

SCANNED

ATTACHMENT A  
DISCLAIMERS  
Seward Commons Redevelopment Site  
PIN 3602924220117  
MPCA Project Number VP22791 and PB3661

1. Reservation of Authorities

The MPCA Commissioner reserves the authority to take any appropriate actions with respect to any release, threatened release, or other conditions at the Site. The MPCA Commissioner also reserves the authority to take such action if the voluntary party does not proceed in the manner described in this letter or if actions taken or omitted by the voluntary party with respect to the Site contribute to any release or threatened release, or create an imminent and substantial danger to public health and welfare.

2. No MPCA Assumption of Liability

The MPCA, its Commissioner and staff do not assume any liability for any release, threatened release or other conditions at the Site or for any actions taken or omitted by the voluntary party with regard to the release, threatened release, or other conditions at the Site, whether the actions taken or omitted are in accordance with this letter or otherwise.

3. Letter Based on Current Information

All statements, conclusions and representations in this letter are based upon information known to the MPCA Commissioner and staff at the time this letter was issued. The MPCA Commissioner and staff reserve the authority to modify or rescind any such statement, conclusion or representation and to take any appropriate action under his authority if the MPCA Commissioner or staff acquires information after issuance of this letter that provides a basis for such modification or action.

4. Disclaimer Regarding Use or Development of the Property

The MPCA, its Commissioner and staff do not warrant that the Site is suitable or appropriate for any particular use.

5. Disclaimer Regarding Investigative or Response Action at the Property

Nothing in this letter is intended to authorize any response action under Minn. Stat. § 115B.17, subd. 12.



# Minnesota Pollution Control Agency

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SCANNED

July 16, 2013

Mr. Brian Miller  
Seward Commons LLC  
2619 East Franklin Avenue  
Minneapolis, Minnesota 55406

RE: Seward Commons Redevelopment Site, 2200 Snelling Avenue, Minneapolis  
MPCA Project Number VP22791 and PB3661  
PIN 3602924220117  
Response Action Plan Amendment Approval

Dear Mr. Miller:

The Minnesota Pollution Control Agency (MPCA) staff in the Voluntary Investigation and Cleanup (VIC) Unit and Petroleum Brownfields (PB) Program has reviewed the "Amendment to the Response Action Plan/Construction Contingency Plan," (RAP Amendment) prepared by Liesch Associates, Inc. (Liesch), dated June 21, 2013. The RAP Amendment was submitted for the Seward Commons Site at the address referenced above, and specifically the 0.62-acre area with common address of 2304 Snelling Avenue and PIN referenced above (the Site).

The RAP Amendment is a letter which describes the need to over-excavate along the west boundary of the Site. The Site excavation work will allow for temporary timber shoring to be placed approximately 4 feet west and north of the Site and Property line, a combined distance of approximately 170 linear feet in the Metro Transit right-of-way. The RAP Amendment describes the provision for Seward Commons LLC to be given a construction easement for the excavation work that will be conducted in accordance with the MPCA RAP approval issued on October 26, 2011.

Based upon review of the Site documents, the RAP Amendment is hereby approved. All other conditions or RAP Modifications issued in the October 26, 2011 RAP approval, remain.

This letter is subject to the disclaimers listed in Attachment A. If you have any questions or comments please contact Ed Olson at 651-757-2627, Mark Koplitz at 651-757-2502 or Mike Connolly, VIC/PB Hydrogeologist at 651-757-2287.

Sincerely,

Edward P. Olson, CEP  
Project Manager  
Remediation Division  
EO:MK:jmp

Mark Koplitz  
Project Leader  
Remediation Division

Attachment

cc: Aaron Benker, Liesch Associates Inc.  
Tom Frame, City of Minneapolis  
Claudius Toussaint, Metro Transit  
David Jaeger, Hennepin County



## Minnesota Pollution Control Agency

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SCANNED

October 25, 2013

Mr. Brian Miller  
Seward Commons LLC  
2619 East Franklin Avenue  
Minneapolis, MN 55406

RE: Approval of Response Action Plan and Construction Contingency Plan  
Site: Seward Commons Redevelopment - Phase 3 Development  
2200-2218 Snelling Avenue, Minneapolis  
MPCA VIC Project Number: VP22791  
MPCA PB Site ID#: PB3661  
PIN: 3602924220045, 3602924220046, 3602924220047, 3602924220048 and 3602924220049

Dear Mr. Miller:

The Minnesota Pollution Control Agency (MPCA) staff in the Voluntary Investigation and Cleanup (VIC) Program and the Petroleum Brownfields Program has reviewed the "Response Action Plan and Construction Contingency Plan" (RAP/CCP) dated September 2013. The RAP/CCP was prepared and submitted on your behalf by Wenck Associates, Inc. (Wenck) for the Seward Commons Redevelopment site - Phase 3 Development area located at the address referenced above (the Site).

The 1.01-acre Site is comprised of 5 parcels and a portion of the adjoining intersection of 22<sup>nd</sup> Street and Snelling Avenue. The Site is part of the former Bystrom Brothers industry property, where for more than sixty years metal turning and machine products manufacturing had taken place. Most recently, the former Bystrom buildings have been used by small business tenants until Site redevelopment.

Several environmental investigations have been conducted at the Site beginning in 2006, including the completion of soil borings and groundwater monitoring wells. The most recent investigation was conducted during February 2012. On-site soil, soil gas and groundwater samples were collected and analyzed for Volatile Organic Compounds (VOCs), Polynuclear Aromatic Hydrocarbons (PAHs), Resource Conservation and Recovery Act metals, Diesel Range Organic (DRO) compounds and Gasoline Range Organic (GRO) compounds. Contaminant detections included VOCs, PAHs, metals, and petroleum compounds in the soil, soil gas and groundwater at concentrations exceeding the MPCA soil reference values (SRVs) for residential land use, the MPCA residential intrusion screening values and the Health Risk Limits established by the Minnesota Department of Health, respectively.

VIC staff understands that Seward Commons, LLC intends to raze the Site in order to complete remediation and redevelopment of the Site. All Site fill soils and native soils to a depth of up to 12 feet below grade (fbg) will be removed for new construction. Contaminated soil will be managed as follows. The majority of soil in the 0-6 fbg zone, estimated at 17,000 tons, is expected to exhibit contaminant concentrations exceeding MPCA's Tier I soil leaching values, residential SRVs and/or DRO/GRO PID screening limit of 10 parts per million, and will be excavated for transport to a Subtitle D Landfill.

SCANNED

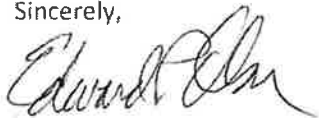
Mr. Brian Miller  
Page 2  
October 25, 2013

Excavated soils found to exhibit contaminant concentrations less than the above criteria may be reused on-site or managed as beneficial fill at an off-site commercial development project. Cleanup confirmation sampling will be completed in accordance with established MPCA remediation guidance.

Based upon review of the Site documents, the RAP/CCP is hereby approved with the modifications provided in Attachment B. This RAP/CCP approval is contingent on the Applicant obtaining all other MPCA, state, federal and local government permit requirements.

This letter is subject to the disclaimers listed in Attachment A. If you have any questions or comments, please contact Ed Olson, Project Manager, at 651-757-2627 or Mark Koplitz, Project Leader, at 651-757-2502.

Sincerely,



Edward P. Olson, CEP  
Project Manager  
Site Remediation/Redevelopment Section  
Remediation Division



Mark Koplitz  
Project Leader  
Petroleum Remediation/Redevelopment Section  
Remediation Division

EO:MK:jmp

Attachments

cc: Tom Frame, City of Minneapolis  
John Evans, Hennepin County  
Aaron Benker, Wenck Associates, Inc.

**ATTACHMENT A  
DISCLAIMERS**

Seward Commons Redevelopment  
MPCA Project Number VP22791  
MPCA PB Site ID#: PB3661

PIN: 3602924220045, 3602924220046, 3602924220047, 3602924220048 and 3602924220049

**1. Reservation of Authorities**

The Minnesota Pollution Control Agency (MPCA) Commissioner reserves the authority to take any appropriate actions with respect to any release, threatened release, or other conditions at the Site. The MPCA Commissioner also reserves the authority to take such actions if the voluntary party does not proceed in the manner described in this letter or if actions taken or omitted by the voluntary party with respect to the Site contribute to any release or threatened release, or create an imminent and substantial danger to public health and welfare.

**2. No MPCA Assumption of Liability**

The MPCA, its Commissioner and staff do not assume any liability for any release, threatened release or other conditions at the Site or for any actions taken or omitted by the voluntary party with regard to the release, threatened release, or other conditions at the Site, whether the actions taken or omitted are in accordance with this letter or otherwise.

**3. Letter Based on Current Information**

All statements, conclusions and representations in this letter are based upon information known to the MPCA Commissioner and staff at the time this letter was issued. The MPCA Commissioner and staff reserve the authority to modify or rescind any such statement, conclusion or representation and to take any appropriate action under his authority if the MPCA Commissioner or staff acquires information after issuance of this letter that provides a basis for such modification or action.

**4. Disclaimer Regarding Use or Development of the Property**

The MPCA, its Commissioner and staff do not warrant that the Site is suitable or appropriate for any particular use.

**5. Disclaimer Regarding Investigative or Response Action at the Property**

Nothing in this letter is intended to authorize any response action under Minn. Stat. § 115B.17, subd. 12.

**ATTACHMENT B**  
**RAP/CCP MODIFICATIONS**

Seward Commons Redevelopment

MPCA Project Number VP22791

MPCA PB Site ID#: PB3661

PIN: 3602924220045, 3602924220046, 3602924220047, 3602924220048 and 3602924220049

- Sec. 4.2 SOIL MONITORING AND SOIL SCREENING ACTION LIMITS - and Sec. 5.7.2 Soil Segregation and Sampling - Any excavated soil that is proposed for use as unregulated fill shall be stockpiled in containment (using under liner, cover, and berms) for determining disposition. The stockpiled soil shall be sampled according to the MPCA's risk-based site evaluation guidance and analyzed to determine compliance with MPCA's guidance document "Best Management Practices for the Off-Site Reuse of Unregulated Fill" (c-rem1-01).
- Sec. 4.2.3 ASBESTOS - and Sec. 4.2.4 UNDERGROUND STORAGE TANKS - and Sec. 5.5 SITE HAZARD EVALUATION ACTIVITIES - Notifications for any previously unidentified release, asbestos, buried container or tank, and/or disposal dry well discovery shall include notifying the MN Duty Officer and the MPCA staff.
- Institutional Controls - an additional institutional control may be needed to complete response action implementation. For example, the institutional control filed in April 2007 does not include risk management for the vapor intrusion pathway.
- A Response Action Implementation Schedule for project timeline shall be submitted 30 days in advance of construction.
- Sec. 4.1 Vapor Mitigation - A RAP/CCP Addendum shall be provided 30 days in advance of construction with response action details to ensure complete control of the vapor intrusion pathway.
- Spatial data locations shall be provided for essential Site field locations (i.e. residual soil contamination, and confirmation sample locations) using the MPCA's Spatial Reporting Spreadsheet (located at: <http://www.pca.state.mn.us/publications/c-s4-04.xls>).



# Minnesota Pollution Control Agency

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SCANNED

January 16, 2013

Ms. Mary Novak  
Project Pride for Living, Inc.  
1035 E Franklin Avenue  
Minneapolis, MN 55404

RE: Completion of Voluntary Response Actions for Petroleum Contamination  
Site: Seward Phase I Redevelopment Site, 2312 Snelling Avenue, Minneapolis  
Site ID#: PB3661

Dear Ms. Novak:

The Minnesota Pollution Control Agency (MPCA) Petroleum Brownfields Program (PBP) staff has reviewed the following documents describing your management of petroleum impacted soils as part of voluntary cleanup work completed at the above-referenced site:

- "Response Action Plan Implementation Report" dated November 30, 2012, prepared by Liesch Associates, Inc.

Based on the information provided, MPCA staff have concluded that soils were managed as proposed in the plan approved by MPCA PBP staff. Thank you for your participation in the Petroleum Brownfields Program. If you have any questions regarding this letter, please call Mark Koplitz at 651-757-2502.

Sincerely,

Mark Koplitz  
Project Leader  
Petroleum Remediation Section  
Remediation Division

Bassou Oulgout  
Hydrogeologist  
Petroleum Remediation Section  
Remediation Division

MEK:BO:tf

cc: Aaron Benker, Liesch Associates, Inc., Plymouth



October 28, 2011

Mr. Brian Miller  
Seward Commons, LLC  
2619 E Franklin Avenue  
Minneapolis, MN 55406

RE: Approval of Voluntary Response Actions for Petroleum Contamination  
Site: Seward Commons Redevelopment Site, Phase 2 Redevelopment Area, 2200 Snelling Avenue,  
Minneapolis  
Site ID#: PB3661

Dear Mr. Miller:

The Minnesota Pollution Control Agency (MPCA) Petroleum Brownfields Program (PBP) staff has reviewed the following documents regarding your intent to investigate and manage all petroleum contaminated soils for the project/property located at 2200 Snelling Avenue, Minneapolis (the Site)

- Soil Assessment Report, Seward Commons Phase 2 Development, 2304 Snelling Avenue, Minneapolis, Minnesota, prepared by Braun Intertec and dated May 23, 2011 (Braun Soil Assessment)
- Amended RAP/CCP, Seward Commons Phase 2 Development, 2304 Snelling Avenue, Minneapolis, Minnesota, prepared by Liesch and dated September 23, 2011 and **Revised October 19, 2011** (Amended RAP)

Based on the information provided, MPCA PBP staff approves the above-referenced plan as proposed with the following comments and modifications:

1. Petroleum contaminated soils at or greater than 10 PPM (PID) encountered during the installation of underground utilities should be removed and properly managed as part of the voluntary plan. If contamination remains at or above 10 PPM a vapor barrier is required.
2. Any petroleum contaminated soils removed from the site must be treated or disposed of in a method approved by the MPCA. Petroleum contaminated soils transported to an approved landfill must be in compliance with all state and local permits. Please include all transportation and handling manifests for such soils within the final implementation report.
3. Imported fill materials shall be from a native source and/or free from debris, asbestos-containing material, visual staining, and chemical odor; no organic vapors above background, as measured by a photoionization detector (PID); for Petroleum-Impacted soil less than 10 mg/kg diesel range organics (DRO)/ gasoline range organics (GRO); and for contaminants detected in soil less the MPCA's Residential Soil Reference Values (SRVs) and Tier 1 soil leaching values (SLVs). Soils that do not meet this definition may not be used at the discretion of the contractor or other project personal.
4. The PBP does not provide review and/or approval for the discharge and/or treatment of ground water, storm water or any other dewatering action.
5. This DRAP approval is contingent on the Applicant obtaining all other MPCA, state, federal and local government permit requirements.



Mr. Brian Miller  
Page 2  
October 28, 2011

The MPCA requires a release site be investigated to define the extent and magnitude of petroleum contamination. If not yet completed, you will be required to take the steps necessary to investigate the release in accordance with MPCA guidance documents. This step includes a site investigation to define the full extent and magnitude of soil and/or ground water contamination caused by the release.

Approval assumes that an implementation report will be provided to the MPCA summarizing the voluntary cleanup work once completed. This report should include all necessary components as described in part V of MPCA Guidance Document 5-03, "*Petroleum Brownfields Program Voluntary Response Action Plan.*" If subsequently obtained information indicates that the proposed activities are inappropriate or inadequate, the MPCA may request modifications in the proposed work.

If the implementation report will not be submitted within six months of the date of this letter, please notify the MPCA Petroleum Brownfields Program project manager of the status of the development. The Applicant's failure to submit the implementation report or to inform the MPCA of the status of the development may result in the MPCA revoking the RAP approval or pursuing additional actions as appropriate to protect public health and the environment.

The responsibility for implementing the Petroleum Brownfields approved plan fully lies with the Applicant. This letter does not apply to other types of contamination, if present, at the site. Approval of this plan does not suggest that any of the costs incurred will be eligible for reimbursement from the PetroBoard. Please be advised that the determination made in this letter is subject to the disclaimers found in Attachment A. If you have any questions regarding this letter, please call Mark Koplitz at 651-757-2502 or staff hydrogeologist Bassou Oulgout at 651-757-2632.

Sincerely,

Mark Koplitz  
Project Leader  
Petroleum Remediation Section  
Remediation Division

Bassou Oulgout  
Hydrogeologist  
Petroleum Remediation Section  
Remediation Division

MEK:BO:tf

Enclosure

cc: Aaron Benker, Liesch Associates, Inc., Plymouth



Minnesota Pollution Control Agency

520 Lafayette Road North  
St. Paul, MN 55155-4194

# Voluntary Brownfields Programs Enrollment Application Form

## Voluntary Investigation and Cleanup (VIC) and Petroleum Brownfields Program (PBP)

APR 01 2009

Please complete this form to enroll in either or both of the Minnesota Pollution Control Agency (MPCA) Voluntary Brownfields Programs (*Voluntary Investigation & Cleanup [VIC] and Petroleum Brownfields Program [PBP]*), pursuant to Minn. Stat. § 115B.17, subd. 14 (or the Land Recycling Act of 1992, as amended) and Minn. Stat. § 115C.03, subd. 9. For questions regarding the VIC Program, please call Patrice Jensen at 651-757-2465. For questions regarding the Petroleum Brownfields Program, please call Stacey Hendry-Van Patten at 651-757-2425. The MPCA can also be reached toll free at 1-800-657-3864.

Mail the completed form to: Stacey Hendry-Van Patten  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

\*Fields with an asterisk are mandatory. The application will not be processed if fields are incomplete.

MPCA site ID number (if known): PB 3661

### \* Subject Property Information

Preferred Site Name (≤ 4 words): Seward Commons Bystrom Redevelopment Phase I-PPL  
Previous Site name (if known): Bystrom Brothers Site  
Address: ~~2200 Snelling Avenue~~ 2310 Snelling Ave  
City (or Township): Minneapolis County: Hennepin Zip: 55404  
Public land survey coordinates: Qtr: NW Section: 36 Twshp: 29 N Range: 24 W  
Approximate property size: 3.85 Phone: NA

### \* Applicant Information

Name: Brian H. Miller Title: Executive Director  
Organization: Seward Commons, LLC Phone: 612-338-8729 ext.107 Fax: (612) 399-0739  
Address: 2619 East Franklin Avenue E-mail (optional): brian@sewardredesign.com  
City: Minneapolis State: MN Zip: 55406

\* Please provide one of the following:

State taxpayer ID#: applied for 23-7290844 Federal taxpayer ID#: applied for

### Other Parties to be Listed on the Letter(s) Requested Below

Name: Damon Peters Title: Vice President  
Organization: M & I Marshall & Ilsley Bank Phone: (612) 904-8795  
Address: 651 Nicollet Avenue, Suite 301 E-mail (optional): damon.peters@micorp.com  
City: Minneapolis State: MN Zip: 55402-1613

**Current Property Owner** (complete if different from applicant)

Name: Scott Tankenoff Title: President  
Organization: 2200 Minnehaha, LLC Phone: (612) 371-0123  
Address: 2424 Kennedy Street NE E-mail (optional): scott@hillcrestdevelopment.com  
City: Minneapolis State: MN Zip: 55413

**Applicant's Consultant** (List the name of your current environmental consultant, if applicable.)

Name: Aaron Benker/Dana Wagner Phone: (763) 489-3100 Fax: (763) 489-3101  
Organization: Liesch Associates, Inc. E-mail (optional): aaronb@liesch.com/danaw@liesch.com  
Address: 13400 15<sup>th</sup> Avenue North  
City: Plymouth State: MN Zip: 55441

**Applicant's Attorney** (List the name of your current legal counsel, if applicable.)

Name: Peter Berrie Phone: (612) 766-7080 Fax: \_\_\_\_\_  
Organization: Faegre and Benson E-mail (optional): PBerrie@faegre.com  
Address: 2200 Wells Fargo Center, 90 South Seventh Street  
City: Minneapolis State: MN Zip: 55402-3901

**\* Spatial Data Information Requirement** (VIC only)

Site location point description (select one):  Center of Site  Main/Front Door  Front Gate/Main Entrance  
Latitude/Easting/X coordinate: 480,700 E  
Longitude/Northing/Y coordinate: 4,97,8,631 N  
Collection method (select one):  GPS-Survey Quality  GPS-Receiver  Interpolation DOQ  
Collection date (enter into text box using format M/D/YYYY): 12/12/2006  
Organization name of who collected spatial data: Liesch Associates, Inc.  
Organization type of who collected spatial data (select one):  
 City office  State office  Voluntary/Responsible party  
 County office  Indian tribe  
 Consultant  Developer

\*The *Spatial Data Requirements* document located on the MPCA Web site at: <http://www.pca.state.mn.us/programs/spatialdata.html> provides background information and a complete description of the spatial data.

✓ \* **Known or Suspected Contaminant Type** (select all that apply)

- Petroleum only** (PBP) - complete Section A (submit one paper report copy and one copy on CD)
- Non-Petroleum only** (VIC) - complete Section B (submit one paper report copy and one copy on CD)
- Petroleum and Non-Petroleum (Both)** - complete Section's A and B  
(Note: you must submit two paper report copies and two copies on CD of all necessary reports)

**Section A- PBP Assistance/Assurances - Description of applicant's request** (select all that apply)

(See *Guidance Document 5-02 Petroleum Brownfields Program General Information for a detailed description of the following services.*)

- Expedited Review of a petroleum storage tank release site (e.g. leak site) or a petroleum non-tank source
- ✓  Technical review of a *DRAP* for a petroleum impacted property (Note: need 45 days for Grants)
- Liability Assurance Letters (Minn. Stat. § 115C.03, subd. 9C).
- General liability Letter.
  - Tank Removal Verification Letter. MPCA ID# \_\_\_\_\_
  - Off-site Tank Release Determination Letter. Suspected source MPCA ID# \_\_\_\_\_
  - File Closure Confirmation Letter. MPCA ID# \_\_\_\_\_

✓ **Section B- VIC Program Assistance/Assurances - Description of applicant's request** (select all that apply)

(See *Guidance Document #1 and #4 MPCA Voluntary Investigation and Cleanup for a detailed description of the following services.*)

- Technical review or third-party review only.
- No Association Determination or Retroactive No Association Determination.
- For a **No Association Determination** request, please include a Proposed Actions Letter that includes a statement on any association with the property and releases at the property by the party(s) requesting the determination, and a list of the actions the party(s) intend/s to take at the site.
  - For a **Retroactive No Association Determination** request, please include:
    1. A Past Actions Letter that includes a statement on any past association with the property and releases at the property by the party(s) requesting the determination, and a list of the actions the party(s) took at the site; and
    2. An affidavit for each party requesting the determination, including a statement of the signing individual's relation to the party, and a statement that the party did not contribute or associate itself in any manner with the releases to be named in the determination.
- No Action or No Further Action Letter.
- No Action Agreement or Covenant Not to Sue.
- Off-Site Source Determination or Agreement under the Land Recycling Act (Minn. Stat. § 115B.177).
- Certificate of Completion under the Land Recycling Act (Minn. Stat. § 115B.175).

**Attachments to the Application Form**

Please list any reports, maps, or other attachments to this form (use separate page if necessary). All documents submitted to the MPCA for use in this program are considered public unless otherwise classified by the Minnesota Data Practices Act. Requests to classify documents as non-public must be submitted to the MPCA in writing.

Development Response Action Plan and Construction Contingency Plan, Seward Commons Bystrom Redevelopment Phase I-PPL, 2310 Snelling, Minneapolis, Minnesota, prepared by Liesch for Seward Commons, LLC and Dated March 30, 2009

Proposed Actions Letter, Seward Commons Redevelopment, 2200 Snelling Avenue, Minneapolis, Minnesota, dated March 30, 2009

**\* Certification**

The applicant or other person signing below (Agent):

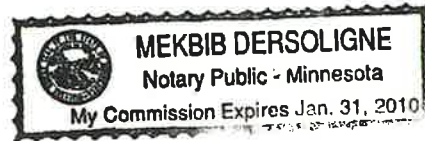
- certifies that the **applicant** has read and is familiar with the information on this form and all attached documents, and that the submitted information is true, accurate and complete to the best of the **applicant's** knowledge;
- hereby asks the MPCA Commissioner for assistance as requested by this application. The **applicant** understands this assistance may include the review of MPCA records and files, and review and approval of investigation plans and reports as well as response action plans and oversight of implementation actions;
- understands that the **applicant** must pay the MPCA Commissioner for the MPCA's costs of providing this assistance under Minn. Stat. § 115B.17 subd. 14. and/or Minn. Stat. § 115C.03 subd. 9. The current fee is \$150.00 per hour. The **applicant** understands that the MPCA Commissioner will send invoices for these costs and that failure to pay the MPCA's costs in a timely manner may result in the MPCA Commissioner taking appropriate administrative or legal action against the **applicant**; and,
- hereby agrees to pay the costs of the MPCA to provide services to the **applicant** as requested in this application. Furthermore, if the form is completed by an Agent of the **applicant**, that person certifies that he/she has the authority to submit this application on behalf of the **applicant** named herein.

Name (print): Brian H. Miller Title: Executive Director

Signature: *Brian H. Miller* Date: March 27, 2009

Subscribed and sworn to before me this:

27<sup>th</sup> day of March, 2009  
*Mekbib Dersoligne*  
Notary Public



To request state assistance or report petroleum or hazardous materials spill call the Minnesota Duty Officer at 1-800-422-0798 or 651-649-5451 (24 hours a day).



February 1, 2007

Mr. Scott Tankenoff  
2200 Minnehaha, LLC  
2424 Kennedy Street NE  
Minneapolis, MN 55413

RE: Petroleum Release Site File Closure  
Site: Bystrom Brothers, Inc., 2200 Snelling Avenue, Minneapolis  
Site ID#: PB3661

Dear Mr. Tankenoff:

The Minnesota Pollution Control Agency (MPCA) Petroleum Brownfields Program staff has determined that your investigation and/or cleanup has adequately addressed the petroleum contamination associated with a French floor drain at the above-referenced site. This determination is based on information provided in the following document:

- French Drain Letter/Report dated January 5, 2007, prepared by Liesch Associates, Inc.
- Groundwater Monitoring Well Sampling dated January 3, 2007, prepared by Liesch Associates, Inc.

Based on the information provided, 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 in response to the identified petroleum contamination. Please be aware that file closure does not mean that petroleum contamination has been removed from this site. However, the MPCA has concluded that the remaining petroleum contamination does not appear to pose a threat to public health or the environment.

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

SCANNED

Mr. Scott Tankenoff

Page 2

February 1, 2007

You should understand that this letter does not release any party from liability for the petroleum contamination under Minn. Stat. ch. 115C (2004) or any other applicable state or federal law. In addition, this letter does not release any party from liability for non-petroleum contamination, if present, under Minn. Stat. ch. 115B (2004), the Minnesota Superfund Law.

If future development of the site or the surrounding area is planned, it should be assumed that petroleum contamination may be present. Property with petroleum contamination to soil or ground water may cause on-site vapor risks to future occupants. The MPCA can assist you with environmental risk and development plan review. MPCA Petroleum Brownfields staff will review and approve plans for property development. If petroleum contamination is encountered during future development work, the MPCA staff should be notified immediately. Approval of this plan does not suggest that any of the costs incurred will be eligible for reimbursement from the PetroBoard.

For specific information regarding petroleum contamination at this site, please call the Petroleum Remediation File Request Program at 651/297-8499. Thank you for your response to this petroleum 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 Mark Koplitz at 651/296-7999.

Sincerely,

  
for

Mark Koplitz  
Project Leader  
Petroleum Remediation Program  
Petroleum and Closed Landfill Section  
Remediation Division

MK:tf

cc: Aaron Benker, Liesch Associates, Inc., Plymouth



# Minnesota Pollution Control Agency

SCANNED

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March 7, 2012

Mr. Brian Miller  
Seward Commons, LLC  
2619 East Franklin Avenue  
Minneapolis, MN 55406

RE: Seward Commons Redevelopment Site, 2200 Snelling Avenue, Minneapolis  
MPCA Project Number VP22791  
Work Plan Approval-Soil Investigation at Phase 3 Development

Dear Mr. Miller:

*PB 3001*

The Minnesota Pollution Control Agency (MPCA) staff in the Voluntary Investigation and Cleanup (VIC) Unit has reviewed the "Revised Work Plan for Additional Environmental Investigation; Seward Commons - Phase 3 Development" (Work Plan), for the Seward Commons Redevelopment site at the address referenced above (the Site) and specifically the area comprised of 11 parcels with addresses along Snelling Avenue, 22<sup>nd</sup> Street and Minnehaha Avenue (approx. 2.46-acres). The Work Plan, prepared by Braun Intertec (Braun) and dated January 27, 2012, is for an in-situ soil characterization assessment of fill/soils to be managed during residential development which is scheduled for completion in March 2012. The Work Plan results will be used to develop Response Action Plans and Construction Contingency Plans (RAP/CCP).

The Work Plan is similar to the previous in-situ soil characterization assessments of both the Phase 1 and Phase 2 development of the Site. The Work Plan proposes advancement of 42 soil probes to the depth of 12 feet below grade, with samples collected and analyzed for contaminants of concern in an effort to better characterize fill soils. VIC staff understands the Work Plan will be completed with the submittal of an investigation report by the end of March 30, 2012.

Based upon staff review of the Site documents, the Work Plan is hereby approved pursuant to Minn. Stat. § 115B.17— STATE RESPONSE TO RELEASES, subd. 14 Requests for review, investigation, and oversight.

This letter is subject to the disclaimers listed in Attachment A. If you have any questions or comments please contact me at 651-757-2627 or Mike Connolly, Hydrogeologist at 651-757-2287.

Sincerely,

Edward P. Olson, CEP  
Project Leader  
VIC & Emergency Response Section  
Remediation Division  
EPO:jmp

Attachment

cc: Jennifer Force, Braun Intertec  
Aaron Benker, Liesch Associates, Inc.  
Steve Maki, City of Minneapolis  
David Jaeger, Hennepin County  
Mark Koplitz, MPCA



ATTACHMENT A  
DISCLAIMERS

Seward Commons Redevelopment Site  
MPCA Project Number VP22791

1. Reservation of Authorities

The MPCA Commissioner reserves the authority to take any appropriate actions with respect to any release, threatened release, or other conditions at the Site. The MPCA Commissioner also reserves the authority to take such actions if the voluntary party does not proceed in the manner described in this letter or if actions taken or omitted by the voluntary party with respect to the Site contribute to any release or threatened release, or create an imminent and substantial danger to public health and welfare.

2. No MPCA Assumption of Liability

The MPCA, its Commissioner and staff do not assume any liability for any release, threatened release or other conditions at the Site or for any actions taken or omitted by the voluntary party with regard to the release, threatened release, or other conditions at the Site, whether the actions taken or omitted are in accordance with this letter or otherwise.

3. Letter Based on Current Information

All statements, conclusions and representations in this letter are based upon information known to the MPCA Commissioner and staff at the time this letter was issued. The MPCA Commissioner and staff reserve the authority to modify or rescind any such statement, conclusion or representation and to take any appropriate action under his authority if the MPCA Commissioner or staff acquires information after issuance of this letter that provides a basis for such modification or action.

4. Disclaimer Regarding Use or Development of the Property

The MPCA, its Commissioner and staff do not warrant that the Site is suitable or appropriate for any particular use.

5. Disclaimer Regarding Investigative or Response Action at the Property

Nothing in this letter is intended to authorize any response action under Minn. Stat. § 115B.17, subd. 12.



SCANNED

HYDROGEOLOGISTS ■ ENGINEERS ■ ENVIRONMENTAL SCIENTISTS

RECEIVED

JAN 10 2007

January 9, 2007

Mark Koplitz  
Petroleum Brownfields Program  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

RE: <sup>PB#3661</sup> Brothers Property - 2200 Snelling Avenue, Minneapolis, Minnesota (the Property)

Dear Mr. Koplitz:

Enclosed for your files are the following environmental reports prepared for the Property by Liesch. Liesch understands that the Petroleum Brownfields Program (PBP) Program has issued closure for this site as Non-Tank Leak #16407. Please add these reports to your project file. The reports include the following:

- Groundwater Monitoring Well Sampling, r Bystrom Brothers, 2200 Snelling Avenue, Minneapolis, Minnesota 55404, prepared by Liesch for 2200 Minnehaha, LLC and Seward Redesign, dated January 3, 2007
- French Drain Cleaning, Sampling and Abandonment Summary Letter prepared by Liesch for Bystrom Brothers and dated January 5, 2007

If you have any questions, please contact me at (763) 489-3147.

Sincerely,

**LIESCH ASSOCIATES, INC.**

Aaron Benker  
Project Principal

cc: Scott Tankenoff, 2200 Minnehaha, LLC  
Brian Miller, Seward Redesign

w:\sa\6201782\vic\pbp trans letter010907.doc



HYDROGEOLOGISTS ■ ENGINEERS ■ ENVIRONMENTAL SCIENTISTS

January 5, 2007

JAN 10 2007

Mr. Kevin Haeg  
Bystrom Bros  
2200 Snelling Avenue  
Minneapolis, Minnesota 55404-3155

RE: French Drain Cleaning, Sampling and Abandonment, Bystrom Brothers Site, 2200 Snelling Avenue, Minneapolis, Minnesota (the Property)

Dear Kevin:

Liesch Associates, Inc. (Liesch) was retained by Bystrom Brothers (Bystrom) to observe the cleaning and conduct environmental soil sampling of a single French drain located in the 400 Apex Building at the Property. **Figure 1**, attached shows the location of the Property and **Figure 2**, attached shows the layout of the Property and the location of the French Drain. Work was completed in preparation of abandoning the French drain by filling the drain with concrete and Bystrom's discontinuing use of the French drain. The French drain was covered by a steel plate and a small stream of air compressor condensate which was formerly discharged into the drain to percolate through the soils below. It is not known what other types of waste were discharged into the drain. Environmental soil and groundwater sampling was completed at the site during a Limited Phase Two Environmental Site Assessment by Liesch. During the Limited Phase Two one soil boring (B-20) was completed adjacent to the French drain. Soil contaminants from the French drain consisted of petroleum based impact.

Prior to conducting the abandonment work Liesch accessed the French drain and observed standing oil and water in the pit below, which was approximately 3'x3' square. A steel rod approximately 8 feet in length was pushed into the bottom of the drain to assess for the presence of a bottom. Sediment and soils were encountered but no hard bottom was encountered. The rod was coated with oils upon removal. Liesch also requested Mr. Rick Anderson with Minnesota Blue, the vacuum truck operator, waste handler and disposer, to view the French drain for purposes of assessing and bidding the clean out and disposal of the waste product in the French drain.

Liesch recommended the French drain be cleaned of all fluids and saturated soils removed. Liesch proposed the use of a vacuum truck contractor to remove the fluids and saturated soils to the extent possible from the French drain. Upon cleaning out of the French drain, a soil sample was proposed to be collected from the bottom for characterization of the underlying soils. Liesch and Bystrom agreed to have Bystrom fill in the French drain basin with ready mix concrete to fill the drain flush with the concrete slab floor surface.

The following work activities were completed to clean, sample and abandon the French drain at the Property:

- Liesch retained Minnesota Blue, a vacuum truck contractor, to pump the liquids and saturated soils from the French drain. Minnesota Blue removed and disposed of approximately 485 gallons of liquid and 55 gallons of sludge/soils. The drain cleaning was completed on November 10, 2006. A copy of Minnesota Blue's invoice and waste manifest is attached.
- Liesch collected one soil confirmation sample (French Drain) upon removal of the liquids and saturated soils for laboratory analysis of diesel range organics (DRO), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Resource Conservation and Recovery Act (RCRA) Metals and polychlorinated biphenyl's (PCBs).
- Bystrom filled the cleaned out French drain with ready mix concrete to bring the French drain flush with the existing slab floor around. Bystrom also began collecting the air compressor condensate for disposal through the sanitary sewer system.

The single soil (sample ID 'French Drain') sample collected from the bottom of the cleaned out French drain was submitted for laboratory analysis. The soil sample was collected at approximately 7 feet below ground surface (bgs). The soil sample was immediately containerized in laboratory provided sample jars, labeled and placed in an ice-chilled cooler for transportation to the laboratory under chain of custody control. The sample was shipped on the same day collected to Environmental Science Corporation (ESC), located in Mt. Juliet, Tennessee laboratory certification #047-999-395 via Federal Express overnight courier for laboratory analysis. A copy of ESC's analytical report is attached.

The soil sample detected the presence RCRA metals barium at 36 ppm, chromium at 5.5 ppm, and lead at 10 ppm. All of the RCRA metals are below the Tier I Soil Reference Value (SRV) and the Tier 1 Soil Leaching Value (SLV). Several VOCs were detected below the Tier 1 SRV as well as the Tier 1 SLV. The VOCs include sec-butylbenzene at 0.055 ppm, p-isopropyltoluene at 0.063 ppm, 1,2,4-trimethylbenzene at 0.73 ppm, 1,2,3-trimethylbenzene at 0.36 ppm, and 1,3,5-trimethylbenzene at 0.22 ppm. DRO was detected at 120 ppm. No SVOCs or PCBs were detected in the French drain confirmation sample.

While there are VOCs and DRO present in the confirmation soil sample collected upon cleanout of the French drain, the contaminated soil concentrations are below the Tier I SRV and SLVs and the DRO impacts are relatively low. Furthermore the concentrations are below other site soil impacts detected at the Property by Liesch during completion of the Phase Two Environmental Site Assessment. Since the French drain has been abandoned and the gross contaminated soils and liquids have been removed, Liesch does not recommend any further action with regard to the French drain at the Property. Liesch recommends submitting a copy of this letter to the MPCA for inclusion in their site file.

Please call me at (800) 338-7914 or (763) 489-3147 should you have any questions. Thank you and best regards.

Sincerely,

**LIESCH ASSOCIATES, INC.**

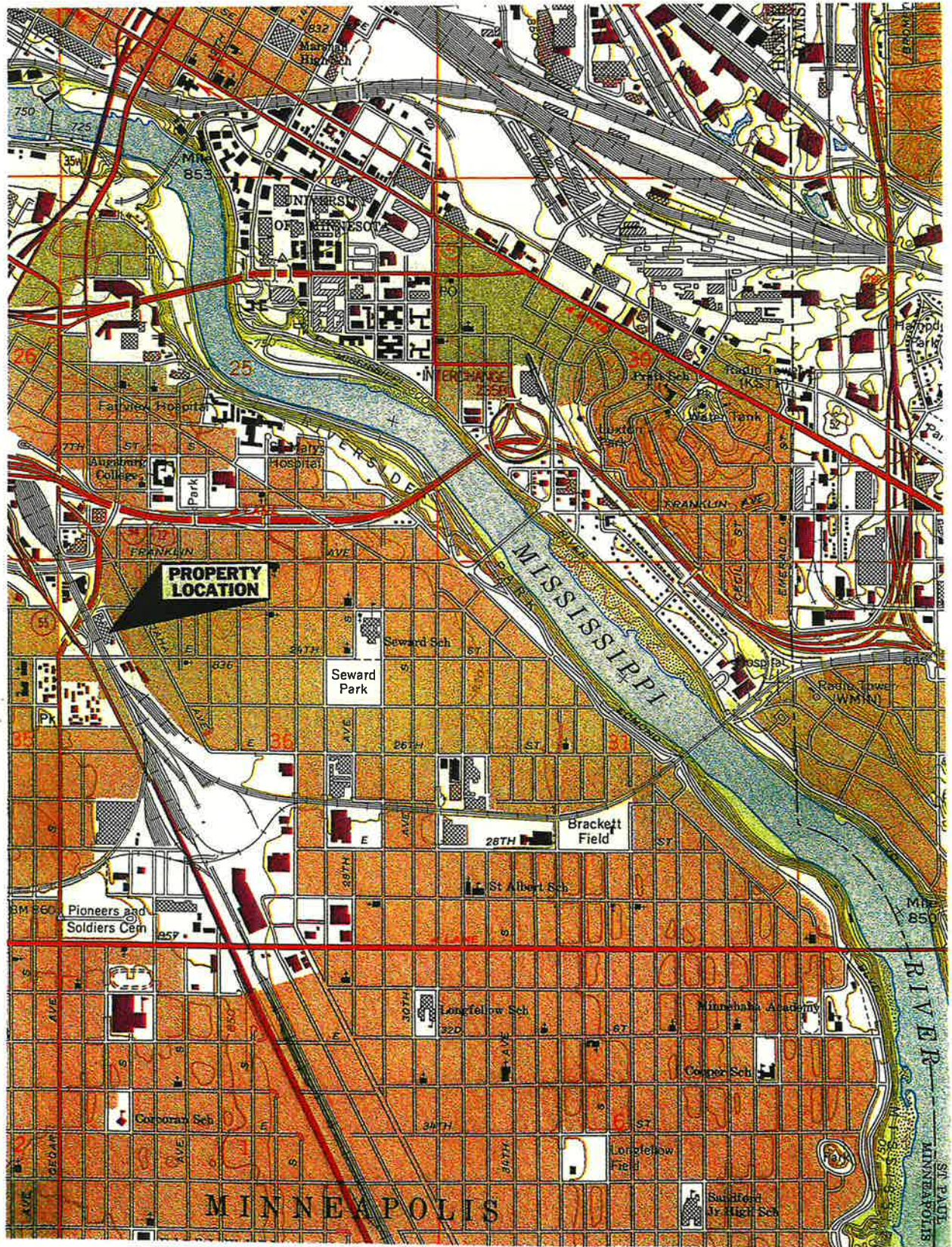


Aaron Benker  
Project Manager

Attachments

Cc: Scott Tankenoff, 2200 Minnehaha, LLC.  
Brian Miller, Seward Redesign

w:\sa\6201782\drain cleanout\bystrom french drain cleanout rpt.doc



Source: USGS 7.5 - minute St Paul West, Minnesota, Topographic Map dated 1967 revised 1993

Scale: 1:24,000

**LIESCH** Hydrogeologists ? Engineers ? Environmental Scientists

6000 Gisholt Dr, Suite 203  
Madison, WI 53713  
(608) 223-1532

13400 15<sup>th</sup> Avenue N  
Minneapolis, MN 55441  
(763) 489-3100

4300 N Miller Rd, Suite 200  
Scottsdale, AZ 85251  
(480) 421-0853

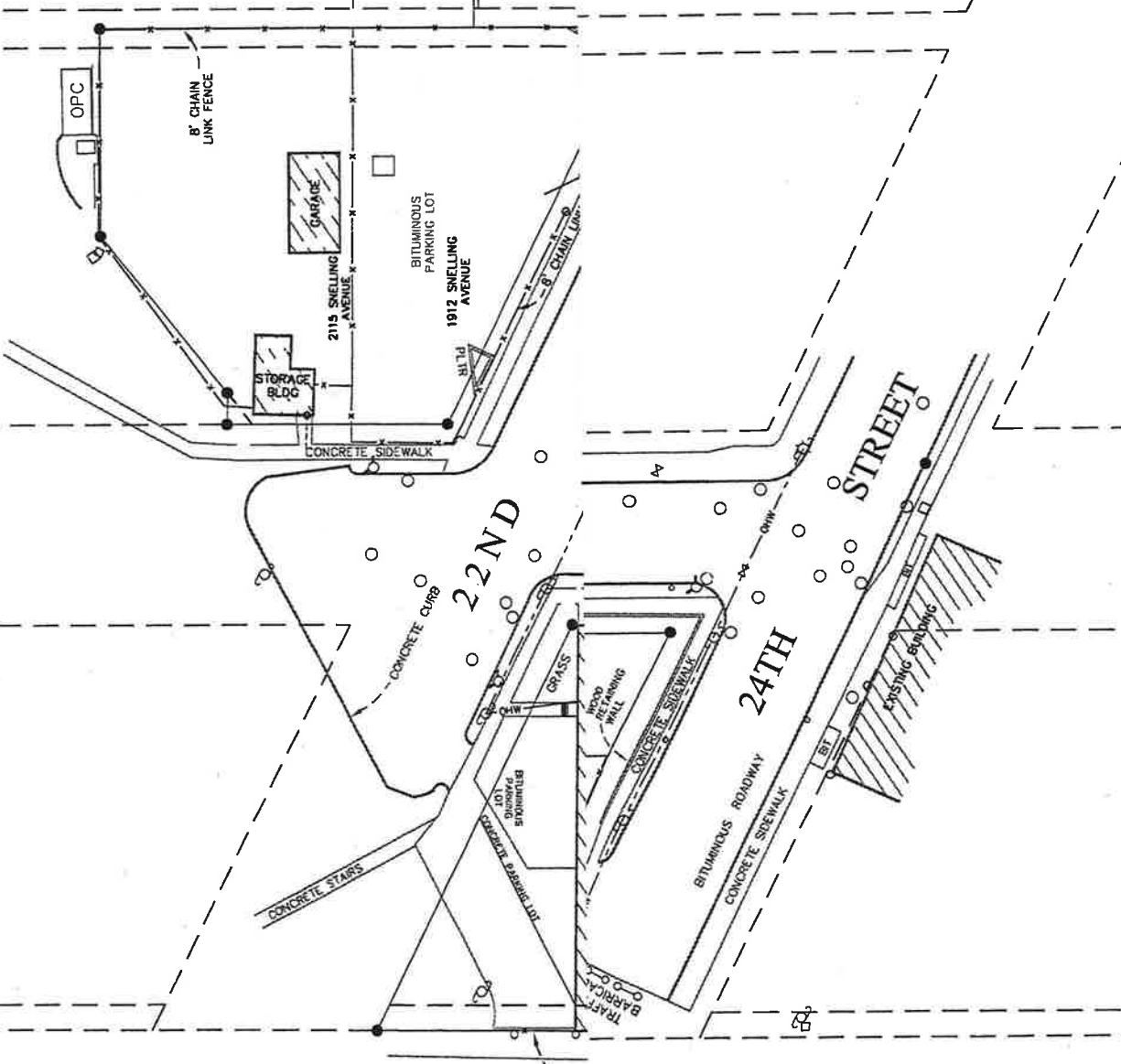
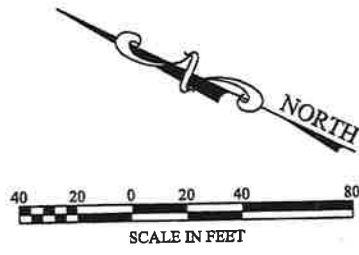
**Property Location Map**

Jan 07

**Bystrom Brother, Minneapolis, MN**

**Figure 1**

M



12-B-C

ALTA/ACSM LAND TITLE LAND SURVEY

**SATHRE-BERGQUIST, INC.**  
150 SOUTH BROADWAY WAYZATA, MN. 55391 (952) 476-6000

1 BROTHERS, MINNEAPOLIS, MN

Jan 07

RAIN and UTILITY LAYOUT MAP

FIGURE  
2



**MINNESOTA  
PETROLEUM  
SERVICE**

682 - 39th Avenue N.E.  
Columbia Heights, MN 55421  
Phone: (763) 780-5191  
Fax: (763) 780-5472  
Toll Free: 888-797-7677  
www.mnpetro.com

# Invoice

DATE	INVOICE #
11/13/2006	58220

**BILL TO:**

Liesch & Associates  
13400 15th Ave North  
Minneapolis, MN 55441  
Attn: Arron Banker

**SHIP TO:**

Q. NUMBER	TERMS	REP	SHIP	VIA	F.O.B.	PROJECT
	Net 30	RAA	11/10/2006			

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
485		Pumped french drain.		
55		Used oil / water Product Disposal	0.75	363.75
		Sludge Product Disposal	5.00	275.00
		Vac Truck & Operator	400.00	400.00

*6201849.00*

**“SERVICE AFTER THE SALE”**

**Sales Tax (6.5%)** \$0.00

Thank you for your business. Invoice is valid unless inquires are made with in 15 days.  
We do accept Credit Cards.

<b>TOTAL</b>	\$1,038.75
--------------	------------

FINANCE CHARGE of 1 1/2% per mo., 18% annual is







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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Aaron Benker  
Liesch Associates, Inc.  
13400 15th Avenue N

Plymouth, MN 55441

Report Summary

Friday November 24, 2006

Report Number: L269065

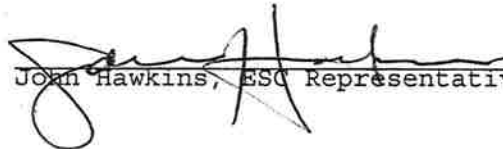
Samples Received: 11/14/06

Client Project:

Description: Bystrom Brothers Site

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Reviewed By:

  
John Hawkins, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, WA - C1915



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REPORT OF ANALYSIS

Aaron Benker  
Liesch Environmental Services  
13400 15th Avenue N  
Plymouth, MN 55441

November 24, 2006

Date Received : November 14, 2006  
Description : Bystrom Brothers Site

ESC Sample # : L269065-01

Sample ID : FRENCH DRAIN

Site ID :

Collected By :  
Collection Date : 11/10/06 00:00

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Total Solids	86.3		%	2540G	11/20/06	1
Mercury	BDL	0.023	mg/kg	7471	11/20/06	1
Arsenic	BDL	1.2	mg/kg	6010B	11/16/06	1
Barium	36.	0.29	mg/kg	6010B	11/16/06	1
Cadmium	BDL	0.29	mg/kg	6010B	11/16/06	1
Chromium	5.5	0.58	mg/kg	6010B	11/16/06	1
Lead	10.	0.29	mg/kg	6010B	11/16/06	1
Selenium	BDL	1.2	mg/kg	6010B	11/16/06	1
Silver	BDL	0.58	mg/kg	6010B	11/16/06	1
<b>Volatile Organics</b>						
Acetone	BDL	1.6	mg/kg	8260B	11/22/06	27.5
Acrylonitrile	BDL	0.32	mg/kg	8260B	11/22/06	27.5
Allyl chloride	BDL	0.16	mg/kg	8260B	11/22/06	27.5
Benzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Bromobenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Bromodichloromethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Bromoform	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Bromomethane	BDL	0.16	mg/kg	8260B	11/22/06	27.5
n-Butylbenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
sec-Butylbenzene	0.055	0.032	mg/kg	8260B	11/22/06	27.5
tert-Butylbenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Carbon tetrachloride	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Chlorobenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Chlorodibromomethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Chloroethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
2-Chloroethyl vinyl ether	BDL	1.6	mg/kg	8260B	11/22/06	27.5
Chloroform	BDL	0.16	mg/kg	8260B	11/22/06	27.5
Chloromethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
2-Chlorotoluene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
4-Chlorotoluene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,2-Dibromo-3-Chloropropane	BDL	0.16	mg/kg	8260B	11/22/06	27.5
1,2-Dibromoethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Dibromomethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,2-Dichlorobenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,3-Dichlorobenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,4-Dichlorobenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Dichlorodifluoromethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1-Dichloroethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,2-Dichloroethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1-Dichloroethene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
cis-1,2-Dichloroethene	BDL	0.032	mg/kg	8260B	11/22/06	27.5

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Est. 1970

REPORT OF ANALYSIS

Aaron Benker  
Liesch Environmental Services  
13400 15th Avenue N  
Plymouth, MN 55441

November 24, 2006

Date Received : November 14, 2006  
Description : Bystrom Brothers Site

ESC Sample # : L269065-01

Sample ID : FRENCH DRAIN

Site ID :

Collected By :  
Collection Date : 11/10/06 00:00

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
trans-1,2-Dichloroethene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,2-Dichloropropane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1-Dichloropropene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,3-Dichloropropane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
cis-1,3-Dichloropropene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
trans-1,3-Dichloropropene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
2,2-Dichloropropane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Di-isopropyl ether	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Ethylbenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Ethyl ether	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Hexachlorobutadiene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
2-Hexanone	BDL	0.32	mg/kg	8260B	11/22/06	27.5
Isopropylbenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
p-Isopropyltoluene	0.063	0.032	mg/kg	8260B	11/22/06	27.5
2-Butanone (MEK)	BDL	0.32	mg/kg	8260B	11/22/06	27.5
Methylene Chloride	BDL	0.16	mg/kg	8260B	11/22/06	27.5
4-Methyl-2-pentanone (MIBK)	BDL	0.32	mg/kg	8260B	11/22/06	27.5
Methyl tert-butyl ether	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Naphthalene	BDL	0.16	mg/kg	8260B	11/22/06	27.5
n-Propylbenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Styrene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1,1,2-Tetrachloroethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1,2,2-Tetrachloroethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1,2-Trichloro-1,2,2-trifluoro	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Tetrachloroethene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Tetrahydrofuran	BDL	0.16	mg/kg	8260B	11/22/06	27.5
Toluene	BDL	0.16	mg/kg	8260B	11/22/06	27.5
1,2,3-Trichlorobenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,2,4-Trichlorobenzene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1,1-Trichloroethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,1,2-Trichloroethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Trichloroethene	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Trichlorofluoromethane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,2,3-Trichloropropane	BDL	0.032	mg/kg	8260B	11/22/06	27.5
1,2,4-Trimethylbenzene	0.73	0.032	mg/kg	8260B	11/22/06	27.5
1,2,3-Trimethylbenzene	0.36	0.032	mg/kg	8260B	11/22/06	27.5
1,3,5-Trimethylbenzene	0.22	0.032	mg/kg	8260B	11/22/06	27.5
Vinyl chloride	BDL	0.032	mg/kg	8260B	11/22/06	27.5
Xylenes, Total	BDL	0.096	mg/kg	8260B	11/22/06	27.5
Surrogate Recovery						
Toluene-d8	83.1		% Rec.	8260B	11/22/06	27.5
Dibromofluoromethane	76.1		% Rec.	8260B	11/22/06	27.5
4-Bromofluorobenzene	157.		% Rec.	8260B	11/22/06	27.5

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

**REPORT OF ANALYSIS**

Aaron Benker  
Liesch Environmental Services  
13400 15th Avenue N  
Plymouth, MN 55441

November 24, 2006

Date Received : November 14, 2006  
Description : Bystrom Brothers Site  
Sample ID : FRENCH DRAIN  
Collected By :  
Collection Date : 11/10/06 00:00

ESC Sample # : L269065-01

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
WI DRO	BDL	9.3	mg/kg	DRO	11/22/06	1
Surrogate Recovery (50-150)						
Triacontane	120.		% Rec.	DRO	11/22/06	1
<b>Polychlorinated Biphenyls</b>						
PCB 1016	BDL	0.098	mg/kg	8082	11/19/06	5
PCB 1221	BDL	0.098	mg/kg	8082	11/19/06	5
PCB 1232	BDL	0.098	mg/kg	8082	11/19/06	5
PCB 1242	BDL	0.098	mg/kg	8082	11/19/06	5
PCB 1248	BDL	0.098	mg/kg	8082	11/19/06	5
PCB 1254	BDL	0.098	mg/kg	8082	11/19/06	5
PCB 1260	BDL	0.098	mg/kg	8082	11/19/06	5
<b>PCBs Surrogates</b>						
Decachlorobiphenyl	111.		% Rec.	8082	11/19/06	5
Tetrachloro-m-xylene	92.9		% Rec.	8082	11/19/06	5
<b>Base/Neutral Extractables</b>						
Acenaphthene	BDL	0.38	mg/kg	8270C	11/18/06	1
Acenaphthylene	BDL	0.38	mg/kg	8270C	11/18/06	1
Anthracene	BDL	0.38	mg/kg	8270C	11/18/06	1
Benzidine	BDL	0.38	mg/kg	8270C	11/18/06	1
Benzo (a) anthracene	BDL	0.38	mg/kg	8270C	11/18/06	1
Benzo (b) fluoranthene	BDL	0.38	mg/kg	8270C	11/18/06	1
Benzo (k) fluoranthene	BDL	0.38	mg/kg	8270C	11/18/06	1
Benzo (g, h, i) perylene	BDL	0.38	mg/kg	8270C	11/18/06	1
Benzo (a) pyrene	BDL	0.38	mg/kg	8270C	11/18/06	1
Bis (2-chloroethoxy) methane	BDL	0.38	mg/kg	8270C	11/18/06	1
Bis (2-chloroethyl) ether	BDL	0.38	mg/kg	8270C	11/18/06	1
Bis (2-chloroisopropyl) ether	BDL	0.38	mg/kg	8270C	11/18/06	1
4-Bromophenyl-phenylether	BDL	0.38	mg/kg	8270C	11/18/06	1
2-Chloronaphthalene	BDL	0.38	mg/kg	8270C	11/18/06	1
4-Chlorophenyl-phenylether	BDL	0.38	mg/kg	8270C	11/18/06	1
Chrysene	BDL	0.38	mg/kg	8270C	11/18/06	1
Dibenz (a, h) anthracene	BDL	0.38	mg/kg	8270C	11/18/06	1
3,3-Dichlorobenzidine	BDL	0.38	mg/kg	8270C	11/18/06	1
2,4-Dinitrotoluene	BDL	0.38	mg/kg	8270C	11/18/06	1
2,6-Dinitrotoluene	BDL	0.38	mg/kg	8270C	11/18/06	1
Fluoranthene	BDL	0.38	mg/kg	8270C	11/18/06	1
Fluorene	BDL	0.38	mg/kg	8270C	11/18/06	1
Hexachlorobenzene	BDL	0.38	mg/kg	8270C	11/18/06	1
Hexachloro-1,3-butadiene	BDL	0.38	mg/kg	8270C	11/18/06	1
Hexachlorocyclopentadiene	BDL	0.38	mg/kg	8270C	11/18/06	1
Hexachloroethane	BDL	0.38	mg/kg	8270C	11/18/06	1
Indeno (1,2,3-cd) pyrene	BDL	0.38	mg/kg	8270C	11/18/06	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Note:

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The reported analytical results relate only to the sample submitted



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Est. 1970

**REPORT OF ANALYSIS**

Aaron Benker  
Liesch Environmental Services  
13400 15th Avenue N  
Plymouth, MN 55441

November 24, 2006

Date Received : November 14, 2006  
Description : Bystrom Brothers Site  
Sample ID : FRENCH DRAIN  
Collected By :  
Collection Date : 11/10/06 00:00

ESC Sample # : L269065-01

Site ID :

Project # :

Parameter	Dry Result	Det. Limit	Units	Method	Date	Dil.
Isophorone	BDL	0.38	mg/kg	8270C	11/18/06	1
Naphthalene	BDL	0.38	mg/kg	8270C	11/18/06	1
Nitrobenzene	BDL	0.38	mg/kg	8270C	11/18/06	1
n-Nitrosodimethylamine	BDL	0.058	mg/kg	8270C	11/18/06	1
n-Nitrosodiphenylamine	BDL	0.38	mg/kg	8270C	11/18/06	1
n-Nitrosodi-n-propylamine	BDL	0.38	mg/kg	8270C	11/18/06	1
Phenanthrene	BDL	0.38	mg/kg	8270C	11/18/06	1
Benzylbutyl phthalate	BDL	0.38	mg/kg	8270C	11/18/06	1
Bis(2-ethylhexyl)phthalate	BDL	0.38	mg/kg	8270C	11/18/06	1
Di-n-butyl phthalate	BDL	0.38	mg/kg	8270C	11/18/06	1
Diethyl phthalate	BDL	0.38	mg/kg	8270C	11/18/06	1
Dimethyl phthalate	BDL	0.38	mg/kg	8270C	11/18/06	1
Di-n-octyl phthalate	BDL	0.38	mg/kg	8270C	11/18/06	1
Pyrene	BDL	0.38	mg/kg	8270C	11/18/06	1
1,2,4-Trichlorobenzene	BDL	0.38	mg/kg	8270C	11/18/06	1
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.38	mg/kg	8270C	11/18/06	1
2-Chlorophenol	BDL	0.38	mg/kg	8270C	11/18/06	1
2,4-Dichlorophenol	BDL	0.38	mg/kg	8270C	11/18/06	1
2,4-Dimethylphenol	BDL	0.38	mg/kg	8270C	11/18/06	1
4,6-Dinitro-2-methylphenol	BDL	0.38	mg/kg	8270C	11/18/06	1
2,4-Dinitrophenol	BDL	0.38	mg/kg	8270C	11/18/06	1
2-Nitrophenol	BDL	0.38	mg/kg	8270C	11/18/06	1
4-Nitrophenol	BDL	0.38	mg/kg	8270C	11/18/06	1
Pentachlorophenol	BDL	0.38	mg/kg	8270C	11/18/06	1
Phenol	BDL	0.38	mg/kg	8270C	11/18/06	1
2,4,6-Trichlorophenol	BDL	0.38	mg/kg	8270C	11/18/06	1
Surrogate Recovery						
Nitrobenzene-d5	63.4		% Rec.	8270C	11/18/06	1
2-Fluorobiphenyl	70.4		% Rec.	8270C	11/18/06	1
p-Terphenyl-d14	77.9		% Rec.	8270C	11/18/06	1
Phenol-d5	80.2		% Rec.	8270C	11/18/06	1
2-Fluorophenol	71.3		% Rec.	8270C	11/18/06	1
2,4,6-Tribromophenol	102.		% Rec.	8270C	11/18/06	1

Results listed are dry weight basis.

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

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Reported: 11/24/06 12:18 Printed: 11/24/06 12:19

Attachment A  
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L269065-01	1,2-Dibromo-3-Chloropropane	J3
	Dichlorodifluoromethane	J4
	Naphthalene	J3
	1,2,3-Trichlorobenzene	J3
	4-Bromofluorobenzene	J1
	Anthracene	J3
	Benzo (k) fluoranthene	J3
	Fluoranthene	J3
	Hexachlorocyclopentadiene	J4
	n-Nitrosodiphenylamine	J3
	Phenanthrene	J3
	Benzylbutyl phthalate	J3
	Bis(2-ethylhexyl)phthalate	J3
	Di-n-butyl phthalate	J3
	Di-n-octyl phthalate	J3
	4,6-Dinitro-2-methylphenol	J3
	PCB 1016	0
	PCB 1221	0
	PCB 1232	0
	PCB 1242	0
	PCB 1248	0
	PCB 1254	0
	PCB 1260	0

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

**Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

**Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

**Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

		Control Limits			(AQ)	(SS)
2-Fluorophenol	31-119	Nitrobenzene-d5	43-118	Dibromfluoromethane	68-128	64-125
Phenol-d5	12-134	2-Fluorobiphenyl	45-128	Toluene-d8	76-115	69-118
2,4,6-Tribromophenol	51-141	Terphenyl-d14	43-137	4-Bromofluorobenzene	79-127	61-134

**TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.





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Plymouth, MN 55441

**Quality Assurance Report  
Level II**

November 24, 2006

L269065

Analyte	Result	Laboratory Blank		Date Analyzed	Batch
		Units			
Arsenic	< 1	mg/kg		11/16/06 12:19	WG275472
Barium	< .25	mg/kg		11/16/06 12:19	WG275472
Cadmium	< .25	mg/kg		11/16/06 12:19	WG275472
Chromium	< .5	mg/kg		11/16/06 12:19	WG275472
Lead	< .25	mg/kg		11/16/06 12:19	WG275472
Selenium	< 1	mg/kg		11/16/06 12:19	WG275472
Silver	< .5	mg/kg		11/16/06 12:19	WG275472
1,2,4-Trichlorobenzene	< .33	ppm		11/18/06 12:32	WG275666
2,4,6-Trichlorophenol	< .33	ppm		11/18/06 12:32	WG275666
2,4-Dichlorophenol	< .33	ppm		11/18/06 12:32	WG275666
2,4-Dimethylphenol	< .33	ppm		11/18/06 12:32	WG275666
2,4-Dinitrophenol	< .33	ppm		11/18/06 12:32	WG275666
2,4-Dinitrotoluene	< .33	ppm		11/18/06 12:32	WG275666
2,6-Dinitrotoluene	< .33	ppm		11/18/06 12:32	WG275666
2-Chloronaphthalene	< .33	ppm		11/18/06 12:32	WG275666
2-Chlorophenol	< .33	ppm		11/18/06 12:32	WG275666
2-Nitrophenol	< .33	ppm		11/18/06 12:32	WG275666
3,3-Dichlorobenzidine	< .33	ppm		11/18/06 12:32	WG275666
4,6-Dinitro-2-methylphenol	< .33	ppm		11/18/06 12:32	WG275666
4-Bromophenyl-phenylether	< .33	ppm		11/18/06 12:32	WG275666
4-Chloro-3-methylphenol	< .33	ppm		11/18/06 12:32	WG275666
4-Chlorophenyl-phenylether	< .33	ppm		11/18/06 12:32	WG275666
4-Nitrophenol	< .33	ppm		11/18/06 12:32	WG275666
Acenaphthene	< .33	ppm		11/18/06 12:32	WG275666
Acenaphthylene	< .33	ppm		11/18/06 12:32	WG275666
Anthracene	< .33	ppm		11/18/06 12:32	WG275666
Benzidine	< .33	ppm		11/18/06 12:32	WG275666
Benzo(a)anthracene	< .33	ppm		11/18/06 12:32	WG275666
Benzo(a)pyrene	< .33	ppm		11/18/06 12:32	WG275666
Benz(b)fluoranthene	< .33	ppm		11/18/06 12:32	WG275666
Benz(g,h,i)perylene	< .33	ppm		11/18/06 12:32	WG275666
Benz(k)fluoranthene	< .33	ppm		11/18/06 12:32	WG275666
Benzylbutyl phthalate	< .33	ppm		11/18/06 12:32	WG275666
Bis(2-chloroethoxy)methane	< .33	ppm		11/18/06 12:32	WG275666
Bis(2-chloroethyl)ether	< .33	ppm		11/18/06 12:32	WG275666
Bis(2-chloroisopropyl)ether	< .33	ppm		11/18/06 12:32	WG275666
Bis(2-ethylhexyl)phthalate	< .33	ppm		11/18/06 12:32	WG275666
Chrysene	< .33	ppm		11/18/06 12:32	WG275666
Di-n-butyl phthalate	< .33	ppm		11/18/06 12:32	WG275666
Di-n-octyl phthalate	< .33	ppm		11/18/06 12:32	WG275666
Dibenz(a,h)anthracene	< .33	ppm		11/18/06 12:32	WG275666
Diethyl phthalate	< .33	ppm		11/18/06 12:32	WG275666
Dimethyl phthalate	< .33	ppm		11/18/06 12:32	WG275666
Fluoranthene	< .33	ppm		11/18/06 12:32	WG275666
Fluorene	< .33	ppm		11/18/06 12:32	WG275666
Hexachloro-1,3-butadiene	< .33	ppm		11/18/06 12:32	WG275666
Hexachlorobenzene	< .33	ppm		11/18/06 12:32	WG275666
Hexachlorocyclopentadiene	< .33	ppm		11/18/06 12:32	WG275666
Hexachloroethane	< .33	ppm		11/18/06 12:32	WG275666
Iheno(1,2,3-cd)pyrene	< .33	ppm		11/18/06 12:32	WG275666
Iophorone	< .33	ppm		11/18/06 12:32	WG275666
n-Nitrosodi-n-propylamine	< .33	ppm		11/18/06 12:32	WG275666
n-Nitrosodimethylamine	< .05	ppm		11/18/06 12:32	WG275666
n-Nitrosodiphenylamine	< .33	ppm		11/18/06 12:32	WG275666
Naphthalene	< .33	ppm		11/18/06 12:32	WG275666
Nitrobenzene	< .33	ppm		11/18/06 12:32	WG275666
Pentachlorophenol	< .33	ppm		11/18/06 12:32	WG275666
Phenanthrene	< .33	ppm		11/18/06 12:32	WG275666
Phenol	< .33	ppm		11/18/06 12:32	WG275666



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Aaron Benker  
13400 15th Avenue N  
Plymouth, MN 55441

**Quality Assurance Report  
Level II**

L269065

November 24, 2006

Analyte	Result	Units	Date Analyzed	Batch
Petroleum	< .33	ppm	11/18/06 12:32	WG275666
Laboratory Blank				
P 3 1016	< .017	mg/kg	11/19/06 18:19	WG275672
P 3 1221	< .017	mg/kg	11/19/06 18:19	WG275672
P 3 1232	< .017	mg/kg	11/19/06 18:19	WG275672
PCB 1242	< .017	mg/kg	11/19/06 18:19	WG275672
PCB 1248	< .017	mg/kg	11/19/06 18:19	WG275672
P 3 1254	< .017	mg/kg	11/19/06 18:19	WG275672
P 3 1260	< .017	mg/kg	11/19/06 18:19	WG275672
Total Solids	0.00	%	11/20/06 08:07	WG276015
Mercury	< .02	mg/kg	11/20/06 03:58	WG276121
W1 DRO	< 8	mg/kg	11/22/06 11:10	WG276334
1,1,1,2-Tetrachloroethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,1,1-Trichloroethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,1,2,2-Tetrachloroethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,1,2-Trichloroethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,1-Dichloroethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,1-Dichloroethene	< .001	mg/kg	11/22/06 13:38	WG276567
1,1-Dichloropropene	< .001	mg/kg	11/22/06 13:38	WG276567
1,2,3-Trichlorobenzene	< .001	mg/kg	11/22/06 13:38	WG276567
1,2,3-Trichloropropane	< .001	mg/kg	11/22/06 13:38	WG276567
1,2,3-Trimethylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
1,3,4-Trichlorobenzene	< .001	mg/kg	11/22/06 13:38	WG276567
1,2,4-Trimethylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
1,2-Dibromo-3-Chloropropane	< .005	mg/kg	11/22/06 13:38	WG276567
1,2-Dibromoethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,2-Dichlorobenzene	< .001	mg/kg	11/22/06 13:38	WG276567
1,2-Dichloroethane	< .001	mg/kg	11/22/06 13:38	WG276567
1,2-Dichloropropane	< .001	mg/kg	11/22/06 13:38	WG276567
1,3,5-Trimethylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
1,3-Dichlorobenzene	< .001	mg/kg	11/22/06 13:38	WG276567
1,3-Dichloropropane	< .001	mg/kg	11/22/06 13:38	WG276567
1,4-Dichlorobenzene	< .001	mg/kg	11/22/06 13:38	WG276567
2,2-Dichloropropane	< .001	mg/kg	11/22/06 13:38	WG276567
2-Butanone (MEK)	< .01	mg/kg	11/22/06 13:38	WG276567
2-Chloroethyl vinyl ether	< .001	mg/kg	11/22/06 13:38	WG276567
2-Chlorotoluene	< .001	mg/kg	11/22/06 13:38	WG276567
2-Hexanone	< .01	mg/kg	11/22/06 13:38	WG276567
4-Chlorotoluene	< .001	mg/kg	11/22/06 13:38	WG276567
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg	11/22/06 13:38	WG276567
Acetone	< .05	mg/kg	11/22/06 13:38	WG276567
Acrylonitrile	< .01	mg/kg	11/22/06 13:38	WG276567
Benzene	< .001	mg/kg	11/22/06 13:38	WG276567
Bromobenzene	< .001	mg/kg	11/22/06 13:38	WG276567
Bromodichloromethane	< .001	mg/kg	11/22/06 13:38	WG276567
Bromoform	< .001	mg/kg	11/22/06 13:38	WG276567
Bromomethane	< .005	mg/kg	11/22/06 13:38	WG276567
Carbon tetrachloride	< .001	mg/kg	11/22/06 13:38	WG276567
Chlorobenzene	< .001	mg/kg	11/22/06 13:38	WG276567
Chlorodibromomethane	< .001	mg/kg	11/22/06 13:38	WG276567
Chloroethane	< .001	mg/kg	11/22/06 13:38	WG276567
Chloroform	< .005	mg/kg	11/22/06 13:38	WG276567
Chloromethane	< .001	mg/kg	11/22/06 13:38	WG276567
cis-1,2-Dichloroethene	< .001	mg/kg	11/22/06 13:38	WG276567
cis-1,3-Dichloropropene	< .001	mg/kg	11/22/06 13:38	WG276567
Diisopropyl ether	< .001	mg/kg	11/22/06 13:38	WG276567



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**Quality Assurance Report  
Level II**

L269065

November 24, 2006

Dibromomethane < .001 mg/kg 11/22/06 13:38 WG276567

Analyte	Result	Units	Date Analyzed	Batch
Laboratory Blank				
Dichlorodifluoromethane	< .001	mg/kg	11/22/06 13:38	WG276567
Ethyl ether	< .001	mg/kg	11/22/06 13:38	WG276567
Ethylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
Hexachlorobutadiene	< .001	mg/kg	11/22/06 13:38	WG276567
Isopropylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
Methyl tert-butyl ether	< .001	mg/kg	11/22/06 13:38	WG276567
Methylene Chloride	< .005	mg/kg	11/22/06 13:38	WG276567
n-Butylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
n-Propylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
Naphthalene	< .005	mg/kg	11/22/06 13:38	WG276567
p-Isopropyltoluene	< .001	mg/kg	11/22/06 13:38	WG276567
p-Butylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
Styrene	< .001	mg/kg	11/22/06 13:38	WG276567
tert-Butylbenzene	< .001	mg/kg	11/22/06 13:38	WG276567
Tetrachloroethene	< .001	mg/kg	11/22/06 13:38	WG276567
Tetrahydrofuran	< .005	mg/kg	11/22/06 13:38	WG276567
Toluene	< .005	mg/kg	11/22/06 13:38	WG276567
trans-1,2-Dichloroethene	< .001	mg/kg	11/22/06 13:38	WG276567
trans-1,3-Dichloropropene	< .001	mg/kg	11/22/06 13:38	WG276567
Trichloroethene	< .001	mg/kg	11/22/06 13:38	WG276567
Trichlorofluoromethane	< .001	mg/kg	11/22/06 13:38	WG276567
Vinyl chloride	< .001	mg/kg	11/22/06 13:38	WG276567
Xylenes, Total	< .003	mg/kg	11/22/06 13:38	WG276567

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Arsenic	mg/kg	0.00	0.00	0.00	20	L268892-11	WG275472
Barium	mg/kg	104.	96.8	7.17	20	L268892-11	WG275472
Cadmium	mg/kg	0.691	0.563	20.4	20	L268892-11	WG275472
Chromium	mg/kg	14.2	14.7	3.46	20	L268892-11	WG275472
Lead	mg/kg	21.2	20.0	5.83	20	L268892-11	WG275472
Selenium	mg/kg	0.00	0.00	0.00	20	L268892-11	WG275472
Silver	mg/kg	0.724	0.851	16.1	20	L268892-11	WG275472
Total Solids	%	78.5	77.4	1.38	20	L269283-02	WG276015
Mercury	mg/kg	0.00	0.00	0.00	20	L268864-01	WG276121

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	161	159.	98.8	79.5-120	WG275472
Barium	mg/kg	252	268.	106.	82.1-117	WG275472
Cadmium	mg/kg	128	127.	99.2	81.3-118	WG275472
Chromium	mg/kg	69.5	66.7	96.0	78.6-121	WG275472
Lead	mg/kg	142	146.	103.	80.3-119	WG275472
Selenium	mg/kg	64.2	63.3	98.6	75.5-124	WG275472
Silver	mg/kg	130	122.	93.8	53-146.9	WG275472
1,2,4-Trichlorobenzene	ppm	.333	0.244	73.3	39-119	WG275666
2,4,6-Trichlorophenol	ppm	.333	0.340	102.	52-128	WG275666
2,4-Dichlorophenol	ppm	.333	0.341	102.	49-126	WG275666
2,4-Dimethylphenol	ppm	.333	0.315	94.7	43-138	WG275666
2,4-Dinitrophenol	ppm	.333	0.226	67.9	41-110	WG275666
2,4-Dinitrotoluene	ppm	.333	0.368	110.	61-138	WG275666
2,6-Dinitrotoluene	ppm	.333	0.323	96.9	54-143	WG275666
2-Chloronaphthalene	ppm	.333	0.293	88.0	47-128	WG275666
2-Chlorophenol	ppm	.333	0.263	78.9	44-126	WG275666



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Tax I.D. 62-0814289

Est. 1970

Liesch Associates, Inc.  
Aaron Benker  
13400 15th Avenue N  
Lymouth, MN 55441

**Quality Assurance Report  
Level II**

L269065

November 24, 2006

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
2-Nitrophenol	ppm	.333	0.231	69.3	54-122	WG275666
3,3-Dichlorobenzidine	ppm	.333	0.241	72.4	41-140	WG275666
4,5-Dinitro-2-methylphenol	ppm	.333	0.270	81.2	37-135	WG275666
4-Bromophenyl-phenylether	ppm	.333	0.285	85.6	58-107	WG275666
4-Chloro-3-methylphenol	ppm	.333	0.339	102.	53-130	WG275666
4-Chlorophenyl-phenylether	ppm	.333	0.315	94.7	54-126	WG275666
4-Nitrophenol	ppm	.333	0.371	111.	44-135	WG275666
Acenaphthene	ppm	.333	0.307	92.2	56-125	WG275666
Acenaphthylene	ppm	.333	0.342	103.	53-138	WG275666
Anthracene	ppm	.333	0.341	102.	57-132	WG275666
Benzidine	ppm	.333	0.0115	3.46	1-73	WG275666
Benzo(a)anthracene	ppm	.333	0.316	95.0	60-119	WG275666
Benzo(a)pyrene	ppm	.333	0.334	100.	53-133	WG275666
Benzo(b)fluoranthene	ppm	.333	0.289	86.8	52-128	WG275666
Benzo(g,h,i)perylene	ppm	.333	0.333	100.	50-134	WG275666
Benzo(k)fluoranthene	ppm	.333	0.315	94.6	53-125	WG275666
Bis(2-butyl)phthalate	ppm	.333	0.359	108.	52-146	WG275666
Bis(2-chloroethoxy)methane	ppm	.333	0.300	90.2	49-131	WG275666
Bis(2-chloroethyl)ether	ppm	.333	0.255	76.4	46-116	WG275666
Bis(2-chloroisopropyl)ether	ppm	.333	0.257	77.1	40-127	WG275666
Bis(2-ethylhexyl)phthalate	ppm	.333	0.346	104.	55-139	WG275666
Crysene	ppm	.333	0.310	93.0	59-124	WG275666
Di-n-butyl phthalate	ppm	.333	0.343	103.	61-138	WG275666
Di-n-octyl phthalate	ppm	.333	0.365	110.	58-138	WG275666
Dibenz(a,h)anthracene	ppm	.333	0.352	106.	53-135	WG275666
Dibethyl phthalate	ppm	.333	0.327	98.3	59-136	WG275666
Dibethyl phthalate	ppm	.333	0.312	93.6	59-130	WG275666
Fluoranthene	ppm	.333	0.329	98.6	57-132	WG275666
Fluorene	ppm	.333	0.321	96.5	60-126	WG275666
Hexachloro-1,3-butadiene	ppm	.333	0.277	83.1	36-138	WG275666
Hexachlorobenzene	ppm	.333	0.305	91.5	52-132	WG275666
Hexachlorocyclopentadiene	ppm	.333	0.525	158.	37-155	WG275666
Hexachloroethane	ppm	.333	0.253	76.0	45-127	WG275666
Indeno(1,2,3-cd)pyrene	ppm	.333	0.329	98.8	52-133	WG275666
Isophorone	ppm	.333	0.326	97.8	44-134	WG275666
n-Nitrosodi-n-propylamine	ppm	.333	0.308	92.4	42-137	WG275666
n-Nitrosodimethylamine	ppm	.333	0.267	80.3	34-121	WG275666
n-Nitrosodiphenylamine	ppm	.333	0.350	105.	54-149	WG275666
Naphthalene	ppm	.333	0.262	78.8	40-120	WG275666
Nitrobenzene	ppm	.333	0.254	76.2	49-127	WG275666
o-Itachlorophenol	ppm	.333	0.285	85.4	49-126	WG275666
o-phenanthrene	ppm	.333	0.305	91.5	58-129	WG275666
Phenol	ppm	.333	0.295	88.5	41-140	WG275666
Pyrene	ppm	.333	0.308	92.6	60-127	WG275666
P 3 1260	mg/kg	.167	0.184	110.	64-120	WG275672
Total Solids	%	50	50.1	100.	85-115	WG276015
Mercury	mg/kg	11.7	13.3	114.	66.4-133	WG276121
W. DRO	mg/kg	40	34.8	86.9	70-120	WG276334
1,1,1,2-Tetrachloroethane	mg/kg	.05	0.0468	93.6	66-134	WG276567
1,1,1-Trichloroethane	mg/kg	.05	0.0445	89.1	56-142	WG276567
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0450	90.0	68-122	WG276567
1,1,2-Trichloroethane	mg/kg	.05	0.0453	90.6	69-118	WG276567
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0536	107.	62-146	WG276567
1,1-Dichloroethane	mg/kg	.05	0.0387	77.4	55-133	WG276567
1,1-Dichloroethene	mg/kg	.05	0.0511	102.	65-129	WG276567



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Aaron Benker  
13400 15th Avenue N  
Plymouth, MN 55441

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L269065

November 24, 2006

Analyte	Units	Known Val	Sample Result	% Rec	Limit	Batch
1,1-Dichloropropene	mg/kg	.05	0.0428	85.6	63-130	WG276567
1,2,3-Trichlorobenzene	mg/kg	.05	0.0433	86.6	60-149	WG276567
1,2,3-Trichloropropene	mg/kg	.05	0.0416	83.2	65-137	WG276567
1,2,3-Trimethylbenzene	mg/kg	.05	0.0399	79.9	60-107	WG276567
1,2,4-Trichlorobenzene	mg/kg	.05	0.0503	101.	59-160	WG276567
1,2,4-Trimethylbenzene	mg/kg	.05	0.0513	103.	59-138	WG276567
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0402	80.5	51-142	WG276567
1,2-Dibromoethane	mg/kg	.05	0.0460	92.0	64-129	WG276567
1,2-Dichlorobenzene	mg/kg	.05	0.0432	86.4	70-126	WG276567
1,2-Dichloroethane	mg/kg	.05	0.0401	80.1	55-139	WG276567
1,2-Dichloropropane	mg/kg	.05	0.0387	77.5	64-124	WG276567
1,3,5-Trimethylbenzene	mg/kg	.05	0.0491	98.1	66-132	WG276567
1,3-Dichlorobenzene	mg/kg	.05	0.0535	107.	64-139	WG276567
1,3-Dichloropropane	mg/kg	.05	0.0456	91.2	71-122	WG276567
1,4-Dichlorobenzene	mg/kg	.05	0.0474	94.9	66-129	WG276567
2,2-Dichloropropane	mg/kg	.05	0.0402	80.3	51-149	WG276567
2-Butanone (MEK)	mg/kg	.25	0.143	57.0	47-134	WG276567
2-Chloroethyl vinyl ether	mg/kg	.25	0.206	82.5	44-142	WG276567
2-Chlorotoluene	mg/kg	.05	0.0471	94.3	64-137	WG276567
2-Hexanone	mg/kg	.25	0.195	77.9	58-133	WG276567
4-Chlorotoluene	mg/kg	.05	0.0493	98.6	69-133	WG276567
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.201	80.4	55-132	WG276567
4-Propyltoluene	mg/kg	.25	0.189	75.6	49-158	WG276567
Acrylonitrile	mg/kg	.25	0.162	64.8	44-126	WG276567
Benzene	mg/kg	.05	0.0441	88.1	65-123	WG276567
Bromobenzene	mg/kg	.05	0.0474	94.9	66-137	WG276567
Bromodichloromethane	mg/kg	.05	0.0400	80.0	67-126	WG276567
Bromoform	mg/kg	.05	0.0387	77.4	56-144	WG276567
Bromomethane	mg/kg	.05	0.0295	59.0	37-117	WG276567
Carbon tetrachloride	mg/kg	.05	0.0430	86.1	61-146	WG276567
Chlorobenzene	mg/kg	.05	0.0506	101.	68-130	WG276567
Chlorodibromomethane	mg/kg	.05	0.0444	88.7	64-131	WG276567
Chloroethane	mg/kg	.05	0.0262	52.3	49-148	WG276567
Chloroform	mg/kg	.05	0.0385	77.0	63-125	WG276567
Chloromethane	mg/kg	.05	0.0337	67.4	41-147	WG276567
cis-1,2-Dichloroethene	mg/kg	.05	0.0461	92.2	68-121	WG276567
cis-1,3-Dichloropropene	mg/kg	.05	0.0417	83.4	69-120	WG276567
Diisopropyl ether	mg/kg	.05	0.0364	72.8	58-124	WG276567
Dibromomethane	mg/kg	.05	0.0438	87.7	68-122	WG276567
Dichlorodifluoromethane	mg/kg	.05	0.0156	31.1	45-139	WG276567
Diphenyl ether	mg/kg	.05	0.0423	84.5	54-145	WG276567
Diphenylbenzene	mg/kg	.05	0.0492	98.4	69-124	WG276567
Hexachlorobutadiene	mg/kg	.05	0.0392	78.3	59-129	WG276567
Isopropylbenzene	mg/kg	.05	0.0522	104.	69-133	WG276567
Methyl tert-butyl ether	mg/kg	.05	0.0445	89.0	56-132	WG276567
Methylene Chloride	mg/kg	.05	0.0395	79.1	55-125	WG276567
n-Butylbenzene	mg/kg	.05	0.0464	92.8	61-136	WG276567
n-Propylbenzene	mg/kg	.05	0.0519	104.	68-129	WG276567
Naphthalene	mg/kg	.05	0.0545	109.	63-146	WG276567
p-Isopropyltoluene	mg/kg	.05	0.0505	101.	64-141	WG276567
sec-Butylbenzene	mg/kg	.05	0.0516	103.	66-133	WG276567
Styrene	mg/kg	.05	0.0513	103.	68-126	WG276567
tert-Butylbenzene	mg/kg	.05	0.0508	102.	64-136	WG276567
Tetrachloroethene	mg/kg	.05	0.0463	92.5	62-143	WG276567
Tetrahydrofuran	mg/kg	.05	0.0360	71.9	43-118	WG276567
Toluene	mg/kg	.05	0.0443	88.6	69-120	WG276567
trans-1,2-Dichloroethene	mg/kg	.05	0.0478	95.5	68-130	WG276567
trans-1,3-Dichloropropene	mg/kg	.05	0.0364	72.9	51-115	WG276567
Trichloroethene	mg/kg	.05	0.0450	90.0	70-124	WG276567
Trichlorofluoromethane	mg/kg	.05	0.0319	63.9	46-131	WG276567



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Aaron Benker  
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Plymouth, MN 55441

**Quality Assurance Report  
Level II**

L269065

November 24, 2006

Vinyl chloride mg/kg .05 0.0263 52.6 49-133 WG276567

Analyte	Laboratory Control		Sample	% Rec	Limit	Batch
	Units	Known Val	Result			

Xylenes, Total	mg/kg	.15	0.149	99.5	69-126	WG276567
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Analyte	Units	Laboratory Control		Sample	Limit	%Rec	Batch
		LCSD	Res Ref	Duplicate			

1,2,4-Trichlorobenzene	ppm	0.223	0.244	8.92	28	67	WG275666
1,6-Trichlorophenol	ppm	0.280	0.340	19.4	20	84	WG275666
2,4-Dichlorophenol	ppm	0.286	0.341	17.5	21	86	WG275666
2,4-Dimethylphenol	ppm	0.285	0.315	10.2	24	85	WG275666
2,4-Dinitrophenol	ppm	0.175	0.226	25.4	28	53	WG275666
2,1-Dinitrotoluene	ppm	0.314	0.368	15.6	18	94	WG275666
2,5-Dinitrotoluene	ppm	0.294	0.323	9.29	15	88	WG275666
2-Chloronaphthalene	ppm	0.259	0.293	12.4	20	78	WG275666
2-Chlorophenol	ppm	0.224	0.263	15.8	25	67	WG275666
2-Nitrophenol	ppm	0.207	0.231	11.1	23	62	WG275666
3,3-Dichlorobenzidine	ppm	0.216	0.241	10.8	24	65	WG275666
4,5-Dinitro-2-methylphenol	ppm	0.206	0.270	27.0	24	62	WG275666
4-Bromophenyl-phenylether	ppm	0.236	0.285	18.9	19	71	WG275666
4-Chloro-3-methylphenol	ppm	0.288	0.339	16.2	18	87	WG275666
4-Chlorophenyl-phenylether	ppm	0.275	0.315	13.7	21	83	WG275666
4-Nitrophenol	ppm	0.308	0.371	18.5	21	92	WG275666
Acenaphthene	ppm	0.267	0.307	13.8	23	80	WG275666
Acenaphthylene	ppm	0.302	0.342	12.2	23	91	WG275666
Anthracene	ppm	0.278	0.341	20.2	17	84	WG275666
Benizidine	ppm	0.0133	0.0115	14.7	26	4	WG275666
Benzo(a)anthracene	ppm	0.272	0.316	15.0	17	82	WG275666
Benzo(a)pyrene	ppm	0.290	0.334	14.3	17	87	WG275666
Benzo(b)fluoranthene	ppm	0.245	0.289	16.6	19	73	WG275666
Benzo(g,h,i)perylene	ppm	0.295	0.333	12.2	17	89	WG275666
Benzo(k)fluoranthene	ppm	0.248	0.315	23.7	18	75	WG275666
Benzylbutyl phthalate	ppm	0.297	0.359	19.1	17	89	WG275666
Bis(2-chloroethoxy)methane	ppm	0.268	0.300	11.2	27	81	WG275666
Bis(2-chloroethyl)ether	ppm	0.212	0.255	18.1	31	64	WG275666
Bis(2-chloroisopropyl) ether	ppm	0.222	0.257	14.5	31	67	WG275666
Bis(2-ethylhexyl)phthalate	ppm	0.288	0.346	18.5	17	86	WG275666
Chrysene	ppm	0.268	0.310	14.5	17	80	WG275666
Di-n-butyl phthalate	ppm	0.280	0.343	20.4	16	84	WG275666
Di-n-octyl phthalate	ppm	0.298	0.365	20.3	16	90	WG275666
Dibenz(a,h)anthracene	ppm	0.315	0.352	11.1	17	95	WG275666
Diethyl phthalate	ppm	0.292	0.327	11.6	15	88	WG275666
Dimethyl phthalate	ppm	0.273	0.312	13.1	16	82	WG275666
Fluoranthene	ppm	0.279	0.329	16.3	16	84	WG275666
Fluorene	ppm	0.283	0.321	12.6	18	85	WG275666
Heptachloro-1,3-butadiene	ppm	0.243	0.277	12.9	27	73	WG275666
Heptachlorobenzene	ppm	0.257	0.305	17.2	20	77	WG275666
Heptachlorocyclopentadiene	ppm	0.446	0.525	16.3	32	134	WG275666
Hexachloroethane	ppm	0.214	0.253	16.7	27	64	WG275666
Indeno(1,2,3-cd)pyrene	ppm	0.286	0.329	14.0	16	86	WG275666
Isophorone	ppm	0.282	0.326	14.5	20	85	WG275666
n-Nitrosodi-n-propylamine	ppm	0.270	0.308	13.0	34	81	WG275666
n-Nitrosodimethylamine	ppm	0.237	0.267	12.0	33	71	WG275666
n-Nitrosodiphenylamine	ppm	0.285	0.350	20.2	19	86	WG275666
Naphthalene	ppm	0.234	0.262	11.5	27	70	WG275666
Nitrobenzene	ppm	0.225	0.254	11.9	24	68	WG275666
Orthachlorophenol	ppm	0.232	0.285	20.3	26	70	WG275666
Phenanthrene	ppm	0.256	0.305	17.3	17	77	WG275666
Phenol	ppm	0.246	0.295	18.1	23	74	WG275666
Pyrene	ppm	0.265	0.308	15.3	18	79	WG275666



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**Quality Assurance Report  
Level II**

November 24, 2006

L269065

PCB 1260	mg/kg	0.182	0.184	0.961	20	109	WG275672
Analyte	Units	LCS	Duplicate	RPD	Limit	%Rec	Batch
WT DRO	mg/kg	37.1	34.8	6.60	20	93	WG276334
1,1,1,2-Tetrachloroethane	mg/kg	0.0502	0.0468	6.92	16	100	WG276567
1,1,1-Trichloroethane	mg/kg	0.0473	0.0445	5.98	16	95	WG276567
1,1,2,2-Tetrachloroethane	mg/kg	0.0480	0.0450	6.32	16	96	WG276567
1,1,2-Trichloroethane	mg/kg	0.0489	0.0453	7.64	14	98	WG276567
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0570	0.0536	6.21	17	114	WG276567
1,1-Dichloroethane	mg/kg	0.0410	0.0387	5.71	16	82	WG276567
1,1-Dichloroethene	mg/kg	0.0546	0.0511	6.75	19	109	WG276567
1,1-Dichloropropene	mg/kg	0.0471	0.0428	9.67	17	94	WG276567
1,2,3-Trichlorobenzene	mg/kg	0.0607	0.0433	33.5	21	121	WG276567
1,2,3-Trichloropropane	mg/kg	0.0445	0.0416	6.80	19	89	WG276567
1,2,3-Trimethylbenzene	mg/kg	0.0422	0.0399	5.52	15	84	WG276567
1,2,4-Trichlorobenzene	mg/kg	0.0610	0.0503	19.1	20	122	WG276567
1,2,4-Trimethylbenzene	mg/kg	0.0519	0.0513	1.26	15	104	WG276567
1,2-Dibromo-3-Chloropropane	mg/kg	0.0526	0.0402	26.6	20	105	WG276567
1,2-Dibromoethane	mg/kg	0.0498	0.0460	7.85	23	100	WG276567
1,2-Dichlorobenzene	mg/kg	0.0466	0.0432	7.63	15	93	WG276567
1,2-Dichloroethane	mg/kg	0.0429	0.0401	6.78	15	86	WG276567
1,2-Dichloropropane	mg/kg	0.0423	0.0387	8.72	16	85	WG276567
1,3,5-Trimethylbenzene	mg/kg	0.0499	0.0491	1.67	15	100	WG276567
1,3-Dichlorobenzene	mg/kg	0.0565	0.0535	5.35	18	113	WG276567
1,3-Dichloropropane	mg/kg	0.0486	0.0456	6.34	15	97	WG276567
1,4-Dichlorobenzene	mg/kg	0.0510	0.0474	7.30	17	102	WG276567
2,2-Dichloropropane	mg/kg	0.0405	0.0402	0.800	19	81	WG276567
2-Butanone (MEK)	mg/kg	0.153	0.143	7.14	21	61	WG276567
2-Chloroethyl vinyl ether	mg/kg	0.217	0.206	5.15	14	87	WG276567
2-Chlorotoluene	mg/kg	0.0497	0.0471	5.39	19	99	WG276567
2-Hexanone	mg/kg	0.205	0.195	5.06	19	82	WG276567
4-Chlorotoluene	mg/kg	0.0516	0.0493	4.50	16	103	WG276567
4-Methyl-2-pentanone (MIBK)	mg/kg	0.218	0.201	8.18	19	87	WG276567
Acetone	mg/kg	0.207	0.189	9.22	31	83	WG276567
Acrylonitrile	mg/kg	0.175	0.162	7.75	18	70	WG276567
Benzene	mg/kg	0.0479	0.0441	8.30	13	96	WG276567
Bromobenzene	mg/kg	0.0497	0.0474	4.58	15	99	WG276567
Bromodichloromethane	mg/kg	0.0442	0.0400	10.0	13	88	WG276567
Bromoform	mg/kg	0.0440	0.0387	12.8	16	88	WG276567
Bromomethane	mg/kg	0.0334	0.0295	12.4	20	67	WG276567
Carbon tetrachloride	mg/kg	0.0471	0.0430	8.91	16	94	WG276567
Chlorobenzene	mg/kg	0.0538	0.0506	6.03	16	108	WG276567
Chlorodibromomethane	mg/kg	0.0480	0.0444	7.96	16	96	WG276567
Chloroethane	mg/kg	0.0281	0.0262	7.07	16	56	WG276567
Chloroform	mg/kg	0.0418	0.0385	8.29	14	84	WG276567
Chloromethane	mg/kg	0.0360	0.0337	6.54	17	72	WG276567
cis-1,2-Dichloroethene	mg/kg	0.0495	0.0461	7.14	15	99	WG276567
cis-1,3-Dichloropropene	mg/kg	0.0445	0.0417	6.57	15	89	WG276567
Di-isopropyl ether	mg/kg	0.0402	0.0364	9.81	15	80	WG276567
Dibromomethane	mg/kg	0.0468	0.0438	6.51	14	94	WG276567
Dichlorodifluoromethane	mg/kg	0.0160	0.0156	2.77	19	32	WG276567
Ethyl ether	mg/kg	0.0456	0.0423	7.67	16	91	WG276567
Ethylbenzene	mg/kg	0.0512	0.0492	4.01	15	102	WG276567
Hexachlorobutadiene	mg/kg	0.0420	0.0392	7.06	16	84	WG276567
Isopropylbenzene	mg/kg	0.0531	0.0522	1.66	16	106	WG276567
Methyl tert-butyl ether	mg/kg	0.0487	0.0445	8.99	16	97	WG276567
Methylene Chloride	mg/kg	0.0431	0.0395	8.67	15	86	WG276567
n-Butylbenzene	mg/kg	0.0481	0.0464	3.62	18	96	WG276567
n-Propylbenzene	mg/kg	0.0531	0.0519	2.16	16	106	WG276567
Naphthalene	mg/kg	0.0699	0.0545	24.7	21	140	WG276567
p-Isopropyltoluene	mg/kg	0.0514	0.0505	1.76	16	103	WG276567



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Tax I.D. 62-0814289

Est. 1970

Liesch Associates, Inc.  
Aaron Benker  
13400 15th Avenue N  
Plymouth, MN 55441

**Quality Assurance Report  
Level II**

L269065

November 24, 2006

Analyte	Units	LCSD	Res	Ref Res	RPD	Limit	%Rec	Batch
sec-Butylbenzene	mg/kg	0.0511	0.0516	0.893	15	102		WG276567
Styrene	mg/kg	0.0540	0.0513	5.28	16	108		WG276567
tert-Butylbenzene	mg/kg	0.0501	0.0508	1.44	16	100		WG276567
Trichloroethene	mg/kg	0.0484	0.0463	4.58	18	97		WG276567
Tetrahydrofuran	mg/kg	0.0396	0.0360	9.61	24	79		WG276567
Toluene	mg/kg	0.0469	0.0443	5.65	13	94		WG276567
trans-1,2-Dichloroethene	mg/kg	0.0523	0.0478	9.06	17	105		WG276567
trans-1,3-Dichloropropene	mg/kg	0.0393	0.0364	7.53	17	79		WG276567
Trichloroethene	mg/kg	0.0478	0.0450	6.13	14	96		WG276567
Trichlorofluoromethane	mg/kg	0.0346	0.0319	8.10	15	69		WG276567
Vinyl chloride	mg/kg	0.0278	0.0263	5.60	14	56		WG276567
Xylenes, Total	mg/kg	0.155	0.149	3.48	14	103		WG276567

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Arsenic	mg/kg	42.7	0.00	50	85.4	75-125	L268892-11	WG275472
Barium	mg/kg	151.	96.8	50	108.	75-125	L268892-11	WG275472
Cadmium	mg/kg	46.4	0.563	50	91.7	75-125	L268892-11	WG275472
Chromium	mg/kg	58.9	14.7	50	88.4	75-125	L268892-11	WG275472
Lead	mg/kg	63.1	20.0	50	86.2	75-125	L268892-11	WG275472
Selenium	mg/kg	40.7	0.00	50	81.4	75-125	L268892-11	WG275472
Silver	mg/kg	47.2	0.851	50	92.7	75-125	L268892-11	WG275472
1,2,4-Trichlorobenzene	ppm	0.339	0.00	.333	102.	43-115	L269206-08	WG275666
2,4,6-Trichlorophenol	ppm	0.414	0.00	.333	124.	46-134	L269206-08	WG275666
2,4-Dichlorophenol	ppm	0.419	0.00	.333	126.	44-126	L269206-08	WG275666
2,4-Dimethylphenol	ppm	0.346	0.00	.333	104.	43-135	L269206-08	WG275666
2,4-Dinitrophenol	ppm	0.218	0.00	.333	65.6	10-117	L269206-08	WG275666
2,4-Dinitrotoluene	ppm	0.455	0.00	.333	137.	47-154	L269206-08	WG275666
2,6-Dinitrotoluene	ppm	0.418	0.00	.333	126.	41-152	L269206-08	WG275666
2-Chloronaphthalene	ppm	0.366	0.00	.333	110.	44-129	L269206-08	WG275666
2-Chlorophenol	ppm	0.326	0.00	.333	98.0	31-115	L269206-08	WG275666
2-Nitrophenol	ppm	0.344	0.00	.333	103.	48-116	L269206-08	WG275666
3,3-Dichlorobenzidine	ppm	0.153	0.00	.333	46.0	39-140	L269206-08	WG275666
4,6-Dinitro-2-methylphenol	ppm	0.303	0.00	.333	90.8	10-159	L269206-08	WG275666
4-Bromophenyl-phenylether	ppm	0.296	0.00	.333	88.7	42-129	L269206-08	WG275666
4-Chloro-3-methylphenol	ppm	0.396	0.00	.333	119.	39-137	L269206-08	WG275666
4-Chlorophenyl-phenylether	ppm	0.384	0.00	.333	115.	47-128	L269206-08	WG275666
4-Nitrophenol	ppm	0.396	0.00	.333	119.	39-138	L269206-08	WG275666
Acenaphthene	ppm	0.354	0.00	.333	106.	47-130	L269206-08	WG275666
Acenaphthylene	ppm	0.415	0.00	.333	125.	46-139	L269206-08	WG275666
Anthracene	ppm	0.373	0.00	.333	112.	45-134	L269206-08	WG275666
Benzidine	ppm	0.0177	0.00	.333	5.3	1-37	L269206-08	WG275666
Benzo(a)anthracene	ppm	0.347	0.00	.333	104.	45-125	L269206-08	WG275666
Benzo(a)pyrene	ppm	0.345	0.00	.333	104.	48-135	L269206-08	WG275666
Benzo(b)fluoranthene	ppm	0.384	0.00	.333	115.	45-148	L269206-08	WG275666
Benzo(g,h,i)perylene	ppm	0.249	0.00	.333	74.8	33-124	L269206-08	WG275666
Benzo(k)fluoranthene	ppm	0.367	0.00	.333	110.	48-147	L269206-08	WG275666
Bis(2-butyl phthalate	ppm	0.390	0.00	.333	117.	44-156	L269206-08	WG275666
Bis(2-chloroethoxy)methane	ppm	0.380	0.00	.333	114.	42-126	L269206-08	WG275666
Bis(2-chloroethyl) ether	ppm	0.335	0.00	.333	101.	29-115	L269206-08	WG275666
Bis(2-chloroisopropyl) ether	ppm	0.324	0.00	.333	97.2	39-122	L269206-08	WG275666
Bis(2-ethylhexyl) phthalate	ppm	0.361	0.00	.333	109.	46-156	L269206-08	WG275666
Chrysene	ppm	0.368	0.00	.333	110.	45-125	L269206-08	WG275666
Di-n-butyl phthalate	ppm	0.366	0.00	.333	110.	50-141	L269206-08	WG275666
Di-n-octyl phthalate	ppm	0.358	0.00	.333	107.	40-154	L269206-08	WG275666
Dibenz(a,h)anthracene	ppm	0.276	0.00	.333	82.9	33-130	L269206-08	WG275666
Diethyl phthalate	ppm	0.374	0.00	.333	112.	51-140	L269206-08	WG275666
Dimethyl phthalate	ppm	0.385	0.00	.333	116.	50-133	L269206-08	WG275666





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Est. 1970

Liesch Associates, Inc.  
Aaron Benker  
13400 15th Avenue N  
Lymouth, MN 55441

## Quality Assurance Report Level II

L269065

November 24, 2006

Fluoranthene ppm 0.385 0.00 .333 116. 43-136 L269206-08 WG275666

Analyte	Units	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res					
Fluorene	ppm	0.386	0.00	.333	116.	50-130	L269206-08	WG275666
Hexachloro-1,3-butadiene	ppm	0.377	0.00	.333	113.	37-134	L269206-08	WG275666
Hexachlorobenzene	ppm	0.321	0.00	.333	96.3	44-134	L269206-08	WG275666
Hexachlorocyclopentadiene	ppm	0.585	0.00	.333	176.	10-155	L269206-08	WG275666
Hexachloroethane	ppm	0.347	0.00	.333	104.	41-114	L269206-08	WG275666
Indeno(1,2,3-cd)pyrene	ppm	0.268	0.00	.333	80.5	34-125	L269206-08	WG275666
Isophorone	ppm	0.411	0.00	.333	123.	45-134	L269206-08	WG275666
n-Nitrosodi-n-propylamine	ppm	0.402	0.00	.333	121.	43-132	L269206-08	WG275666
n-Nitrosodimethylamine	ppm	0.241	0.00	.333	72.4	19-124	L269206-08	WG275666
n-Nitrosodiphenylamine	ppm	0.379	0.00	.333	114.	49-145	L269206-08	WG275666
Naphthalene	ppm	0.341	0.00	.333	102.	39-124	L269206-08	WG275666
Nitrobenzene	ppm	0.337	0.00	.333	101.	49-121	L269206-08	WG275666
Pentachlorophenol	ppm	0.373	0.00	.333	112.	41-141	L269206-08	WG275666
Phenanthrene	ppm	0.361	0.00	.333	108.	43-136	L269206-08	WG275666
Phenol	ppm	0.331	0.00	.333	99.5	32-117	L269206-08	WG275666
Pyrene	ppm	0.358	0.00	.333	108.	43-142	L269206-08	WG275666

Mercury mg/kg 0.242 0.00 .25 96.8 70-130 L268864-02 WG276121

1,1,1,2-Tetrachloroethane	mg/kg	0.220	0.00	.05	87.9	56-123	L269151-06	WG276567
1,1,1-Trichloroethane	mg/kg	0.218	0.00	.05	87.2	53-139	L269151-06	WG276567
1,1,2,2-Tetrachloroethane	mg/kg	0.182	0.00	.05	72.7	37-133	L269151-06	WG276567
1,1,2-Trichloroethane	mg/kg	0.208	0.00	.05	83.2	61-113	L269151-06	WG276567
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.241	0.00	.05	96.6	56-115	L269151-06	WG276567
1,1-Dichloroethane	mg/kg	0.182	0.00	.05	72.8	64-127	L269151-06	WG276567
1,1-Dichloroethene	mg/kg	0.256	0.00	.05	102.	64-126	L269151-06	WG276567
1,1-Dichloropropene	mg/kg	0.198	0.00	.05	79.4	55-108	L269151-06	WG276567
1,2,3-Trichlorobenzene	mg/kg	0.107	0.00	.05	42.8	30-113	L269151-06	WG276567
1,2,3-Trichloropropane	mg/kg	0.166	0.00	.05	66.5	47-138	L269151-06	WG276567
1,2,3-Trimethylbenzene	mg/kg	0.167	0.00	.05	66.8	42-96	L269151-06	WG276567
1,2,4-Trichlorobenzene	mg/kg	0.117	0.00	.05	46.7	30-104	L269151-06	WG276567
1,2,4-Trimethylbenzene	mg/kg	0.147	0.00	.05	58.7	38-108	L269151-06	WG276567
1,2-Dibromo-3-Chloropropane	mg/kg	0.201	0.00	.05	80.4	39-135	L269151-06	WG276567
1,2-Dibromoethane	mg/kg	0.201	0.00	.05	80.5	57-120	L269151-06	WG276567
1,2-Dichlorobenzene	mg/kg	0.190	0.00	.05	75.8	36-110	L269151-06	WG276567
1,2-Dichloroethane	mg/kg	0.191	0.00	.05	76.5	46-147	L269151-06	WG276567
1,2-Dichloropropane	mg/kg	0.193	0.00	.05	77.3	63-124	L269151-06	WG276567
1,3,5-Trimethylbenzene	mg/kg	0.149	0.00	.05	59.5	39-106	L269151-06	WG276567
1,3-Dichlorobenzene	mg/kg	0.170	0.00	.05	67.9	31-109	L269151-06	WG276567
1,3-Dichloropropane	mg/kg	0.211	0.00	.05	84.3	65-116	L269151-06	WG276567
1,4-Dichlorobenzene	mg/kg	0.211	0.00	.05	84.5	32-102	L269151-06	WG276567
2,2-Dichloropropane	mg/kg	0.187	0.00	.05	74.8	49-138	L269151-06	WG276567
2-Butanone (MEK)	mg/kg	0.500	0.00	.25	40.0	43-137	L269151-06	WG276567
2-Chloroethyl vinyl ether	mg/kg	0.686	0.00	.25	54.9	40-138	L269151-06	WG276567
2-Chlorotoluene	mg/kg	0.167	0.00	.05	66.9	45-111	L269151-06	WG276567
2-Hexanone	mg/kg	0.727	0.00	.25	58.2	43-127	L269151-06	WG276567
4-Chlorotoluene	mg/kg	0.177	0.00	.05	70.7	38-106	L269151-06	WG276567
4-Methyl-2-pentanone (MIBK)	mg/kg	0.760	0.00	.25	60.8	47-133	L269151-06	WG276567
Acetone	mg/kg	0.617	0.00	.25	49.4	33-148	L269151-06	WG276567
Acrylonitrile	mg/kg	0.626	0.00	.25	50.1	40-126	L269151-06	WG276567
Benzene	mg/kg	0.212	0.00	.05	84.9	54-119	L269151-06	WG276567
Bromobenzene	mg/kg	0.185	0.00	.05	73.9	45-116	L269151-06	WG276567
Bromodichloromethane	mg/kg	0.192	0.00	.05	77.0	51-125	L269151-06	WG276567
Bromoform	mg/kg	0.171	0.00	.05	68.6	44-135	L269151-06	WG276567
Bromomethane	mg/kg	0.150	0.00	.05	59.9	30-113	L269151-06	WG276567
Carbon tetrachloride	mg/kg	0.208	0.00	.05	83.2	47-133	L269151-06	WG276567
Chlorobenzene	mg/kg	0.225	0.00	.05	89.9	53-110	L269151-06	WG276567
Chlorodibromomethane	mg/kg	0.204	0.00	.05	81.8	53-125	L269151-06	WG276567
Chloroethane	mg/kg	0.141	0.00	.05	56.5	42-149	L269151-06	WG276567



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**Quality Assurance Report  
Level II**

L269065

November 24, 2006

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Chloroform	mg/kg	0.194	0.00	.05	77.6	61-127	L269151-06	WG276567
Chloromethane	mg/kg	0.208	0.00	.05	83.3	35-140	L269151-06	WG276567
cis-1,2-Dichloroethene	mg/kg	0.226	0.00	.05	90.3	67-120	L269151-06	WG276567
cis-1,3-Dichloropropene	mg/kg	0.188	0.00	.05	75.2	53-113	L269151-06	WG276567
Di-isopropyl ether	mg/kg	0.187	0.00	.05	74.6	62-119	L269151-06	WG276567
Dibromomethane	mg/kg	0.192	0.00	.05	77.0	57-126	L269151-06	WG276567
Dichlorodifluoromethane	mg/kg	0.102	0.00	.05	40.9	34-140	L269151-06	WG276567
Ethyl ether	mg/kg	0.208	0.00	.05	83.4	60-138	L269151-06	WG276567
Ethylbenzene	mg/kg	0.204	0.00	.05	81.6	47-111	L269151-06	WG276567
Hexachlorobutadiene	mg/kg	0.0757	0.00	.05	30.3	30-91	L269151-06	WG276567
Isopropylbenzene	mg/kg	0.183	0.00	.05	73.3	49-110	L269151-06	WG276567
Methyl tert-butyl ether	mg/kg	0.219	0.00	.05	87.8	63-131	L269151-06	WG276567
Methylene Chloride	mg/kg	0.199	0.00	.05	79.6	54-123	L269151-06	WG276567
n-Butylbenzene	mg/kg	0.131	0.00	.05	52.3	36-94	L269151-06	WG276567
n-Propylbenzene	mg/kg	0.163	0.00	.05	65.3	43-101	L269151-06	WG276567
Naphthalene	mg/kg	0.153	0.00	.05	61.1	33-125	L269151-06	WG276567
p-Isopropyltoluene	mg/kg	0.122	0.00	.05	48.7	34-105	L269151-06	WG276567
s-Butylbenzene	mg/kg	0.127	0.00	.05	51.0	37-105	L269151-06	WG276567
Styrene	mg/kg	0.206	0.00	.05	82.4	43-107	L269151-06	WG276567
tert-Butylbenzene	mg/kg	0.146	0.00	.05	58.3	45-112	L269151-06	WG276567
Tetrachloroethene	mg/kg	0.190	0.00	.05	76.1	40-114	L269151-06	WG276567
Tetrahydrofuran	mg/kg	0.140	0.00	.05	56.1	38-131	L269151-06	WG276567
Toluene	mg/kg	0.191	0.00	.05	76.6	54-109	L269151-06	WG276567
trans-1,2-Dichloroethene	mg/kg	0.234	0.00	.05	93.8	58-118	L269151-06	WG276567
trans-1,3-Dichloropropene	mg/kg	0.161	0.00	.05	64.3	41-107	L269151-06	WG276567
Trichloroethene	mg/kg	0.200	0.00	.05	80.1	56-119	L269151-06	WG276567
Trichlorofluoromethane	mg/kg	0.163	0.00	.05	65.1	39-126	L269151-06	WG276567
Vinyl chloride	mg/kg	0.152	0.00	.05	60.8	39-127	L269151-06	WG276567
Xylenes, Total	mg/kg	0.603	0.00	.15	80.4	51-107	L269151-06	WG276567

Analyte	Units	MSD Res	Ref Res	RPD	Limit	%Rec	Ref Samp	Batch
Arsenic	mg/kg	43.6	42.7	2.09	20	87.2	L268892-11	WG275472
Barium	mg/kg	177.	151.	15.9	20	160.	L268892-11	WG275472
Cadmium	mg/kg	46.1	46.4	0.649	20	91.1	L268892-11	WG275472
Cromium	mg/kg	58.3	58.9	1.02	20	87.2	L268892-11	WG275472
Lead	mg/kg	66.2	63.1	4.80	20	92.4	L268892-11	WG275472
Selenium	mg/kg	41.3	40.7	1.46	20	82.6	L268892-11	WG275472
Silver	mg/kg	47.1	47.2	0.212	20	92.5	L268892-11	WG275472
1,2,4-Trichlorobenzene	ppm	0.274	0.339	21.3	31	82.2	L269206-08	WG275666
2,4,6-Trichlorophenol	ppm	0.340	0.414	19.6	24	102.	L269206-08	WG275666
2,4-Dichlorophenol	ppm	0.343	0.419	20.0	29	103.	L269206-08	WG275666
2,4-Dimethylphenol	ppm	0.274	0.346	23.4	30	82.2	L269206-08	WG275666
2,4-Dinitrophenol	ppm	0.163	0.218	29.0	35	49.0	L269206-08	WG275666
2,4-Dinitrotoluene	ppm	0.361	0.455	23.1	30	108.	L269206-08	WG275666
2,6-Dinitrotoluene	ppm	0.345	0.418	19.1	27	104.	L269206-08	WG275666
2-Chloronaphthalene	ppm	0.303	0.366	18.6	20	91.1	L269206-08	WG275666
2-Chlorophenol	ppm	0.274	0.326	17.6	28	82.2	L269206-08	WG275666
2-Nitrophenol	ppm	0.288	0.344	17.9	29	86.4	L269206-08	WG275666
3,3-Dichlorobenzidine	ppm	0.175	0.153	13.4	29	52.6	L269206-08	WG275666
4,6-Dinitro-2-methylphenol	ppm	0.209	0.303	36.5	28	62.8	L269206-08	WG275666
4-Bromophenyl-phenylether	ppm	0.254	0.296	15.2	23	76.2	L269206-08	WG275666
4-Chloro-3-methylphenol	ppm	0.324	0.396	20.0	27	97.2	L269206-08	WG275666
4-Chlorophenyl-phenylether	ppm	0.307	0.384	22.2	21	92.3	L269206-08	WG275666
4-Nitrophenol	ppm	0.330	0.396	18.2	28	99.1	L269206-08	WG275666
Acenaphthene	ppm	0.302	0.354	15.8	24	90.7	L269206-08	WG275666
Acenaphthylene	ppm	0.341	0.415	19.6	25	102.	L269206-08	WG275666
Anthracene	ppm	0.322	0.373	14.7	23	96.6	L269206-08	WG275666



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Est. 1970

Liesch Associates, Inc.  
Aaron Benker  
13400 15th Avenue N  
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**Quality Assurance Report  
Level II**

L269065

November 24, 2006

**Benzidine ppm 0.0181 0.0177 1.90 27 5.42 L269206-08 WG275666**

Analyte	Matrix Spike Duplicate			RPD	Limit	%Rec	Ref Samp	Batch
	Units	MSD Res	Ref Res					
Benzo(a)anthracene	ppm	0.297	0.347	15.5	23	89.2	L269206-08	WG275666
Benzo(a)pyrene	ppm	0.290	0.345	17.3	23	87.0	L269206-08	WG275666
Benzo(b)fluoranthene	ppm	0.337	0.384	13.0	26	101.	L269206-08	WG275666
Benzo(g,h,i)perylene	ppm	0.195	0.249	24.1	23	58.7	L269206-08	WG275666
Benzo(k)fluoranthene	ppm	0.297	0.367	21.3	24	89.1	L269206-08	WG275666
Benzylbutyl phthalate	ppm	0.348	0.390	11.2	21	105.	L269206-08	WG275666
Bis(2-chloroethoxy)methane	ppm	0.313	0.380	19.3	31	93.9	L269206-08	WG275666
Bis(2-chloroethyl) ether	ppm	0.257	0.335	26.3	31	77.2	L269206-08	WG275666
Bis(2-chloroisopropyl) ether	ppm	0.261	0.324	21.5	30	78.4	L269206-08	WG275666
Bis(2-ethylhexyl) phthalate	ppm	0.328	0.361	9.65	28	98.5	L269206-08	WG275666
Chrysene	ppm	0.314	0.368	15.7	23	94.3	L269206-08	WG275666
Di-n-butyl phthalate	ppm	0.314	0.366	15.5	21	94.2	L269206-08	WG275666
Di-n-octyl phthalate	ppm	0.304	0.358	16.1	22	91.4	L269206-08	WG275666
Dibenz(a,h)anthracene	ppm	0.216	0.276	24.3	24	64.9	L269206-08	WG275666
Diethyl phthalate	ppm	0.311	0.374	18.4	21	93.4	L269206-08	WG275666
Dimethyl phthalate	ppm	0.308	0.385	22.3	22	92.5	L269206-08	WG275666
Fluoranthene	ppm	0.314	0.385	20.3	23	94.4	L269206-08	WG275666
Fluorene	ppm	0.322	0.386	18.1	23	96.7	L269206-08	WG275666
Hexachloro-1,3-butadiene	ppm	0.300	0.377	22.7	31	90.2	L269206-08	WG275666
Hexachlorobenzene	ppm	0.277	0.321	14.6	19	83.2	L269206-08	WG275666
Hexachlorocyclopentadiene	ppm	0.339	0.585	53.2	36	102.	L269206-08	WG275666
Hexachloroethane	ppm	0.269	0.347	25.4	32	80.8	L269206-08	WG275666
Indeno(1,2,3-cd)pyrene	ppm	0.208	0.268	25.1	22	62.5	L269206-08	WG275666
Isophorone	ppm	0.338	0.411	19.5	25	101.	L269206-08	WG275666
N-Nitrosodi-n-propylamine	ppm	0.328	0.402	20.2	29	98.6	L269206-08	WG275666
N-Nitrosodimethylamine	ppm	0.193	0.241	22.4	36	57.8	L269206-08	WG275666
N-Nitrosodiphenylamine	ppm	0.328	0.379	14.6	24	98.4	L269206-08	WG275666
Naphthalene	ppm	0.273	0.341	22.0	31	82.1	L269206-08	WG275666
Nitrobenzene	ppm	0.268	0.337	23.0	30	80.4	L269206-08	WG275666
o-Atachlorophenol	ppm	0.305	0.373	20.2	24	91.5	L269206-08	WG275666
o-Enanthrene	ppm	0.301	0.361	17.9	22	90.5	L269206-08	WG275666
p-Enol	ppm	0.278	0.331	17.6	25	83.4	L269206-08	WG275666
Pyrene	ppm	0.329	0.358	8.51	25	98.8	L269206-08	WG275666
Mercury	mg/kg	0.239	0.242	1.25	20	95.6	L268864-02	WG276121
1,1,1,2-Tetrachloroethane	mg/kg	0.227	0.220	3.44	18	91.0	L269151-06	WG276567
1,1,1-Trichloroethane	mg/kg	0.221	0.218	1.27	17	88.3	L269151-06	WG276567
1,1,2,2-Tetrachloroethane	mg/kg	0.234	0.182	25.1	14	93.5	L269151-06	WG276567
1,1,2-Trichloroethane	mg/kg	0.241	0.208	14.9	19	96.6	L269151-06	WG276567
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.229	0.241	5.07	20	91.8	L269151-06	WG276567
1,1-Dichloroethane	mg/kg	0.203	0.182	11.1	16	81.4	L269151-06	WG276567
1,1-Dichloroethene	mg/kg	0.269	0.256	5.20	20	108.	L269151-06	WG276567
1,1-Dichloropropene	mg/kg	0.205	0.198	3.46	21	82.2	L269151-06	WG276567
1,2,3-Trichlorobenzene	mg/kg	0.148	0.107	32.3	23	59.3	L269151-06	WG276567
1,2,3-Trichloropropane	mg/kg	0.207	0.166	21.6	16	82.7	L269151-06	WG276567
1,2,3-Trimethylbenzene	mg/kg	0.160	0.167	4.11	14	64.2	L269151-06	WG276567
1,2,4-Trichlorobenzene	mg/kg	0.143	0.117	20.4	24	57.3	L269151-06	WG276567
1,2,4-Trimethylbenzene	mg/kg	0.154	0.147	5.11	23	61.8	L269151-06	WG276567
1,2-Dibromo-3-Chloropropane	mg/kg	0.276	0.201	31.6	24	111.	L269151-06	WG276567
1,2-Dibromoethane	mg/kg	0.245	0.201	19.7	16	98.1	L269151-06	WG276567
1,2-Dichlorobenzene	mg/kg	0.193	0.190	1.73	19	77.1	L269151-06	WG276567
1,2-Dichloroethane	mg/kg	0.226	0.191	16.7	14	90.5	L269151-06	WG276567
1,2-Dichloropropane	mg/kg	0.219	0.193	12.3	16	87.4	L269151-06	WG276567
1,3,5-Trimethylbenzene	mg/kg	0.148	0.149	0.257	19	59.3	L269151-06	WG276567
1,3-Dichlorobenzene	mg/kg	0.185	0.170	8.78	18	74.1	L269151-06	WG276567
1,3-Dichloropropane	mg/kg	0.244	0.211	14.7	16	97.6	L269151-06	WG276567
1,4-Dichlorobenzene	mg/kg	0.197	0.211	6.83	18	78.9	L269151-06	WG276567
1,4-Dichloropropane	mg/kg	0.192	0.187	2.68	18	76.8	L269151-06	WG276567



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**Quality Assurance Report  
Level II**

L269065

November 24, 2006

2-Butanone (MEK) mg/kg 0.729 0.500 37.3 21 58.3 L269151-06 WG276567

Analyte	Matrix Spike Duplicate			RPD	Limit	%Rec	Ref Samp	Batch
	Units	MSD Res	Ref Res					
2-Chloroethyl vinyl ether	mg/kg	0.931	0.686	30.3	13	74.5	L269151-06	WG276567
2-Chlorotoluene	mg/kg	0.172	0.167	2.56	20	68.7	L269151-06	WG276567
2-Hexanone	mg/kg	0.976	0.727	29.3	19	78.1	L269151-06	WG276567
4-Chlorotoluene	mg/kg	0.179	0.177	1.43	19	71.7	L269151-06	WG276567
4-Methyl-2-pentanone (MIBK)	mg/kg	1.11	0.760	37.1	20	88.4	L269151-06	WG276567
Acetone	mg/kg	0.866	0.617	33.5	23	69.2	L269151-06	WG276567
Acrylonitrile	mg/kg	0.874	0.626	33.0	20	69.9	L269151-06	WG276567
Benzene	mg/kg	0.226	0.212	6.15	15	90.3	L269151-06	WG276567
Bromobenzene	mg/kg	0.202	0.185	8.97	19	80.8	L269151-06	WG276567
Bromodichloromethane	mg/kg	0.223	0.192	14.5	15	89.0	L269151-06	WG276567
Bromoform	mg/kg	0.225	0.171	26.9	21	89.9	L269151-06	WG276567
Bromomethane	mg/kg	0.184	0.150	20.7	30	73.8	L269151-06	WG276567
Carbon tetrachloride	mg/kg	0.210	0.208	0.738	22	83.8	L269151-06	WG276567
Chlorobenzene	mg/kg	0.225	0.225	0.0760	22	90.0	L269151-06	WG276567
Chlorodibromomethane	mg/kg	0.236	0.204	14.3	17	94.4	L269151-06	WG276567
Chloroethane	mg/kg	0.150	0.141	5.69	28	59.8	L269151-06	WG276567
Chloroform	mg/kg	0.209	0.194	7.73	14	83.8	L269151-06	WG276567
Chloromethane	mg/kg	0.221	0.208	5.82	19	88.3	L269151-06	WG276567
cis-1,2-Dichloroethene	mg/kg	0.246	0.226	8.76	12	98.6	L269151-06	WG276567
cis-1,3-Dichloropropene	mg/kg	0.219	0.188	15.3	16	87.7	L269151-06	WG276567
Diisopropyl ether	mg/kg	0.205	0.187	9.58	20	82.1	L269151-06	WG276567
Dibromomethane	mg/kg	0.239	0.192	21.5	16	95.5	L269151-06	WG276567
Dichlorodifluoromethane	mg/kg	0.105	0.102	2.87	22	42.1	L269151-06	WG276567
Ethyl ether	mg/kg	0.243	0.208	15.3	17	97.2	L269151-06	WG276567
Ethylbenzene	mg/kg	0.194	0.204	4.87	20	77.7	L269151-06	WG276567
Hexachlorobutadiene	mg/kg	0.0611	0.0757	21.4	22	24.4	L269151-06	WG276567
Isopropylbenzene	mg/kg	0.173	0.183	5.81	20	69.1	L269151-06	WG276567
Methyl tert-butyl ether	mg/kg	0.268	0.219	19.8	13	107.	L269151-06	WG276567
Methylene Chloride	mg/kg	0.219	0.199	9.70	16	87.8	L269151-06	WG276567
n-Butylbenzene	mg/kg	0.116	0.131	11.6	22	46.5	L269151-06	WG276567
n-Propylbenzene	mg/kg	0.160	0.163	2.05	19	63.9	L269151-06	WG276567
Naphthalene	mg/kg	0.218	0.153	35.3	22	87.2	L269151-06	WG276567
p-Isopropyltoluene	mg/kg	0.121	0.122	0.441	21	48.5	L269151-06	WG276567
sec-Butylbenzene	mg/kg	0.124	0.127	2.89	21	49.5	L269151-06	WG276567
Styrene	mg/kg	0.209	0.206	1.64	23	83.7	L269151-06	WG276567
tert-Butylbenzene	mg/kg	0.139	0.146	5.06	21	55.5	L269151-06	WG276567
Tetrachloroethene	mg/kg	0.169	0.190	12.0	21	67.5	L269151-06	WG276567
Tetrahydrofuran	mg/kg	0.202	0.140	36.3	24	81.0	L269151-06	WG276567
Toluene	mg/kg	0.201	0.191	5.06	19	80.6	L269151-06	WG276567
trans-1,2-Dichloroethene	mg/kg	0.245	0.234	4.56	20	98.2	L269151-06	WG276567
trans-1,3-Dichloropropene	mg/kg	0.197	0.161	20.1	16	78.7	L269151-06	WG276567
Trichloroethene	mg/kg	0.210	0.200	4.58	18	83.9	L269151-06	WG276567
Trichlorofluoromethane	mg/kg	0.170	0.163	4.51	21	68.1	L269151-06	WG276567
Vinyl chloride	mg/kg	0.157	0.152	3.12	24	62.7	L269151-06	WG276567
Xlenes, Total	mg/kg	0.586	0.603	2.73	16	78.2	L269151-06	WG276567

Batch number /Run number / Sample number cross reference

WG275472: R297218: L269065-01  
 WG276015: R297397: L269065-01  
 WG275672: R297432: L269065-01  
 WG276121: R297493: L269065-01  
 WG275666: R297498: L269065-01  
 WG276334: R297827: L269065-01  
 WG276567: R297980: L269065-01

\* \* Calculations are performed prior to rounding of reported values



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Quality Assurance Report  
Level II

L269065

November 24, 2006

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.