OTHER

Site Location STATE: MN

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N): Y N N

Analysis Tests: BTEX-MTBE-GRO (WIGRO); DRO (w/ DRO); Moisture

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	BTEX-MTBE-GRO (WIGRO)	DRO (w/ DRO)	Moisture	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-2, 8.5-9 ft	SL	G			7-15-10	9:15		5	3						2		✓	✓	✓		001
2	SB-3, 8-9 ft	SL	G				10:45		5	3						2		✓	✓	✓		002
3	SB-4, 5.5-6 ft	SL	G				12:40		3	2						1		✓	✓	✓		003
4	SB-5, 9-10 ft	SL	G				14:00		3	2						1		✓	✓	✓		004
5	SB-6, 6-7 ft	SL	G				15:30		3	2						1		✓	✓	✓		005
6	SB-6, 10-12 ft	SL	G				15:40		3	2						1		✓	✓	✓		006
7	SB-7, 8.5-10 ft	SL	G				17:30		3	2						1		✓	✓	✓		007
8	Trip Blank	S														1		✓				008
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Nancy Rodning / Delta	7-16-10	9:30	Shannon Janis / Pace	7-16-10	1535				
	Shannon Janis / Pace	7-16-10	1616	Shannon Janis / Pace	7-16-10	1616	4.2°	Y	Y	Y

20 of 21

ORIGINAL

SAMPLER NAME AND SIGNATURE
- PRINT Name of SAMPLER: Nancy Rodning
- SIGNATURE of SAMPLER: Nancy Rodning
- DATE Signed (MM/DD/YY): 7-15-10

Sample Condition Upon Receipt

Pace Analytical

Client Name: Delta Project # 10133724

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals Intact: ☒ yes ☐ no

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes X No _____

Thermometer Used 80344042 or (179425) Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 4.2° Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: RO 7-16-10

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☒N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	Samp #
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water	☐Yes ☒No	Initial when completed / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☒N/A	15.
Trip Blank Present:	☒Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 052410-3		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: CMat **Date:** 7/19/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

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July 27, 2010

Mr. Matt Hobson
Delta Consultants
5910 Rice Creek Parkway
Saint Paul, MN 55126

RE: Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Dear Mr. Hobson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne Trout

Carolynne Trout

carolynne.trout@pacelabs.com
Project Manager

Enclosures

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Minneapolis, MN 55414
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CERTIFICATIONS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Washington Certification #: C754
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10133718001	SB-2	Water	07/15/10 10:15	07/16/10 16:16
10133718002	SB-3	Water	07/15/10 11:00	07/16/10 16:16
10133718003	SB-4	Water	07/15/10 13:20	07/16/10 16:16
10133718004	SB-5	Water	07/15/10 14:30	07/16/10 16:16
10133718005	SB-6	Water	07/15/10 16:10	07/16/10 16:16
10133718006	SB-7	Water	07/15/10 18:10	07/16/10 16:16
10133718007	Duplicate	Water	07/15/10 00:00	07/16/10 16:16
10133718008	Trip Blank	Water		07/16/10 16:16

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SAMPLE ANALYTE COUNT

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10133718001	SB-2	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
		EPA 8260	DJT	73
10133718002	SB-3	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
		EPA 8260	DJT	73
10133718003	SB-4	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
		EPA 8260	DJT	73
10133718004	SB-5	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
		EPA 8260	DJT	73
10133718005	SB-6	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
		EPA 8260	DJT	73
10133718006	SB-7	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
		EPA 8260	DJT	73
10133718007	Duplicate	WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
		EPA 8260	DJT	73
10133718008	Trip Blank	EPA 8260	DJT	73

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-2 **Lab ID: 10133718001** Collected: 07/15/10 10:15 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	ND	mg/L	0.11	1	07/19/10 14:55	07/23/10 11:36		P4
n-Triacontane (S)	89	%	50-150	1	07/19/10 14:55	07/23/10 11:36		
WIGRO GCV	Analytical Method: WI MOD GRO							
Gasoline Range Organics	ND	ug/L	200	2		07/20/10 21:34		
a,a,a-Trifluorotoluene (S)	97	%	80-125	2		07/20/10 21:34	98-08-8	4M
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	20.0	2		07/19/10 23:14	67-64-1	
Allyl chloride	ND	ug/L	8.0	2		07/19/10 23:14	107-05-1	
Benzene	ND	ug/L	2.0	2		07/19/10 23:14	71-43-2	
Bromobenzene	ND	ug/L	2.0	2		07/19/10 23:14	108-86-1	
Bromochloromethane	ND	ug/L	2.0	2		07/19/10 23:14	74-97-5	
Bromodichloromethane	ND	ug/L	2.0	2		07/19/10 23:14	75-27-4	
Bromoform	ND	ug/L	16.0	2		07/19/10 23:14	75-25-2	
Bromomethane	ND	ug/L	8.0	2		07/19/10 23:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	8.0	2		07/19/10 23:14	78-93-3	
n-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:14	104-51-8	
sec-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:14	135-98-8	
tert-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:14	98-06-6	
Carbon tetrachloride	ND	ug/L	8.0	2		07/19/10 23:14	56-23-5	
Chlorobenzene	ND	ug/L	2.0	2		07/19/10 23:14	108-90-7	
Chloroethane	ND	ug/L	2.0	2		07/19/10 23:14	75-00-3	
Chloroform	ND	ug/L	2.0	2		07/19/10 23:14	67-66-3	
Chloromethane	ND	ug/L	8.0	2		07/19/10 23:14	74-87-3	
2-Chlorotoluene	ND	ug/L	2.0	2		07/19/10 23:14	95-49-8	
4-Chlorotoluene	ND	ug/L	2.0	2		07/19/10 23:14	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	8.0	2		07/19/10 23:14	96-12-8	
Dibromochloromethane	ND	ug/L	2.0	2		07/19/10 23:14	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	2		07/19/10 23:14	106-93-4	
Dibromomethane	ND	ug/L	8.0	2		07/19/10 23:14	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:14	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:14	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:14	106-46-7	
Dichlorodifluoromethane	ND	ug/L	2.0	2		07/19/10 23:14	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0	2		07/19/10 23:14	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	2		07/19/10 23:14	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:14	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:14	156-60-5	
Dichlorofluoromethane	ND	ug/L	2.0	2		07/19/10 23:14	75-43-4	
1,2-Dichloropropane	ND	ug/L	2.0	2		07/19/10 23:14	78-87-5	
1,3-Dichloropropane	ND	ug/L	2.0	2		07/19/10 23:14	142-28-9	
2,2-Dichloropropane	ND	ug/L	8.0	2		07/19/10 23:14	594-20-7	
1,1-Dichloropropene	ND	ug/L	2.0	2		07/19/10 23:14	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	8.0	2		07/19/10 23:14	10061-01-5	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-2 **Lab ID: 10133718001** Collected: 07/15/10 10:15 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	8.0	2		07/19/10 23:14	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	8.0	2		07/19/10 23:14	60-29-7	
Ethylbenzene	ND	ug/L	2.0	2		07/19/10 23:14	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	8.0	2		07/19/10 23:14	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	2.0	2		07/19/10 23:14	98-82-8	
p-Isopropyltoluene	ND	ug/L	2.0	2		07/19/10 23:14	99-87-6	
Methylene Chloride	ND	ug/L	8.0	2		07/19/10 23:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	8.0	2		07/19/10 23:14	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	2.0	2		07/19/10 23:14	1634-04-4	
Naphthalene	ND	ug/L	8.0	2		07/19/10 23:14	91-20-3	
n-Propylbenzene	ND	ug/L	2.0	2		07/19/10 23:14	103-65-1	
Styrene	ND	ug/L	2.0	2		07/19/10 23:14	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	2		07/19/10 23:14	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	2		07/19/10 23:14	79-34-5	
Tetrachloroethene	ND	ug/L	2.0	2		07/19/10 23:14	127-18-4	
Tetrahydrofuran	ND	ug/L	20.0	2		07/19/10 23:14	109-99-9	
Toluene	**2.0**	ug/L	2.0	2		07/19/10 23:14	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:14	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:14	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	2.0	2		07/19/10 23:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	2.0	2		07/19/10 23:14	79-00-5	
Trichloroethene	ND	ug/L	2.0	2		07/19/10 23:14	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	2		07/19/10 23:14	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.0	2		07/19/10 23:14	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	2.0	2		07/19/10 23:14	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	2.0	2		07/19/10 23:14	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	2.0	2		07/19/10 23:14	108-67-8	
Vinyl chloride	ND	ug/L	0.80	2		07/19/10 23:14	75-01-4	
Xylene (Total)	ND	ug/L	6.0	2		07/19/10 23:14	1330-20-7	
m&p-Xylene	ND	ug/L	4.0	2		07/19/10 23:14	1330-20-7	
o-Xylene	ND	ug/L	2.0	2		07/19/10 23:14	95-47-6	
Dibromofluoromethane (S)	105	%	75-130	2		07/19/10 23:14	1868-53-7	3M
1,2-Dichloroethane-d4 (S)	107	%	75-131	2		07/19/10 23:14	17060-07-0	
Toluene-d8 (S)	99	%	75-125	2		07/19/10 23:14	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	2		07/19/10 23:14	460-00-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-3 **Lab ID: 10133718002** Collected: 07/15/10 11:00 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**0.34**	mg/L	0.14	1	07/19/10 14:55	07/23/10 11:29		P4
n-Triacontane (S)	90	%	50-150	1	07/19/10 14:55	07/23/10 11:29		
WIGRO GCV	Analytical Method: WI MOD GRO							
Gasoline Range Organics	ND	ug/L	200	2		07/20/10 21:56		
a,a,a-Trifluorotoluene (S)	98	%	80-125	2		07/20/10 21:56	98-08-8	4M
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	20.0	2		07/19/10 23:36	67-64-1	
Allyl chloride	ND	ug/L	8.0	2		07/19/10 23:36	107-05-1	
Benzene	ND	ug/L	2.0	2		07/19/10 23:36	71-43-2	
Bromobenzene	ND	ug/L	2.0	2		07/19/10 23:36	108-86-1	
Bromochloromethane	ND	ug/L	2.0	2		07/19/10 23:36	74-97-5	
Bromodichloromethane	ND	ug/L	2.0	2		07/19/10 23:36	75-27-4	
Bromoform	ND	ug/L	16.0	2		07/19/10 23:36	75-25-2	
Bromomethane	ND	ug/L	8.0	2		07/19/10 23:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	8.0	2		07/19/10 23:36	78-93-3	
n-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:36	104-51-8	
sec-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:36	135-98-8	
tert-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:36	98-06-6	
Carbon tetrachloride	ND	ug/L	8.0	2		07/19/10 23:36	56-23-5	
Chlorobenzene	ND	ug/L	2.0	2		07/19/10 23:36	108-90-7	
Chloroethane	ND	ug/L	2.0	2		07/19/10 23:36	75-00-3	
Chloroform	ND	ug/L	2.0	2		07/19/10 23:36	67-66-3	
Chloromethane	ND	ug/L	8.0	2		07/19/10 23:36	74-87-3	
2-Chlorotoluene	ND	ug/L	2.0	2		07/19/10 23:36	95-49-8	
4-Chlorotoluene	ND	ug/L	2.0	2		07/19/10 23:36	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	8.0	2		07/19/10 23:36	96-12-8	
Dibromochloromethane	ND	ug/L	2.0	2		07/19/10 23:36	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	2		07/19/10 23:36	106-93-4	
Dibromomethane	ND	ug/L	8.0	2		07/19/10 23:36	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:36	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:36	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:36	106-46-7	
Dichlorodifluoromethane	ND	ug/L	2.0	2		07/19/10 23:36	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0	2		07/19/10 23:36	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	2		07/19/10 23:36	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:36	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:36	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:36	156-60-5	
Dichlorofluoromethane	ND	ug/L	2.0	2		07/19/10 23:36	75-43-4	
1,2-Dichloropropane	ND	ug/L	2.0	2		07/19/10 23:36	78-87-5	
1,3-Dichloropropane	ND	ug/L	2.0	2		07/19/10 23:36	142-28-9	
2,2-Dichloropropane	ND	ug/L	8.0	2		07/19/10 23:36	594-20-7	
1,1-Dichloropropene	ND	ug/L	2.0	2		07/19/10 23:36	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	8.0	2		07/19/10 23:36	10061-01-5	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-3 **Lab ID: 10133718002** Collected: 07/15/10 11:00 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	8.0	2		07/19/10 23:36	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	8.0	2		07/19/10 23:36	60-29-7	
Ethylbenzene	ND	ug/L	2.0	2		07/19/10 23:36	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	8.0	2		07/19/10 23:36	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	2.0	2		07/19/10 23:36	98-82-8	
p-Isopropyltoluene	ND	ug/L	2.0	2		07/19/10 23:36	99-87-6	
Methylene Chloride	ND	ug/L	8.0	2		07/19/10 23:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	8.0	2		07/19/10 23:36	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	2.0	2		07/19/10 23:36	1634-04-4	
Naphthalene	ND	ug/L	8.0	2		07/19/10 23:36	91-20-3	
n-Propylbenzene	ND	ug/L	2.0	2		07/19/10 23:36	103-65-1	
Styrene	ND	ug/L	2.0	2		07/19/10 23:36	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	2		07/19/10 23:36	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	2		07/19/10 23:36	79-34-5	
Tetrachloroethene	ND	ug/L	2.0	2		07/19/10 23:36	127-18-4	
Tetrahydrofuran	ND	ug/L	20.0	2		07/19/10 23:36	109-99-9	
Toluene	ND	ug/L	2.0	2		07/19/10 23:36	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:36	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:36	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	2.0	2		07/19/10 23:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	2.0	2		07/19/10 23:36	79-00-5	
Trichloroethene	ND	ug/L	2.0	2		07/19/10 23:36	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	2		07/19/10 23:36	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.0	2		07/19/10 23:36	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	2.0	2		07/19/10 23:36	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	2.0	2		07/19/10 23:36	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	2.0	2		07/19/10 23:36	108-67-8	
Vinyl chloride	ND	ug/L	0.80	2		07/19/10 23:36	75-01-4	
Xylene (Total)	ND	ug/L	6.0	2		07/19/10 23:36	1330-20-7	
m&p-Xylene	ND	ug/L	4.0	2		07/19/10 23:36	1330-20-7	
o-Xylene	ND	ug/L	2.0	2		07/19/10 23:36	95-47-6	
Dibromofluoromethane (S)	103	%	75-130	2		07/19/10 23:36	1868-53-7	3M
1,2-Dichloroethane-d4 (S)	104	%	75-131	2		07/19/10 23:36	17060-07-0	
Toluene-d8 (S)	97	%	75-125	2		07/19/10 23:36	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125	2		07/19/10 23:36	460-00-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-4 **Lab ID: 10133718003** Collected: 07/15/10 13:20 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**0.42**	mg/L	0.15	1	07/19/10 14:55	07/23/10 11:50		P4
n-Triacontane (S)	92	%	50-150	1	07/19/10 14:55	07/23/10 11:50		
WIGRO GCV	Analytical Method: WI MOD GRO							
Gasoline Range Organics	ND	ug/L	100	1		07/20/10 20:50		
a,a,a-Trifluorotoluene (S)	101	%	80-125	1		07/20/10 20:50	98-08-8	
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		07/19/10 22:29	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		07/19/10 22:29	107-05-1	
Benzene	ND	ug/L	1.0	1		07/19/10 22:29	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		07/19/10 22:29	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		07/19/10 22:29	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		07/19/10 22:29	75-27-4	
Bromoform	ND	ug/L	8.0	1		07/19/10 22:29	75-25-2	
Bromomethane	ND	ug/L	4.0	1		07/19/10 22:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	1		07/19/10 22:29	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		07/19/10 22:29	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		07/19/10 22:29	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		07/19/10 22:29	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		07/19/10 22:29	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		07/19/10 22:29	108-90-7	
Chloroethane	ND	ug/L	1.0	1		07/19/10 22:29	75-00-3	
Chloroform	ND	ug/L	1.0	1		07/19/10 22:29	67-66-3	
Chloromethane	ND	ug/L	4.0	1		07/19/10 22:29	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		07/19/10 22:29	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		07/19/10 22:29	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		07/19/10 22:29	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		07/19/10 22:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		07/19/10 22:29	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		07/19/10 22:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		07/19/10 22:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/19/10 22:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/19/10 22:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/19/10 22:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/10 22:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/10 22:29	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		07/19/10 22:29	75-43-4	
1,2-Dichloropropane	ND	ug/L	1.0	1		07/19/10 22:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		07/19/10 22:29	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		07/19/10 22:29	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		07/19/10 22:29	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		07/19/10 22:29	10061-01-5	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-4 **Lab ID: 10133718003** Collected: 07/15/10 13:20 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		07/19/10 22:29	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		07/19/10 22:29	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		07/19/10 22:29	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	1		07/19/10 22:29	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		07/19/10 22:29	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		07/19/10 22:29	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		07/19/10 22:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	1		07/19/10 22:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		07/19/10 22:29	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		07/19/10 22:29	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		07/19/10 22:29	103-65-1	
Styrene	ND	ug/L	1.0	1		07/19/10 22:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		07/19/10 22:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		07/19/10 22:29	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		07/19/10 22:29	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		07/19/10 22:29	109-99-9	
Toluene	ND	ug/L	1.0	1		07/19/10 22:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/19/10 22:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		07/19/10 22:29	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		07/19/10 22:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		07/19/10 22:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		07/19/10 22:29	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		07/19/10 22:29	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		07/19/10 22:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		07/19/10 22:29	108-67-8	
Vinyl chloride	ND	ug/L	0.40	1		07/19/10 22:29	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		07/19/10 22:29	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		07/19/10 22:29	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		07/19/10 22:29	95-47-6	
Dibromofluoromethane (S)	108	%	75-130	1		07/19/10 22:29	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	75-131	1		07/19/10 22:29	17060-07-0	
Toluene-d8 (S)	97	%	75-125	1		07/19/10 22:29	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	1		07/19/10 22:29	460-00-4	

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(612)607-1700

ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-5 **Lab ID: 10133718004** Collected: 07/15/10 14:30 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**0.38**	mg/L	0.11	1	07/19/10 14:55	07/23/10 11:43		P4
n-Triacontane (S)	89	%	50-150	1	07/19/10 14:55	07/23/10 11:43		
WIGRO GCV	Analytical Method: WI MOD GRO							
Gasoline Range Organics	ND	ug/L	100	1		07/20/10 21:12		
a,a,a-Trifluorotoluene (S)	100	%	80-125	1		07/20/10 21:12	98-08-8	
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		07/19/10 22:52	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		07/19/10 22:52	107-05-1	
Benzene	ND	ug/L	1.0	1		07/19/10 22:52	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		07/19/10 22:52	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		07/19/10 22:52	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		07/19/10 22:52	75-27-4	
Bromoform	ND	ug/L	8.0	1		07/19/10 22:52	75-25-2	
Bromomethane	ND	ug/L	4.0	1		07/19/10 22:52	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	1		07/19/10 22:52	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		07/19/10 22:52	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		07/19/10 22:52	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		07/19/10 22:52	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		07/19/10 22:52	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		07/19/10 22:52	108-90-7	
Chloroethane	ND	ug/L	1.0	1		07/19/10 22:52	75-00-3	
Chloroform	ND	ug/L	1.0	1		07/19/10 22:52	67-66-3	
Chloromethane	ND	ug/L	4.0	1		07/19/10 22:52	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		07/19/10 22:52	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		07/19/10 22:52	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		07/19/10 22:52	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		07/19/10 22:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		07/19/10 22:52	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		07/19/10 22:52	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:52	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		07/19/10 22:52	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/19/10 22:52	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/19/10 22:52	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/19/10 22:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/10 22:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/10 22:52	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		07/19/10 22:52	75-43-4	
1,2-Dichloropropane	ND	ug/L	1.0	1		07/19/10 22:52	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		07/19/10 22:52	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		07/19/10 22:52	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		07/19/10 22:52	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		07/19/10 22:52	10061-01-5	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-5 **Lab ID: 10133718004** Collected: 07/15/10 14:30 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		07/19/10 22:52	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		07/19/10 22:52	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		07/19/10 22:52	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	1		07/19/10 22:52	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		07/19/10 22:52	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		07/19/10 22:52	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		07/19/10 22:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	1		07/19/10 22:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		07/19/10 22:52	1634-04-4	
Naphthalene	ND	ug/L	4.0	1		07/19/10 22:52	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		07/19/10 22:52	103-65-1	
Styrene	ND	ug/L	1.0	1		07/19/10 22:52	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		07/19/10 22:52	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		07/19/10 22:52	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		07/19/10 22:52	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		07/19/10 22:52	109-99-9	
Toluene	ND	ug/L	1.0	1		07/19/10 22:52	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:52	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		07/19/10 22:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/19/10 22:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		07/19/10 22:52	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		07/19/10 22:52	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		07/19/10 22:52	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		07/19/10 22:52	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		07/19/10 22:52	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		07/19/10 22:52	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		07/19/10 22:52	108-67-8	
Vinyl chloride	ND	ug/L	0.40	1		07/19/10 22:52	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		07/19/10 22:52	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		07/19/10 22:52	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		07/19/10 22:52	95-47-6	
Dibromofluoromethane (S)	104	%	75-130	1		07/19/10 22:52	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	75-131	1		07/19/10 22:52	17060-07-0	
Toluene-d8 (S)	93	%	75-125	1		07/19/10 22:52	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125	1		07/19/10 22:52	460-00-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-6 **Lab ID: 10133718005** Collected: 07/15/10 16:10 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**64.2**	mg/L	7.1	50	07/19/10 14:55	07/23/10 12:43		P4,T7
n-Triacontane (S)	0	%	50-150	50	07/19/10 14:55	07/23/10 12:43		S4
WIGRO GCV	Analytical Method: WI MOD GRO							
Gasoline Range Organics	**57400**	ug/L	5000	50		07/22/10 15:06		
a,a,a-Trifluorotoluene (S)	100	%	80-125	50		07/22/10 15:06	98-08-8	
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	500	50		07/20/10 00:21	67-64-1	
Allyl chloride	ND	ug/L	200	50		07/20/10 00:21	107-05-1	
Benzene	**2950**	ug/L	50.0	50		07/20/10 00:21	71-43-2	
Bromobenzene	ND	ug/L	50.0	50		07/20/10 00:21	108-86-1	
Bromochloromethane	ND	ug/L	50.0	50		07/20/10 00:21	74-97-5	
Bromodichloromethane	ND	ug/L	50.0	50		07/20/10 00:21	75-27-4	
Bromoform	ND	ug/L	400	50		07/20/10 00:21	75-25-2	
Bromomethane	ND	ug/L	200	50		07/20/10 00:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	50		07/20/10 00:21	78-93-3	
n-Butylbenzene	**98.9**	ug/L	50.0	50		07/20/10 00:21	104-51-8	
sec-Butylbenzene	ND	ug/L	50.0	50		07/20/10 00:21	135-98-8	
tert-Butylbenzene	ND	ug/L	50.0	50		07/20/10 00:21	98-06-6	
Carbon tetrachloride	ND	ug/L	200	50		07/20/10 00:21	56-23-5	
Chlorobenzene	ND	ug/L	50.0	50		07/20/10 00:21	108-90-7	
Chloroethane	ND	ug/L	50.0	50		07/20/10 00:21	75-00-3	
Chloroform	ND	ug/L	50.0	50		07/20/10 00:21	67-66-3	
Chloromethane	ND	ug/L	200	50		07/20/10 00:21	74-87-3	
2-Chlorotoluene	ND	ug/L	50.0	50		07/20/10 00:21	95-49-8	
4-Chlorotoluene	ND	ug/L	50.0	50		07/20/10 00:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	50		07/20/10 00:21	96-12-8	
Dibromochloromethane	ND	ug/L	50.0	50		07/20/10 00:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	50.0	50		07/20/10 00:21	106-93-4	
Dibromomethane	ND	ug/L	200	50		07/20/10 00:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	50.0	50		07/20/10 00:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0	50		07/20/10 00:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0	50		07/20/10 00:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	50		07/20/10 00:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0	50		07/20/10 00:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0	50		07/20/10 00:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0	50		07/20/10 00:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	50.0	50		07/20/10 00:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	50		07/20/10 00:21	156-60-5	
Dichlorofluoromethane	ND	ug/L	50.0	50		07/20/10 00:21	75-43-4	
1,2-Dichloropropane	ND	ug/L	50.0	50		07/20/10 00:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	50.0	50		07/20/10 00:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	200	50		07/20/10 00:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	50.0	50		07/20/10 00:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	200	50		07/20/10 00:21	10061-01-5	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-6 **Lab ID: 10133718005** Collected: 07/15/10 16:10 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	200	50		07/20/10 00:21	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	200	50		07/20/10 00:21	60-29-7	
Ethylbenzene	**3390**	ug/L	50.0	50		07/20/10 00:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	200	50		07/20/10 00:21	87-68-3	
Isopropylbenzene (Cumene)	**145**	ug/L	50.0	50		07/20/10 00:21	98-82-8	
p-Isopropyltoluene	ND	ug/L	50.0	50		07/20/10 00:21	99-87-6	
Methylene Chloride	ND	ug/L	200	50		07/20/10 00:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	50		07/20/10 00:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	50.0	50		07/20/10 00:21	1634-04-4	
Naphthalene	**835**	ug/L	200	50		07/20/10 00:21	91-20-3	
n-Propylbenzene	**448**	ug/L	50.0	50		07/20/10 00:21	103-65-1	
Styrene	ND	ug/L	50.0	50		07/20/10 00:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	50.0	50		07/20/10 00:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	50		07/20/10 00:21	79-34-5	
Tetrachloroethene	ND	ug/L	50.0	50		07/20/10 00:21	127-18-4	
Tetrahydrofuran	ND	ug/L	500	50		07/20/10 00:21	109-99-9	
Toluene	**5800**	ug/L	50.0	50		07/20/10 00:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0	50		07/20/10 00:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0	50		07/20/10 00:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	50.0	50		07/20/10 00:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0	50		07/20/10 00:21	79-00-5	
Trichloroethene	ND	ug/L	50.0	50		07/20/10 00:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	50		07/20/10 00:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	50.0	50		07/20/10 00:21	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	50.0	50		07/20/10 00:21	76-13-1	
1,2,4-Trimethylbenzene	**3460**	ug/L	50.0	50		07/20/10 00:21	95-63-6	
1,3,5-Trimethylbenzene	**831**	ug/L	50.0	50		07/20/10 00:21	108-67-8	
Vinyl chloride	ND	ug/L	20.0	50		07/20/10 00:21	75-01-4	
Xylene (Total)	**18000**	ug/L	150	50		07/20/10 00:21	1330-20-7	
m&p-Xylene	**12900**	ug/L	100	50		07/20/10 00:21	1330-20-7	
o-Xylene	**5090**	ug/L	50.0	50		07/20/10 00:21	95-47-6	
Dibromofluoromethane (S)	101	%	75-130	50		07/20/10 00:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	75-131	50		07/20/10 00:21	17060-07-0	
Toluene-d8 (S)	101	%	75-125	50		07/20/10 00:21	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125	50		07/20/10 00:21	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-7 **Lab ID: 10133718006** Collected: 07/15/10 18:10 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	**247**	mg/L	13.3	100	07/19/10 14:55	07/23/10 12:50		P4,T7
n-Triacontane (S)	0	%	50-150	100	07/19/10 14:55	07/23/10 12:50		S4
WIGRO GCV	Analytical Method: WI MOD GRO							
Gasoline Range Organics	**36900**	ug/L	2000	20		07/22/10 16:12		
a,a,a-Trifluorotoluene (S)	113	%	80-125	20		07/22/10 16:12	98-08-8	
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	250	25		07/20/10 19:51	67-64-1	
Allyl chloride	ND	ug/L	100	25		07/20/10 19:51	107-05-1	
Benzene	**197**	ug/L	25.0	25		07/20/10 19:51	71-43-2	
Bromobenzene	ND	ug/L	25.0	25		07/20/10 19:51	108-86-1	
Bromochloromethane	ND	ug/L	25.0	25		07/20/10 19:51	74-97-5	
Bromodichloromethane	ND	ug/L	25.0	25		07/20/10 19:51	75-27-4	
Bromoform	ND	ug/L	200	25		07/20/10 19:51	75-25-2	
Bromomethane	ND	ug/L	100	25		07/20/10 19:51	74-83-9	
2-Butanone (MEK)	**1080**	ug/L	100	25		07/20/10 19:51	78-93-3	
n-Butylbenzene	**443**	ug/L	25.0	25		07/20/10 19:51	104-51-8	
sec-Butylbenzene	**101**	ug/L	25.0	25		07/20/10 19:51	135-98-8	
tert-Butylbenzene	ND	ug/L	25.0	25		07/20/10 19:51	98-06-6	
Carbon tetrachloride	ND	ug/L	100	25		07/20/10 19:51	56-23-5	
Chlorobenzene	ND	ug/L	25.0	25		07/20/10 19:51	108-90-7	
Chloroethane	ND	ug/L	25.0	25		07/20/10 19:51	75-00-3	
Chloroform	ND	ug/L	25.0	25		07/20/10 19:51	67-66-3	
Chloromethane	ND	ug/L	100	25		07/20/10 19:51	74-87-3	
2-Chlorotoluene	ND	ug/L	25.0	25		07/20/10 19:51	95-49-8	
4-Chlorotoluene	ND	ug/L	25.0	25		07/20/10 19:51	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	100	25		07/20/10 19:51	96-12-8	
Dibromochloromethane	ND	ug/L	25.0	25		07/20/10 19:51	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	25.0	25		07/20/10 19:51	106-93-4	
Dibromomethane	ND	ug/L	100	25		07/20/10 19:51	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	25.0	25		07/20/10 19:51	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	25.0	25		07/20/10 19:51	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	25.0	25		07/20/10 19:51	106-46-7	
Dichlorodifluoromethane	ND	ug/L	25.0	25		07/20/10 19:51	75-71-8	
1,1-Dichloroethane	ND	ug/L	25.0	25		07/20/10 19:51	75-34-3	
1,2-Dichloroethane	ND	ug/L	25.0	25		07/20/10 19:51	107-06-2	
1,1-Dichloroethene	ND	ug/L	25.0	25		07/20/10 19:51	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	25.0	25		07/20/10 19:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	25.0	25		07/20/10 19:51	156-60-5	
Dichlorofluoromethane	ND	ug/L	25.0	25		07/20/10 19:51	75-43-4	
1,2-Dichloropropane	ND	ug/L	25.0	25		07/20/10 19:51	78-87-5	
1,3-Dichloropropane	ND	ug/L	25.0	25		07/20/10 19:51	142-28-9	
2,2-Dichloropropane	ND	ug/L	100	25		07/20/10 19:51	594-20-7	
1,1-Dichloropropene	ND	ug/L	25.0	25		07/20/10 19:51	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	100	25		07/20/10 19:51	10061-01-5	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: SB-7 **Lab ID: 10133718006** Collected: 07/15/10 18:10 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	100	25		07/20/10 19:51	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	100	25		07/20/10 19:51	60-29-7	
Ethylbenzene	**1040**	ug/L	25.0	25		07/20/10 19:51	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	100	25		07/20/10 19:51	87-68-3	
Isopropylbenzene (Cumene)	**221**	ug/L	25.0	25		07/20/10 19:51	98-82-8	
p-Isopropyltoluene	**164**	ug/L	25.0	25		07/20/10 19:51	99-87-6	
Methylene Chloride	ND	ug/L	100	25		07/20/10 19:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	100	25		07/20/10 19:51	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	25.0	25		07/20/10 19:51	1634-04-4	
Naphthalene	**487**	ug/L	100	25		07/20/10 19:51	91-20-3	
n-Propylbenzene	**902**	ug/L	25.0	25		07/20/10 19:51	103-65-1	
Styrene	ND	ug/L	25.0	25		07/20/10 19:51	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	25.0	25		07/20/10 19:51	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	25.0	25		07/20/10 19:51	79-34-5	
Tetrachloroethene	ND	ug/L	25.0	25		07/20/10 19:51	127-18-4	
Tetrahydrofuran	ND	ug/L	250	25		07/20/10 19:51	109-99-9	
Toluene	**71.8**	ug/L	25.0	25		07/20/10 19:51	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	25.0	25		07/20/10 19:51	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	25.0	25		07/20/10 19:51	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	25.0	25		07/20/10 19:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	25.0	25		07/20/10 19:51	79-00-5	
Trichloroethene	ND	ug/L	25.0	25		07/20/10 19:51	79-01-6	
Trichlorofluoromethane	ND	ug/L	25.0	25		07/20/10 19:51	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	25.0	25		07/20/10 19:51	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	25.0	25		07/20/10 19:51	76-13-1	
1,2,4-Trimethylbenzene	**4070**	ug/L	25.0	25		07/20/10 19:51	95-63-6	
1,3,5-Trimethylbenzene	**1260**	ug/L	25.0	25		07/20/10 19:51	108-67-8	
Vinyl chloride	ND	ug/L	10.0	25		07/20/10 19:51	75-01-4	
Xylene (Total)	**2040**	ug/L	75.0	25		07/20/10 19:51	1330-20-7	
m&p-Xylene	**1850**	ug/L	50.0	25		07/20/10 19:51	1330-20-7	
o-Xylene	**190**	ug/L	25.0	25		07/20/10 19:51	95-47-6	
Dibromofluoromethane (S)	103	%	75-130	25		07/20/10 19:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	124	%	75-131	25		07/20/10 19:51	17060-07-0	
Toluene-d8 (S)	104	%	75-125	25		07/20/10 19:51	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	25		07/20/10 19:51	460-00-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: Duplicate **Lab ID: 10133718007** Collected: 07/15/10 00:00 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
Diesel Range Organics	ND	mg/L	0.12	1	07/19/10 14:55	07/23/10 11:22		P4
n-Triacontane (S)	85	%	50-150	1	07/19/10 14:55	07/23/10 11:22		
WIGRO GCV	Analytical Method: WI MOD GRO							
Gasoline Range Organics	ND	ug/L	100	1		07/21/10 02:19		
a,a,a-Trifluorotoluene (S)	98	%	80-125	1		07/21/10 02:19	98-08-8	
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	20.0	2		07/19/10 23:59	67-64-1	
Allyl chloride	ND	ug/L	8.0	2		07/19/10 23:59	107-05-1	
Benzene	ND	ug/L	2.0	2		07/19/10 23:59	71-43-2	
Bromobenzene	ND	ug/L	2.0	2		07/19/10 23:59	108-86-1	
Bromochloromethane	ND	ug/L	2.0	2		07/19/10 23:59	74-97-5	
Bromodichloromethane	ND	ug/L	2.0	2		07/19/10 23:59	75-27-4	
Bromoform	ND	ug/L	16.0	2		07/19/10 23:59	75-25-2	
Bromomethane	ND	ug/L	8.0	2		07/19/10 23:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	8.0	2		07/19/10 23:59	78-93-3	
n-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:59	104-51-8	
sec-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:59	135-98-8	
tert-Butylbenzene	ND	ug/L	2.0	2		07/19/10 23:59	98-06-6	
Carbon tetrachloride	ND	ug/L	8.0	2		07/19/10 23:59	56-23-5	
Chlorobenzene	ND	ug/L	2.0	2		07/19/10 23:59	108-90-7	
Chloroethane	ND	ug/L	2.0	2		07/19/10 23:59	75-00-3	
Chloroform	ND	ug/L	2.0	2		07/19/10 23:59	67-66-3	
Chloromethane	ND	ug/L	8.0	2		07/19/10 23:59	74-87-3	
2-Chlorotoluene	ND	ug/L	2.0	2		07/19/10 23:59	95-49-8	
4-Chlorotoluene	ND	ug/L	2.0	2		07/19/10 23:59	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	8.0	2		07/19/10 23:59	96-12-8	
Dibromochloromethane	ND	ug/L	2.0	2		07/19/10 23:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	2		07/19/10 23:59	106-93-4	
Dibromomethane	ND	ug/L	8.0	2		07/19/10 23:59	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:59	106-46-7	
Dichlorodifluoromethane	ND	ug/L	2.0	2		07/19/10 23:59	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0	2		07/19/10 23:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	2		07/19/10 23:59	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:59	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	2		07/19/10 23:59	156-60-5	
Dichlorofluoromethane	ND	ug/L	2.0	2		07/19/10 23:59	75-43-4	
1,2-Dichloropropane	ND	ug/L	2.0	2		07/19/10 23:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	2.0	2		07/19/10 23:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	8.0	2		07/19/10 23:59	594-20-7	
1,1-Dichloropropene	ND	ug/L	2.0	2		07/19/10 23:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	8.0	2		07/19/10 23:59	10061-01-5	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: Duplicate **Lab ID: 10133718007** Collected: 07/15/10 00:00 Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
trans-1,3-Dichloropropene	ND	ug/L	8.0	2		07/19/10 23:59	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	8.0	2		07/19/10 23:59	60-29-7	
Ethylbenzene	ND	ug/L	2.0	2		07/19/10 23:59	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	8.0	2		07/19/10 23:59	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	2.0	2		07/19/10 23:59	98-82-8	
p-Isopropyltoluene	ND	ug/L	2.0	2		07/19/10 23:59	99-87-6	
Methylene Chloride	ND	ug/L	8.0	2		07/19/10 23:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	8.0	2		07/19/10 23:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	2.0	2		07/19/10 23:59	1634-04-4	
Naphthalene	ND	ug/L	8.0	2		07/19/10 23:59	91-20-3	
n-Propylbenzene	ND	ug/L	2.0	2		07/19/10 23:59	103-65-1	
Styrene	ND	ug/L	2.0	2		07/19/10 23:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	2		07/19/10 23:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	2		07/19/10 23:59	79-34-5	
Tetrachloroethene	ND	ug/L	2.0	2		07/19/10 23:59	127-18-4	
Tetrahydrofuran	ND	ug/L	20.0	2		07/19/10 23:59	109-99-9	
Toluene	**2.3**	ug/L	2.0	2		07/19/10 23:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	2		07/19/10 23:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	2.0	2		07/19/10 23:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	2.0	2		07/19/10 23:59	79-00-5	
Trichloroethene	ND	ug/L	2.0	2		07/19/10 23:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	2		07/19/10 23:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.0	2		07/19/10 23:59	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	2.0	2		07/19/10 23:59	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	2.0	2		07/19/10 23:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	2.0	2		07/19/10 23:59	108-67-8	
Vinyl chloride	ND	ug/L	0.80	2		07/19/10 23:59	75-01-4	
Xylene (Total)	ND	ug/L	6.0	2		07/19/10 23:59	1330-20-7	
m&p-Xylene	ND	ug/L	4.0	2		07/19/10 23:59	1330-20-7	
o-Xylene	ND	ug/L	2.0	2		07/19/10 23:59	95-47-6	
Dibromofluoromethane (S)	104	%	75-130	2		07/19/10 23:59	1868-53-7	3M
1,2-Dichloroethane-d4 (S)	109	%	75-131	2		07/19/10 23:59	17060-07-0	
Toluene-d8 (S)	97	%	75-125	2		07/19/10 23:59	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	2		07/19/10 23:59	460-00-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: Trip Blank **Lab ID: 10133718008** Collected: Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
Acetone	ND	ug/L	10.0	1		07/19/10 18:24	67-64-1	
Allyl chloride	ND	ug/L	4.0	1		07/19/10 18:24	107-05-1	
Benzene	ND	ug/L	1.0	1		07/19/10 18:24	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		07/19/10 18:24	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		07/19/10 18:24	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		07/19/10 18:24	75-27-4	
Bromoform	ND	ug/L	8.0	1		07/19/10 18:24	75-25-2	
Bromomethane	ND	ug/L	4.0	1		07/19/10 18:24	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	1		07/19/10 18:24	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		07/19/10 18:24	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		07/19/10 18:24	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		07/19/10 18:24	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	1		07/19/10 18:24	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		07/19/10 18:24	108-90-7	
Chloroethane	ND	ug/L	1.0	1		07/19/10 18:24	75-00-3	
Chloroform	ND	ug/L	1.0	1		07/19/10 18:24	67-66-3	
Chloromethane	ND	ug/L	4.0	1		07/19/10 18:24	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		07/19/10 18:24	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		07/19/10 18:24	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	1		07/19/10 18:24	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		07/19/10 18:24	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		07/19/10 18:24	106-93-4	
Dibromomethane	ND	ug/L	4.0	1		07/19/10 18:24	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 18:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 18:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		07/19/10 18:24	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		07/19/10 18:24	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/19/10 18:24	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/19/10 18:24	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/19/10 18:24	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/10 18:24	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/10 18:24	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	1		07/19/10 18:24	75-43-4	
1,2-Dichloropropane	ND	ug/L	1.0	1		07/19/10 18:24	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		07/19/10 18:24	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	1		07/19/10 18:24	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		07/19/10 18:24	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	1		07/19/10 18:24	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	1		07/19/10 18:24	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	1		07/19/10 18:24	60-29-7	
Ethylbenzene	ND	ug/L	1.0	1		07/19/10 18:24	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	1		07/19/10 18:24	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		07/19/10 18:24	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		07/19/10 18:24	99-87-6	
Methylene Chloride	ND	ug/L	4.0	1		07/19/10 18:24	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	1		07/19/10 18:24	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		07/19/10 18:24	1634-04-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Sample: Trip Blank **Lab ID: 10133718008** Collected: Received: 07/16/10 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260							
Naphthalene	ND	ug/L	4.0	1		07/19/10 18:24	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		07/19/10 18:24	103-65-1	
Styrene	ND	ug/L	1.0	1		07/19/10 18:24	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		07/19/10 18:24	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		07/19/10 18:24	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		07/19/10 18:24	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	1		07/19/10 18:24	109-99-9	
Toluene	ND	ug/L	1.0	1		07/19/10 18:24	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		07/19/10 18:24	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		07/19/10 18:24	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/19/10 18:24	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		07/19/10 18:24	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		07/19/10 18:24	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		07/19/10 18:24	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		07/19/10 18:24	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		07/19/10 18:24	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		07/19/10 18:24	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		07/19/10 18:24	108-67-8	
Vinyl chloride	ND	ug/L	0.40	1		07/19/10 18:24	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		07/19/10 18:24	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		07/19/10 18:24	1330-20-7	
o-Xylene	ND	ug/L	1.0	1		07/19/10 18:24	95-47-6	
Dibromofluoromethane (S)	100	%	75-130	1		07/19/10 18:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	75-131	1		07/19/10 18:24	17060-07-0	
Toluene-d8 (S)	98	%	75-125	1		07/19/10 18:24	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125	1		07/19/10 18:24	460-00-4	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

QC Batch: OEXT/13362 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10133718001, 10133718002, 10133718003, 10133718004, 10133718005, 10133718006, 10133718007

METHOD BLANK: 824944 Matrix: Water
Associated Lab Samples: 10133718001, 10133718002, 10133718003, 10133718004, 10133718005, 10133718006, 10133718007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/L	ND	0.10	07/22/10 18:31	
n-Triacontane (S)	%	86	50-150	07/22/10 18:31	

LABORATORY CONTROL SAMPLE & LCSD: 824945 824946

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/L	2	1.9	2.0	97	99	75-115	2	20	
n-Triacontane (S)	%				0	0	50-150			1M,2M,S0

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

QC Batch: GCV/7269 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10133718001, 10133718002, 10133718003, 10133718004, 10133718007

METHOD BLANK: 825600 Matrix: Water
Associated Lab Samples: 10133718001, 10133718002, 10133718003, 10133718004, 10133718007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	07/20/10 17:33	
a,a,a-Trifluorotoluene (S)	%	98	80-125	07/20/10 17:33	

LABORATORY CONTROL SAMPLE & LCSD: 825601 825602

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	968	975	97	98	80-120	.8	20	
a,a,a-Trifluorotoluene (S)	%				98	98	80-125			

MATRIX SPIKE SAMPLE: 826117

Parameter	Units	10133706006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	ND	1000	906	91	80-120	
a,a,a-Trifluorotoluene (S)	%				98	80-125	

SAMPLE DUPLICATE: 826118

Parameter	Units	10133891001 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		20	
a,a,a-Trifluorotoluene (S)	%	99	98	.9		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

QC Batch: GCV/7273
QC Batch Method: WI MOD GRO
Analysis Method: WI MOD GRO
Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10133718005, 10133718006

METHOD BLANK: 826654 Matrix: Water
Associated Lab Samples: 10133718005, 10133718006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	07/22/10 14:22	
a,a,a-Trifluorotoluene (S)	%	98	80-125	07/22/10 14:22	

LABORATORY CONTROL SAMPLE & LCSD: 826655 826656

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	1010	1010	101	101	80-120	.3	20	
a,a,a-Trifluorotoluene (S)	%				94	95	80-125			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 826657 826658

Parameter	Units	10133718005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	ug/L	57400	50000	50000	110000	109000	104	104	80-120	.3	20	
a,a,a-Trifluorotoluene (S)	%						102	98	80-125			

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

QC Batch: MSV/14966 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 465 W
Associated Lab Samples: 10133718001, 10133718002, 10133718003, 10133718004, 10133718005, 10133718007, 10133718008

METHOD BLANK: 824750 Matrix: Water
Associated Lab Samples: 10133718001, 10133718002, 10133718003, 10133718004, 10133718005, 10133718007, 10133718008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	07/19/10 17:39	
1,1,1-Trichloroethane	ug/L	ND	1.0	07/19/10 17:39	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/19/10 17:39	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/19/10 17:39	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	07/19/10 17:39	
1,1-Dichloroethane	ug/L	ND	1.0	07/19/10 17:39	
1,1-Dichloroethene	ug/L	ND	1.0	07/19/10 17:39	
1,1-Dichloropropene	ug/L	ND	1.0	07/19/10 17:39	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	07/19/10 17:39	
1,2,3-Trichloropropane	ug/L	ND	1.0	07/19/10 17:39	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	07/19/10 17:39	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	07/19/10 17:39	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	07/19/10 17:39	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	07/19/10 17:39	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/19/10 17:39	
1,2-Dichloroethane	ug/L	ND	1.0	07/19/10 17:39	
1,2-Dichloropropane	ug/L	ND	1.0	07/19/10 17:39	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	07/19/10 17:39	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/19/10 17:39	
1,3-Dichloropropane	ug/L	ND	1.0	07/19/10 17:39	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/19/10 17:39	
2,2-Dichloropropane	ug/L	ND	4.0	07/19/10 17:39	
2-Butanone (MEK)	ug/L	ND	4.0	07/19/10 17:39	
2-Chlorotoluene	ug/L	ND	1.0	07/19/10 17:39	
4-Chlorotoluene	ug/L	ND	1.0	07/19/10 17:39	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	4.0	07/19/10 17:39	
Acetone	ug/L	ND	10.0	07/19/10 17:39	
Allyl chloride	ug/L	ND	4.0	07/19/10 17:39	
Benzene	ug/L	ND	1.0	07/19/10 17:39	
Bromobenzene	ug/L	ND	1.0	07/19/10 17:39	
Bromochloromethane	ug/L	ND	1.0	07/19/10 17:39	
Bromodichloromethane	ug/L	ND	1.0	07/19/10 17:39	
Bromoform	ug/L	ND	8.0	07/19/10 17:39	
Bromomethane	ug/L	ND	4.0	07/19/10 17:39	
Carbon tetrachloride	ug/L	ND	4.0	07/19/10 17:39	
Chlorobenzene	ug/L	ND	1.0	07/19/10 17:39	
Chloroethane	ug/L	ND	1.0	07/19/10 17:39	
Chloroform	ug/L	ND	1.0	07/19/10 17:39	
Chloromethane	ug/L	ND	4.0	07/19/10 17:39	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/19/10 17:39	
cis-1,3-Dichloropropene	ug/L	ND	4.0	07/19/10 17:39	
Dibromochloromethane	ug/L	ND	1.0	07/19/10 17:39	
Dibromomethane	ug/L	ND	4.0	07/19/10 17:39	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

METHOD BLANK: 824750 Matrix: Water

Associated Lab Samples: 10133718001, 10133718002, 10133718003, 10133718004, 10133718005, 10133718007, 10133718008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	07/19/10 17:39	
Dichlorofluoromethane	ug/L	ND	1.0	07/19/10 17:39	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	07/19/10 17:39	
Ethylbenzene	ug/L	ND	1.0	07/19/10 17:39	
Hexachloro-1,3-butadiene	ug/L	ND	4.0	07/19/10 17:39	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	07/19/10 17:39	
m&p-Xylene	ug/L	ND	2.0	07/19/10 17:39	
Methyl-tert-butyl ether	ug/L	ND	1.0	07/19/10 17:39	
Methylene Chloride	ug/L	ND	4.0	07/19/10 17:39	
n-Butylbenzene	ug/L	ND	1.0	07/19/10 17:39	
n-Propylbenzene	ug/L	ND	1.0	07/19/10 17:39	
Naphthalene	ug/L	ND	4.0	07/19/10 17:39	
o-Xylene	ug/L	ND	1.0	07/19/10 17:39	
p-Isopropyltoluene	ug/L	ND	1.0	07/19/10 17:39	
sec-Butylbenzene	ug/L	ND	1.0	07/19/10 17:39	
Styrene	ug/L	ND	1.0	07/19/10 17:39	
tert-Butylbenzene	ug/L	ND	1.0	07/19/10 17:39	
Tetrachloroethene	ug/L	ND	1.0	07/19/10 17:39	
Tetrahydrofuran	ug/L	ND	10.0	07/19/10 17:39	
Toluene	ug/L	ND	1.0	07/19/10 17:39	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/19/10 17:39	
trans-1,3-Dichloropropene	ug/L	ND	4.0	07/19/10 17:39	
Trichloroethene	ug/L	ND	1.0	07/19/10 17:39	
Trichlorofluoromethane	ug/L	ND	1.0	07/19/10 17:39	
Vinyl chloride	ug/L	ND	0.40	07/19/10 17:39	
Xylene (Total)	ug/L	ND	3.0	07/19/10 17:39	
1,2-Dichloroethane-d4 (S)	%	99	75-131	07/19/10 17:39	
4-Bromofluorobenzene (S)	%	100	75-125	07/19/10 17:39	
Dibromofluoromethane (S)	%	101	75-130	07/19/10 17:39	
Toluene-d8 (S)	%	99	75-125	07/19/10 17:39	

LABORATORY CONTROL SAMPLE: 824751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	53.7	107	75-125	
1,1,1-Trichloroethane	ug/L	50	54.3	109	68-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.0	98	71-125	
1,1,2-Trichloroethane	ug/L	50	50.3	101	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	50	39.7	79	60-141	
1,1-Dichloroethane	ug/L	50	47.7	95	75-125	
1,1-Dichloroethene	ug/L	50	49.9	100	69-125	
1,1-Dichloropropene	ug/L	50	49.8	100	69-125	
1,2,3-Trichlorobenzene	ug/L	50	51.2	102	72-129	
1,2,3-Trichloropropane	ug/L	50	48.1	96	69-127	
1,2,4-Trichlorobenzene	ug/L	50	51.9	104	75-125	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

LABORATORY CONTROL SAMPLE: 824751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	50.9	102	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	51.6	103	64-135	
1,2-Dibromoethane (EDB)	ug/L	50	53.4	107	75-126	
1,2-Dichlorobenzene	ug/L	50	49.8	100	75-125	
1,2-Dichloroethane	ug/L	50	47.4	95	75-125	
1,2-Dichloropropane	ug/L	50	50.0	100	75-125	
1,3,5-Trimethylbenzene	ug/L	50	50.4	101	75-125	
1,3-Dichlorobenzene	ug/L	50	49.6	99	75-125	
1,3-Dichloropropane	ug/L	50	49.5	99	75-125	
1,4-Dichlorobenzene	ug/L	50	49.5	99	75-125	
2,2-Dichloropropane	ug/L	50	61.8	124	54-149	
2-Butanone (MEK)	ug/L	50	48.5	97	55-140	
2-Chlorotoluene	ug/L	50	49.1	98	75-125	
4-Chlorotoluene	ug/L	50	49.8	100	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	52.5	105	65-132	
Acetone	ug/L	125	124	99	36-126	
Allyl chloride	ug/L	50	52.7	105	64-137	
Benzene	ug/L	50	48.7	97	75-125	
Bromobenzene	ug/L	50	50.0	100	75-125	
Bromochloromethane	ug/L	50	50.1	100	75-125	
Bromodichloromethane	ug/L	50	52.7	105	75-125	
Bromoform	ug/L	100	111	111	72-131	
Bromomethane	ug/L	50	48.9	98	30-150	
Carbon tetrachloride	ug/L	50	57.4	115	61-140	
Chlorobenzene	ug/L	50	49.2	98	75-125	
Chloroethane	ug/L	50	46.8	94	56-137	
Chloroform	ug/L	50	48.5	97	75-125	
Chloromethane	ug/L	50	52.6	105	62-128	
cis-1,2-Dichloroethene	ug/L	50	47.9	96	75-125	
cis-1,3-Dichloropropene	ug/L	50	56.1	112	75-125	
Dibromochloromethane	ug/L	50	57.5	115	75-125	
Dibromomethane	ug/L	50	49.7	99	75-125	
Dichlorodifluoromethane	ug/L	50	34.3	69	54-141	
Dichlorofluoromethane	ug/L	50	48.5	97	70-128	
Diethyl ether (Ethyl ether)	ug/L	50	51.1	102	75-125	
Ethylbenzene	ug/L	50	50.8	102	75-125	
Hexachloro-1,3-butadiene	ug/L	50	52.8	106	68-133	
Isopropylbenzene (Cumene)	ug/L	50	51.6	103	75-125	
m&p-Xylene	ug/L	100	102	102	75-125	
Methyl-tert-butyl ether	ug/L	50	46.4	93	73-132	
Methylene Chloride	ug/L	50	48.6	97	74-125	
n-Butylbenzene	ug/L	50	51.9	104	75-125	
n-Propylbenzene	ug/L	50	50.9	102	75-125	
Naphthalene	ug/L	50	51.8	104	69-130	
o-Xylene	ug/L	50	51.6	103	75-125	
p-Isopropyltoluene	ug/L	50	52.1	104	75-125	
sec-Butylbenzene	ug/L	50	51.1	102	75-125	
Styrene	ug/L	50	51.4	103	75-125	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

LABORATORY CONTROL SAMPLE: 824751

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	50.1	100	73-125	
Tetrachloroethene	ug/L	50	51.2	102	72-125	
Tetrahydrofuran	ug/L	500	500	100	64-135	
Toluene	ug/L	50	50.2	100	75-125	
trans-1,2-Dichloroethene	ug/L	50	48.9	98	70-125	
trans-1,3-Dichloropropene	ug/L	50	53.2	106	75-125	
Trichloroethene	ug/L	50	51.3	103	75-125	
Trichlorofluoromethane	ug/L	50	44.8	90	68-132	
Vinyl chloride	ug/L	50	47.3	95	62-132	
Xylene (Total)	ug/L	150	154	103	75-125	
1,2-Dichloroethane-d4 (S)	%			93	75-131	
4-Bromofluorobenzene (S)	%			97	75-125	
Dibromofluoromethane (S)	%			97	75-130	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE SAMPLE: 824974

Parameter	Units	10133706006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	23.2	116	72-133	
1,1,1-Trichloroethane	ug/L	ND	20	24.9	125	65-150	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.4	102	63-138	
1,1,2-Trichloroethane	ug/L	ND	20	21.0	105	68-131	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	27.9	139	47-150	
1,1-Dichloroethane	ug/L	ND	20	21.2	106	71-131	
1,1-Dichloroethene	ug/L	ND	20	22.2	111	66-145	
1,1-Dichloropropene	ug/L	ND	20	22.4	112	62-144	
1,2,3-Trichlorobenzene	ug/L	ND	20	21.6	108	66-139	
1,2,3-Trichloropropane	ug/L	ND	20	19.7	98	61-139	
1,2,4-Trichlorobenzene	ug/L	ND	20	21.6	108	68-139	
1,2,4-Trimethylbenzene	ug/L	ND	20	14.6	73	69-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	22.5	112	53-150	
1,2-Dibromoethane (EDB)	ug/L	ND	20	22.2	111	69-133	
1,2-Dichlorobenzene	ug/L	ND	20	21.1	106	72-131	
1,2-Dichloroethane	ug/L	ND	20	20.3	101	62-148	
1,2-Dichloropropane	ug/L	ND	20	21.7	109	74-128	
1,3,5-Trimethylbenzene	ug/L	ND	20	13.3	67	65-134	
1,3-Dichlorobenzene	ug/L	ND	20	21.3	107	73-130	
1,3-Dichloropropane	ug/L	ND	20	21.0	105	71-130	
1,4-Dichlorobenzene	ug/L	ND	20	21.6	108	71-132	
2,2-Dichloropropane	ug/L	ND	20	29.4	147	50-150	
2-Butanone (MEK)	ug/L	ND	20	18.7	94	46-140	
2-Chlorotoluene	ug/L	ND	20	21.4	107	74-131	
4-Chlorotoluene	ug/L	ND	20	21.6	108	70-139	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	21.1	105	59-145	
Acetone	ug/L	ND	50	45.2	90	36-126	
Allyl chloride	ug/L	ND	20	23.3	117	50-148	
Benzene	ug/L	ND	20	21.8	109	70-133	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

MATRIX SPIKE SAMPLE: 824974

Parameter	Units	10133706006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	ug/L	ND	20	21.3	107	72-129	
Bromochloromethane	ug/L	ND	20	21.6	108	69-137	
Bromodichloromethane	ug/L	ND	20	22.5	112	73-134	
Bromoform	ug/L	ND	40	44.2	110	56-144	
Bromomethane	ug/L	ND	20	21.4	107	30-150	
Carbon tetrachloride	ug/L	ND	20	27.7	139	55-150	
Chlorobenzene	ug/L	ND	20	21.5	107	71-132	
Chloroethane	ug/L	ND	20	21.9	109	50-150	
Chloroform	ug/L	ND	20	21.6	108	68-138	
Chloromethane	ug/L	ND	20	23.9	120	61-148	
cis-1,2-Dichloroethene	ug/L	ND	20	21.9	109	68-135	
cis-1,3-Dichloropropene	ug/L	ND	20	23.2	116	70-134	
Dibromochloromethane	ug/L	ND	20	23.0	115	67-135	
Dibromomethane	ug/L	ND	20	21.1	105	74-130	
Dichlorodifluoromethane	ug/L	ND	20	24.3	121	44-150	
Dichlorofluoromethane	ug/L	ND	20	21.9	109	67-145	
Diethyl ether (Ethyl ether)	ug/L	ND	20	21.7	108	69-132	
Ethylbenzene	ug/L	ND	20	21.4	107	66-133	
Hexachloro-1,3-butadiene	ug/L	ND	20	23.1	115	59-150	
Isopropylbenzene (Cumene)	ug/L	ND	20	21.9	109	71-140	
m&p-Xylene	ug/L	ND	40	37.3	93	63-130	
Methyl-tert-butyl ether	ug/L	ND	20	20.0	100	62-143	
Methylene Chloride	ug/L	ND	20	21.0	105	69-126	
n-Butylbenzene	ug/L	ND	20	22.0	110	73-140	
n-Propylbenzene	ug/L	ND	20	21.6	108	71-136	
Naphthalene	ug/L	ND	20	20.9	105	55-147	
o-Xylene	ug/L	ND	20	19.3	97	66-132	
p-Isopropyltoluene	ug/L	ND	20	20.3	101	69-138	
sec-Butylbenzene	ug/L	ND	20	22.0	110	73-140	
Styrene	ug/L	ND	20	10.7	53	68-138	M0
tert-Butylbenzene	ug/L	ND	20	22.3	112	70-138	
Tetrachloroethene	ug/L	ND	20	23.5	117	70-138	
Tetrahydrofuran	ug/L	ND	200	205	102	54-148	
Toluene	ug/L	ND	20	20.9	105	65-127	
trans-1,2-Dichloroethene	ug/L	ND	20	22.0	110	67-131	
trans-1,3-Dichloropropene	ug/L	ND	20	22.4	112	64-138	
Trichloroethene	ug/L	ND	20	22.7	114	70-133	
Trichlorofluoromethane	ug/L	ND	20	23.6	118	59-150	
Vinyl chloride	ug/L	ND	20	22.0	110	59-150	
Xylene (Total)	ug/L	ND	60	56.6	94	65-130	
1,2-Dichloroethane-d4 (S)	%				93	75-131	
4-Bromofluorobenzene (S)	%				97	75-125	
Dibromofluoromethane (S)	%				98	75-130	
Toluene-d8 (S)	%				98	75-125	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

SAMPLE DUPLICATE: 824975

Parameter	Units	10133706007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

SAMPLE DUPLICATE: 824975

Parameter	Units	10133706007 Result	Dup Result	RPD	Max RPD	Qualifiers
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	101	102	1		
4-Bromofluorobenzene (S)	%	98	100	2		
Dibromofluoromethane (S)	%	104	104	.07		
Toluene-d8 (S)	%	97	97	.5		

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

QC Batch: MSV/14978
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 465 W
Associated Lab Samples: 10133718006

METHOD BLANK: 825270
Matrix: Water
Associated Lab Samples: 10133718006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	07/20/10 13:32	
1,1,1-Trichloroethane	ug/L	ND	1.0	07/20/10 13:32	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/20/10 13:32	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/20/10 13:32	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	07/20/10 13:32	
1,1-Dichloroethane	ug/L	ND	1.0	07/20/10 13:32	
1,1-Dichloroethene	ug/L	ND	1.0	07/20/10 13:32	
1,1-Dichloropropene	ug/L	ND	1.0	07/20/10 13:32	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	07/20/10 13:32	
1,2,3-Trichloropropane	ug/L	ND	1.0	07/20/10 13:32	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	07/20/10 13:32	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	07/20/10 13:32	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	07/20/10 13:32	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	07/20/10 13:32	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/20/10 13:32	
1,2-Dichloroethane	ug/L	ND	1.0	07/20/10 13:32	
1,2-Dichloropropane	ug/L	ND	1.0	07/20/10 13:32	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	07/20/10 13:32	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/20/10 13:32	
1,3-Dichloropropane	ug/L	ND	1.0	07/20/10 13:32	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/20/10 13:32	
2,2-Dichloropropane	ug/L	ND	4.0	07/20/10 13:32	
2-Butanone (MEK)	ug/L	ND	4.0	07/20/10 13:32	
2-Chlorotoluene	ug/L	ND	1.0	07/20/10 13:32	
4-Chlorotoluene	ug/L	ND	1.0	07/20/10 13:32	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	4.0	07/20/10 13:32	
Acetone	ug/L	ND	10.0	07/20/10 13:32	
Allyl chloride	ug/L	ND	4.0	07/20/10 13:32	
Benzene	ug/L	ND	1.0	07/20/10 13:32	
Bromobenzene	ug/L	ND	1.0	07/20/10 13:32	
Bromochloromethane	ug/L	ND	1.0	07/20/10 13:32	
Bromodichloromethane	ug/L	ND	1.0	07/20/10 13:32	
Bromoform	ug/L	ND	8.0	07/20/10 13:32	
Bromomethane	ug/L	ND	4.0	07/20/10 13:32	
Carbon tetrachloride	ug/L	ND	4.0	07/20/10 13:32	
Chlorobenzene	ug/L	ND	1.0	07/20/10 13:32	
Chloroethane	ug/L	ND	1.0	07/20/10 13:32	
Chloroform	ug/L	ND	1.0	07/20/10 13:32	
Chloromethane	ug/L	ND	4.0	07/20/10 13:32	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/20/10 13:32	
cis-1,3-Dichloropropene	ug/L	ND	4.0	07/20/10 13:32	
Dibromochloromethane	ug/L	ND	1.0	07/20/10 13:32	
Dibromomethane	ug/L	ND	4.0	07/20/10 13:32	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

METHOD BLANK: 825270 Matrix: Water

Associated Lab Samples: 10133718006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	07/20/10 13:32	
Dichlorofluoromethane	ug/L	ND	1.0	07/20/10 13:32	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	07/20/10 13:32	
Ethylbenzene	ug/L	ND	1.0	07/20/10 13:32	
Hexachloro-1,3-butadiene	ug/L	ND	4.0	07/20/10 13:32	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	07/20/10 13:32	
m&p-Xylene	ug/L	ND	2.0	07/20/10 13:32	
Methyl-tert-butyl ether	ug/L	ND	1.0	07/20/10 13:32	
Methylene Chloride	ug/L	ND	4.0	07/20/10 13:32	
n-Butylbenzene	ug/L	ND	1.0	07/20/10 13:32	
n-Propylbenzene	ug/L	ND	1.0	07/20/10 13:32	
Naphthalene	ug/L	ND	4.0	07/20/10 13:32	
o-Xylene	ug/L	ND	1.0	07/20/10 13:32	
p-Isopropyltoluene	ug/L	ND	1.0	07/20/10 13:32	
sec-Butylbenzene	ug/L	ND	1.0	07/20/10 13:32	
Styrene	ug/L	ND	1.0	07/20/10 13:32	
tert-Butylbenzene	ug/L	ND	1.0	07/20/10 13:32	
Tetrachloroethene	ug/L	ND	1.0	07/20/10 13:32	
Tetrahydrofuran	ug/L	ND	10.0	07/20/10 13:32	
Toluene	ug/L	ND	1.0	07/20/10 13:32	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/20/10 13:32	
trans-1,3-Dichloropropene	ug/L	ND	4.0	07/20/10 13:32	
Trichloroethene	ug/L	ND	1.0	07/20/10 13:32	
Trichlorofluoromethane	ug/L	ND	1.0	07/20/10 13:32	
Vinyl chloride	ug/L	ND	0.40	07/20/10 13:32	
Xylene (Total)	ug/L	ND	3.0	07/20/10 13:32	
1,2-Dichloroethane-d4 (S)	%	108	75-131	07/20/10 13:32	
4-Bromofluorobenzene (S)	%	101	75-125	07/20/10 13:32	
Dibromofluoromethane (S)	%	104	75-130	07/20/10 13:32	
Toluene-d8 (S)	%	98	75-125	07/20/10 13:32	

LABORATORY CONTROL SAMPLE: 825271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	54.0	108	75-125	
1,1,1-Trichloroethane	ug/L	50	55.5	111	68-130	
1,1,2,2-Tetrachloroethane	ug/L	50	49.3	99	71-125	
1,1,2-Trichloroethane	ug/L	50	49.6	99	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	50	39.0	78	60-141	
1,1-Dichloroethane	ug/L	50	47.7	95	75-125	
1,1-Dichloroethene	ug/L	50	48.7	97	69-125	
1,1-Dichloropropene	ug/L	50	48.9	98	69-125	
1,2,3-Trichlorobenzene	ug/L	50	50.0	100	72-129	
1,2,3-Trichloropropane	ug/L	50	47.3	95	69-127	
1,2,4-Trichlorobenzene	ug/L	50	50.1	100	75-125	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

LABORATORY CONTROL SAMPLE: 825271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	49.7	99	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	53.7	107	64-135	
1,2-Dibromoethane (EDB)	ug/L	50	52.6	105	75-126	
1,2-Dichlorobenzene	ug/L	50	48.6	97	75-125	
1,2-Dichloroethane	ug/L	50	48.9	98	75-125	
1,2-Dichloropropane	ug/L	50	49.8	100	75-125	
1,3,5-Trimethylbenzene	ug/L	50	49.3	99	75-125	
1,3-Dichlorobenzene	ug/L	50	47.9	96	75-125	
1,3-Dichloropropane	ug/L	50	49.1	98	75-125	
1,4-Dichlorobenzene	ug/L	50	48.2	96	75-125	
2,2-Dichloropropane	ug/L	50	61.6	123	54-149	
2-Butanone (MEK)	ug/L	50	47.7	95	55-140	
2-Chlorotoluene	ug/L	50	47.3	95	75-125	
4-Chlorotoluene	ug/L	50	48.5	97	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	52.3	105	65-132	
Acetone	ug/L	125	129	103	36-126	
Allyl chloride	ug/L	50	51.9	104	64-137	
Benzene	ug/L	50	47.7	95	75-125	
Bromobenzene	ug/L	50	48.8	98	75-125	
Bromochloromethane	ug/L	50	49.1	98	75-125	
Bromodichloromethane	ug/L	50	54.0	108	75-125	
Bromoform	ug/L	100	114	114	72-131	
Bromomethane	ug/L	50	42.6	85	30-150	
Carbon tetrachloride	ug/L	50	61.2	122	61-140	
Chlorobenzene	ug/L	50	47.6	95	75-125	
Chloroethane	ug/L	50	47.2	94	56-137	
Chloroform	ug/L	50	48.8	98	75-125	
Chloromethane	ug/L	50	50.2	100	62-128	
cis-1,2-Dichloroethene	ug/L	50	47.1	94	75-125	
cis-1,3-Dichloropropene	ug/L	50	55.6	111	75-125	
Dibromochloromethane	ug/L	50	58.0	116	75-125	
Dibromomethane	ug/L	50	50.2	100	75-125	
Dichlorodifluoromethane	ug/L	50	34.3	69	54-141	
Dichlorofluoromethane	ug/L	50	48.7	97	70-128	
Diethyl ether (Ethyl ether)	ug/L	50	51.1	102	75-125	
Ethylbenzene	ug/L	50	49.6	99	75-125	
Hexachloro-1,3-butadiene	ug/L	50	49.4	99	68-133	
Isopropylbenzene (Cumene)	ug/L	50	50.0	100	75-125	
m&p-Xylene	ug/L	100	99.5	100	75-125	
Methyl-tert-butyl ether	ug/L	50	46.8	94	73-132	
Methylene Chloride	ug/L	50	49.0	98	74-125	
n-Butylbenzene	ug/L	50	49.6	99	75-125	
n-Propylbenzene	ug/L	50	49.0	98	75-125	
Naphthalene	ug/L	50	51.0	102	69-130	
o-Xylene	ug/L	50	50.1	100	75-125	
p-Isopropyltoluene	ug/L	50	49.8	100	75-125	
sec-Butylbenzene	ug/L	50	48.9	98	75-125	
Styrene	ug/L	50	50.1	100	75-125	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

LABORATORY CONTROL SAMPLE: 825271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	48.7	97	73-125	
Tetrachloroethene	ug/L	50	48.5	97	72-125	
Tetrahydrofuran	ug/L	500	497	99	64-135	
Toluene	ug/L	50	48.2	96	75-125	
trans-1,2-Dichloroethene	ug/L	50	48.3	97	70-125	
trans-1,3-Dichloropropene	ug/L	50	53.1	106	75-125	
Trichloroethene	ug/L	50	49.5	99	75-125	
Trichlorofluoromethane	ug/L	50	45.5	91	68-132	
Vinyl chloride	ug/L	50	46.3	93	62-132	
Xylene (Total)	ug/L	150	150	100	75-125	
1,2-Dichloroethane-d4 (S)	%			96	75-131	
4-Bromofluorobenzene (S)	%			97	75-125	
Dibromofluoromethane (S)	%			99	75-130	
Toluene-d8 (S)	%			98	75-125	

MATRIX SPIKE SAMPLE: 825923

Parameter	Units	10133603005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	25.4	127	72-133	
1,1,1-Trichloroethane	ug/L	ND	20	28.0	136	65-150	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.0	105	63-138	
1,1,2-Trichloroethane	ug/L	ND	20	21.9	109	68-131	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	29.4	147	47-150	
1,1-Dichloroethane	ug/L	5.5	20	28.1	113	71-131	
1,1-Dichloroethene	ug/L	ND	20	25.7	125	66-145	
1,1-Dichloropropene	ug/L	ND	20	24.5	123	62-144	
1,2,3-Trichlorobenzene	ug/L	ND	20	21.8	109	66-139	
1,2,3-Trichloropropane	ug/L	ND	20	21.2	106	61-139	
1,2,4-Trichlorobenzene	ug/L	ND	20	22.4	112	68-139	
1,2,4-Trimethylbenzene	ug/L	ND	20	22.9	114	69-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	24.5	122	53-150	
1,2-Dibromoethane (EDB)	ug/L	ND	20	23.1	115	69-133	
1,2-Dichlorobenzene	ug/L	ND	20	22.2	111	72-131	
1,2-Dichloroethane	ug/L	ND	20	21.8	109	62-148	
1,2-Dichloropropane	ug/L	ND	20	22.2	111	74-128	
1,3,5-Trimethylbenzene	ug/L	ND	20	23.1	115	65-134	
1,3-Dichlorobenzene	ug/L	ND	20	22.5	113	73-130	
1,3-Dichloropropane	ug/L	ND	20	21.7	108	71-130	
1,4-Dichlorobenzene	ug/L	ND	20	22.5	113	71-132	
2,2-Dichloropropane	ug/L	ND	20	32.4	162	50-150	M0
2-Butanone (MEK)	ug/L	ND	20	20.0	100	46-140	
2-Chlorotoluene	ug/L	ND	20	22.9	115	74-131	
4-Chlorotoluene	ug/L	ND	20	23.3	116	70-139	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	21.6	108	59-145	
Acetone	ug/L	ND	50	46.6	93	36-126	
Allyl chloride	ug/L	ND	20	24.6	123	50-148	
Benzene	ug/L	ND	20	22.9	115	70-133	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

MATRIX SPIKE SAMPLE: 825923

Parameter	Units	10133603005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	ug/L	ND	20	22.2	111	72-129	
Bromochloromethane	ug/L	ND	20	22.0	110	69-137	
Bromodichloromethane	ug/L	ND	20	24.2	121	73-134	
Bromoform	ug/L	ND	40	50.1	125	56-144	
Bromomethane	ug/L	ND	20	19.4	97	30-150	
Carbon tetrachloride	ug/L	ND	20	32.1	161	55-150	M0
Chlorobenzene	ug/L	ND	20	22.4	112	71-132	
Chloroethane	ug/L	ND	20	23.3	116	50-150	
Chloroform	ug/L	ND	20	23.2	116	68-138	
Chloromethane	ug/L	ND	20	25.6	128	61-148	
cis-1,2-Dichloroethene	ug/L	14.1	20	36.3	111	68-135	
cis-1,3-Dichloropropene	ug/L	ND	20	24.2	121	70-134	
Dibromochloromethane	ug/L	ND	20	25.5	128	67-135	
Dibromomethane	ug/L	ND	20	21.8	109	74-130	
Dichlorodifluoromethane	ug/L	ND	20	26.4	132	44-150	
Dichlorofluoromethane	ug/L	ND	20	24.1	121	67-145	
Diethyl ether (Ethyl ether)	ug/L	ND	20	22.6	113	69-132	
Ethylbenzene	ug/L	ND	20	23.6	118	66-133	
Hexachloro-1,3-butadiene	ug/L	ND	20	25.3	126	59-150	
Isopropylbenzene (Cumene)	ug/L	ND	20	23.8	119	71-140	
m&p-Xylene	ug/L	ND	40	46.7	117	63-130	
Methyl-tert-butyl ether	ug/L	ND	20	21.0	105	62-143	
Methylene Chloride	ug/L	ND	20	22.5	112	69-126	
n-Butylbenzene	ug/L	ND	20	24.6	123	73-140	
n-Propylbenzene	ug/L	ND	20	24.1	120	71-136	
Naphthalene	ug/L	ND	20	21.2	106	55-147	
o-Xylene	ug/L	ND	20	23.2	116	66-132	
p-Isopropyltoluene	ug/L	ND	20	24.1	121	69-138	
sec-Butylbenzene	ug/L	ND	20	24.5	122	73-140	
Styrene	ug/L	ND	20	22.2	111	68-138	
tert-Butylbenzene	ug/L	ND	20	23.4	117	70-138	
Tetrachloroethene	ug/L	310	20	409	495	70-138	E,M0
Tetrahydrofuran	ug/L	ND	200	209	105	54-148	
Toluene	ug/L	ND	20	22.9	115	65-127	
trans-1,2-Dichloroethene	ug/L	ND	20	24.6	121	67-131	
trans-1,3-Dichloropropene	ug/L	ND	20	24.2	121	64-138	
Trichloroethene	ug/L	130	20	156	131	70-133	
Trichlorofluoromethane	ug/L	ND	20	26.1	130	59-150	
Vinyl chloride	ug/L	ND	20	24.0	120	59-150	
Xylene (Total)	ug/L	ND	60	69.8	116	65-130	
1,2-Dichloroethane-d4 (S)	%				98	75-131	
4-Bromofluorobenzene (S)	%				99	75-125	
Dibromofluoromethane (S)	%				98	75-130	
Toluene-d8 (S)	%				100	75-125	

Pace Analytical Services, Inc.
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

SAMPLE DUPLICATE: 825924

Parameter	Units	10133603006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

SAMPLE DUPLICATE: 825924

Parameter	Units	10133603006 Result	Dup Result	RPD	Max RPD	Qualifiers
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	110	108	1		
4-Bromofluorobenzene (S)	%	101	102	1		
Dibromofluoromethane (S)	%	107	104	2		
Toluene-d8 (S)	%	98	99	.7		

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QUALIFIERS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

1M	The LCS was not spiked with surrogate solution.
2M	The LCSD was not spiked with surrogate solution.
3M	The sample was analyzed at a dilution due to a large amount of sediment in the vials.
4M	The sample was analyzed at a dilution due to a large amount of sediment in the vials. The pH was found to be greater than 2.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
T7	Low boiling point hydrocarbons are present in the sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133718

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10133718001	SB-2	WI MOD DRO	OEXT/13362	WI MOD DRO	GCSV/6986
10133718002	SB-3	WI MOD DRO	OEXT/13362	WI MOD DRO	GCSV/6986
10133718003	SB-4	WI MOD DRO	OEXT/13362	WI MOD DRO	GCSV/6986
10133718004	SB-5	WI MOD DRO	OEXT/13362	WI MOD DRO	GCSV/6986
10133718005	SB-6	WI MOD DRO	OEXT/13362	WI MOD DRO	GCSV/6986
10133718006	SB-7	WI MOD DRO	OEXT/13362	WI MOD DRO	GCSV/6986
10133718007	Duplicate	WI MOD DRO	OEXT/13362	WI MOD DRO	GCSV/6986
10133718001	SB-2	WI MOD GRO	GCV/7269		
10133718002	SB-3	WI MOD GRO	GCV/7269		
10133718003	SB-4	WI MOD GRO	GCV/7269		
10133718004	SB-5	WI MOD GRO	GCV/7269		
10133718005	SB-6	WI MOD GRO	GCV/7273		
10133718006	SB-7	WI MOD GRO	GCV/7273		
10133718007	Duplicate	WI MOD GRO	GCV/7269		
10133718001	SB-2	EPA 8260	MSV/14966		
10133718002	SB-3	EPA 8260	MSV/14966		
10133718003	SB-4	EPA 8260	MSV/14966		
10133718004	SB-5	EPA 8260	MSV/14966		
10133718005	SB-6	EPA 8260	MSV/14966		
10133718006	SB-7	EPA 8260	MSV/14978		
10133718007	Duplicate	EPA 8260	MSV/14966		
10133718008	Trip Blank	EPA 8260	MSV/14966		

1134, 1135

10133718

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1233219

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Delta Consultants	Report To: Matt Hobson	Attention: Matt Hobson
Address: 5910 Rice Creek Pkwy Shoreview MN	Copy To:	Company Name: Delta Consultants
Email To: mhobson@deltaenv.com	Purchase Order No.:	Address:
Phone: 651 639 9449 Fax:	Project Name: Holiday 411	Pace Quote Reference:
Requested Due Date/TAT: Std	Project Number: NAA 1004827	Pace Project Manager: Carolynne Trout
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: MN

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	GRO (WI GRO)	VOC (8260)	DRO (WI DRO)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	SB-2	WT	G			7-15-10	10:15		8				8						✓	✓	✓		001
2	SB-3	WT	G				11:00		8				8						✓	✓	✓		002
3	SB-4	WT	G				13:20		7				7						✓	✓	✓		003
4	SB-5	WT	G				14:30		7				7						✓	✓	✓		004
5	SB-6	WT	G				16:10		8				8						✓	✓	✓		005
6	SB-7	WT	G				18:10		6				6						✓	✓	✓		006
7	Duplicate	WT	G			↓			8				8						✓	✓	✓		007
8	TRIP Blank	WT				7-15-10			2											✓			008
9	TRIP Blank	WT							2											✓			008
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SB-4, only 1 DRO Bottle	Nancy Rodning/DELTA	7-16-10	9:30	Shawna Jones/Pace	7-16-10	1505	5.6			
SB-7, only 2 GRO vials	Shawna Jones/Pace	7-16-10	1616			1616	5.2	Y	Y	Y
SB-6, only 2 GRO & VOC vials										
*Samples in 2 Coolers										

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nancy Rodning

SIGNATURE of SAMPLER: Nancy Rodning DATE Signed (MM/DD/YY): 7-15-10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical

Client Name: Delta Project # 10133718

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals Intact: ☑ yes ☐ no

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No _____

Thermometer Used 80344042 or (79425) Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 5.6, 5.2 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: 7-16-10 MJP

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12. All samples contain sediment
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☑Yes ☐No	Initial when completed MJP / Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased): 221		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 7/19/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the ~~North Carolina DENR~~, Inc.

F-L213Rev.00, 05Aug2009

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July 27, 2010

Mr. Matt Hobson
Delta Consultants
5910 Rice Creek Parkway
Saint Paul, MN 55126

RE: Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Dear Mr. Hobson:
Enclosed are the analytical results for sample(s) received by the laboratory on July 16, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Carolynne Trout

Carolynne Trout

carolynne.trout@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Washington Certification #: C754
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10133717001	SVV-1	Air	07/15/10 15:00	07/16/10 16:16
10133717002	SVV-2	Air	07/15/10 19:00	07/16/10 16:16

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SAMPLE ANALYTE COUNT

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10133717001	SVV-1	TO-15	CJR	61
10133717002	SVV-2	TO-15	CJR	61

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Sample: SVV-1 **Lab ID: 10133717001** Collected: 07/15/10 15:00 Received: 07/16/10 16:16 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	**95.9**	ug/m3	15.0	31.32		07/27/10 12:54	67-64-1	
Benzene	**11.0**	ug/m3	1.2	1.8		07/22/10 19:52	71-43-2	
Benzyl chloride	ND	ug/m3	1.9	1.8		07/22/10 19:52	100-44-7	
Bromodichloromethane	ND	ug/m3	2.5	1.8		07/22/10 19:52	75-27-4	
Bromoform	ND	ug/m3	3.8	1.8		07/22/10 19:52	75-25-2	
Bromomethane	**2.3**	ug/m3	1.4	1.8		07/22/10 19:52	74-83-9	
1,3-Butadiene	ND	ug/m3	0.81	1.8		07/22/10 19:52	106-99-0	
2-Butanone (MEK)	**331**	ug/m3	18.8	31.32		07/27/10 12:54	78-93-3	
Carbon disulfide	**5.2**	ug/m3	1.1	1.8		07/22/10 19:52	75-15-0	
Carbon tetrachloride	ND	ug/m3	2.3	1.8		07/22/10 19:52	56-23-5	
Chlorobenzene	ND	ug/m3	1.7	1.8		07/22/10 19:52	108-90-7	
Chloroethane	ND	ug/m3	0.97	1.8		07/22/10 19:52	75-00-3	
Chloroform	ND	ug/m3	1.8	1.8		07/22/10 19:52	67-66-3	
Chloromethane	ND	ug/m3	0.76	1.8		07/22/10 19:52	74-87-3	
Cyclohexane	ND	ug/m3	1.2	1.8		07/22/10 19:52	110-82-7	
Dibromochloromethane	ND	ug/m3	3.1	1.8		07/22/10 19:52	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	2.9	1.8		07/22/10 19:52	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	2.2	1.8		07/22/10 19:52	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	2.2	1.8		07/22/10 19:52	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	2.2	1.8		07/22/10 19:52	106-46-7	
Dichlorodifluoromethane	**2.7**	ug/m3	1.8	1.8		07/22/10 19:52	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.5	1.8		07/22/10 19:52	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.5	1.8		07/22/10 19:52	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	1.8		07/22/10 19:52	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.5	1.8		07/22/10 19:52	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	1.8		07/22/10 19:52	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.7	1.8		07/22/10 19:52	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.7	1.8		07/22/10 19:52	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.7	1.8		07/22/10 19:52	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	2.5	1.8		07/22/10 19:52	76-14-2	
Ethanol	ND	ug/m3	3.4	1.8		07/22/10 19:52	64-17-5	
Ethyl acetate	ND	ug/m3	1.3	1.8		07/22/10 19:52	141-78-6	
Ethylbenzene	**21.9**	ug/m3	1.6	1.8		07/22/10 19:52	100-41-4	
4-Ethyltoluene	**5.7**	ug/m3	4.5	1.8		07/22/10 19:52	622-96-8	
n-Heptane	**53.3**	ug/m3	1.5	1.8		07/22/10 19:52	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	4.0	1.8		07/22/10 19:52	87-68-3	
n-Hexane	ND	ug/m3	1.3	1.8		07/22/10 19:52	110-54-3	
2-Hexanone	ND	ug/m3	1.5	1.8		07/22/10 19:52	591-78-6	
Methylene Chloride	ND	ug/m3	1.3	1.8		07/22/10 19:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	1.5	1.8		07/22/10 19:52	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	1.3	1.8		07/22/10 19:52	1634-04-4	
Naphthalene	ND	ug/m3	4.9	1.8		07/22/10 19:52	91-20-3	
2-Propanol	ND	ug/m3	4.5	1.8		07/22/10 19:52	67-63-0	
Propylene	**159**	ug/m3	11.0	31.32		07/27/10 12:54	115-07-1	
Styrene	**2.7**	ug/m3	1.6	1.8		07/22/10 19:52	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	2.5	1.8		07/22/10 19:52	79-34-5	
Tetrachloroethene	**3.2**	ug/m3	2.5	1.8		07/22/10 19:52	127-18-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Sample: SVV-1 **Lab ID: 10133717001** Collected: 07/15/10 15:00 Received: 07/16/10 16:16 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Tetrahydrofuran	ND	ug/m3	1.1	1.8		07/22/10 19:52	109-99-9	
Toluene	**43.4**	ug/m3	1.4	1.8		07/22/10 19:52	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	1.8	1.8		07/22/10 19:52	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	2.0	1.8		07/22/10 19:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	2.0	1.8		07/22/10 19:52	79-00-5	
Trichloroethene	ND	ug/m3	2.0	1.8		07/22/10 19:52	79-01-6	
Trichlorofluoromethane	ND	ug/m3	2.0	1.8		07/22/10 19:52	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.9	1.8		07/22/10 19:52	76-13-1	
1,2,4-Trimethylbenzene	**19.6**	ug/m3	4.5	1.8		07/22/10 19:52	95-63-6	
1,3,5-Trimethylbenzene	**8.2**	ug/m3	4.5	1.8		07/22/10 19:52	108-67-8	
Vinyl acetate	ND	ug/m3	1.3	1.8		07/22/10 19:52	108-05-4	
Vinyl chloride	ND	ug/m3	0.94	1.8		07/22/10 19:52	75-01-4	
m&p-Xylene	**90.6**	ug/m3	3.2	1.8		07/22/10 19:52	1330-20-7	
o-Xylene	**28.2**	ug/m3	1.6	1.8		07/22/10 19:52	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Sample: SVV-2 **Lab ID: 10133717002** Collected: 07/15/10 19:00 Received: 07/16/10 16:16 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Acetone	**35.4**	ug/m3	1.4	2.82		07/22/10 21:18	67-64-1	
Benzene	**10.9**	ug/m3	1.8	2.82		07/22/10 21:18	71-43-2	
Benzyl chloride	ND	ug/m3	3.0	2.82		07/22/10 21:18	100-44-7	
Bromodichloromethane	ND	ug/m3	3.9	2.82		07/22/10 21:18	75-27-4	
Bromoform	ND	ug/m3	5.9	2.82		07/22/10 21:18	75-25-2	
Bromomethane	ND	ug/m3	2.2	2.82		07/22/10 21:18	74-83-9	
1,3-Butadiene	ND	ug/m3	1.3	2.82		07/22/10 21:18	106-99-0	
2-Butanone (MEK)	**28.0**	ug/m3	1.7	2.82		07/22/10 21:18	78-93-3	
Carbon disulfide	ND	ug/m3	1.8	2.82		07/22/10 21:18	75-15-0	
Carbon tetrachloride	ND	ug/m3	3.7	2.82		07/22/10 21:18	56-23-5	
Chlorobenzene	ND	ug/m3	2.7	2.82		07/22/10 21:18	108-90-7	
Chloroethane	ND	ug/m3	1.5	2.82		07/22/10 21:18	75-00-3	
Chloroform	ND	ug/m3	2.8	2.82		07/22/10 21:18	67-66-3	
Chloromethane	**2.1**	ug/m3	1.2	2.82		07/22/10 21:18	74-87-3	
Cyclohexane	**58.2**	ug/m3	1.9	2.82		07/22/10 21:18	110-82-7	
Dibromochloromethane	ND	ug/m3	4.8	2.82		07/22/10 21:18	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	4.5	2.82		07/22/10 21:18	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	3.4	2.82		07/22/10 21:18	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	3.4	2.82		07/22/10 21:18	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	3.4	2.82		07/22/10 21:18	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	2.8	2.82		07/22/10 21:18	75-71-8	
1,1-Dichloroethane	ND	ug/m3	2.3	2.82		07/22/10 21:18	75-34-3	
1,2-Dichloroethane	ND	ug/m3	2.3	2.82		07/22/10 21:18	107-06-2	
1,1-Dichloroethene	ND	ug/m3	2.3	2.82		07/22/10 21:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	2.3	2.82		07/22/10 21:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	2.3	2.82		07/22/10 21:18	156-60-5	
1,2-Dichloropropane	ND	ug/m3	2.7	2.82		07/22/10 21:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	2.6	2.82		07/22/10 21:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	2.6	2.82		07/22/10 21:18	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	3.9	2.82		07/22/10 21:18	76-14-2	
Ethanol	ND	ug/m3	5.4	2.82		07/22/10 21:18	64-17-5	
Ethyl acetate	ND	ug/m3	2.1	2.82		07/22/10 21:18	141-78-6	
Ethylbenzene	**22.4**	ug/m3	2.5	2.82		07/22/10 21:18	100-41-4	
4-Ethyltoluene	**11.7**	ug/m3	7.0	2.82		07/22/10 21:18	622-96-8	
n-Heptane	**8.2**	ug/m3	2.3	2.82		07/22/10 21:18	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	6.2	2.82		07/22/10 21:18	87-68-3	
n-Hexane	**45.4**	ug/m3	2.0	2.82		07/22/10 21:18	110-54-3	
2-Hexanone	ND	ug/m3	2.3	2.82		07/22/10 21:18	591-78-6	
Methylene Chloride	**20.9**	ug/m3	2.0	2.82		07/22/10 21:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	2.3	2.82		07/22/10 21:18	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	2.1	2.82		07/22/10 21:18	1634-04-4	
Naphthalene	ND	ug/m3	7.6	2.82		07/22/10 21:18	91-20-3	
2-Propanol	ND	ug/m3	7.0	2.82		07/22/10 21:18	67-63-0	
Propylene	ND	ug/m3	0.99	2.82		07/22/10 21:18	115-07-1	
Styrene	ND	ug/m3	2.5	2.82		07/22/10 21:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	3.9	2.82		07/22/10 21:18	79-34-5	
Tetrachloroethene	**482**	ug/m3	3.9	2.82		07/22/10 21:18	127-18-4	

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ANALYTICAL RESULTS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Sample: SVV-2 **Lab ID: 10133717002** Collected: 07/15/10 19:00 Received: 07/16/10 16:16 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15							
Tetrahydrofuran	ND	ug/m3	1.7	2.82		07/22/10 21:18	109-99-9	
Toluene	**58.4**	ug/m3	2.2	2.82		07/22/10 21:18	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	2.8	2.82		07/22/10 21:18	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	3.1	2.82		07/22/10 21:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	3.1	2.82		07/22/10 21:18	79-00-5	
Trichloroethene	ND	ug/m3	3.1	2.82		07/22/10 21:18	79-01-6	
Trichlorofluoromethane	ND	ug/m3	3.1	2.82		07/22/10 21:18	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	4.5	2.82		07/22/10 21:18	76-13-1	
1,2,4-Trimethylbenzene	**50.6**	ug/m3	7.0	2.82		07/22/10 21:18	95-63-6	
1,3,5-Trimethylbenzene	**14.2**	ug/m3	7.0	2.82		07/22/10 21:18	108-67-8	
Vinyl acetate	ND	ug/m3	2.0	2.82		07/22/10 21:18	108-05-4	
Vinyl chloride	ND	ug/m3	1.5	2.82		07/22/10 21:18	75-01-4	
m&p-Xylene	**99.6**	ug/m3	5.0	2.82		07/22/10 21:18	1330-20-7	
o-Xylene	**46.3**	ug/m3	2.5	2.82		07/22/10 21:18	95-47-6	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

QC Batch: AIR/10582
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10133717001, 10133717002

METHOD BLANK: 826907
Matrix: Air
Associated Lab Samples: 10133717001, 10133717002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	07/22/10 16:30	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.4	07/22/10 16:30	
1,1,2-Trichloroethane	ug/m3	ND	1.1	07/22/10 16:30	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	07/22/10 16:30	
1,1-Dichloroethane	ug/m3	ND	0.82	07/22/10 16:30	
1,1-Dichloroethene	ug/m3	ND	0.81	07/22/10 16:30	
1,2,4-Trichlorobenzene	ug/m3	ND	0.99	07/22/10 16:30	
1,2,4-Trimethylbenzene	ug/m3	ND	2.5	07/22/10 16:30	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.6	07/22/10 16:30	
1,2-Dichlorobenzene	ug/m3	ND	1.2	07/22/10 16:30	
1,2-Dichloroethane	ug/m3	ND	0.82	07/22/10 16:30	
1,2-Dichloropropane	ug/m3	ND	0.94	07/22/10 16:30	
1,3,5-Trimethylbenzene	ug/m3	ND	2.5	07/22/10 16:30	
1,3-Butadiene	ug/m3	ND	0.45	07/22/10 16:30	
1,3-Dichlorobenzene	ug/m3	ND	1.2	07/22/10 16:30	
1,4-Dichlorobenzene	ug/m3	ND	1.2	07/22/10 16:30	
2-Butanone (MEK)	ug/m3	ND	0.60	07/22/10 16:30	
2-Hexanone	ug/m3	ND	0.83	07/22/10 16:30	
2-Propanol	ug/m3	ND	2.5	07/22/10 16:30	
4-Ethyltoluene	ug/m3	ND	2.5	07/22/10 16:30	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	0.83	07/22/10 16:30	
Acetone	ug/m3	ND	0.48	07/22/10 16:30	
Benzene	ug/m3	ND	0.65	07/22/10 16:30	
Benzyl chloride	ug/m3	ND	1.0	07/22/10 16:30	
Bromodichloromethane	ug/m3	ND	1.4	07/22/10 16:30	
Bromoform	ug/m3	ND	2.1	07/22/10 16:30	
Bromomethane	ug/m3	ND	0.79	07/22/10 16:30	
Carbon disulfide	ug/m3	ND	0.63	07/22/10 16:30	
Carbon tetrachloride	ug/m3	ND	1.3	07/22/10 16:30	
Chlorobenzene	ug/m3	ND	0.94	07/22/10 16:30	
Chloroethane	ug/m3	ND	0.54	07/22/10 16:30	
Chloroform	ug/m3	ND	0.99	07/22/10 16:30	
Chloromethane	ug/m3	ND	0.42	07/22/10 16:30	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	07/22/10 16:30	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	07/22/10 16:30	
Cyclohexane	ug/m3	ND	0.68	07/22/10 16:30	
Dibromochloromethane	ug/m3	ND	1.7	07/22/10 16:30	
Dichlorodifluoromethane	ug/m3	ND	1.0	07/22/10 16:30	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	07/22/10 16:30	
Ethanol	ug/m3	ND	1.9	07/22/10 16:30	
Ethyl acetate	ug/m3	ND	0.73	07/22/10 16:30	
Ethylbenzene	ug/m3	ND	0.88	07/22/10 16:30	
Hexachloro-1,3-butadiene	ug/m3	ND	2.2	07/22/10 16:30	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

METHOD BLANK: 826907 Matrix: Air

Associated Lab Samples: 10133717001, 10133717002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/m3	ND	1.8	07/22/10 16:30	
Methyl-tert-butyl ether	ug/m3	ND	0.73	07/22/10 16:30	
Methylene Chloride	ug/m3	ND	0.71	07/22/10 16:30	
n-Heptane	ug/m3	ND	0.83	07/22/10 16:30	
n-Hexane	ug/m3	ND	0.72	07/22/10 16:30	
Naphthalene	ug/m3	ND	2.7	07/22/10 16:30	
o-Xylene	ug/m3	ND	0.88	07/22/10 16:30	
Propylene	ug/m3	ND	0.35	07/22/10 16:30	
Styrene	ug/m3	ND	0.87	07/22/10 16:30	
Tetrachloroethene	ug/m3	ND	1.4	07/22/10 16:30	
Tetrahydrofuran	ug/m3	ND	0.60	07/22/10 16:30	
Toluene	ug/m3	ND	0.77	07/22/10 16:30	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	07/22/10 16:30	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	07/22/10 16:30	
Trichloroethene	ug/m3	ND	1.1	07/22/10 16:30	
Trichlorofluoromethane	ug/m3	ND	1.1	07/22/10 16:30	
Vinyl acetate	ug/m3	ND	0.71	07/22/10 16:30	
Vinyl chloride	ug/m3	ND	0.52	07/22/10 16:30	

LABORATORY CONTROL SAMPLE: 826908

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	65.6	118	75-135	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	76.4	109	69-131	
1,1,2-Trichloroethane	ug/m3	55.5	63.0	114	64-127	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	88.8	114	53-125	
1,1-Dichloroethane	ug/m3	41.2	48.3	117	60-125	
1,1-Dichloroethene	ug/m3	40.3	46.0	114	69-128	
1,2,4-Trichlorobenzene	ug/m3	75.5	65.0	86	30-150	
1,2,4-Trimethylbenzene	ug/m3	50	53.8	108	61-150	
1,2-Dibromoethane (EDB)	ug/m3	78.1	90.7	116	68-136	
1,2-Dichlorobenzene	ug/m3	61.2	57.4	94	59-150	
1,2-Dichloroethane	ug/m3	41.2	48.5	118	66-127	
1,2-Dichloropropane	ug/m3	47	54.5	116	75-134	
1,3,5-Trimethylbenzene	ug/m3	50	54.2	108	71-150	
1,3-Butadiene	ug/m3	22.5	21.7	96	67-126	
1,3-Dichlorobenzene	ug/m3	61.2	68.5	112	58-147	
1,4-Dichlorobenzene	ug/m3	61.2	66.2	108	62-143	
2-Butanone (MEK)	ug/m3	30	30.8	103	52-139	
2-Hexanone	ug/m3	41.7	41.3	99	61-138	
2-Propanol	ug/m3	23.8	22.6	95	30-146	
4-Ethyltoluene	ug/m3	50	53.7	107	55-134	
4-Methyl-2-pentanone (MIBK)	ug/m3	41.7	43.9	105	60-135	
Acetone	ug/m3	24.2	25.1	104	61-135	
Benzene	ug/m3	32.5	39.0	120	71-125	

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QUALITY CONTROL DATA

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

LABORATORY CONTROL SAMPLE: 826908

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzyl chloride	ug/m3	52.5	59.4	113	70-130	
Bromodichloromethane	ug/m3	68.2	77.2	113	66-136	
Bromoform	ug/m3	105	111	105	62-132	
Bromomethane	ug/m3	39.5	42.5	108	69-125	
Carbon disulfide	ug/m3	31.7	34.5	109	75-150	
Carbon tetrachloride	ug/m3	64	76.9	120	60-145	
Chlorobenzene	ug/m3	46.8	51.4	110	73-143	
Chloroethane	ug/m3	26.8	25.8	96	71-128	
Chloroform	ug/m3	49.7	56.4	114	73-137	
Chloromethane	ug/m3	21	22.5	107	64-125	
cis-1,2-Dichloroethene	ug/m3	40.3	44.9	111	67-131	
cis-1,3-Dichloropropene	ug/m3	46.2	49.8	108	75-150	
Cyclohexane	ug/m3	35	36.6	105	75-141	
Dibromochloromethane	ug/m3	86.6	102	117	64-127	
Dichlorodifluoromethane	ug/m3	50.3	60.6	120	69-124	
Dichlorotetrafluoroethane	ug/m3	71.1	78.5	110	59-125	
Ethanol	ug/m3	19.2	20.2	106	30-150	
Ethyl acetate	ug/m3	36.6	43.0	117	75-150	
Ethylbenzene	ug/m3	44.2	45.4	103	75-150	
Hexachloro-1,3-butadiene	ug/m3	108	98.4	91	30-150	
m&p-Xylene	ug/m3	88.3	95.8	108	68-138	
Methyl-tert-butyl ether	ug/m3	36.7	39.2	107	75-134	
Methylene Chloride	ug/m3	35.3	35.7	101	45-125	
n-Heptane	ug/m3	41.7	47.7	115	65-125	
n-Hexane	ug/m3	35.8	44.5	124	67-141	
Naphthalene	ug/m3	53.3	42.0	79	30-150	
o-Xylene	ug/m3	44.2	47.4	107	69-143	
Propylene	ug/m3	17.5	21.6	123	65-140	
Styrene	ug/m3	43.3	46.4	107	62-137	
Tetrachloroethene	ug/m3	69	74.0	107	68-136	
Tetrahydrofuran	ug/m3	30	30.8	103	51-125	
Toluene	ug/m3	38.3	44.9	117	70-128	
trans-1,2-Dichloroethene	ug/m3	40.3	43.6	108	69-131	
trans-1,3-Dichloropropene	ug/m3	46.2	47.6	103	65-135	
Trichloroethene	ug/m3	54.6	62.5	114	75-147	
Trichlorofluoromethane	ug/m3	57.1	61.8	108	63-127	
Vinyl acetate	ug/m3	35.8	41.2	115	68-136	
Vinyl chloride	ug/m3	26	25.4	98	66-125	

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

SAMPLE QUALIFIERS

Sample: 10133717001

[1] The Total Hydrocarbon (THC) pattern occured in the second half of the chromatogram (after toluene).

Sample: 10133717002

[1] The Total Hydrocarbon (THC) pattern occured in the second half of the chromatogram (after toluene).

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NAA 1004827 Holiday 411
Pace Project No.: 10133717

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10133717001	**SVV-1**	TO-15	AIR/10582		
10133717002	**SVV-2**	TO-15	AIR/10582		

Data File: \\192.168.10.12\chem\10air7.i\072210.b\20320.D
Report Date: 23-Jul-2010 11:34

Pace Analytical Services

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10133717001
Operator : CJR
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 22-JUL-2010 19:52

Client SDG: 072210.b

Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.730	454	J
2.		Unknown	9.813	7.31	J
3.	124-18-5	Decane	14.296	9.75	NJ
4.		Unknown	15.007	8.31	J
5.		Unknown	15.184	7.28	J
6.	3741-00-2	Cyclopentane, pentyl-	15.243	9.34	NJ
7.		Unknown	15.358	6.61	J
8.		Unknown	15.525	13.2	J
9.	19780-34-8	Tridecane, 3-methylene-	15.981	11.5	NJ
10.		Unknown	16.591	12.2	J

Data File: \\192.168.10.12\chem\10air7.i\072210.b\20320.D
Report Date: 23-Jul-2010 11:34

Pace Analytical Services

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10air7.i\072210.b\20320.D
Lab Smp Id: 10133717001
Inj Date : 22-JUL-2010 19:52
Operator : CJR Inst ID: 10air7.i
Smp Info : Sample 0
Misc Info : 10582
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\072210.b\TO15_203-10.m
Meth Date : 23-Jul-2010 09:52 dbrusky Quant Type: ISTD
Cal Date : 22-JUL-2010 15:03 Cal File: 20310.D
Als bottle: 20
Dil Factor: 1.80000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * CpndVariable

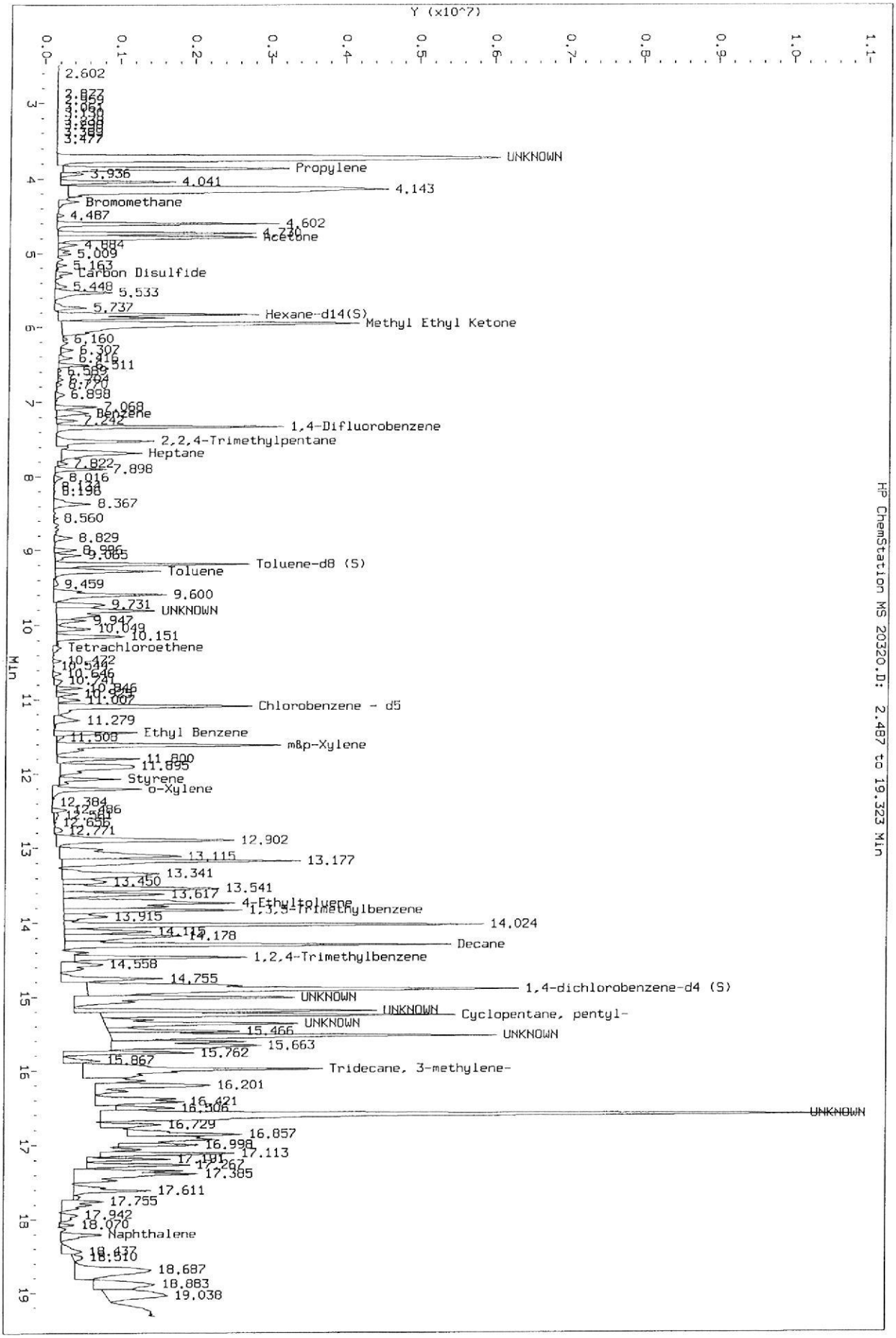
Name	Value	Description
DF	1.800	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	COMPOUND	RT	AREA	AMOUNT
1	Propylene	3.864	6984345	69.852
52	Tetrachloroethene	10.302	380450	0.259
65	1,2,4-Trimethylbenzene	14.466	5037203	2.181
$ 68	1,4-dichlorobenzene-d4	14.896	23351031	10.832
74	Naphthalene	18.192	1909538	0.389

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
3.730	25230851	252.340474	454	0		0	1
Unknown				CAS #:			
9.813	5955147	4.06158827	7.31	0		0	52
Decane				CAS #: 124-18-5			
14.296	12516144	5.41877533	9.75	96	NBS75K.l	8077	65

Data File: \\192.168.10.12\chem\10air7.i\072210.b\20320.D
Report Date: 23-Jul-2010 11:34

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
15.007	9948228	4.61465963	8.31	0		0	68
Unknown				CAS #:			
15.184	8716088	4.04310993	7.28	0		0	68
Cyclopentane, pentyl-				CAS #: 3741-00-2			
15.243	11181748	5.18684980	9.34	72	NBS75K.1	7536	68
Unknown				CAS #:			
15.358	7913864	3.67098443	6.61	0		0	68
Unknown				CAS #:			
15.525	15826826	7.34155034	13.2	0		0	68
Tridecane, 3-methylene-				CAS #: 19780-34-8			
15.981	13770343	6.38761480	11.5	78	NBS75K.1	21984	68
Unknown				CAS #:			
16.591	33165658	6.76112179	12.2	0		0	74


Data File: \\192.168.10.12\chem\10air7.i\072210.b\20320.D
Injection Date: 22-JUL-2010 19:52
Instrument: 10air7.i
Client Sample ID:
HP ChemStation MS 20320.D: 2.487 to 19.323 Min
Y (x10^7)
Min
2.602
UNKNOWN
Propylene
3.936
4.041
4.143
Bromomethane
4.487
4.602
Acetone
5.009
5.163
Carbon Disulfide
5.448
5.533
5.737
Hexane-d14(S)
Methyl Ethyl Ketone
6.160
6.307
6.511
6.898
7.068
Benzene
7.242
1,4-Difluorobenzene
2,2,4-Trimethylpentane
Heptane
7.822
7.898
8.016
8.198
8.367
8.560
8.829
9.065
Toluene-d8 (S)
Toluene
9.459
9.600
9.731
UNKNOWN
9.947
10.049
10.151
Tetrachloroethene
10.422
10.646
10.846
11.007
Chlorobenzene - d5
11.279
Ethyl Benzene
11.500
m&p-Xylene
11.800
11.895
Styrene
o-Xylene
12.384
12.486
12.656
12.771
12.902
13.115
13.177
13.341
13.450
13.541
13.617
4-Ethyltoluene
1,3,5-Trimethylbenzene
13.915
14.024
14.115
14.178
Decane
1,2,4-Trimethylbenzene
14.558
14.755
1,4-dichlorobenzene-d4 (S)
UNKNOWN
UNKNOWN
Cyclopentane, pentyl-
UNKNOWN
15.466
UNKNOWN
15.663
15.762
15.867
Tridecane, 3-methylene-
16.201
16.421
16.508
UNKNOWN
16.729
16.857
16.998
17.113
17.191
17.262
17.385
17.611
17.755
17.942
18.070
Naphthalene
18.437
18.510
18.687
18.883
19.038

Data File: \\192.168.10.12\chem\10air7.i\072210.b\20323.D
Report Date: 23-Jul-2010 11:35

Pace Analytical Services

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10133717002
Operator : CJR
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 22-JUL-2010 21:18

Client SDG: 072210.b

Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.730	18.5	J
2.		Unknown	4.172	8.81	J
3.		Unknown	4.871	8.33	J
4.	107-83-5	Pentane, 2-methyl-	5.533	18.0	NJ
5.	96-14-0	Pentane, 3-methyl-	5.737	7.32	NJ
6.	110-54-3	Hexane	5.956	11.9	NJ
7.	108-08-7	Pentane, 2,4-dimethyl-	6.415	7.60	NJ
8.	96-37-7	Cyclopentane, methyl-	6.510	7.66	NJ
9.	108-87-2	Cyclohexane, methyl-	8.370	5.48	NJ
10.	541-05-9	Cyclotrisiloxane, hexamethy	10.200	6.57	NJ

Data File: \\192.168.10.12\chem\10air7.i\072210.b\20323.D
Report Date: 23-Jul-2010 11:35

Pace Analytical Services

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10air7.i\072210.b\20323.D
Lab Smp Id: 10133717002
Inj Date : 22-JUL-2010 21:18
Operator : CJR Inst ID: 10air7.i
Smp Info : Sample 3
Misc Info : 10582
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\072210.b\TO15_203-10.m
Meth Date : 23-Jul-2010 09:52 dbrusky Quant Type: ISTD
Cal Date : 22-JUL-2010 15:03 Cal File: 20310.D
Als bottle: 23
Dil Factor: 2.82240
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14

Concentration Formula: Amt * DF * Uf * CpndVariable

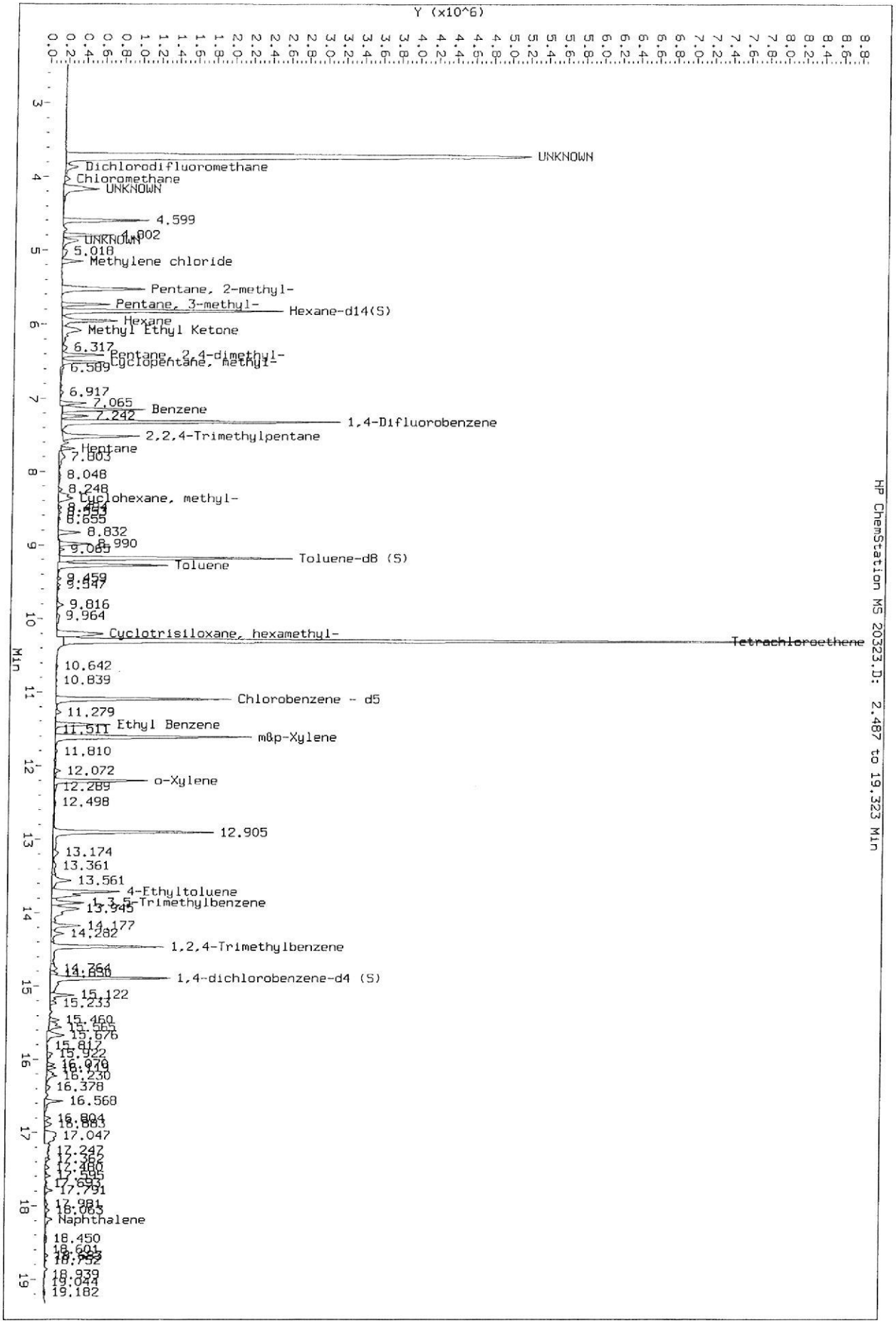
Name	Value	Description
DF	2.822	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	COMPOUND	RT	AREA	AMOUNT
2	Dichlorodifluoromethane	3.897	543006	0.180
4	Chloromethane	4.021	178652	0.350
12	Acetone	4.871	1027654	5.199
$ 24	Hexane-d14(S)	5.825	4669220	12.745
25	Methyl Ethyl Ketone	6.071	1139086	3.317
38	Heptane	7.694	271325	0.697
52	Tetrachloroethene	10.298	18436405	24.810

	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
3.730	19794797	6.54993953	18.5	0		0	2
Unknown				CAS #:			
4.172	1593360	3.12103207	8.81	0		0	4

Data File: \\192.168.10.12\chem\10air7.i\072210.b\20323.D
Report Date: 23-Jul-2010 11:35

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
4.871	583272	2.95098749	8.33	0		0	12
Pentane, 2-methyl-				CAS #:	107-83-5		
5.533	2337685	6.38070096	18.0	87	NBS75K.l	62863	24
Pentane, 3-methyl-				CAS #:	96-14-0		
5.737	950034	2.59311347	7.32	91	NBS75K.l	62867	24
Hexane				CAS #:	110-54-3		
5.956	1448264	4.21749345	11.9	90	NBS75K.l	62873	25
Pentane, 2,4-dimethyl-				CAS #:	108-08-7		
6.415	924598	2.69252501	7.60	91	NBS75K.l	1594	25
Cyclopentane, methyl-				CAS #:	96-37-7		
6.510	932425	2.71531812	7.66	86	NBS75K.l	594	25
Cyclohexane, methyl-				CAS #:	108-87-2		
8.370	756069	1.94158586	5.48	86	NBS75K.l	63234	38
Cyclotrisiloxane, hexamethyl-				CAS #:	541-05-9		
10.200	1729818	2.32779101	6.57	72	NBS75K.l	27918	52



Data File: \\192.168.10.12\chem\10air7.i\072210.b\20323.D
Injection Date: 22-JUL-2010 21:18
Instrument: 10air7.i
Client Sample ID:

Pace Analytical®
www.pacelabs.com

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10133717

02117 | Page: 1 of 1

Section A Required Client Information:
Company: Delta Consultants
Address: 5910 Rice Creek Pkwy
Shoreview MN 55126
Email To: mhobson@deltaenv.com
Phone: 651-639-9449 | Fax:
Requested Due Date/TAT: std

Section B Required Project Information:
Report To: Matt Hobson
Copy To:
Purchase Order No.:
Project Name: Holiday 411
Project Number: NAA 1004827

Section C Invoice Information:
Attention: Matt Hobson
Company Name: Delta Consultants
Address: Shoreview, MN
Pace Quote Reference:
Pace Project Manager/Sales Rep.: Carolynne Trout
Pace Profile #:

Program: X UST | Superfund | Emissions | Clean Air Act | Voluntary Clean Up | Dry Clean | RCRA | Other
Location of Sampling by State: MN
Reporting Units: ug/m³ X | mg/m³ | PPBV | PPMV | Other
Report Level: II. III. IV. Other

Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START END/GRAB DATE	COLLECTED COMPOSITE START END/GRAB TIME	COLLECTED COMPOSITE - DATE	COLLECTED COMPOSITE - TIME	Canister Pressure (Initial Field - psig)	Canister Pressure (Final Field - psig)	Summa Can Number	Flow Control Number	Method: PM10	3C- Fixed Gas (%)	TO-3	TO-3M (Methane)	TO-4 (PCBs)	TO-13 (PAH)	TO-14	TO-15	TO15 Short List*	Pace Lab ID
1	SVV-1	6LC	0	7-15-10	15:00			0	0	1032	P19							✓			10133717001
2	SVV-2	6LC	0	7-15-10	19:00			0	0	1309	912							✓			002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments :

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Nancy Rochning / DELTA	7-16-10	9:30	Shawna Jones / Pace	7-16-10	1525
Shawna Jones / Pace	7-16-10	1616	[signature] / Pace	7-16-10	16:16

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
AMB	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Nancy Rochning
SIGNATURE of SAMPLER: Nancy Rochning
DATE Signed (MM / DD / YY): 7-15-10

ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

AIR Sample Condition Upon Receipt

Pace Analytical

Client Name: DELTA MN Project # 10133717

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Tracking #:_____

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: 2-16-10 AT

		Comments:
Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☒No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☒No ☐N/A	7.
Sufficient Volume:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No ☐N/A	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
Containers Intact:	☒Yes ☐No ☐N/A	10.
Media: AIR (CAN)		11.
Sample Labels match COC:	☒Yes ☐No ☐N/A	12.

Samples Received: 2 CANS, 2 GAUGES

Canisters		Flow Controllers		Stand Alone G		Tedlar Bags	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
SVV-1	1032				919		
SVV-2	1309				912		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

Project Manager Review: _____ **Date:** 2-16-10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

A106 Rev.01 (22May2009)

METHODS AND PROCEDURES

Push Probe Soil Sample Collection

Soil borings were advanced using a truck-mounted, hydraulically-powered Geoprobe® push probe machine that utilizes static force and percussion to advance small (2-inch) sampling tools into the subsurface for collecting soil core samples. Soil samples were collected continuously for this project into 4-foot acetate liners attached to the end of the push probe rods. The acetate liner with soil sample was provided to an on-site geologist.

Push probe rods were decontaminated using an Alconox solution wash and a water rinse between each boring. Separate disposable acetate liners are used for each discrete soil sample.

Soil Classification

Acetate liners were opened by a Delta geologist, who was wearing disposable, clean nitrile gloves. Soil samples were visually and manually classified using the Unified Soil Classification system. Soil descriptions and depths were recorded on a soil boring log. Visual and olfactory evidence of contamination was also noted on the soil boring log.

Soil Sample Collection for Laboratory Analysis

Upon opening of the acetate liners, soil samples selected for laboratory analysis of volatile organic compounds (VOCs) were immediately placed into laboratory-supplied jars when possible. If selection of soil samples for laboratory is based upon field headspace reading of VOCs, then soil samples were placed in bags with zero headspace and stored on ice until selection of the soil laboratory sample was made. Soils collected for hydrocarbon analysis were transferred from the acetate liner to the sample jar using a dedicated, disposable syringe provided by the laboratory. Jar threads were wiped clean and Teflon-lined lids replaced. Soil jars were labeled and stored on ice in a cooler.

Soil samples selected for laboratory analysis of non-volatile compounds or grain size analysis may have been placed in supplied jars after soils were placed in polyethylene bags for headspace development (see below).

A chain-of-custody record was kept for all laboratory samples. The chain-of-custody record included project number, sample ID number, sampling point location, date and time of sample, sample type, number of containers, analyses required, sampler signature, and other information required by the laboratory.

Soil Headspace Analysis

Soil samples were screened for total organic vapors using a thermal photoionization detector (PID) equipped with an 10.6 eV lamp and calibrated for reading in parts per million volume/volume of benzene. Calibration was performed on the PID instrument in

the field each morning before use to yield "total organic vapors" in volume parts-per-million of a benzene equivalent.

Upon opening of the acetate liners, a quart-sized freezer zip-lock bag was half filled with the soil sample to be screened and immediately sealed. The bags were set aside for at least 10 minutes to allow headspace development. After ten minutes, the bags were shaken for 15 seconds, and set aside for another 1 to 2 minutes. Then, the PID probe was inserted into the bag through a small opening at the top of the bag. Gas vapors from the headspace were drawn through the PID, and a reading proportional to the concentration of the trace gas present was obtained. The PID probe was withdrawn when the PID readings stabilized. The highest PID reading was recorded on the soil boring log.

Groundwater Sample Collection Via Push Probe

The depth to groundwater was determined by observation of wet soil in the soil core samples. After reaching the bottom of the boring, the drill rods were removed from the boring and a temporary PVC well with a 5-foot screen was installed into the borehole. The screen was placed so as to intersect the top of the water table. Groundwater samples were collected by inserting disposable polyethylene tubing containing a steel check ball through the center of the drill rods and into the screen. The groundwater was hand-checked through tubing directly into laboratory-supplied sample jars. Laboratory jars were labeled and stored on ice in a cooler for delivery to the laboratory.

PVC casing and screens and polyethylene tubing were disposed after sampling; dedicated temporary wells and tubing were used for each boring.

Soil Boring Closure

Soil borings were abandoned in accordance with Minnesota Department of Health regulations by filling the bore hole with bentonite, to approximately 2 inches from the surface grade. Then, asphalt patches completed the top 2 inches of the bore hole, as needed.

Method of Vapor Monitoring

Monitoring for petroleum vapor intrusion into underground utility lines was conducted with an explosimeter and a PID. The explosimeter detects and measures concentrations of combustible gases or vapors in the air. Explosive limits, expressed in percentage, are the minimum and maximum concentrations of a flammable gas or vapor between which ignition can occur.

The PID measures the concentration of total organic vapors by photo-ionization. Organic vapors from potential intrusion points such as drains or wall/floor joints are drawn through the analyzer. The analyzer's display registers a reading proportional to the concentration of total organic vapors present in ppm.

Manhole covers for sanitary sewer and water lines were opened by New Hope Public Works personnel. The depths to the bottom of the utility was measured with a weighted measuring tape and recorded onto a field log. Clean polyethylene tubing was placed onto the probes of the explosimeter and PID to facilitate monitoring at the bottom and mid-level depths. PID and explosimeter readings were collected at the bottom, mid-level and top of the utility line accesses, except for utilities that were 4 feet or less in depth below grade, where only top and bottom readings were collected.

(72)

7-15-10

Holiday 411

9456 Medicine Lake Rd

New Hope, MN

NAA 100482T

7:15 Load equipment

7:45-8:25 Drive to site. Bergerson-Caswell on site. Private utility Locator on site, all utilities on site marked. Andy and Jeff, Bergerson-Caswell are drillers. Truck-mounted Geoprobe Rig.

8:40 Talked to store manager Jared re drilling. Be here all day. Best time for boring west of pump islands is ~9:00-10:30.

8:50 Calibrate PID. Thermo Environmental model 580E2, Delta PID#

Cal to 100 ppm Isobutylene.

fresh air Read = 0

Cal Gas Read = 102 ppm

Review SHSP w/ B.C., stay 5' off utilities, hot day concerns

(73)

7-15-10 Holiday 411 - cont.

9:30 PID not working on soil samples, too much moisture in headspace bags. Attached moisture trap, still no work. Called PM Matt Hobson, bringing new PID. No PID Readings for soils from SB-2.

11:15 Matt brought new PID. Calibrated Thermo Environmental Model 580B OVM. Delta #6.

fresh air Read = 0

Cal Gas Read = ~~00~~ 97.2 to 100 (jumping)

15:00 SVV-1 Screen to 4 ft.

Canister 1032 Guage P19

Start Pressure 0 Vac in

High Pressure 26 Hg

Stop Pressure 0 PSI

17:30 Didn't get to breaking down clay soil cores. Left note for Store Manager Jared that I would be back ~~today~~ Friday to do that.

Leave Site

7-15-10 Holiday 4/11 cont.

9:00 SB-2 Sunny, 70's

Depth	Description	class	PID
0-2	Asphalt over ~~clean~~ fill	fill	NR
2-4	Silty clay, trace sand, gray ~~and~~ tan with orange mottling, soft, moist	CL	NR
4-6	Same as above	CL	NR
6-8	Sandy clay, trace gravel, 2" sand seam at 6ft. Gray to tan, moist	CL	~~2~~, NR
8-12	Sandy clay, trace gravel, tan, soft clayey sand seam at 8.5-9'. ~~to~~ Clay firm. ~~moist to very~~ wet ~~moist~~ at clayey sand seam.	CL	NR
12-13.5	Sandy clay, tan, with gravel, very moist.	CL	NR
13.5-13.8	Brown ~~clay~~ sand, trace clay, medium-grain, very moist	SP	NR

7-15-10

SB-2, cont.

Depth	Description	class	PID
13.8-16	Clay, ~~with~~ trace gravel and sand, tan, stiff	CL	NR
16-20	Same soil		NR

EOB @ 20ft.

10.15 Water sample, VOC, GRO, DRO

Dup sample, VOC, GRO, DRO

8.5-9 Soil Sample, BTEX, MTBE, GRO, DRO

Water at 13.08', come up to 8.75'

10:33 SB-3 Sunny, 80's

Depth	Description	class	PID
0-2	Asphalt over fill	FILL	ND
2-4	Sandy Clay, gray and tan with orange mottling, soft, moist	CL	ND
4-8	Same as above	CL	ND
8-10	Clayey sand, tan, medium-grain, soft, wet	SC	ND
10-12	Sandy clay, tan, firm, very moist	CL	ND
12-14	Sandy clay, tan, firm, with lenses of soft, moist	CL	ND

Holiday Hill cont.

SB-3, cont.

Depth	Description	class	PID
14-16	Clay, tan, trace gravel and sand, stiff, slightly moist	CL	ND
16-18	same soil	CL	ND
18-20	same soil 11:00 Sample Groundwater VOC, GRO, DRO	CL	ND
20-21	same soil	CL	ND
21-24	Clay, gray, trace gravel, firm to stiff, slightly moist	CL	ND
24-26	same soil	CL	ND
26-28	same soil	CL	ND

Boring at 28'

*Soil Lab sample 8-9ft, 10:45. BTEX GRO MTBE DRO

PID samples 0-20 ft samples after ~45 minutes headspace

Water Level 8.4 ft.

7-15-10 Holiday Hill cont.

SB-4 12:20

Depth	Description	USCS	PID
0-2.5	Asphalt over fill	FILL	ND
2.5-4	Sandy clay, gray and tan, orange mottling.	CL	ND
4-5.5	soft, moist		
4-6 *	Clayey sand, brown, medium to coarse grain, wet.	CL	ND
6-8	Silty clay, gray and tan mottled, soft, moist	CL	ND
8-9	same soil		ND
9-12 * 12:45	Sand, medium grain, brown, grade to gray at 9.2', wet Lab soil sample 9-10 12:45	SP	ND
12-14	~2" ~~Gray sand, debris~~ over tan sandy clay, ~~firm~~, trace gravel, firm, moist.	CL	ND
14-16	same soil, firm to stiff	CL	ND
16-18	Clay, gray, trace clay, stiff, slightly moist.	CL	ND
18-20	Same soil	CL	ND

7-15-10 Holiday 411 cont.

SB-4 cont.

EOB at 20'

* Soil Sample, BTEX, MTBE, GRO, DRO

water Level 5.75'

13:20 Groundwater sample, VOC, GRO, DRO only one DRO bottle, slow water Recovery

SB-5 13:35

Depth	Description	USCS	PID
0-2	Asphalt over fill	fill	—
2-4	Sandy clay, trace gravel, gray and tan and dark brown mix, slightly moist	CL	ND
4-5	Sandy clay, ~~tan~~ gray, soft, moist	CL	ND
5-8	Sandy clay, tan, with gravel, firm, moist	CL	ND
8-9	Same soil	CL	ND
9-11.5	~~Sam~~ Silty clay, Gray + tan, sand *seam at ~9ft.,	CL	4347
13:55	soft, wet. slight petroleum odor		

Holiday 411 cont. 7-15-10

SB-5, cont.

Depth	Description	USCS	PID
11.5-12	Silty clay, tan, soft, to firm moist	CL	—
12-13	Sand, coarse to medium grain, well sorted, gray wet.	SP	ND
13-16	Tan sandy clay, trace gravel, stiff, slightly moist.	CL	ND
16-18	Clay, trace gravel, stiff, slightly moist	CL	ND
18-20	Same soil	CL	ND

5.61 depth to water

EOB @ 20'

* Soil Lab sample, BTEX, MTBE, GRO, DRO

Groundwater sampled at 14:30, VOC, GRO, DRO only 5 VOC vials, dropped one

SVV-1 15:00 See Pg. 73

(80)

7-15-10 Holiday 411

SB-6 15:10 Sunny, 80s

Depth	Description	USCS	PID
0-2	~~Black~~ Asphalt over fill	fill	-
2-4	Sandy clay, tan and gray with orange mottling, soft, slightly moist	CL	ND
4-6	Same Soil	CL	ND
*6-8	Gray silty, sandy clay, wet, soft, petroleum odor	CL	30.0
8-9	Same Soil	CL	7670.R.
9-10	Sandy clay, gray and tan, soft, wet, petroleum odor	CL	7670.R.
*10-12	Silty clay, gray, with tan mottling at 11.5-12 ft. wet, soft, petroleum odor.	CL	8210.R.
12-13	Sandy silty clay, tan, soft, moist, petrol odor	CL	7670R.
13-15.5	Sandy silt, gray, wet, petrol odor	~~SM~~ ML	7670.R.
15.5-16	Sandy silty clay, tan, soft, moist	CL	7670.R.

8.7 *6.1

(81)

7-15-10 Holiday 411

SB-6 cont.

Depth	Description	USCS	PID
16-20	Clay, trace gravel, gray, stiff, slightly moist	CL	84
16:10	Sample Groundwater, VOC, GRO, DRO		
	Groundwater at 8.7 ft, come up to 6.1 feet in about 10 minutes		
20-22	Same Soil	CL	ND
22-24	Same Soil	CL	ND
24-26	Same Soil	CL	ND
26-28	Same Soil	CL	ND
28-30	Same Soil	CL	ND
30-32	Same Soil	CL	ND

EOB @ 32ft

* Soil Lab sample, BTEX MTBE GRO DRO

O.R. = OVER Range on PID

SB-7 17:05

Depth	Description	USCS	PID
0-3.8	Asphalt over ~~fill~~ gravel over fill	fill	
3.8-4	Tan sandy clay, with gravel, soft, moist.	CL	ND ~~ND~~

Holiday 411 cont.

SB-7 cont.

Depth	Description	USCS	PID
4-6	Same Soil	CL	ND
6-8	Same Soil, sand lens at 8'	CL	ND
8-8.5	Clayey Sand, medium grain, gray-tan, wet, petroleum odor	SC	ND
*8.5-10	Clayey Silt, gray and tan, wet, soft petroleum oder		7670.R. 9150
10-12	Same Soil		
12-13	Clayey sand, medium grain, dark gray, wet, petrol. odor	SC	7670.R. 2785
13-14	Sandy clay, soft, wet, gray and tan, petrol odor	CL	7670.R. 4347
14-16	Sandy clay, stiem, moist, tan with gray, petrol odor	CL	3232
16-18	Sandy clay, trace gravel, brown, fiem, slightly moist	CL	418
18-20	Same Soil	CL	454
			151

SB-7 cont.

18:10 Collect Groundwater, VOC, GRO, DRO

7.8 ft shen on water. Only 4 vials due to
6.6 ft effervescence.
↳ water levels, initial at 7.8, up to 6.6

Depth	Description	USCS	PID
20-22	Clay, trace gravel, stiff, brown and gray, slightly moist	CL	139
22-24	Same Soil	CL	78
24-26	Same Soil	CL	72
26-28	Same Soil	CL	78
28-29	0.2 ft Recovery Same Soil	CL	—

Refusal @ 29 ft.

*Soil Lab Sample, BTEX, MTBE, GRO, DRO

SVV-2 Screen to 4.5 ft. 19:00
Canister 1309 Gauge
Start Pressure 0
High Pressure 21
End Pressure 0

[redacted] 762 [redacted] 592 [redacted] 6 [redacted] 7 [redacted]

DELTA ENVIRONMENTAL CONSULTANTS, INC. RECEPTOR SURVEY DATA SHEET™

** If PID readings of more than 5ppm are measured in any utility please call the site contact for further instructions*

PROJECT NAME/LOCATION: Holiday 411 - New Hope
DELTA PROJECT NUMBER:
DATE: 7/19/10
DELTA PERSONNEL ON SITE: N Rocking

STATION NUMBER:
TEMPERATURE (f °):
PRECIPATATION:
WINDSPEED (mph):

	RECEPTOR SITE DESCRIPTION	TOTAL DEPTH (ft.)	TOP %O2	MID DEPTH %O2	BOTTOM %O2	TOP % LEL	MID DEPTH % LEL	BOTTOM % LEL	TOP OVM (ppm)	MID DEPTH OVM (ppm)	BOTTOM OVM (ppm)	LIQUID FLOW DIRECTION	AIR FLOW DIRECTION	HEAD SPACE READING (ppm)	COMMENTS
1	SS-1	13'	20.7	20.6	20.6	1	1	0	0	0	0				
2	SS-2	14.5'	20.2	20.2	20.2	1	1	1	0	0	0				
3	~~ST~~ W-1	4.5'	20.2	20.2	20.2	1	1	1	0	0	0				
4	W-2	4.5'	20.2	20.2	20.2	1	1	1	0	0	0				
5	SS-3	12'	20.3	20.3	20.3	1	1	1	0	0	0				
6	ST-1	3'	20.0	—	20.0	1	—	1	0	—	0				Restart Explosimeter
7	ST-2	2.5 3	20.2	—	20.2	1	—	1	0	—	0				
8	ST-3	3'	20.2	—	20.2	1	—	1	0	—	0				
9	ST-4	3.7'	20.3	—	20.3	1	—	1	0	—	0				
10	ST-5	9'	20.4	20.4	20.4	1	1	1	0	0	0				
11	ST-6	3'	20.3	—	20.3	1	—	1	0	—	0				
12		.	.	.	.										
13		.	.	.	.										
14		.	.	.	.										
15		.	.	.	.										

Additional Comments:

CB = Catch Basin
SS = Storm Sewer
S = Sanitary Sewer
E = Electrical Service
C = Combined Sanitary/Storm

* *Vapor Survey Procedure*
- Screen all utilities proximal to the site
- Begin with the nearest utility down gradient of the site
- Screen the utility at flow line, midpoint and below the rim, with a PID, LEL and O2
- Note the depth to bottom, air flow direction and liquid flow direction
- Follow the utility up gradient, repeating the above inspections, until a reading below 5 ppm is obtained
- Follow the utility down gradient, repeating the above inspections, until a reading of below 5 ppm is obtained

* *If A reading of more than 5 ppm is obtained*
- Call Delta contact immediatly
- Collect a headspace reading of the utility's liquids

APPENDIX I

NOT APPLICABLE

APPENDIX J

NOT APPLICABLE

Minnesota Unique Well No.

114408

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name KEN BERSCHEID

Township Range Dir Section Subsections Elevation 910 ft.

118 22 W 25 AADACC **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
245 ft.	245 ft.	09/01/1976

Drilling Method --

Well Address
9540 24TH AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY	BROWN		0	35
CLAY AND GRAVEL	BROWN		35	43
GRAVEL	BROWN		43	64
CLAY AND STONES	BROWN		64	72
CLAY	RED		72	93
CLAY	GRAY		93	115
CLAY AND STONES	GRAY		115	134
SANDSTONE	WHITE		134	194
SHALE	WHITE		194	199
SHALE	RED		199	205
ST PETER SANDSTONE	TAN	HARD	205	245

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to 200 ft.	lbs./ft.	

Open Hole from 200 ft. to 245 ft.

Screen NO **Make** **Type**

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
80 ft. from Land surface Date Measured 09/01/1976

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 80 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468338 Y: 4983589

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name RED JACKET Model number BVC 10 HP 1 Volts 230
Length of drop Pipe 105 ft. Capacity 14 g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock St.Peter
Last Strat St.Peter
Aquifer St.Peter
Depth to Bedrock 134 ft.

Well Contractor Certification
Renner E.H. & Sons 27015
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report

114408

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

127243

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name DAVE ROTHER

Township Range Dir Section Subsections Elevation 915 ft.

118 22 W 25 AAADBC **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
164 ft.	164 ft.	04/25/1977

Drilling Method --

Well Address
2505 18 CR N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY	YELLOW		0	30
GRAVEL	BROWN		30	60
CLAY	RED		60	145
ROCKS & SAND	BROWN		145	156
SAND	BROWN		156	164

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES **Make** JOHNSON **Type** stainless steel

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
70 ft. from Land surface Date Measured 04/25/1977

PUMPING LEVEL (below land surface)
80 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey

Method: Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: Address verification

Input Date: 01/01/1990

System: *UTM - Nad83, Zone15, Meters*

X: 468326 **Y:** 4983704

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name TAIT Model number ___ HP 0.5 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Torgerson Well Co. 27056
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock

Last Strat Sand-brown

Aquifer Quat. Buried Artes. Aquifer

Depth to Bedrock ft.

County Well Index Online Report

127243

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

147180

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name SHERMAN GOODMANSON

Township Range Dir Section Subsections Elevation 906 ft.

118 22 W 25 AAACDD **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
218 ft.	218 ft.	07/28/1978

Drilling Method --

Well Address
9620 25 AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY	GRAY	HARD	0	27
GRAVEL		SOFT	27	42
CLAY	BROWN	HARD	42	81
CLAY	GRAY	HARD	81	107
CLAY	RED	HARD	107	142
SHALE	BLUE	HARD	142	168
SANDROCK	WHITE	HARD	168	184
SANDROCK	RED	HARD	184	199
SANDROCK	WHITE	HARD	199	218

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to 174 ft.	lbs./ft.	

Open Hole from 174 ft. to 218 ft.

Screen NO **Make** **Type**

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
25 ft. from Land surface Date Measured 07/28/1978

PUMPING LEVEL (below land surface)
100 ft. after hrs. pumping 40 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey

Method: Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: Address verification

Input Date: 01/01/1990

System: *UTM - Nad83, Zone15, Meters*

X: 468296 **Y:** 4983674

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name RED JACKET Model number __ HP 0.5 Volts 230
Length of drop Pipe 60 ft. Capacity 10 g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

Mork Well Co.	02133	
License Business Name	Lic. Or Reg. No.	Name of Driller

First Bedrock St.Peter
Last Strat St.Peter
Aquifer St.Peter
Depth to Bedrock 142 ft.

County Well Index Online Report

147180

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

160014

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name RON GRIDLEY

Township Range Dir Section Subsections Elevation 909 ft.

118 22 W 25 AAADCC **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
230 ft.	230 ft.	02/26/1979

Drilling Method --

Well Address
9610 25 AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY	YELLOW		0	13
CLAY & ROCKS	DK. YEL		13	16
CLAY	RED		16	24
GRAVEL	DARK		24	46
CLAY	RED		46	95
GRAVEL	DARK		95	101
CLAY	YELLOW		101	104
CLAY	GRAY		104	119
GRAVEL	DARK		119	124
CLAY & GRAVEL	GRAY		124	136
GRAVEL	DARK		136	142
CLAY & GRAVEL	GRAY		142	167
SHALE	WHITE		167	176
SHALE	BLUE		176	185
SHALE	RED		185	192
SHALE & SANDSTONE	WHITE		192	230

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to 195 ft.	lbs./ft.	

Open Hole from 195 ft. to 230 ft.

Screen NO **Make** **Type**

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
54 ft. from Land surface Date Measured 02/26/1979

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 80 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey

Method: Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: Address verification

Input Date: 01/01/1990

System: *UTM - Nad83, Zone15, Meters*

X: 468324 **Y:** 4983667

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name JACUZZI Model number 5S4M9-S1 HP 0.5 Volts 115
Length of drop Pipe 84 ft. Capacity 8 g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock St.Peter
Last Strat St.Peter
Aquifer St.Peter
Depth to Bedrock 167 ft.

Well Contractor Certification

Renner E.H. & Sons	27015	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report

160014

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203803

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name ROBERT HAWKINSON

Township Range Dir Section Subsections Elevation 950 ft.
118 21 W 19 DBCAAD Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
150 ft.	150 ft.	10/04/1961

Drilling Method --

Well Address
3031 YUKON AV N
NEW HOPE MN

Drilling Fluid
--

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Geological Material	Color	Hardness	From	To
CLAY			0	75
SAND			75	85
SAND			85	105
HARDPAN			105	115
CLAY	RED		115	126
HARDPAN			126	131
SAND & CLAY	RED		131	145
WATER SAND	GRAY		145	150

Casing Diameter	Weight	Hole Diameter
3 in. to 145 ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make Type other

Diameter	Slot/Gauze	Length	Set Between
1.3	40	6	0 ft. and ft.

Static Water Level
95 ft. from Land surface Date Measured 10/04/1961

PUMPING LEVEL (below land surface)
105 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 469428 Y: 4984399

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Aamot Well Co. 27062
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock
Last Strat Sand-gray
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

County Well Index Online Report

203803

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203804

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name RICHARD HAWKINSON

Township Range Dir Section Subsections Elevation 945 ft.

118 21 W 19 DBCADA **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
168 ft.	168 ft.	11/16/1961

Drilling Method --

Well Address
3025 YUKON AV N
NEW HOPE MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
CLAY & ROCKS			0	75
GRAVEL & ROCKS			75	115
CLAY & GRAVEL			115	144
SAND			144	151
COARSE SAND			151	168

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to 162 ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES **Make** JOHNSON **Type** galvanized

Diameter	Slot/Gauze	Length	Set Between
1.3	10	4	0 ft. and ft.

Static Water Level
78 ft. from Land surface Date Measured 11/16/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 18 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 469443 Y: 4984390

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

Aamot Well Co.	27062	
License Business Name	Lic. Or Reg. No.	Name of Driller

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

County Well Index Online Report **203804** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203805

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name DICK HIRSCH

Township Range Dir Section Subsections Elevation 950 ft.

118 21 W 19 DBCCBB Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
162 ft.	162 ft.	02/15/1962

Drilling Method --

Well Address
3013 AQUILA AV N
NEW HOPE MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
CLAY			0	58
SAND	RED		58	147
SAND & GRAVEL			147	154
SAND, ROCK, GRAVEL		SOFT	154	162

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to 159 ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make Type

Diameter	Slot/Gauze	Length	Set Between
1.3	10	3	0 ft. and ft.

Static Water Level
90 ft. from Land surface Date Measured 02/15/1962

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 469267 Y: 4984329

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP 0_ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Unconf. Aquife
Depth to Bedrock ft.

Well Contractor Certification
Aamot Well Co. 27062
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report

203805

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203806

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 955 ft.

118 21 W 19 DBDCDD **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
106 ft.	106 ft.	06/06/1961

Drilling Method --

Well Address
8317 30TH AV N
MN

Drilling Fluid
--

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
CLAY			0	42
CLAY			42	70
SAND			70	98
SAND & GRAVEL			98	106

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES **Make** JOHNSON **Type**

Diameter	Slot/Gauze	Length	Set Between
1.3	10	3	0 ft. and ft.

Static Water Level
80 ft. from Land surface Date Measured 06/06/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 15 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 469523 Y: 4984285

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0_ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

Aamot Well Co.	27062	
License Business Name	Lic. Or Reg. No.	Name of Driller

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Unconf. Aquife
Depth to Bedrock ft.

Minnesota Unique Well No.

203807

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation — 945 ft.

118 21 W 19 DCBBAB Elevation Method — 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
166 ft.	166 ft.	11/14/1961

Drilling Method --

Well Address
2948 AQUILA
NEW HOPE MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
CLAY			0	20
CLAY & GRAVEL			20	60
CLAY			60	80
CLAY & ROCKS			80	110
CLAY & SAND	RED		110	147
SAND	RED		147	158
SAND ROCK			158	166

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to 158 ft.	lbs./ft.	

Open Hole from 158 ft. to 166 ft.

Screen NO Make Type

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
75 ft. from Land surface Date Measured 11/14/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 469334 Y: 4984249

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP 0 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Aamot Well Co. 27062
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock St.Peter
Last Strat St.Peter
Aquifer St.Peter
Depth to Bedrock 158 ft.

County Well Index Online Report

203807

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203933

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation — 935 ft. 7.5 minute topographic map (+/- 5 feet)

118 21 W 30 BCDBBB Elevation Method

Well Depth	Depth Completed	Date Well Completed
85 ft.	85 ft.	09/22/1961

Drilling Method

Well Address
2016 HILLSBORO AV N
GOLDEN VALLEY MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	85

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
50 ft. from Land surface Date Measured 09/22/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468641 Y: 4983222

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Gess Henry Well Co. 27008
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

County Well Index Online Report **203933** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203934

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 960 ft.
7.5 minute topographic map (+/- 5 feet)

118 21 W 30 BCCCAB **Elevation Method**

Well Depth	Depth Completed	Date Well Completed
109 ft.	109 ft.	02/28/1963

Drilling Method --

Well Address
1913 INDEPENDANCE
GOLDEN VALLEY MN

Drilling Fluid
--

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	109

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES **Make** JOHNSON **Type**

Diameter	Slot/Gauze	Length	Set Between
1.3	10	0	0 ft. and ft.

Static Water Level
75 ft. from Land surface Date Measured 02/28/1963

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468479 Y: 4983110

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0_ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

Gess Henry Well Co.	27008	
License Business Name	Lic. Or Reg. No.	Name of Driller

First Bedrock

Last Strat Unknown deposit type

Aquifer Quaternary Undiff.

Depth to Bedrock ft.

Minnesota Unique Well No.

203935

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 955 ft.

118 21 W 30 BCCCBD **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
100 ft.	100 ft.	02/23/1961

Drilling Method

Well Address
1908 MENDELSOHN AV N
GOLDEN VALLEY MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	100

Casing Type Joint **Drive Shoe?** ☐ Yes ☐ No **Above/Below** ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
82 ft. from Land surface Date Measured 02/23/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 90 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* **X:** 468452 **Y:** 4983122

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

Gess Henry Well Co. 27008
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report **203935** Printed 7/16/2010
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Minnesota Unique Well No.

203936

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 925 ft.

118 21 W 30 BCDBAB **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
88 ft.	88 ft.	10/18/1962

Drilling Method

Well Address
2018 GETTYSBERG AV
GOLDEN VALLEY MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	88

Casing Type Joint **Drive Shoe?** ☐ Yes ☐ No **Above/Below** ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
59 ft. from Land surface Date Measured 10/18/1962

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* **X:** 468701 **Y:** 4983220

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock

Last Strat Unknown deposit type

Aquifer Quaternary Undiff.

Depth to Bedrock ft.

Well Contractor Certification

Gess Henry Well Co.	27008	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report

203936

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203937

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 955 ft. 7.5 minute topographic map (+/- 5 feet)

118 21 W 30 BCCABB **Elevation Method**

Well Depth	Depth Completed	Date Well Completed
101 ft.	101 ft.	08/18/1961

Drilling Method --

Well Address
2016 INDEPENDANCE AV N
GOLDEN VALLEY MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	101

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES **Make** **Type**

Diameter	Slot/Gauze	Length	Set Between
0	50	0	0 ft. and ft.

Static Water Level
63 ft. from Land surface Date Measured 08/18/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 15 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468549 Y: 4983223

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0_ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

Well Contractor Certification

Gess Henry Well Co.	27008	
License Business Name	Lic. Or Reg. No.	Name of Driller

Minnesota Unique Well No.

203938

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 940 ft. 7.5 minute topographic map (+/- 5 feet)

118 21 W 30 BCBBBC Elevation Method

Well Depth	Depth Completed	Date Well Completed
89 ft.	89 ft.	09/19/1961

Drilling Method

Well Address
2012 HILLSBORO AV N
GOLDEN VALLEY MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	89

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
55 ft. from Land surface Date Measured 09/19/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468652 Y: 4983201

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Gess Henry Well Co. 27008
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

County Well Index Online Report **203938** Printed 7/16/2010
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Minnesota Unique Well No.

203939

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name WEINMAN PLUMBING CO.

Township Range Dir Section Subsections Elevation 950 ft.

118 21 W 30 BCDBDC Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
92 ft.	92 ft.	12/29/1954

Drilling Method --

Well Address
1916 HILLSBORO AV N
GOLDEN VALLEY MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
CLAY	BROWN		0	45
PACK GRAVEL	DARK		45	64
CLAY, SAND ,STONE LAYERED	BROWN		64	92

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make CLAYTON MARK Type

Diameter	Slot/Gauze	Length	Set Between
2	60	0	0 ft. and ft.

Static Water Level
68 ft. from Land surface Date Measured 12/29/1954

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 5 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468644 Y: 4983162

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name DEMMING Model number ___ HP 0.75 Volts
Length of drop Pipe 70 ft. Capacity 5 g.p.m Type Jet Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Unknown deposit type-brown
Aquifer Quat. Buried Unconf. Aquife
Depth to Bedrock ft.

Well Contractor Certification
Renner E.H. & Sons 27015
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report **203939** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203940

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 935 ft.

118 21 W 30 BCDCAD Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
177 ft.	177 ft.	09/14/1962

Drilling Method

Well Address
1909 GETTYSBURG N
GOLDEN VALLEY MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	177

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
65 ft. from Land surface Date Measured 09/14/1962

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468699 Y: 4983123

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

Well Contractor Certification

Gess Henry Well Co.	27008	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report **203940** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203941

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 945 ft.

118 21 W 30 BCDCBC **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
94 ft.	94 ft.	06/26/1964

Drilling Method --

Well Address
1904 HILLSBORO AV N
GOLDEN VALLEY MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	94

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make Type

Diameter	Slot/Gauze	Length	Set Between
2	60	0	0 ft. and ft.

Static Water Level
73 ft. from Land surface Date Measured 06/26/1964

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468645 Y: 4983107

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP 0_ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

Gess Henry Well Co. | 27008
License Business Name | Lic. Or Reg. No. | Name of Driller

County Well Index Online Report **203941** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203942

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 940 ft.

118 21 W 30 BCDCCB **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Address
1908 HILLSBORO AV N
GOLDEN VALLEY MN

Geological Material	Color	Hardness	From	To
DRIFT			0	97

Well Depth	Depth Completed	Date Well Completed
97 ft.	97 ft.	

Drilling Method

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
74 ft. from Land surface Date Measured

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468647 Y: 4983090

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

Well Contractor Certification

Gess Henry Well Co.	27008	
License Business Name	Lic. Or Reg. No.	Name of Driller

Minnesota Unique Well No.

203943

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 935 ft.

118 21 W 30 BCDDCC **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
89 ft.	89 ft.	10/16/1962

Drilling Method

Well Address
9200 EARL ST
GOLDEN VALLEY MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	89

Casing Type Joint **Drive Shoe?** ☐ Yes ☐ No **Above/Below** ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
55 ft. from Land surface Date Measured 10/16/1962

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468702 Y: 4983079

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock

Last Strat Unknown deposit type

Aquifer Quaternary Undiff.

Depth to Bedrock ft.

Well Contractor Certification

Gess Henry Well Co.	27008	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report

203943

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

203944

County Hennepin
Quad Hopkins
Quad ID 104B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 945 ft.

118 21 W 30 CBBBDA **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
90 ft.	90 ft.	01/27/1961

Drilling Method

Well Address
1721 INDEPENDENCE AV N
GOLDEN VALLEY MN

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
DRIFT			0	90

Casing Type Joint **Drive Shoe?** ☐ Yes ☐ No **Above/Below** ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
60 ft. from Land surface Date Measured 01/27/1961

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 120 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* **X:** 468501 **Y:** 4982962

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock

Last Strat Unknown deposit type

Aquifer Quaternary Undiff.

Depth to Bedrock ft.

Well Contractor Certification

Gess Henry Well Co.	27008	
License Business Name	Lic. Or Reg. No.	Name of Driller

Minnesota Unique Well No.

203945

County Hennepin
Quad Hopkins
Quad ID 104B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name HENN. COUNTY RADIO STATI

Township Range Dir Section Subsections Elevation 940 ft.

118 21 W 30 CBBDDB **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
353 ft.	353 ft.	01/00/1949

Drilling Method

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No From Ft. to Ft.

Well Address
NAPER RD
MN

Use

Casing Type Joint **Drive Shoe?** ☐ Yes ☐ No **Above/Below** ft.

Geological Material	Color	Hardness	From	To
CLAY & BOULDERS			0	84
WATER SAND			84	90
SANDY CLAY			90	115
GRAVEL			115	120
DIRTY SAND			120	134
CLAY			134	163
SAND			163	166
CLAY & GRAVEL			166	235
SAND			235	238
HARDPAN			238	248
ST. PETER			248	290
SHAKOPEE DOLOMITE			290	353

Casing Diameter **Weight** **Hole Diameter**

Open Hole from ft. to ft.

Screen
Diameter **Slot/Gauze** **Length** **Set Between**

Static Water Level
ft. from Date Measured

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
WELL ABANDONED

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468599 Y: 4982881

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

24246
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock St.Peter

Last Strat Prairie Du Chien Group

Aquifer

Depth to Bedrock 248 ft.

Minnesota Unique Well No.

204366

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name CHARLES PETERSON

Township Range Dir Section Subsections Elevation 953 ft.

118 22 W 24 DBCACD **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
185 ft.	185 ft.	08/03/1971

Drilling Method --

Well Address
101325 29TH AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY, SAND AND GRAVEL	BROWN		0	47
CEMENTED SAND	BROWN		47	65
DRY PACK GRAVEL	BROWN		65	71
DRY SAND	BROWN		71	78
DRY PACK SAND GROUND	BROWN		78	110
SAND GRAVEL	RED		110	136
CLAY SANDY GRAVEL	GREEN		136	150
SAND	GRAY		150	179
GRAVEL	GRAY		179	185

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to 181 ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES **Make** JOHNSON **Type**

Diameter	Slot/Gauze	Length	Set Between
4	18	0	181 ft. and 185 ft.

Static Water Level
70 ft. from Land surface Date Measured 08/03/1971

PUMPING LEVEL (below land surface)
75 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 467771 Y: 4984369

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name RED JACKET Model number __ HP 0.75 Volts
Length of drop Pipe 105 ft. Capacity _ g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand-gray
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

Well Contractor Certification

Renner E.H. & Sons	27015	
License Business Name	Lic. Or Reg. No.	Name of Driller

Minnesota Unique Well No.

204367

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name EARL WYATT

Township Range Dir Section Subsections Elevation: 957 ft. (7.5 minute topographic map (+/- 5 feet))

118 22 W 24 DBCBAB Elevation Method

Well Address
2935 QUAKER LA
PLYMOUTH MN

Geological Material	Color	Hardness	From	To
DRIFT			0	78

Well Depth	Depth Completed	Date Well Completed
78 ft.	78 ft.	

Drilling Method

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
60 ft. from Land surface Date Measured

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 467704 Y: 4984439

Grouting Information Well Grouted? ☐ Yes ☐ No

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Gess Henry Well Co. 27008
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

County Well Index Online Report **204367** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204368

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name HOWARD SHOLL

Township Range Dir Section Subsections Elevation 955 ft.

118 22 W 24 DCADAB Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
181 ft.	181 ft.	06/29/1963

Drilling Method --

Well Address
2735 NATHAN LA
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
PIT			0	8
CLAY			8	31
SANDY CLAY			31	131
HARDPAN			131	146
SAND WITH LAYERS OF CLAY			146	161
SAND AND SHALE			161	171
SAND			171	181

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES Make 27 Type

Diameter	Slot/Gauze	Length	Set Between
3	10	0	0 ft. and ft.

Static Water Level
75 ft. from Land surface Date Measured 06/29/1963

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468002 Y: 4984143

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

Well Contractor Certification
Associated Well Co. 27259
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report

204368

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204369

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name EVERETT SCHUBERT

Township Range Dir Section Subsections Elevation 930 ft. 7.5 minute topographic map (+/- 5 feet)

118 22 W 24 DCDCCC Elevation Method

Well Depth	Depth Completed	Date Well Completed
72 ft.	72 ft.	12/02/1968

Drilling Method --

Well Address
10030 26TH AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY	YELLOW		0	24
CLAY	BLUE		24	46
HARDPAN	BLACK		46	53
SAND GRAVEL			53	72

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES Make 948 Type

Diameter	Slot/Gauze	Length	Set Between
0	10	0	0 ft. and ft.

Static Water Level
41 ft. from Land surface Date Measured 12/02/1968

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 30 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 467865 Y: 4983895

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name GOULDS Model number __ HP 0.5 Volts
Length of drop Pipe 55 ft. Capacity _g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

Well Contractor Certification

Mork Well Co.	02133	
License Business Name	Lic. Or Reg. No.	Name of Driller

Minnesota Unique Well No.

204370

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name ROGER ERICKSON

Township Range Dir Section Subsections Elevation 938 ft.

118 22 W 24 DDABAB **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
201 ft.	201 ft.	06/16/1969

Drilling Method –

Well Address
9610 28TH AV N
PLYMOUTH MN

Drilling Fluid –

Well Hydrofractured? ☐ Yes ☐ No From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY			0	8
ROCKS AND CLAY			8	13
ROCKS AND CLAY			13	30
HARDPAN			30	56
MUDDY SAND AND GRAVEL			56	72
HARDPAN			72	94
MUDDY GRAVEL			94	104
ROCK LEDGE			104	105
MUDDY GRAVEL			105	150
ROCKS AND GRAVEL			150	154
MUDDY GRAVEL			154	189
GRAVEL AND WATER			189	201

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES **Make** 948 **Type** stainless steel

Diameter	Slot/Gauze	Length	Set Between
0	18	0	0 ft. and ft.

Static Water Level
60 ft. from Land surface Date Measured 06/16/1969

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 35 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468314 Y: 4984252

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name GOULD Model number ___ HP 0.75 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Unconf. Aquife
Depth to Bedrock ft.

Well Contractor Certification

Mork Well Co.	02133	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report

204370

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204371

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name WILLARD OMAN

Township Range Dir Section Subsections Elevation 950 ft.

118 22 W 24 DDBBCC **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
170 ft.	170 ft.	11/03/1971

Drilling Method --

Well Address
2740 NATHAN LA
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
SAND, GRAVEL AND CLAY	BROWN		0	45
CLAY	BROWN		45	96
CLAY AND SAND	RED		96	151
WATERBEARING GRAVEL, SAND			151	170

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES **Make** 948 **Type** stainless steel

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
80 ft. from Land surface Date Measured 11/03/1971

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 25 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468061 Y: 4984158

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name AERMOTOR Model number ___ HP 0.5 Volts
Length of drop Pipe 90 ft. Capacity _g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Mork Well Co. 02133
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

County Well Index Online Report

204371

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204372

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name LES ROSKOP

Township Range Dir Section Subsections Elevation 930 ft.

118 22 W 24 DDCDCC **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
87 ft.	87 ft.	02/11/1969

Drilling Method --

Well Address
9730 26TH AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
PIT			0	8
HARDPAN GRAY	GRAY		8	28
ROCKS CLAY GRAY	GRAY		28	42
MUDDY SAND GRAY	GRAY		42	70
SAND GRAY-WATER			70	87

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES **Make** 948 **Type**

Diameter	Slot/Gauze	Length	Set Between
0	10	6	0 ft. and ft.

Static Water Level
50 ft. from Land surface Date Measured 02/11/1969

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 30 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
UNKNOWN IF CASED

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468152 Y: 4983889

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name AERMOTOR Model number __ HP 0.5 Volts
Length of drop Pipe 60 ft. Capacity __ g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Unconf. Aquife
Depth to Bedrock ft.

Well Contractor Certification

Mork Well Co.	02133	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report

204372

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204373

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name JAMES KISTLER

Township Range Dir Section Subsections Elevation 925 ft.

118 22 W 24 DDCDCD **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
173 ft.	173 ft.	08/16/1966

Drilling Method --

Well Address
9765 27TH AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY AND BOULDERS	YELLOW		0	40
SANDY CLAY	BROWN		40	50
DIRTY SAND	BROWN		50	60
PACK GRAVEL	BROWN		60	100
MUCK	BROWN		100	129
GRAVEL	BROWN		129	131
CLAY	GRAY		131	150
PACK GRAVEL	BROWN		150	168
WATER GRAVEL	LIGHT		168	173

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to 170 ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES **Make** JOHNSON **Type** stainless steel

Diameter	Slot/Gauze	Length	Set Between
4	25	4	170 ft. and 173 ft.

Static Water Level
65 ft. from Land surface Date Measured 08/16/1966

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
SCREEN HAS K PACKER. PUMP REBUILT.

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468146 Y: 4984172

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name MEYERS Model number SA75A HP 0.75 Volts
Length of drop Pipe 75 ft. Capacity _g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

Well Contractor Certification

Renner E.H. & Sons	27015	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report

204373

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204375

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name ALLEN EUGENE CARLSON

Township Range Dir Section Subsections Elevation 925 ft.

118 22 W 24 DDDABB Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
93 ft.	93 ft.	

Drilling Method --

Well Address
9530 27TH AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
PIT			0	8
CLAY			8	40
SAND			40	65
HARDPAN			65	86
WATER SAND			86	93

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES Make JOHNSON Type

Diameter	Slot/Gauze	Length	Set Between
2	18	0	0 ft. and ft.

Static Water Level
50 ft. from Land surface Date Measured

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 25 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
NO DATES GIVEN.

Located by: Minnesota Geological Survey Method: Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A Input Date: 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468339 Y: 4984044

Grouting Information Well Grouted? ☐ Yes ☐ No

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

Well Contractor Certification
Associated Well Co. 27259
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report **204375** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204376

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name CARL HUTTEN

Township Range Dir Section Subsections Elevation 925 ft.

118 22 W 25 AAABCD **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
161 ft.	161 ft.	05/20/1967

Drilling Method --

Well Address
2520 LANCASTER LA
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY	BROWN		0	40
CLAY GRAVEL	RED		40	135
SANDSTONE	WHITE		135	161

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES **Make** JOHNSON **Type** stainless steel

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
50 ft. from Land surface Date Measured 05/20/1967

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468278 Y: 4983762

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name Model number __ HP 0.75 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Stodola Don Well Co. 27172
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock St.Peter
Last Strat St.Peter
Aquifer
Depth to Bedrock 135 ft.

County Well Index Online Report

204376

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204378

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name PERNA

Township Range Dir Section Subsections Elevation 905 ft. 7.5 minute topographic map (+/- 5 feet)

118 22 W 25 AAACCA Elevation Method

Well Depth	Depth Completed	Date Well Completed
115 ft.	115 ft.	09/17/1964

Drilling Method --

Well Address
9650 25TH AV N
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
DRIFT			0	115

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen YES Make 2048 Type

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
25 ft. from Land surface Date Measured 09/17/1964

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468276 Y: 4983684

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0_ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Unknown deposit type
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

Well Contractor Certification
Gess Henry Well Co. 27008
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report **204378** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204379

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name RONALD C. JOHNSON

Township Range Dir Section Subsections Elevation: 905 ft. 7.5 minute topographic map (+/- 5 feet)

118 22 W 25 AADCAD Elevation Method

Well Depth	Depth Completed	Date Well Completed
139 ft.	139 ft.	03/10/1967

Drilling Method --

Well Address
9605 24TH AV N
PLYMOUTH MN 55427

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY	YELLOW		0	29
FINE SAND	BROWN		29	51
GRAVEL	BROWN		51	56
SANDY CLAY	RED		56	74
CLAY	BLUE		74	96
MUDDY SAND	YELLOW		96	130
SANDROCK AND GRAVEL	YELLOW		130	139

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to 135 ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make JOHNSON 746 Type stainless steel

Diameter	Slot/Gauze	Length	Set Between
3	10	5	0 ft. and ft.

Static Water Level
22 ft. from Land surface Date Measured 03/10/1967

PUMPING LEVEL (below land surface)
22 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468335 Y: 4983524

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name AERMOTOR Model number S50LXPE 110
HP 0.5 Volts
Length of drop Pipe 42 ft. Capacity 11 g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification
Renner E.H. & Sons 27015
License Business Name Lic. Or Reg. No. Name of Driller

First Bedrock
Last Strat Sand-brown
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

County Well Index Online Report

204379

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

204413

County Hennepin
Quad Hopkins
Quad ID 104B

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name WALTER WOODS
Township Range Dir Section Subsections Elevation 895 ft.
118 22 W 25 DADABA Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
53 ft.	53 ft.	05/16/1966

Drilling Method --

Well Address
9530 17TH AV N
PLYMOUTJ MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
CLAY			0	32
HARDPAN			32	41
SAND, GRAVEL			41	53

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make 2054 Type

Diameter	Slot/Gauze	Length	Set Between
2	60	5.8	0 ft. and ft.

Static Water Level
17 ft. from Land surface Date Measured 05/16/1966

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 35 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468336 Y: 4982864

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name MCDONALD Model number __ HP 1.8 Volts
Length of drop Pipe 31 ft. Capacity __ g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock
Last Strat Sand
Aquifer Quat. Buried Artes. Aquifer
Depth to Bedrock ft.

Well Contractor Certification
Mork Well Co. 02133
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report

204413

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

206858

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 957 ft.

118 21 W 30 BCCADB Elevation Method 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
109 ft.	109 ft.	04/27/1960

Drilling Method --

Well Address
1916 INDEPENDANCE AV N
GOLDEN VALLEY MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use

Geological Material	Color	Hardness	From	To
CLAY	RED		0	20
SAND	RED		20	65
CLAY HARDPAN	BLUE		65	95
SAND + WATER	GRAY		95	109

Casing Type Joint No Information Drive Shoe? ☐ Yes ☐ No Above/Below 0 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to 105 ft.	lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make JOHNSON Type

Diameter	Slot/Gauze	Length	Set Between
1.3	10	0	0 ft. and ft.

Static Water Level
65 ft. from Land surface Date Measured 04/27/1960

PUMPING LEVEL (below land surface)
0 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A
Input Date: 01/01/1990
System: *UTM - Nad83, Zone15, Meters*
X: 468566 Y: 4983196

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0_ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

First Bedrock
Last Strat Sand-gray
Aquifer Quaternary Undiff.
Depth to Bedrock ft.

License Business Name | Lic. Or Reg. No. | Name of Driller

Minnesota Unique Well No.

206862

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 09/11/1991
Received Date

Well Name

Township Range Dir Section Subsections Elevation 945 ft.

118 22 W 25 ADADBA **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
141 ft.	141 ft.	04/04/1961

Drilling Method --

Well Address
2010 LANCASTER
PLYMOUTH MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Geological Material	Color	Hardness	From	To
GRAVEL AND CLAY	BROWN		0	32
CLAY	BROWN		32	55
CLAY AND GRAVEL	BROWN		55	105
GRAVEL	BROWN		105	131
LIMEROCK	BROWN		131	141

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 **ft.**

Casing Diameter	Weight	Hole Diameter
3 in. to 131 ft.	lbs./ft.	

Open Hole from 131 ft. to 141 ft.

Screen NO **Make** **Type**

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
65 ft. from Land surface Date Measured 04/04/1961

PUMPING LEVEL (below land surface)
70 ft. after hrs. pumping 20 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)

Unique Number Verification: N/A **Input Date:** 01/01/1990

System: *UTM - Nad83, Zone15, Meters* X: 468347 Y: 4983333

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP 0 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock Platteville
Last Strat Platteville
Aquifer Platteville
Depth to Bedrock 131 **ft.**

Well Contractor Certification
Dependable Well Co. 27143
License Business Name Lic. Or Reg. No. Name of Driller

County Well Index Online Report **206862** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

239757

County Hennepin
Quad Osseo
Quad ID 120C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 07/05/1991
Update Date 11/28/2006
Received Date

Well Name HINITZ, MARCIA

Township Range Dir Section Subsections Elevation ft.
118 21 W 19 CCA Elevation Method

Well Address
2880 VALLE VISTA RD
CRYSTAL MN 55427

Geological Material	Color	Hardness	From	To
GRAVEL	BROWN		0	26
FINE SAND	BROWN		26	31
FINE SAND	RED		31	58
FINE SAND	DARK		58	81
GRAVEL	DARK		81	96
MUD & SAND	BROWN		96	114
SOFT ST. PETER	WHITE		114	236
SHALE	YELLOW		236	238
SHALE	RED		238	249
ST. PETER	WHITE		249	249

REMARKS
WELL LOG TAKEN FROM ARTHUR P. HARTERT 8925 31ST AVE N.

First Bedrock
Last Strat
Aquifer
Depth to Bedrock ft.

Well Depth	Depth Completed	Date Well Completed
249 ft.	58 ft.	05/29/1986

Drilling Method Non-specified Rotary

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Domestic

Casing Type Steel (black or low carbon) Joint Threaded Drive Shoe? ☑
Yes ☐ No Above/Below -5 ft.

Casing Diameter	Weight	Hole Diameter
3 in. to 53 ft.	7.6 lbs./ft.	

Open Hole from ft. to ft.

Screen YES Make Type

Diameter	Slot/Gauze	Length	Set Between
2			ft. and ft.

Static Water Level
35 ft. from Land surface Date Measured 05/29/1986

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☑ Yes ☐ No
Grout Material: Neat Cement from to 56 ft. 3 bags

Nearest Known Source of Contamination
75 feet S direction Sewer type
Well disinfected upon completion? ☑ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name PULLED Model number HP 0.5 Volts 230
Length of drop Pipe 42 ft. Capacity 10 g.p.m Type Jet Material Galvanized

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

EH Renner and Sons, Inc.	1431	HEISEL/LUDENS
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report **239757** Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

528995

County Hennepin
Quad
Quad ID

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 04/24/1995
Update Date 05/06/2005
Received Date

Well Name

Township Range Dir Section Subsections Elevation ft.
118 21 W 19 Elevation Method

Well Address
2731 HILLSBORO AV N
NEW HOPE MN 55427

Geological Material	Color	Hardness	From	To

Well Depth	Depth Completed	Date Well Completed
21 ft.	15 ft.	06/04/1993

Drilling Method

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Abandoned Status Sealed

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
6 ft. from Land surface Date Measured 06/04/1993

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
WELL SEALED 10-02-2001 BY 27058
ORIGINAL USE MW - MONITOR WELL

Grouting Information Well Grouted? ☑ Yes ☐ No

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

Thein Well Co.	34050	
License Business Name	Lic. Or Reg. No.	Name of Driller

First Bedrock
Last Strat
Aquifer
Depth to Bedrock ft.

County Well Index Online Report

528995

Printed 7/16/2010
HE-01205-07

Minnesota Unique Well No.

528996

County Hennepin
Quad
Quad ID

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 04/24/1995
Update Date 05/06/2005
Received Date

Well Name

Township Range Dir Section Subsections Elevation ft.
118 21 W 19 Elevation Method

Well Address
2731 HILLSBORO AV N
NEW HOPE MN 55427

Geological Material	Color	Hardness	From	To

Well Depth	Depth Completed	Date Well Completed
16 ft.	15 ft.	06/04/1993

Drilling Method

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Abandoned **Status** Sealed

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
6 ft. from Land surface Date Measured 06/04/1993

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
WELL SEALED 10-02-2001 BY 27058
ORIGINAL USE MW - MONITOR WELL

Grouting Information Well Grouted? ☑ Yes ☐ No

Nearest Known Source of Contamination
_feet _direction _type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

Thein Well Co.	34050	
License Business Name	Lic. Or Reg. No.	Name of Driller

First Bedrock
Last Strat
Aquifer
Depth to Bedrock ft.

County Well Index Online Report | **528996** | Printed 7/16/2010 HE-01205-07

Minnesota Unique Well No.

528997

County Hennepin
Quad
Quad ID

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 04/24/1995
Update Date 05/06/2005
Received Date

Well Name

Township Range Dir Section Subsections Elevation ft.
118 21 W 19 Elevation Method

Well Depth: 16 ft. | Depth Completed: 14 ft. | Date Well Completed: 06/04/1993

Drilling Method

Well Address
2731 HILLSBORO AV N
NEW HOPE MN 55427

Drilling Fluid

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Abandoned Status Sealed

Geological Material	Color	Hardness	From	To

Casing Type Joint Drive Shoe? ☐ Yes ☐ No Above/Below ft.

Casing Diameter	Weight	Hole Diameter

Open Hole from ft. to ft.

Screen

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
6 ft. from Land surface Date Measured 06/04/1993

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
WELL SEALED 10-02-2001 BY 27058
ORIGINAL USE MW - MONITOR WELL

Grouting Information Well Grouted? ☑ Yes ☐ No

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number ___ HP _ Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐
Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Well Contractor Certification

First Bedrock
Last Strat
Aquifer
Depth to Bedrock ft.

Thein Well Co. | 34050
License Business Name | Lic. Or Reg. No. | Name of Driller

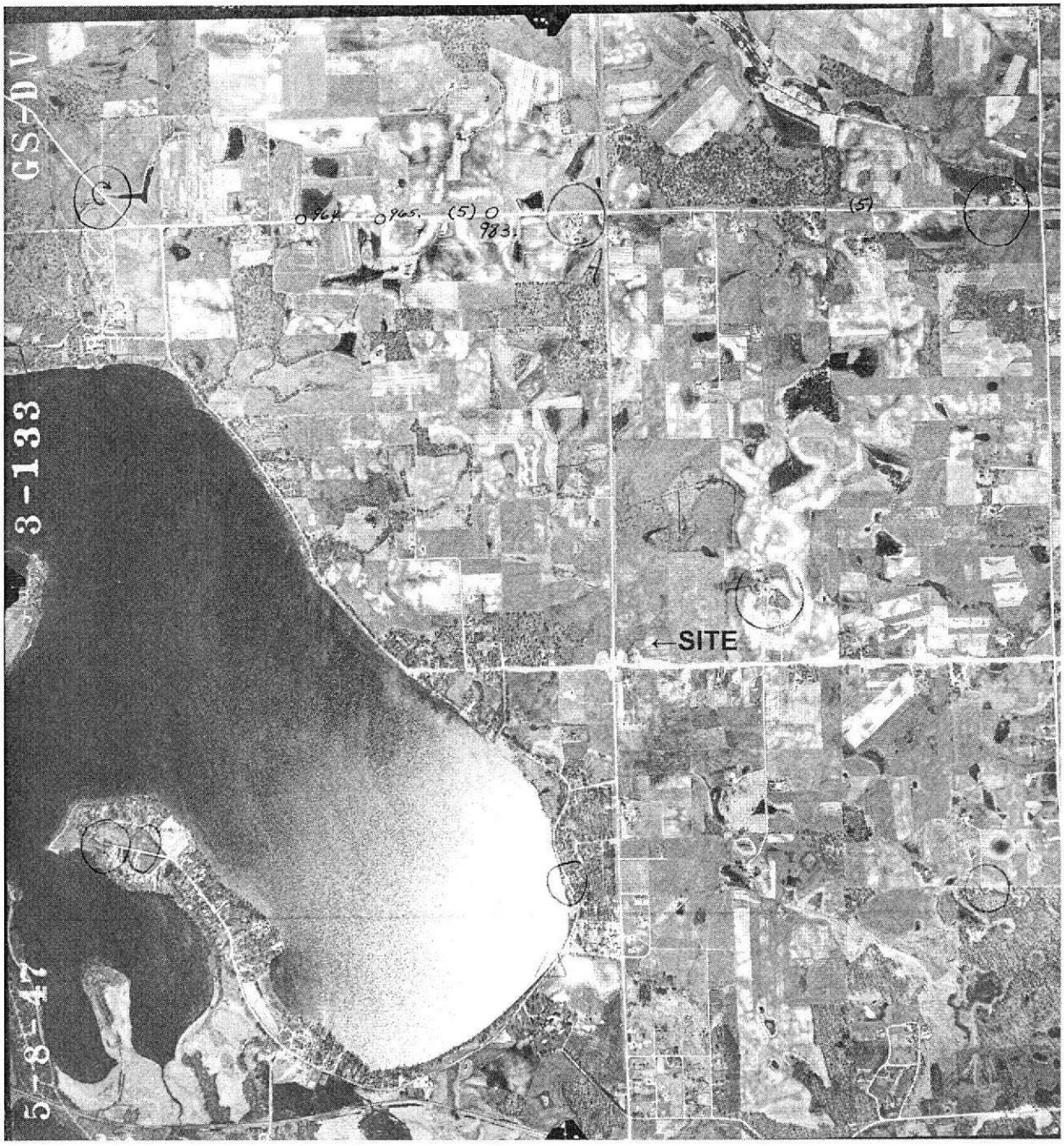
County Well Index Online Report | **528997** | Printed 7/16/2010 HE-01205-07

APPENDIX L

NOT APPLICABLE

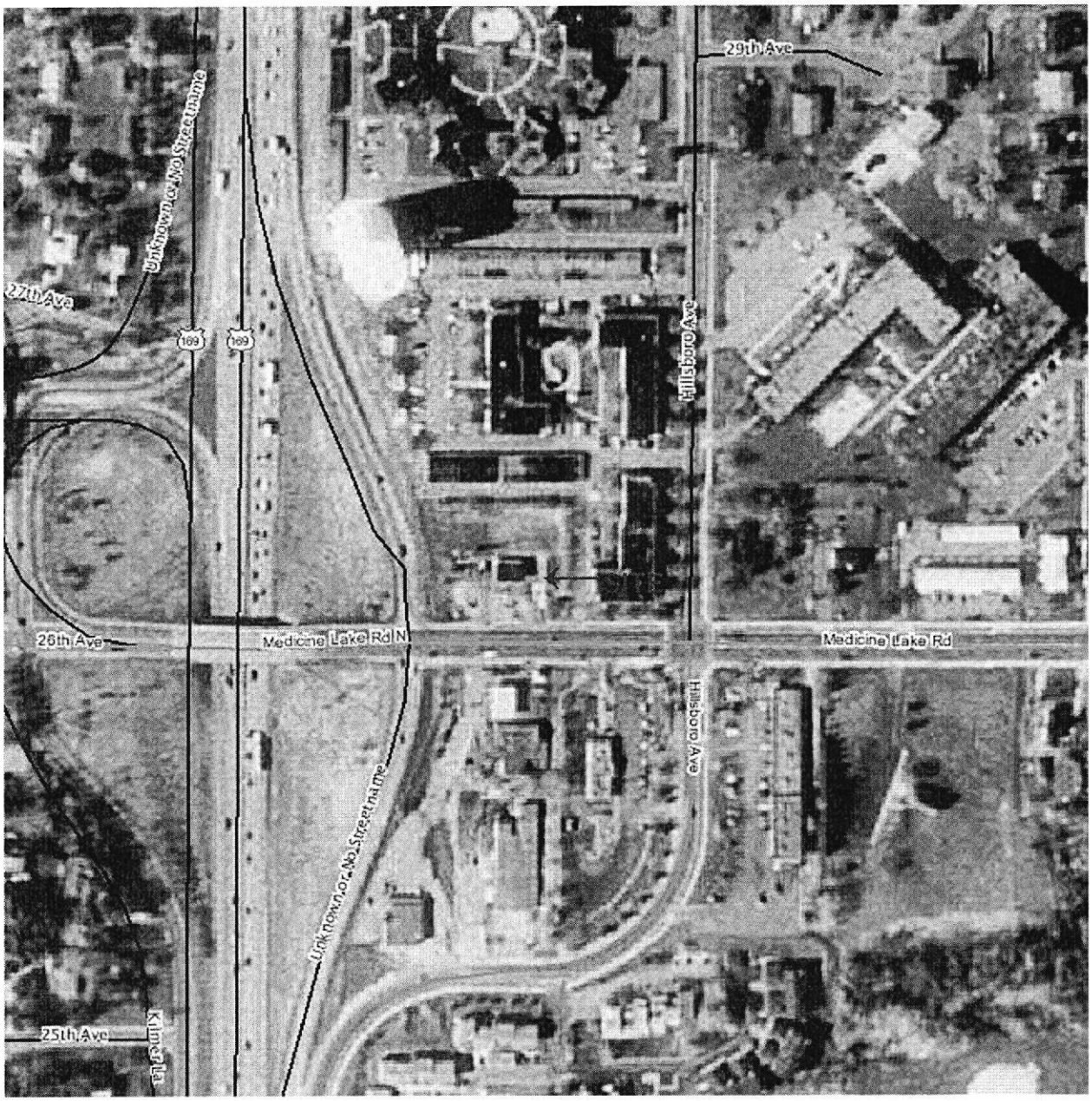
APPENDIX M

NOT APPLICABLE



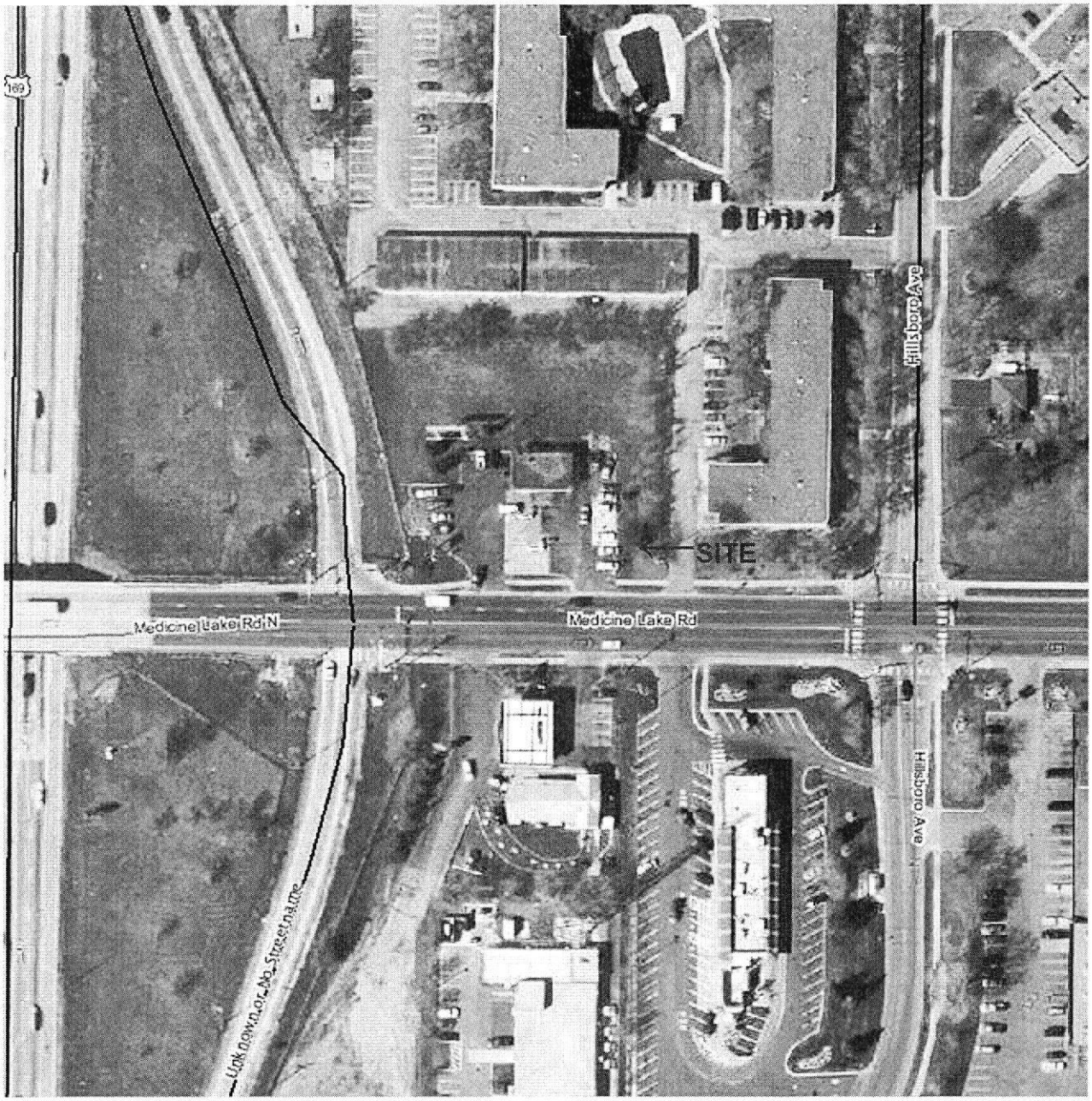
1947 Aerial Photograph

↑ NORTH



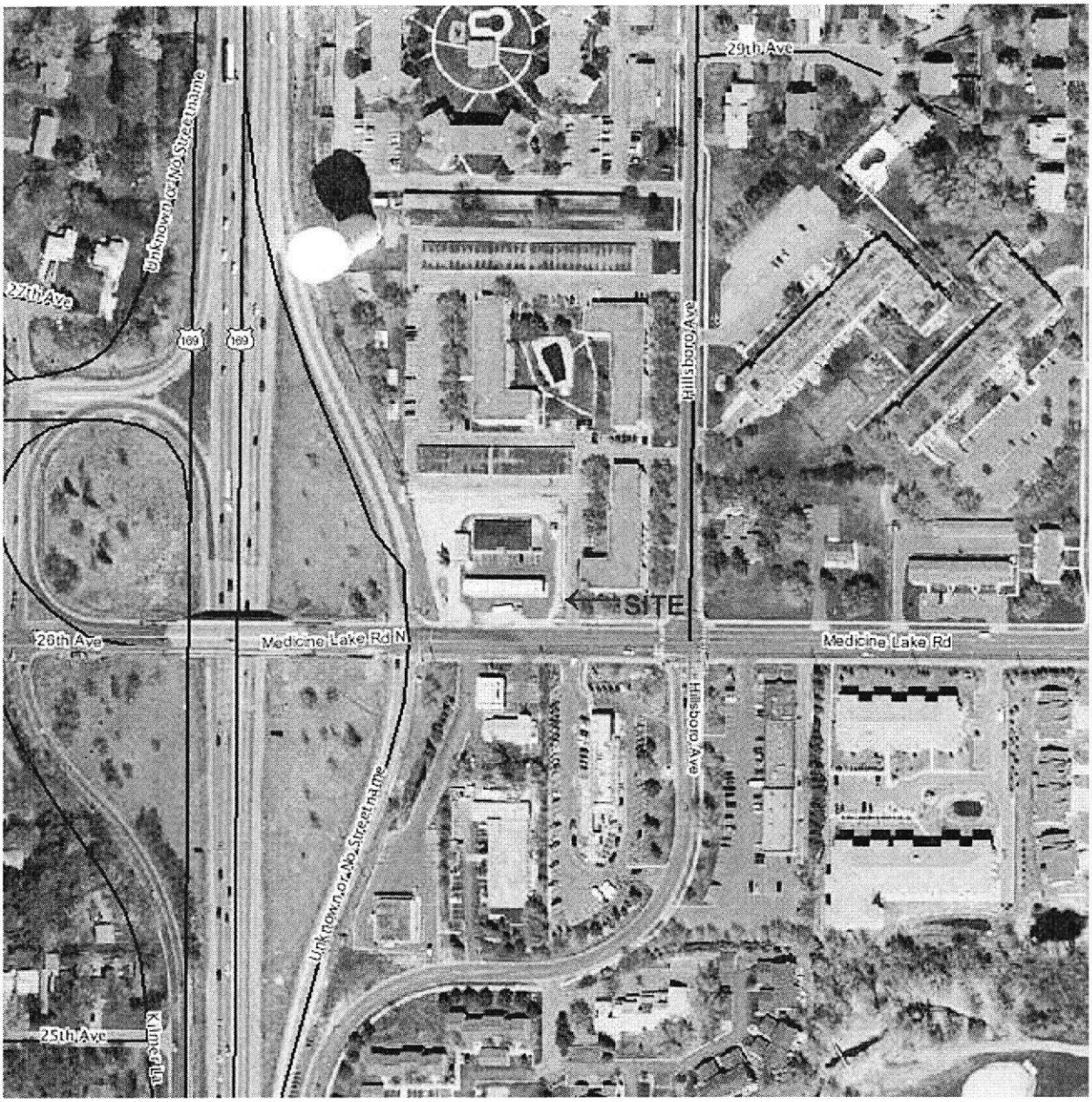
1991 Aerial Photograph

↑ NORTH



2004 Aerial Photograph

↑ NORTH



2006 Aerial Photograph

↑ NORTH