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Preliminary Geotechnical Evaluation and Limited Phase II Environmental Site Assessment

Linden Avenue Corridor Property
Minneapolis, MN

Prepared For

Minneapolis Community Development Agency

Project Number CMXX-98-0416
Project Number BABX-98-632
September 3, 1998

Braun Intertec Corporation

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INTERTEC

Braun Intertec Corporation
6801 Washington Avenue South
P.O. Box 39108
Minneapolis, Minnesota 55439-0108
612-941-5600 Fax: 941-4151

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September 3, 1998

Project CMXX-98-416
Project BABX-98-632

Mr. Patrick Connoy
Minneapolis Community Development Agency
Crown Roller Mill, Suite 600
105 Fifth Avenue South
Minneapolis, MN 55401-2538

Dear Mr. Connoy:

Re: Preliminary Geotechnical Evaluation and Preliminary Phase II Environmental Site Assessment, Linden Avenue Corridor Property, Minneapolis, Minnesota

We have completed the requested preliminary geotechnical evaluation and limited Phase II environmental site assessment for the Linden Avenue Corridor property located immediately northwest of both Interstate 394 and Linden Avenue in Minneapolis.

Our services were provided in general accordance with our proposal to you dated May 18, 1998.

Summary of Results

Preliminary Geotechnical Evaluation. Nine standard penetration test borings were performed throughout the property. Five of the borings were taken to a depth of 120 feet below existing grade. Four of the borings were taken to depths of 23 to 38 feet below existing grade. The shallow borings were done in the northeast corner of the site.

The borings typically encountered 10 to 40 feet of fill and possible fill mixed with debris such as plastic, cinders, bituminous, wood, brick and concrete. Swamp deposits were encountered below the fill at two of the boring locations. At nearly all of the boring locations, alluvial clays and alluvial sands were encountered below the swamp deposit and fill from 11 to 64 feet below the surface. Glacial soils consisting of layers of sands and clays were then encountered below the alluvium to the termination depths of the borings.

Groundwater was typically encountered 11 to 14 feet below the surface at the boring locations.

Limited Phase II Environmental Site Assessment. The results of this Phase II ESA indicate the parameters detected in the soil samples were below the applicable MPCA residential SRVs and that no RCRA metals were detected at concentrations above naturally occurring background levels. Also, none of the groundwater samples that were analyzed had concentrations greater than or equal to the laboratory method detection limits for DROs, GROs, VOCs included in the MDH 465E list of parameters, PAHs, MDA List 1 and 2 pesticides and organophosphorous pesticides. However, the groundwater samples did contain concentrations of RCRA metals that exceeded applicable HRLs or MCLs. This is likely due to the presence of fine sediments within the groundwater sample. The concentrations of RCRA metals in groundwater could be better defined by installing permanent groundwater monitoring wells, and then collecting data from which can be used to obtain MPCA liability assurances related to chemical releases.

Suspected asbestos containing material (ACM) was observed in site debris. Positive identification of this material as ACM has yet to be determined. Sampling and microscopic analysis of these materials would be necessary in order to determine the asbestos content.

Summary of Preliminary Recommendations

Geotechnical Evaluation. The existing fill, swamp deposit and alluvial soils are considered to be unsuitable for support of single level or multi-level structures without massive subgrade corrections which would require the removal and replacement of tens of feet of existing fill and poor soils or a deep foundation system. Given the depth of poor soils, a pile foundation system appears to be the best alternative. This system has been used to support other structures in this area. The lower level slabs will also need to be structurally supported. Given the past use of the site the construction of parking areas and roadways can likely follow normal construction practices. Large fill areas beyond the current stabilized areas could experience long-term consolidation.

Utilities within the building footprints will likely need to be supported by the structural slab. Below driveways and parking areas, the utilities could potentially be floated on the existing soils provided some movement can be tolerated.

Phase II ESA. Based on the analytical results, additional soil and groundwater testing does not appear warranted at this time.

General

Please refer to the attached report for a more detailed summary for the results of our study. Thank you for the opportunity to be of service on this project. If we can provide additional assistance or if we can answer any geotechnical related questions, please call Matt Ruble at (612) 942-4821 or Mike Heuer at (612) 942-4830. Questions related to the Limited Phase II ESA, should be directed to either Mike Bratrud at (612) 833-4786 or Joe Zachmann at (612) 833-4781.

Sincerely,

Braun Intertec
Geotechnical Services

Matthew P. Ruble
Staff Engineer

Michael M. Heuer, PE
Principal Engineer

Braun Intertec
Environmental Services

Michael L. Bratrud, PG
Senior Scientist

For Joseph E. Zachmann, Ph.D.
Manager of Site Redevelopment

Attachment:
Evaluation Report

c: Mr. Steven Maki; MCDA
mpr/mmh/mlb/jez:dre\babx\georpt\98416

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BRAUN SM
INTERTEC

Braun Intertec Corporation
6801 Washington Avenue South
P.O. Box 39108
Minneapolis, Minnesota 55439-0108
612-941-5600 Fax: 941-4151

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A. Introduction

A.1. Nature of Evaluation

This preliminary evaluation was done to provide general comments relative to the potential for developing this site from a geotechnical and environmental prospective. As a result, a sufficient number of soil borings were not done to provide the level of detail needed to prepare plans and specifications for any level of construction. If the presented information suggests that development of this site is economically feasible, additional design soil borings must be put down once site plans are developed and building, roadway and parking lot areas defined. Further environmental studies may also be considered warranted as other areas are explored.

A.2. Project

The Minneapolis Community Development Agency (MCDA) is evaluating the potential to develop the Linden Avenue Corridor property located immediately north of Interstate 394 and Linden Avenue, and south of the Burlington Northern Sante Fe Railroad Track alignment.

A.3. Authorization

In accordance with the written authorization received from Mr. Patrick Connoy of MCDA, Braun Intertec Corporation (Braun Intertec) conducted a preliminary geotechnical evaluation and a limited phase II environmental site assessment (Phase II ESA) of Linden Ave Corridor Property.

A.4. Purpose

The purpose of our preliminary geotechnical evaluation and limited Phase II ESA was to assist the MCDA, their consultants and potential developers in evaluating the site with regard to subsurface soil and groundwater conditions and environmental related concerns.

A.5. General Site Discussion

Based on available geological maps, the development area is in a rather large backwater area that contained a small connection to the Mississippi River. The area, which is confined between higher ground to the north, south, east, and west, contains remnants of Bassett Creek and Bassett Lake. Although Bassett Lake no longer exists, Bassett Creek has recently been rerouted by the U.S. Army Corp of Engineers into a new underground culvert which crosses this site somewhere in the extreme northeast corner.

The soils deposited in the lake and creek environment vary both in composition and classification. Area maps indicate the potential for areas of peat and alluvial clay to exist, of which in some areas could exceed 50 feet in thickness. Manually placed fill is also predominate in this area. Area maps suggest the fill thicknesses are generally in excess of 10 feet thick.

The history of this site would suggest the general soils description is quite accurate. Past developments in this area have experienced a wide range of structural distress including excessive settlement and heaving as the fill and soft alluvial deposits compress under the load of the overlying soils and the development. The alluvial clays are also very susceptible to moisture changes. In dry conditions, the clays will dry out and shrink, resulting in settlements. Conversely, during wet conditions, the alluvial clays will absorb water and swell, resulting in heave. This movement has resulted in many structures being rendered uninhabitable and ultimately, they were demolished. Based on discussions with those familiar with this area, several generations of construction have been negatively affected by the subsurface conditions in this area.

A.6. Previous Explorations

Braun Intertec has performed soil borings on this site or immediately adjacent to this for other projects. Two of the notable projects soil borings were performed for included the cellular telephone tower near the southwest corner of the site and an elevated bike trail connecting the bike trail adjacent to Linden Avenue with Bryn Mawr Meadows Park. The elevated bike trail testing program was performed for the Minneapolis Park and Recreation Board. If constructed, the elevated trail will be supported on a deep foundation system consisting of piling. We have reviewed the results of the borings and the analysis and recommendations for foundation support for those projects. Those borings and analysis are consistent with the borings and analysis for this project and information published by the United States Geologic Society.

B. Geotechnical Evaluation

B.1. Geotechnical Evaluation Scope of Services

Our services were provided in general accordance with our proposal to the MCDA dated May 18, 1998. Our scope of services include the following:

- Coordinating access to the site for drill rigs with Mr. Pat Connoy;
- Staking and locating the boring locations;
- Coordinating the coordinating of underground utilities near our boring locations;
- Conducting up to ten penetration test borings across the site;
- Returning the soil samples to our laboratory for visual classification and logging by a geotechnical engineer; and
- Submitting a preliminary geotechnical evaluation report containing logs of the borings, our analysis of the field and laboratory tests and general recommendations for the development of this property.

B.2. Locations and Elevations

Borings ST-1 through ST-3 and ST-5 through ST-6 were performed in the area of potential building sites. Boring ST-4 was eliminated from the drilling program prior to the start of drilling because information from previous soil borings in the area was considered adequate for this study. Borings ST-7 through ST-10 were performed in the northeast corner of the site to evaluate the soil and groundwater condition in the area of a mill building which has been long removed.

The borings were staked by Braun Intertec personnel and were not surveyed by a professional surveyor. Due to the large size of the site and the current mixed use and obstacles across the site, the accuracy of our boring locations is considered to be marginal at best. However, it was felt by all involved, general locations would be acceptable for this evaluation.

The boring elevations were determined by our drill crew, but due to the size of the site, several different benchmarks were used as references.

The reference used for Borings ST-1 and ST-2 was the concrete footing supporting the telephone tower located east of the Linden Yard Park building. Assumed elevation of 100 was used for this location. The reference used for Borings ST-3 and ST-5 was the catch basin on the High Occupancy Vehicle on-ramp to Interstate 394. Assumed elevation of 300.0 was used for this location. The reference used for Boring ST-6 was the top of the catch basin on the north side of Linden Avenue near Boring ST-6. An assumed elevation of 500.0 was used for this reference. The reference used for Borings ST-7 through ST-10 was the footing supporting the high line tower located near the northeast corner of the site. An assumed elevation of 700.0 was used for this reference.

When a professional surveyor is retained to survey this site, we recommend that we be contacted to identify the benchmarks used for the boring elevations so that the surveyor can provide us with Mean Sea Level Datum (MSLD) of those benchmarks. Our attached log of borings can then be re-generated to reflect the MSLD elevations of the various strata encountered by the boring locations and will be more useful for future construction.

A general site location map and a sketch showing the location of the soil borings conducted on the site is included as Plate 1.

C. Results of Geotechnical Evaluation

C.1. Logs

Log of Boring sheets indicating the depths and identifications of the various soil strata, penetration resistances, and groundwater observations are attached. The strata changes were inferred from the changes in the penetration test samples and auger cuttings. The depths shown as changes between the strata are only approximate. The changes are likely transitions and the depths of the changes vary between the borings.

Geologic origins presented for each stratum on the Log of Boring sheets are based on the soil types, blows per foot, and available common knowledge of the depositional history of the site. Because of the complex glacial and post-glacial depositional environments, geologic origins

can be difficult to ascertain. A detailed investigation of the geologic history of the site was not performed.

C.2. Soils

The soil borings encountered four distinct strata: fill, swamp deposits, alluvial deposits and glacial deposits. The following subsections discuss the various strata.

C.2.a. Fill. The borings encountered 11 to 37 feet of fill and possible fill consisting of sands with various amounts of silts and clays. Debris, such as plastic, cinders, bituminous, wood, brick, limestone and concrete were encountered in the fill. Some of the fill was also organic. The penetration resistances of the fill encountered varied from 2 to 29 blows per foot (BPF), indicating that the fill was not placed in controlled manner. For this reason, it is reasonable to expect the looser fill to continue to consolidate under its own weight and to realize more consolidation if additional loads are applied to the fill.

Additional debris could be encountered during construction such as foundations, basement slabs and floor slabs from previous structures which were located in this area. It is known that a structure was located near the locations of Borings ST-7 through ST-10.

C.2.b. Swamp Deposits. Organic clays and peat were encountered at Borings ST-5 and ST-6 below the fill to depths of 22 to 24 feet below the surface. The penetration resistances recorded in the organic clays and peat varied from 3 to 4 BPF. These soils are soft but are relatively consolidated in comparison to most organic soils due to the existing fill loads. Given the general geological depositions of the soils in this area, other pockets of organic soils likely exist which were not identified in the borings. These organic soils are soft and will consolidate over time and will also decompose causing additional settlement.

C.2.c. Alluvial Deposits. Alluvial soils were encountered from 11 to 64 feet below the surface at the boring locations. The alluvial soils consisted of mixed layers of sand and clay. The sands included poorly graded sand, poorly graded sand with silt, silty sand and clayey sand. The clays included lean clay, lean clay with sand, clayey sand and fat clay.

The soft lean clays, fat clays and the loose sands have a potential to settle under any new loads. Due to the relative impermeable nature of the lean clays and fat clays, any consolidation of those layers will occur over an extended period of time unlike sands which

consolidate more quickly under new loads. The penetration resistances of the sands encountered varied from 4 to 22 BPF, indicating those soils were very loose to medium dense. The penetration resistances of the alluvial clays encountered varied from 4 to 7 BPF, indicating those soils were rather soft to medium.

C.2.d. Glacial Deposits. At depth, the borings encountered glacial deposits to their termination depths. These soils typically consisted of a mixture of sands and clays. The penetration resistances in the glacial sands varied from 7 to 30 BPF, indicating those soils were loose to medium dense. The penetration resistances of the clay glacial soils encountered varied from 3 to 28 BPF, indicating those soils were soft to very stiff.

C.2.e. Soils Summary. In general, the soil conditions were less favorable in the west two-thirds of the site where Borings ST-1 through ST-3 and ST-5 through ST-6 were performed. At these locations, the soft fill, swamp deposits and alluvial soils were quite deep. These type of soils are not suitable to support buildings with shallow foundation systems, and therefore, more expensive deep foundation systems are needed for these soils. The more favorable soil conditions were encountered at Borings ST-7 through ST-10, located in the northeast corner of the site. The results of these borings are consistent with previous soil borings and geotechnical data collected in this area.

C.3. Groundwater

Groundwater was typically encountered at 11 to 14 feet below the surface at the boring locations. Groundwater is usually encountered wherever organic soils are encountered. It is possible that the water table has been drawn down due to construction of drainage systems such as the Bassett Creek drainage system consisting of a covered box culvert or due to other grading that has occurred around this particular property.

It is not anticipated that groundwater will affect construction due to the anticipated deep foundation systems of new structures. However, due to the large area of the site and the size of the proposed construction, it may be prudent to place several piezometers throughout the site to monitor groundwater fluctuations. Fluctuations in the groundwater level after construction could have significant effects on fill and structures because groundwater can

affect foundation systems and cause consolidation of soils. It may prudent to perform a large scale hydraulic survey based on the scope of any proposed construction.

Seasonal and annual fluctuations in the groundwater levels should be anticipated.

D. Analysis and Preliminary Recommendations

D.1. Proposed Construction

The fill, swamp deposits and most of the alluvial deposits encountered on the site are typically not suitable to support single or multi-level structures designed based on a typical shallow foundation system. For that reason, it should be expected that a deep foundation system will be necessary to support any new construction.

The potential exception to this is the very northeast corner of the site where Borings ST-7 through ST-10 were performed. The soils in this area could potentially be corrected so that a shallow foundation system could be used. A fairly significant soil correction would need to be made. However, additional deep borings would be needed in this area to further define this potential.

Based on information made available to us by the United States Army Corp of Engineers, it appears the box culvert containing Bassett Creek is buried within the Northeast corner of the site. If development of this area proposed, the Corp of Engineers should be contacted to review the location of the culvert and to review the implications of constructing near the culvert.

The following sections discuss in more detail foundation recommendations for deep foundations, support of utilities, support of exterior slabs and interior slabs and support of pavement areas.

D.2. Preliminary Deep Foundations Recommendations

D.2.a. Pile Type, Depth and Capacities. We anticipate steel pipe piles or mono-tube pipe piles will provide the most economical foundation system for this area. The use of timber piles is not considered feasible because of the great fill depths and rubble in the fill. The use

of end-bearing H-piles is also considered less feasible because of the depth to bedrock in this area (estimated to be 200 to 250 feet) and because a combination friction/end bearing pile is desirable.

Typical commercial developments supported on piles require single pile capacities with working loads of about 100 tons per pile. In our preliminary analysis, we have found that a typical 9 5/8-inch diameter pipe pile cannot provide this capacity for lengths of less than 120 feet. We have then estimated the required lengths for 12 3/4-inch and 16-inch diameter pipe piles to generate 100-ton working loads with a safety factor of 2. For this evaluation, we also set the top of pile elevation 6 feet below existing grade. As this elevation will impact the negative load that must be carried by the pile, a new analysis should be done once grades are set for any building.

The majority of the soils at the boring locations can generate 100 working tons with pile lengths of 120 feet or less, however 12 3/4-inch diameter pipe piles at Borings ST-3 and ST-6 and 16-inch pipe piles at Boring ST-6 will not generate 100 working tons with pile lengths of 120 feet or less.

Table 1. Results of Pile Depth and Capacity Analysis

Boring	Pile Diameter (inches)	Estimated Pile Length (feet)	Negative Skin Friction (tons)	Estimated Working Capacity (tons)
ST-1	12.75	110	20-25	100
ST-1	16	100	25-30	100
ST-2	12.75	110	35-40	100
ST-2	16	95	40-45	100
ST-3	12.75	120	40-45	70
ST-3	16	120	50-55	100
ST-5	12.75	115	20-25	100
ST-5	16	100	25-30	100
ST-6	12.75	120	50-55	60
ST-6	16	120	65-70	80

Given the soil conditions the use of monotubes may reduce the length by about 10 to 20 percent. This needs to be further evaluated prior to final design of new structures.

D.2.b. Pile Wall Thickness. Minimum pipe wall thickness of 0.375 inches would be needed for 12 3/4 or 16 inch diameter pipe piles used for this application. This is due to the high negative load, the axial load and because of potential hard driving through the existing fill and construction debris.

For a pipe pile of this diameter and wall thickness, it is possible that driving stresses could reach damaging levels for the pile that are to provide a working load of 100 tons. To further evaluate this, special testing and evaluations should be done. this is typically done using a Pile Dynamic Analyzes and a Wave Equation Analysis.

D.3. Floor Slabs

Interior floor slabs should be structurally supported on piles. If the slabs are not connected to the foundation system, they may experience some settlement while the walls and columns of the structure will not experience settlement.

D.4. Exterior Slabs

Increasing the grade in areas of the site could cause some consolidation of the underlying soils. If up to a foot of fill is placed on the site, the settlement will most likely no be more than a few inches. Grade changes of around 10 feet could result in up to a foot or more of settlement. Even without any additional fill placed on the site, the soils could experience a few inches of settlement due to the existing fill which may still be consolidating the underlying soils or due to any future groundwater level changes. Changes in the groundwater level will cause swelling of clays if the water level is rising, or shrinking of clays as the water level drops.

Some of the on-site soils are frost -susceptible while some of the soils are not frost-susceptible. The frost-susceptible soils will experience some heaving during winter which will be noticeable in sidewalk areas and specifically where sidewalks and slabs abut the structures. The floor slabs of the structures will most likely be supported on the deep foundation systems and will not experience any frost heave.

It will likely be necessary to perform some soil correction immediately beneath any new exterior slabs to provide adequate support to the slabs and any loads to be used on the slabs.

D.5. Pavement Areas and Heavily Loaded Slabs

Heavily loaded exterior slabs and pavement areas may need some subgrade correction to prevent the pavements and slabs from breaking up. Much of the existing site has been surcharged by fill or contains significant amounts of fill. Heavy vehicle traffic has also been prevalent in much of these areas, therefore, much of the site will be suitable to support vehicle traffic. However, some areas of the site have not been surcharged by fill or used by heavy vehicles and could experience detrimental settlement between the areas of the site which have been consolidated.

Therefore, without some correction, maintenance of pavements and slabs on this site will need to occur more frequently and more extensively than other sites which do not have poor soils. Subcutting that is limited to 3 to 5 feet and refilling of the subcuts with controlled engineered fill would assist in minimizing the potential problems. We do not foresee the need to extensively rework the areas to be paved.

D.6. Utilities

Utilities which will service the buildings will need to be supported by the structured slabs to prevent service line distress as the grade settles away from the slab. Outside the building footprint, the method of supporting the utilities will depend on grade changes and soil conditions along the utility alignments.

With minimal grade changes and reasonable soil conditions, it maybe possible to oversize the utility lines and float the structures in the fill. Some settlement would need to be anticipated give the overall soil conditions, but with the use of flexible connections and oversized pipes, floating maybe possible.

The alternative would be to use pile supported utilities which would not be affected by settlement. Pile lengths and load carry capacities would need to be evaluated based on the soil conditions along each utility alignment.

E. Procedures Related to Geotechnical Evaluation

E.1. Drilling and Sampling

We performed the penetration test borings from June 12 through June 19, 1998 with truck-mounted core and auger drills equipped with 3 1/4-inch inside diameter hollow-stem auger. Sampling for the borings was conducted in general accordance with ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils." We advanced the boreholes with the hollow-stem auger to the desired test depths. A 140-pound hammer falling 30 inches was then used to drive the standard 2-inch split-barrel sampler a total penetration of 1 1/2 feet below the tip of the hollow-stem auger. The blows for the last foot of penetration were recorded and are an index of soil strength characteristics. Samples were taken in 2 1/2-foot vertical intervals to a depth of 25 feet and then at 5-foot intervals to the termination depths of the borings. The vertical spacing was typically 2 1/2 and 5 feet. A representative portion of each sample was then sealed in a glass jar capped with a lid.

E.2. Soil Classification

Our drill crew chief visually and manually classified soils encountered in the borings in general accordance with ASTM D 2488, "Description and Identification of Soils (Visual-Manual Procedure)." A summary of the ASTM classification system is attached. All samples were then returned to our laboratory for review of the field classifications by a geotechnical engineer. Representative samples will remain in our office for a period of 60 days to be available for your examination.

E.3. Groundwater Observations

Immediately after taking the final samples in the bottoms of the borings, our drill crew probed the holes through the hollow-stem auger to check for the presence of groundwater. Immediately after withdrawal of the auger, the holes were again probed and the depths to water or cave-ins were noted. The borings were then immediately backfilled.

F. Limited Phase II Environmental Site Assessment

F.1. Limited Phase II ESA Background

Braun Intertec completed a phase I environmental site assessment (Phase I ESA) of the site on June 5, 1998 (Braun Intertec Project number CMXX-98-0199.G). The Phase I ESA identified

the following recognized environmental conditions as defined by the ASTM Standard Practice E 1527-94:

The following recognized environmental conditions were revealed in relation to Area G:

- Available historical-use information indicated that Area G historically was occupied by railroad tracks and grain elevators where potentially hazardous chemical storage and use activities may have occurred. It is possible that these prior uses may have adversely impacted soil and groundwater at Area G.

- An apparent aboveground storage tank (AST) was located adjacent and north of the grain elevator facility on the 1938 to 1960 aerial photographs.

- Wood debris and soil dumping were apparent in place of the former elevator building on the 1978 and 1987 aerial photographs.
- On the 1993 aerial photograph apparent excavation and dumping activities were noted in the area southwest of the pedestrian overpass bridge.
- The current use of Area G as a materials storage area by the City of Minneapolis, includes stockpiling of concrete rubble from City sidewalk and road projects, it is possible that some contaminated soils from unknown sites across the city could have been imported with the concrete rubble and placed on Area G.

- Area G is used as a stockpile location for compost and topsoil. It is possible that potentially contaminated soil or compost material may have been incorporated into these stockpiles. The compost and topsoil stockpiles are located in an unsecured part of Area G.

- Suspected asbestos containing materials (ACM) were observed in site debris. The positive identification of this material as ACM has yet to be determined.

The following facilities or past property uses are or were adjacent to Area G, and if soil or groundwater impacts are present at these facilities, may have caused adverse impacts to Area G:

- Historical-use information indicates that the Elliott Fuel Company yard occupied a large area north of Area G, and was used for coal storage until approximately 1950.

- Aerial photographs dating from 1939 to 1960 indicate dumping and filling activities occurred in the open land located northwest of Area G but south of Bassett Creek.

- The former Minneapolis Gas Light Company facility with gas holder tank, used presumably for coal gas storage, was located adjacent to the southeast corner of Area G at the intersection of Linden Avenue North and Lyndale Avenue North. A large gas holder tank was present at this facility until the late 1950s. It is not known whether coal gas was manufactured at this facility.

- The adjacent NSP-Aldrich Substation (located 75 feet north of Area G) has known releases of mineral oil (from transformers and switches) which have impacted soil and groundwater at the facility. Some shallow soil impacts from PCBs have been remediated at this facility. It is possible that remaining soil and/or ground water impacts at this facility may adversely impact Area G.

- The Dependable Courier Company (former US West) leaking underground storage tank (LUST) facility has been investigated and closed by the MPCA. It is possible that remaining soil and/or groundwater impacts at this adjacent facility may adversely impact Area G.

No buildings or grounds were entered to perform the Phase I ESA. The property inspections were limited to property observations made from adjacent public right-of-ways.

The site is located north and east of Interstate 394, north of Linden Avenue, west of Lyndale Avenue and south of active railroad tracks in Minneapolis, Minnesota. The site consists of a strip of undeveloped land, which is owned by the City of Minneapolis and presently is used as an equipment and construction material storage yard. Available historical-use information indicates that the site previously was a railroad yard. A large grain mill was located in the eastern portion of the site from before 1885 to the mid-1970's. A coal-gas holder-tank historically was located adjacent to and south of the portion of the site where the grain mill was located. The gas-holder-tank was owned and operated by the Minneapolis Gas Light Company (now Minnegasco).

Based on the historical use of the site as a railroad yard, it is possible that on-site soils may have been impacted by petroleum products and coal-burning by-products. Petroleum products and pesticides potentially used in the operation of the feed mill at the site may have impacted

soil and groundwater. The site also may have been impacted by by-products from the operation of the adjacent coal holder tank facility. In addition, possible petroleum odors were noted in the vicinity of soil and demolition debris piles at the site during our recent reconnaissance of the site from the adjacent public right-of-way.

The Phase II ESA was conducted in conjunction with a preliminary geotechnical evaluation. Based on the findings of the Phase I ESA, Braun Intertec recommended that additional evaluation, including the collection of soil and ground water samples, be conducted to assess whether the above-listed recognized environmental conditions had adversely impacted the site.

A Soil Boring Locations Map, which also depicts the locations of the recognized environmental conditions is attached in Plate 1.

F.2. Limited Phase II ESA Objective

The objective of the Phase II ESA was to evaluate whether the soils and/or ground water at the site were adversely impacted by the recognized environmental conditions outlined in Section F.2.

F.3. Scope of Services

The following work tasks were conducted at the site as part of this evaluation:

- Coordinated with, and met on site appropriate public utility companies to determine the locations of public underground utilities at the site.

- Advanced nine standard penetration test borings distributed along the length of the site as shown on Plate 1.

- A Braun Intertec environmental scientist was at the site during the soil boring activities to monitor the subsurface materials encountered at each soil boring location. Soil samples were screened for the presence of organic vapors with a photoionization detector (PID) equipped with an 10.6 eV lamp using both direct readings from each split-barrel sample and a bag-headspace method of analysis recommended by the MPCA. Rock fragment samples were observed and screened in a similar manner to that used on soils.

- Nine shallow soil samples were collected from between 2.5 and 5 ft below land surface (bls) in each test boring. The samples were analyzed for the presence and concentration of the eight Resource Conservation Recovery Act (RCRA) total metals by Series 7000 Methods, diesel range organics (DRO) by Wisconsin Department of Natural Resources (WDNR) Method, and polynuclear aromatic hydrocarbons (PAHs) by United States Environmental Protection Agency (EPA) Method 8270.

- Five of the nine soil samples (ST-5, ST-7, ST-8, ST-9, ST-10) were chemically analyzed for the presence and concentration of volatile organic compounds (VOCs) by Minnesota Department of Health (MDH) Method 466A and gasoline range organics (GRO) by WDNR Method.

- Three samples (SB-7, SB-8, and SB-9) were analyzed for organophosphorous pesticides using EPA Method 8270. Four soil samples (SB-7, SB-8, SB-9, and SB-10) were analyzed for Minnesota Department of Agriculture (MDA) prescribed analyte list 1 and list 2 pesticides using EPA Method 8270.

These samples were analyzed by the Braun Intertec environmental laboratory. Samples were transported to our laboratory under refrigerated conditions and accompanied by chain-of-custody records. All analyses were performed within EPA holding times or Wisconsin DNR holding times for GRO/DRO.

The site work relating to the Phase II ESA was conducted from June 10 through 17, 1998.

F.4. Environmental Soils Assessment

A soil boring program was performed to evaluate geotechnical soil conditions, obtain soil samples for visual inspection, on-site monitoring and chemical analyses. Nine soil borings were advance at the site. Four environmental soil borings (ST-7, ST-8, ST-9, and ST-10) were completed in the eastern portion of the site in the vicinity of the historical location of the grain mill and near the adjacent former coal-gas holder tank facility. Geotechnical soil borings ST-5 and ST-6 were completed in the vicinity of the soil and demolition debris pile, where possible petroleum odors were noted. Three additional geotechnical soil borings (ST-1, ST-2, and ST-3) were completed across the site and were also monitored for environmental purposes.

The borings were completed using truck-mounted core-and-auger drill rigs. Environmental soil borings, ST-7, ST-8, ST-9, and ST-10 were advanced to approximately 23 to 30.5 feet below land surface (bls). The five geotechnical soil borings, ST-1, ST-2, ST-3, ST-5 and ST-6, were advanced in the western portion of the site to approximately 120 feet bls to obtain additional subsurface information for geotechnical purposes. The drill rig was steam cleaned prior to starting the field work. For the environmental bore holes, the auger was cleaned between each boring. The downhole soil sampling equipment was cleaned with soap and water prior to collection of each sample. In the geotechnical borings, the sampling equipment was cleaned if used above the 25-foot depth.

A Braun Intertec environmental field scientist was at the site during the environmental and geotechnical soil boring activities to monitor the subsurface materials encountered at each soil boring location. Soil discoloration and odors were documented if detected. In addition, soil samples were screened for the presence of organic vapors with a photoionization detector (PID) using both direct readings from each split-barrel sample and the bag-headspace method of analysis recommended in "Soil Sample Collection and Analysis Procedures," Minnesota Pollution Control Agency (MPCA) Tanks and Emergency Response Section Fact Sheet #3.22 (April 1996).

Nine soil samples were collected from the environmental and geotechnical soil borings for chemical analyses. The soil samples were analyzed at the Braun Intertec analytical laboratory for the presence and concentrations of the relevant chemical parameters as outlined below:

- Vicinity of the former grain mill and coal-gasification plant (4 borings) - VOCs listed in the MDH 466A Method, GROs, DROs, total RCRA metals, PAHs, MDA List 1 and 2 pesticides and organophosphorous pesticides.

- Vicinity of fill and demolition debris pile and former rail yard (one boring) - VOCs, GRO, DRO, total RCRA metals and PAHs.

- Geotechnical borings (former rail yard - five borings) - DRO, total RCRA metals and PAHs (VOCs also if organic vapors were detected)

The samples were transported under refrigerated conditions and accompanied by Braun Intertec chain-of-custody records. All analyses will be performed within EPA, MDH and/or WDNR holding times.

F.5. Environmental Groundwater Assessment

Braun Intertec also collected three groundwater samples using a Hydropunch™ groundwater sampling tool to evaluate the groundwater quality at the site. After the water table was encountered in bore holes ST-1, ST-5, and ST-10 , the Hydropunch™ was driven into the saturated soils below the apparent groundwater surface and used to collect groundwater samples for laboratory chemical analyses. The water table was found to be at 20 to 35 feet bls during drilling and sampling and 11 to 14 feet bls after drilling.

After the groundwater samples were collected, the bore holes were abandoned in accordance with MDH guidelines. All groundwater sampling equipment was cleaned with soap and water prior to the collection of each sample.

The groundwater samples were analyzed for the presence of DROs, GROs, VOCs included in the MDH 465E list of parameters, total RCRA metals, PAHs, MDA List 1 and 2 pesticides and organophosphorous pesticides. A field blank was collected and analyzed for VOCs. A trip blank also was also collected, but the trip blank was not analyzed as no contamination was found in the field blank.

The collected samples were transported under refrigerated conditions and accompanied by Braun Intertec chain-of-custody records. The analyses were performed within EPA, MDH and/or Wisconsin DNR holding times.

G. Limited Phase II ESA Results

G.1. Soils Encountered

Soil boring logs with descriptions of the various soil strata encountered during the soil boring operations, penetration resistances and water level information are contained in Appendix A. Refer to section B.2. for detailed descriptions of soil strata encountered.

Soil samples were collected at 2 1/2-foot vertical intervals to the termination depths of the standard penetration test borings. Measurable groundwater was encountered in each of the soil borings at depths ranging from about 20 to 35 feet bls during drilling and sampling and 11 to 14 feet bls after drilling.

G.2. Soil Contamination Observations

The soil samples retrieved from the soil borings were examined by a Braun Intertec environmental technician for staining and other apparent signs of contamination. In addition, the soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was equipped with a 10.6 electron volt lamp and calibrated to an isobutylene standard. The PID was used to test fresh surfaces of soil retrieved in the split-barrel sampler and to perform headspace analyses, as recommended by the MPCA.

Slightly elevated PID readings were detected in soil samples collected from ST-7 and ST-10 in the 2.5 to 10 feet bls intervals. PID readings ranged from 0.9 to 11.0 parts per million (ppm). No significant PID readings were detected in soil samples collected from any of the other soil borings. No unusual odors, staining or organic vapors were detected at the remaining soil boring locations.

At the time of the Phase I ESA site reconnaissance, Braun Intertec noted pieces of vinyl floor-tile material incorporated within a pile of concrete building debris located near the yard entrance. Vinyl floor-tile material may contain asbestos. Sampling and microscopic analysis of these materials would be necessary in order to determine the actual asbestos content.

G.3. Laboratory Chemical Analyses of Soil Samples

Soil samples were collected at the 2.5 foot bls interval from each of the nine soil borings for laboratory chemical analyses except for the samples collected from ST-1 and ST-2, which were collected from the 5 and 4 foot bls intervals, respectively.

The results of the chemical analyses identified relatively low levels of PAHs in the samples collected from ST-2, ST-7, ST-8, ST-9, and ST-10. Low concentrations of VOCs and DRO were also detected in the sample collected from ST-7. Concentrations of GRO and DRO also were detected in the sample collected from ST-10. All parameters detected in the soil samples were below the applicable MPCA residential soil reference values (SRVs). Each of the soil samples contained detectable concentrations of metals. However, the total metals

concentrations identified were within naturally-occurring metals concentration ranges for soils in this region and are not believed to be indicative of contamination (Pendias and Pendias, 1984). None of the soil samples that were analyzed had concentrations greater than or equal to the laboratory method detection limits for any of the MDA List 1 and 2 parameters. A summary of the laboratory chemical analysis results for the soil samples is provided below in Table 2. Only those chemical parameters which were detected in one or more of the soil samples are listed in Table 2. The complete laboratory analyses report received from the Braun Intertec laboratory is attached in Appendix B.

G.4. Laboratory Chemical Analysis of Groundwater Samples

Four Hydropunch™ groundwater samples (labeled ST-1, ST-5, and ST-10) were completed at the site. A Soil Boring Locations Map that illustrates the locations of the Hydropunch™ samples is contained in Plate 1.

The groundwater samples were analyzed at the Braun Intertec laboratory for the presence and concentrations of DROs, GROs, VOCs included in the MDH 465E list of parameters, total RCRA metals, PAHs, MDA List 1 and 2 pesticides and organophosphorous pesticides.

No visible petroleum sheens or measurable, liquid-phase petroleum (free product) were observed during collection of the groundwater samples. The results of the groundwater chemical analyses indicated the presence of arsenic, barium, cadmium, total chromium, and mercury at concentrations that exceed the applicable Minnesota Department of Health (MDH) Health Risk Limit (HRL) or EPA maximum contaminant level (MCL) for private and public drinking water supplies, respectively. However, it should be noted that the regulatory limits are established for concentrations of dissolved phase metals. Since the samples were not filtered, the exceedences could be due to metals concentrations in the fine sediments incorporated within an unfiltered groundwater sample.

None of the groundwater samples that were analyzed had concentrations greater than or equal to the laboratory method detection limits for DROs, GROs, VOCs included in the MDH 465E list of parameters, PAHs, MDA List 1 and 2 pesticides and organophosphorous pesticides.

A summary of the groundwater chemical analyses results is provided in Table 3. Only those chemical parameters that were identified at concentrations greater than or equal to the laboratory method detection limits are listed in Table 3. The complete chemical analyses report received from the Braun Intertec laboratory is attached in Appendix B.

Table 2. Soil Chemical Analysis Summary (concentrations in milligrams per kilogram)

Compound	Boring ID Number				
	ST-2	ST-7	ST-8	ST-9	ST-10
Acenaphthene			0.37		0.34
Acenaphthylene			0.21	0.13	
Anthracene			0.47	0.12	
Benzo(a)anthracene	0.08	0.45	0.81	0.44	
Benzo(b)fluoranthene	0.10	0.7	1.7	0.85	
Benzo(k)fluoranthene			0.6	0.27	
Benzo(ghi)perylene	0.8		0.26	0.2	
Benzo(a)pyrene	0.09	0.46	1.0	0.54	
Carbazole			0.24	0.08	
Crysene	0.08	0.72	0.95	0.44	0.49
Dibenzofuran			0.3		
Fluoranthene	0.18	0.68	2.1	1.0	
Fluorene			0.4		0.51
Indeno(1,2,3-cd)pyrene			0.23	0.20	
2-methylnaphthalene		1.4	0.45	0.11	3.4
Naphthalene		0.4	0.55	0.07	
Phenanthrene	0.12	1.6	1.8	0.52	1.6
Pyrene	0.13	0.93	1.4	0.6	0.74
n-Butylbenzene		0.2			
ethylbenzene		0.14			
n-Propylbenzene		0.1			
1,2,4-Trimethylbenzene		0.3			
m,p-xylene		0.08			
o-xylene		0.11			
GRO			45		
DRO		240	2,100		

Table 3. Groundwater Chemical Analysis Summary (concentrations in μg/l)

Compound	Boring ID Number			HRL\MCL
	ST-1	ST-5	ST-10	
Arsenic	880	<110	940	50
Barium	1,900	4,300	14,000	2,000
Cadmium	<50	<10	62	4
Chromium (total)	1,000	810	3,000	100
Lead	720	420	1,000	NSE
Mercury	1.6	3.0	1.7	2
Selenium	<550	<110	<550	30
Silver	<50	<10	<50	30

Shaded = Above MDH HRL or MCL
NA = Not Analyzed
NSE = No Standard Established
μg/l = Micrograms per liter = approximately parts per billion

H. Conclusions and Recommendation for the Limited Phase II ESA

The results of this Phase II ESA indicate that the parameters detected in the soil samples were below the applicable MPCA residential SRVs and no RCRA metals were detected at concentrations above naturally occurring background levels. Also, none of the groundwater samples that were analyzed had concentrations greater than or equal to the laboratory method detection limits for DROs, GROs, VOCs included in the MDH 465E list of parameters, PAHs, MDA List 1 and 2 pesticides and organophosphorous pesticides. The groundwater samples did contain concentrations of RCRA metals that exceeded applicable HRLs or MCLs. However, this is likely due to the presence of fine sediments within the groundwater sample. The concentrations of RCRA metals in groundwater could be more accurately evaluated by installing permanent groundwater monitoring wells, data from which can be used to obtain MPCA liability assurances related to chemical releases.

Suspected ACM were observed in site debris. Positive identification of this material as ACM has yet to be determined. Sampling and microscopic analysis of these materials would be necessary in order to determine the actual asbestos content.

Based on the analytical results, no additional soil and groundwater investigations appear warranted at this time.

I. General Recommendations

I.1. Basis of Recommendations

The analyses and recommendations submitted in this report are based upon the data obtained from the soil borings performed at the approximate locations indicated on the attached sketch. Often, variations occur between these borings, the nature and extent of which do not become evident until additional exploration or construction is conducted.

I.2. Groundwater Fluctuations

We made water level observations in the borings at the times and under the conditions stated on the boring logs. These data were interpreted in the text of this report. The period of observation was relatively short, and fluctuations in the groundwater level may occur due to rainfall, flooding, irrigation, spring thaw, drainage, and other seasonal and annual factors not evident at the time the observations were made.

I.3. Use of Report

This preliminary report is for the exclusive use of the Minneapolis Community Development Agency, their consultants and prospective developers to use for the design of the development. In the absence of our written approval, we make no representation and assume no responsibility to other parties regarding this report. The data, analyses and recommendations should not be considered sufficient to develop specific plans and specifications for any development on this site. For this additional design, soil borings and a detailed geotechnical evaluation must be done once a development plan with building layout and proposed grades have been prepared. In addition, an expansion of the environmental evaluation may also be warranted.

I.4. Level of Care

Services performed by Braun Intertec Corporation personnel for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area under similar budget and time restraints. No warranty, expressed or implied, is made.

Report Prepared by:

Matthew P. Ruble
Staff Engineer

Michael L. Bratrud
Project Manager

Professional Certification:

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Michael M. Heuer, PE
Principal Engineer
Registration Number: 15571

Plate

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BRAUN INTERTEC

Engineers and Scientists Serving the Built and Natural Environments

REVISIONS	CHK'D	DATE

AREA G SITE MAP

PHASE II ENVIRONMENTAL SITE ASSESSMENT

HARRISON / BRYN MAWR / BASSETT CREEK VALLEY NEIGHBORHOODS

MINNEAPOLIS, MINNESOTA

JOB NO. CMXX-98-0199	DRAWN BY: COM	DATE DRAWN: 7-17-98	
SCALE: 1" = 120'	DRAWING NO. MXB0199B	SHEET OF	

SHEET NO.

Appendix A

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-1 LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
93.4	0.0					
91.9	1.5	FILL	FILL: Silty Sand, fine- to medium-grained, slightly organic, with a trace of Gravel, with fibers, black, moist.			The benchmark used as a reference for the elevations of borings ST-1 and ST-2 was the concrete footing of the telephone tower located east of the Linden Yard Park Building with an assumed elevation of 100.0.
86.4	7.0	FILL	FILL: Poorly Graded Sand with Silt, fine- to medium-grained, with Gravel, dark brown, moist.	29 8		
79.4	14.0	FILL	FILL: Poorly Graded Sand with Silt, fine- to medium-grained, with a trace of Gravel, brown, moist.	6 7 6		No sample recovered.
71.4	22.0	FILL	FILL: Poorly Graded Sand with Silt, fine- to medium-grained, with a trace of Gravel, with piece of plastic, with a trace of black, waterbearing.	6 6 7		
64.9	28.5	CL/CH	LEAN to FAT CLAY, with a trace of fibers, gray, wet, rather soft. (Alluvium)	4 4		
61.4	32.0	SP	POORLY GRADED SAND with GRAVEL, gray, waterbearing, loose. (Alluvium)	5		

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-1 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
58.9	34.5	SP	POORLY GRADED SAND with GRAVEL, gray, waterbearing, loose. (Alluvium)			
53.9	39.5	CL	SANDY LEAN CLAY, with a trace of Gravel, gray, wet, medium. (Alluvium)	7		
43.9	49.5	SC	CLAYEY SAND, with a trace of Gravel, gray, wet, stiff to very stiff. (Alluvium)	12 *28		* No sample recovered.
38.9	54.5	CH	FAT CLAY, gray, wet, stiff. (Alluvium)	14 *		* Hydro-Punch water sample 17-19 feet.
33.9	59.5	GP	POORLY GRADED GRAVEL with SAND, grayish brown, wet, loose. (Glacial Outwash)	7		
		ML	SILT, brown, moist, medium dense. (Glacial Outwash)	12		

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-1 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
28.9	64.5					
		SP	POORLY GRADED SAND, fine-grained, reddish brown, wet, medium dense to loose. (Glacial Outwash)	15		
				10		
18.9	74.5					
		SC	CLAYEY SAND, fine-grained, brown, wet, medium dense. (Glacial Till)	11		
13.9	79.5					
		SP-SM	POORLY GRADED SAND with SILT, fine-grained, brown, wet, medium dense. (Glacial Outwash)	23		
				23		
				21		Jetting water used to wash sand out of the auger between the 91 and 94 foot depths.
				9		
-2.6	96.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-1 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		SP-SM	POORLY GRADED SAND with SILT, fine-grained, brown, wet, medium dense. (Glacial Outwash)			
-6.1	99.5					
		SP	POORLY GRADED SAND, fine- to medium-grained, with a trace of Gravel, brown, moist, medium dense. (Glacial Outwash)	21		
				*21		* No sample recovered.
				*20		* No sample recovered.
-21.1	114.5					
		SP	POORLY GRADED SAND, fine- to medium-grained, with a trace of Gravel, brown, wet, medium dense. (Glacial Outwash)	23		
-27.1	120.5			21		
			END OF BORING. Boring immediately grouted.			

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-2 LOCATION: See attached sketch.

CREW CHIEF: M. Rowland	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/11/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
90.0	0.0					
89.0	1.0	FILL	FILL: Silty Sand with Gravel, black, moist.			
		FILL	FILL: Poorly Graded Sand with Silt with Gravel, fine- to medium-grained, light brown, moist.	10		
				7		
				7		
				7		
				6		
75.5	14.5					
		FILL	FILL: Poorly Graded Sand with Silt with Gravel, fine- to medium-grained, light brown, waterbearing.	3		
				*		* No Sample Recovered.
				4		
68.0	22.0					
		FILL	FILL: Poorly Graded Sand, fine- to coarse-grained, with Gravel, brown, waterbearing.	11		
				6		
				3		
58.0	32.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-2 (cont.) LOCATION: See attached sketch.

CREW CHIEF: M. Rowland	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/11/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		FILL	FILL: Poorly Graded Sand, fine- to coarse-grained, with Gravel, brown, waterbearing.	2		No Sample Recovered.
53.0	37.0					
		SP	POORLY GRADED SAND with GRAVEL, fine- to medium-grained, grayish brown, waterbearing, very loose, medium dense. (Alluvium)	4		
				11	▽	
40.5	49.5					
		CH	FAT CLAY, gray, wet, medium. (Alluvium)	7		
35.5	54.5					
		SM	SILTY SAND, fine-grained, gray, waterbearing, medium dense. (Alluvium)	15		Jetting water used to wash sand out of the auger between the 55 and 64 foot depths.
				18		
26.0	64.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-2 (cont.) LOCATION: See attached sketch.

CREW CHIEF: M. Rowland	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/11/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		CL	SANDY LEAN CLAY, with a trace of Gravel, gray, wet, rather stiff. (Glacial Till)	10		
20.5	69.5					
		SM	SILTY SAND, fine- to medium-grained, with Gravel, gray, wet, medium dense. (Glacial Till)	21		
15.5	74.5					
		CL	SANDY LEAN CLAY, with Gravel, gray, wet, medium dense. (Glacial Till)	15		
10.5	79.5					
		SP-SM	POORLY GRADED SAND with SILT, fine-grained, brown, waterbearing, medium dense. (Glacial Outwash)	27		Jetting water used to wash sand out of the auger between the 80 and 90 foot depths.
				18		
2.0	88.0					
		SP	POORLY GRADED SAND, fine- to medium-grained, grayish brown, waterbearing, medium dense. (Glacial Outwash)	30		Rotary drilling with mud 90 to 120 foot depths.
-6.0	96.0			30		

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-2 (cont.) LOCATION: See attached sketch.

CREW CHIEF: M. Rowland	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/11/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		SP	POORLY GRADED SAND, fine-grained, grayish brown, waterbearing, medium dense. (Glacial Outwash)	30		
				28		
				27		
-23.0	113.0					
		SP	POORLY GRADED SAND, fine- to medium-grained, with a trace of Gravel, gray, waterbearing, medium dense. (Glacial Outwash)	24		
-30.5	120.5			26		
			END OF BORING. Water down 12 feet with 14 feet of hollow-stem auger in the ground. Boring then grouted.			

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-3 LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
298.1	0.0	FILL	FILL: Poorly Graded Sand, fine- to medium-grained, with a trace of Gravel, brown.	8		The benchmark used as a reference for the elevations of borings ST-3 and ST-5 was the catch basin on the high occupancy vehicle on-ramp to Interstate 394 with an assumed elevation of 300.0.
293.6	4.5	FILL	FILL: Silty Sand, fine- to coarse-grained, with a trace of Gravel, with cinders, black, moist.	9		
291.1	7.0	FILL	FILL: Clayey Sand, fine- to medium-grained, with brick and cinders, black, wet.	4		
288.6	9.5	SP	POORLY GRADED SAND, fine-grained, with a trace of Gravel, light brown, medium dense. (Possible Fill)	13 12		
283.6	14.5	SP	POORLY GRADED SAND, fine- to medium-grained, with a trace of Gravel, grayish brown, waterbearing, loose. (Possible Fill)	8	▽	
281.1	17.0	SP	POORLY GRADED SAND, fine- to medium-grained, brown, waterbearing, loose to medium dense. (Possible Fill)	8 10 12		Jetting water used to wash sand out of the auger between the 18 and 24 foot depths. No sample recovered.
273.6	24.5	CH	FAT CLAY, gray, wet, rather soft. (Alluvium)	5 5		
266.1	32.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-3 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		CH	FAT CLAY, gray, wet, rather soft to rather stiff. (Alluvium)			
				4		
						No sample recovered.
				6		
				3		
				8		
				7		
234.1	64.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-3 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		CH	FAT CLAY, gray, wet, rather soft to rather stiff. (Alluvium)	10		
229.1	69.0					
		CL	SANDY LEAN CLAY, with a trace of Gravel, gray, moist, rather stiff to very stiff. (Glacial Till)	9		
				11		
				12		
				14		
				14		
				17		
202.1	96.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-3 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/12/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
198.6	99.5	CL	SANDY LEAN CLAY, with a trace of Gravel, gray, moist, rather stiff to very stiff. (Glacial Till)			
193.6	104.5	CL	LEAN CLAY, gray, moist, very stiff. (Glacial Till)	17		Rotary drilling with mud 100-120'.
188.6	109.5	CL	SANDY LEAN CLAY, with a trace of Gravel, gray, wet, stiff. (Glacial Till)	15		
179.6	118.5	CL	LEAN CLAY, gray, wet, stiff to very stiff. (Glacial Till)	16		
				25		No sample recovered.
177.6	120.5	CL	SANDY LEAN CLAY, with a trace of Gravel, gray, wet, very stiff. (Glacial Till)	22		
			END OF BORING. Water down 15 feet with 19 feet of hollow-stem auger in the ground. Boring then grouted.			

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-5 LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/14/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
296.4	0.0					
294.9	1.5	FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, black, moist.			
291.9	4.5	FILL	FILL: Clayey Sand, fine- to medium-grained, with Gravel, light brown, moist.	17		
289.4	7.0	FILL	FILL: Poorly Graded Sand with Silt, fine- to medium-grained, with Gravel, light brown, moist.	17		
286.4	10.0	FILL	FILL: Sandy Lean Clay, with a trace of Gravel, brown, wet.	4 6		
283.9	12.5	FILL	FILL: Silty Sand, fine- to medium-grained, with a trace of Gravel, black and brown, wet.	2		
282.4	14.0	PT	PEAT, fibrous, black, wet, very soft. (Swamp Deposit)			
279.9	16.5	OH	ORGANIC FAT CLAY, with vegetation and shells, gray, wet, soft. (Swamp Deposit)	2		
273.9	22.5	OH	ORGANIC FAT CLAY, plastic, with a trace of vegetation and shells, greenish gray, wet, soft. (Swamp Deposit)	3		
264.4	32.0	SM	SILTY SAND, fine-grained, gray, waterbearing, medium dense. (Alluvium)	13 15 14		No sample recovered.

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-5 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/14/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		SM	SILTY SAND, fine-grained, gray, waterbearing, medium dense. (Alluvium)	12		
256.9	39.5					
		CH	FAT CLAY, gray, moist, stiff. (Glacial Till)	13		
				10		
				12		
				11		
236.9	59.5					
		SC	CLAYEY SAND, fine-grained, with a trace of Gravel, gray, wet, medium dense. (Glacial Till)	12		

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-5 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/14/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
231.9	64.5					
		SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, with a trace of Gravel, gray, wet, medium dense. (Glacial Outwash)	12 11		
221.9	74.5					
		CL	SANDY LEAN CLAY, with a trace of Gravel, gray, moist, rather stiff to very stiff. (Glacial Till)	12 14 16 18 20		
200.4	96.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-5 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/14/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		CL	SANDY LEAN CLAY, with a trace of Gravel, gray, moist, rather stiff to very stiff. (Glacial Till)			
				28		
				24		
				26		
				24		
175.9	120.5			26		
			END OF BORING. Boring then grouted.			

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-6 LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/16/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
498.0	0.0					
497.2	0.8	FILL	FILL: Silty Sand, with Gravel, dark brown, dry.			The benchmark used as a reference for the elevations of boring ST-6 was the top of the catch basin on the north side of Linden Avenue near boring ST-6. An assumed elevation of 500.0 was used.
495.5	2.5	FILL	FILL: Bituminous.	18		
494.0	4.0	FILL	FILL: Clayey Sand, fine- to medium-grained, with Gravel, brown.			
491.0	7.0	FILL	FILL: Clay, with Gravel, brown, dry, medium dense.	16		
486.0	12.0	FILL	FILL: Poorly Graded Sand, fine- to coarse-grained, with Gravel, light brown, moist.	17 21		
481.0	17.0	FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, light brown, waterbearing.	16 8		
479.5	18.5	FILL	FILL: Poorly Graded Sand, fine- to coarse-grained, with Gravel, brown, waterbearing.	7		
473.5	24.5	OL	ORGANIC CLAY, with fibers, light gray, wet. (Swamp Deposit)	4		No Sample Recovered.
466.0	32.0	CH	FAT CLAY, gray, wet, rather stiff. (Alluvium)	11		

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-6 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/16/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		SC	CLAYEY SAND, fine- to medium-grained, with a trace of Gravel, gray, wet, medium dense. (Alluvium)	11		
460.5	37.5					
		SP	POORLY GRADED SAND with SILT, fine- to coarse-grained, with Gravel, gray, wet, medium dense. (Alluvium)	12		
455.5	42.5					
		CH	FAT CLAY, gray, wet, medium. (Alluvium)	7		
				8		
				8		
				8		
434.0	64.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-6 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/16/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		CH	FAT CLAY, gray, wet, medium. (Alluvium)	9		
431.0	67.0					
		CL	LEAN CLAY, gray, wet, stiff to very stiff. (Glacial Till)	12		
				15		
				20		
				16		
410.5	87.5					
		CL	LEAN CLAY with SAND, with a trace of Gravel, gray, wet, stiff. (Glacial Till)	16		
				15		
402.0	96.0					

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-6 (cont.) LOCATION: See attached sketch.

CREW CHIEF: D. Lovaasen	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/16/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
		CL	LEAN CLAY with SAND, with a trace of Gravel, gray, wet, stiff. (Glacial Till)			
				17		
				19		
				18		
				13		
377.5	120.5			12		
			END OF BORING. Boring then grouted.			

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-7 LOCATION: See attached sketch.

CREW CHIEF: S. McLean	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/16/87	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
696.4	0.0					
695.9	0.5	FILL	FILL: 6 inches Bituminous.			The benchmark used as a reference for the elevations of borings ST-7 through ST-10 was the footing for the high line tower located near the northeast corner of the site. An assumed elevation of 700.0 was used.
691.9	4.5	FILL	FILL: Sandy Lean Clay, with cinders, with gravel, black and dark brown, moist.	22		
686.9	9.5	FILL	FILL: Silty Sand, fine- to coarse-grained, with wood, brick and Limestone, yellow, moist.	18 *		* No sample recovered. Concrete obstruction at 7.5'-8.5'.
679.4	17.0	FILL	FILL: Fat Clay, with a trace of Concrete, gray, moist, medium.	8 8 7		
674.4	22.0	CH	FAT CLAY, gray, wet, medium, wet. (Alluvium)	7 7		
669.4	27.0	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, with a trace of Gravel, grayish brown, wet, medium dense. (Glacial Outwash)	10 11		
665.9	30.5	SP	POORLY GRADED SAND, fine-grained, reddish brown, waterbearing, loose. (Glacial Outwash)	7		* Water not observed to cave-in depth of 25 feet immediately after withdrawal of the auger.
			END OF BORING. *			Boring then grouted.

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632
GEOTECHNICAL EVALUATION
Minneapolis Community Development Agency
Linden Avenue Corridor Property
Minneapolis, Minnesota

BORING: ST-8

LOCATION: See attached sketch.

CREW CHIEF: S. McLean | METHOD: 3 1/4" HSA Autohmr. | DATE: 6/17/98 | SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
695.9	0.0					
694.9	1.0	FILL	FILL: Silty Sand, fine- to medium-grained, dark brown, moist.			
		FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, with Bituminous, moist.	33		
690.9	5.0			18		
		FILL	FILL: Poorly Graded Sand, fine- to medium-grained, with a trace of Gravel, light brown, moist.	12		
684.9	11.0			12		
		CH/CL	FAT to LEAN CLAY, brown, wet, medium. (Alluvium)	6		
681.9	14.0					
		CH/CL	FAT to LEAN CLAY, gray, wet, medium. (Alluvium)	7		
678.4	17.5			7		
		SP	POORLY GRADED SAND, fine-grained, brown, waterbearing, loose. (Glacial Outwash)	9		
672.9	23.0			9		
			END OF BORING.			
			Water not observed to cave-in depth of 17.5 immediately after withdrawal of the auger.			
			Boring then grouted.			

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LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-9 LOCATION: See attached sketch.

CREW CHIEF: S. McLean	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/17/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
695.6	0.0	FILL	FILL: Silty Sand, fine- to coarse-grained, with Gravel, dark brown, moist.	12		
691.1	4.5	FILL	FILL: Silty Sand, with cinders, fine- to coarse-grained, with Gravel, black, moist.	13		
688.6	7.0	FILL	FILL: Poorly Graded Sand, fine-grained, with a trace of Gravel, brown, moist.	5		* No sample recovered. Concrete obstruction at 7.5'-8.5'.
683.6	12.0	SP	POORLY GRADED SAND, fine- to medium-grained, with a trace of Gravel, brown, moist, loose to medium dense. (Alluvium)	*		* 100 blows for 1/2" No sample recovered. (obstruction)
				10		
				8		
				22		
				22		
				16		
				21		
665.1	30.5			19		* Water not observed to cave-in depth of 20 feet immediately after withdrawal of the auger.
			END OF BORING. *			Boring then grouted.

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-10 LOCATION: See attached sketch.

CREW CHIEF: S. McLean	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/16/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
697.5	0.0					
696.0	1.5	FILL	FILL: Silty Sand and Lean Clay, brown and black, moist.			
693.5	4.0	FILL	FILL: Sandy Lean Clay, black, moist.	9		
691.5	6.0	FILL	FILL: Lean Clay, with cinder, with Sand, with Gravel, dark gray, moist.	7		
688.0	9.5	FILL	FILL: Lean Clay, with Asphalt, with Gravel, gray, moist.	6		* Petroleum odor
685.5	12.0	FILL	FILL: Silty Sand, fine- to medium-grained, brown, moist.	9		
683.5	14.0	FILL	FILL: Limestone Gravel, yellow, moist.	*		* 100 blows for 2".
670.0	27.5	CL	SANDY LEAN CLAY, with a trace of Gravel, gray to brown at 22 feet, moist, rather stiff to stiff. (Glacial Till)	11 7 7 13 11		
665.5	32.0	SP	POORLY GRADED SAND, fine- to medium-grained, with a trace of Gravel, brown, moist, medium dense. (Glacial Outwash)	19		

BRAUN INTERTEC

LOG OF BORING

PROJECT: CMXX98416/BABX98632 GEOTECHNICAL EVALUATION Minneapolis Community Development Agency Linden Avenue Corridor Property Minneapolis, Minnesota	BORING: ST-10 (cont.) LOCATION: See attached sketch.

CREW CHIEF: S. McLean	METHOD: 3 1/4" HSA Autohmr.	DATE: 6/16/98	SCALE: 1" = 4'

Elev.	Depth	ASTM Symbol	Description of Materials	BPF	WL	Tests or Notes
662.5	35.0	SP	POORLY GRADED SAND, fine- to medium-grained, with a trace of Gravel, brown, moist, medium dense. (Glacial Outwash)	17		Hydro-Punch water sample 34.5-38.5 foot depths.
659.0	38.5	SP	POORLY GRADED SAND, fine- to coarse-grained, brown, waterbearing, medium dense. (Glacial Outwash)			
			END OF BORING. Water down 33 feet with 34 feet of hollow-stem auger in the ground. Water not observed to cave-in depth of 33 feet immediately after withdrawal of the auger. Boring then grouted.			

Appendix B

BRAUN℠
INTERTEC

June 19, 1998

Report 98-4798
Project CMXX-98-0416

Mr. Eric Dott/E2
Braun Intertec Corporation

Re: Braun Intertec

MCDA-Linden Yard

Braun Intertec Corporation received your analytical request on June 12, 1998. Analytical results are summarized on the following laboratory report.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed.

When possible these samples will be held by the laboratory for 14 days from the date of this report. The process of disposing or returning the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time.

We appreciate the opportunity to meet your analytical needs. If you have any questions or would like additional information, please call Barbara Maki at 612-942-4820.

Sincerely,

Barbara J. Maki

Barbara J. Maki
Project Manager

Attachments
Chain of Custody
Laboratory Results

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4798	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/19/98
PO Number:		**% Moisture:**	4%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4798-01				

Client Sample ID/Description: ST-3 2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Petroleum Hydrocarbons									
Diesel Range Organics (dry weight)	WI DRO	06/16/98	WI DRO	06/18/98	1.0	0.89	10	<10	mg/kg
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.011	0.066	<0.066	mg/kg
Acenaphthylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	<0.066	mg/kg
Anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0050	0.066	<0.066	mg/kg
Benzo(a)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	<0.066	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.066	<0.066	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.066	<0.066	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
Benzo(a)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	<0.066	mg/kg
Carbazole	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.066	<0.066	mg/kg
Chrysene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	<0.066	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
Dibenzofuran	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.025	0.066	<0.066	mg/kg
Fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.066	<0.066	mg/kg
Fluorene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0090	0.066	<0.066	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
2-Methylnaphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.031	0.066	<0.066	mg/kg
Naphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.066	<0.066	mg/kg
Phenanthrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	<0.066	mg/kg
Pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	<0.066	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	59	% rec
Nitrobenzene-d5	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	57	% rec
Terphenyl-d14	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	92	% rec
Inorganic									
Solids, Total	-	-	EPA 160.3	06/14/98	1.0	-	-	96	%
Metals									
Arsenic, Total	-	-	SW-846 6010	06/17/98	1.0	0.74	2.2	<2.2	mg/kg
Barium, Total	-	-	SW-846 6010	06/17/98	1.0	0.16	1.0	59	mg/kg
Cadmium, Total	-	-	SW-846 6010	06/17/98	1.0	0.089	0.50	0.74	mg/kg
Chromium, Total	-	-	SW-846 6010	06/17/98	1.0	0.28	1.0	12	mg/kg
Lead, Total	-	-	SW-846 6010	06/17/98	1.0	0.62	1.9	4.6	mg/kg
Mercury, Total	-	-	SW-846 7471	06/15/98	1.0	0.006	0.02	<0.02	mg/kg
Selenium, Total	-	-	SW-846 6010	06/17/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/17/98	1.0	0.17	1.0	<1.0	mg/kg

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	
Log-in:	98-4798	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/19/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4798-02				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.011	0.067	<0.067	mg/kg
Acenaphthylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0050	0.067	<0.067	mg/kg
Benzo(a)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
Benzo(a)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Carbazole	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.067	<0.067	mg/kg
Chrysene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
Dibenzofuran	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.025	0.067	<0.067	mg/kg
Fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.067	<0.067	mg/kg
Fluorene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0090	0.067	<0.067	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
2-Methylnaphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.031	0.067	<0.067	mg/kg
Naphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.067	<0.067	mg/kg
Phenanthrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
Pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	73	% rec
Nitrobenzene-d5	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	76	% rec
Terphenyl-d14	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	97	% rec

(End of Report)

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BRAUN INTERTEC

Braun Intertec Corporation
6875 Washington Ave. S.
Edina, MN 55439-0108
(612) 942-4930 Fax (612) 942-4844
labservices@brauncorp.com

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: _____
Time _____
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote # _____

For Braun Intertec Use Only
Braun Intertec Project No.
CMXX-98-0416

REPORT RESULTS TO
Contact Name: Eric Dott
Company:
Mailing Address:
City, State, Zip:
Telephone #: Fax #:

Project ID/Project Name: MCDA - Linden Yard
P.O. #:

SEND INVOICE TO
Contact Name: Company:
Address:
City, State, Zip:
Telephone #: Fax #:

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	Metals Field Filtered Y/N	DRO	PAH	RCRA Metals								FOR LAB USE ONLY
ST-3 2.5'	6-12-98	1310	Soil		4		X	X	X								98-4798-01

CHAIN OF CUSTODY
Collected by: Dave Higgins Bottom (print)
Collector's Signature: [signature]
Relinquished by: Date/Time 6-12-98 1320
Received by: P A McElligott Date/Time 6-12-98 1320
Relinquished by: P A McElligott Date/Time 6-12-98 1510
Received by: April Bergman Date/Time 6/12/98 1510

Evidence Tape Intact ☐ Yes ☐ No ☒ N/A
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other _____
Temperature _____ °C ☐ Received on Ice

Comments:

10/97

E-2 ✓

BRAUNSM
INTERTEC

To: Eric Dott/E2

From: Barbara Maki

Re: CMXX-98-0416/98-4798

Date: June 12, 1998

This letter is to acknowledge receipt of the following samples June 12, 1998 for chemical analyses. Please find attached the laboratory draft invoice. This invoice will be sent to Judy Wolf (BST) upon completion of the analyses by the laboratory. Please proof the following information including the draft invoice and notify your project manager of any changes. A final report will be forthcoming.

Client Information

Braun Intertec

Re: MCDA-Linden Yard

Sample Information

Braun Intertec I.D.	Client Sample I.D.	Sample Date	Sample Matrix
98-4798-01	ST-3 2.5'	12-JUN-98	Solid
98-4798-02	Method Blank		Solid

Analyses Information

Parameter	Matrix	Braun Intertec Sample Number (98-4798-XX)
Total Solids	Solid	01
Silver, Total	Solid	01
Arsenic, Total	Solid	01
Barium, Total	Solid	01
Cadmium, Total	Solid	01
Chromium, Total	Solid	01
Lead, Total	Solid	01
Selenium, Total	Solid	01
Mercury, Total	Solid	01
Metals Digestion	Solid	01
MS PAH Extraction	Solid	01

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Analyses Information Continued

Parameter	Matrix	Braun Intertec Sample Number (98-4798-XX)	
Diesel Range Organics	Dry Weight	01	
GCMS Polynuclear Aromatic Hydrocarbons	Solid	01	02

Your samples have been assigned to our report number 98-4798. The samples will be held by the laboratory for 14 days after your report has been issued. Disposal or return of the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time. If you have any questions or need additional information, please call Barbara Maki at 612-942-4820.

Attachments
Chain of Custody
Draft Invoice

BRAUN[SM]
INTERTEC

July 23, 1998

Report 98-4737
Project CMXX-98-0416

Mr. Eric Dott/E2
Braun Intertec Corporation

Re: Braun Intertec

Braun Intertec Corporation received your analytical request on June 10, 1998. Analytical results are summarized on the following laboratory report.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed.

When possible these samples will be held by the laboratory for 14 days from the date of this report. The process of disposing or returning the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time.

We appreciate the opportunity to meet your analytical needs. If you have any questions or would like additional information, please call Barbara Maki at 612-942-4820.

Sincerely,

Barbara J. Maki

Barbara J. Maki
Project Manager

Attachments
Chain of Custody
Laboratory Results

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	7%		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-01				

Client Sample ID/Description: ST2-4.0'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Petroleum Hydrocarbons									
Diesel Range Organics (dry weight)	WI DRO	06/16/98	WI DRO	06/18/98	1.0	0.89	10	<10	mg/kg
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.011	0.066	<0.066	mg/kg
Acenaphthylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	<0.066	mg/kg
Anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0050	0.066	<0.066	mg/kg
Benzo(a)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	0.08	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.066	0.10	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.066	<0.066	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	0.08	mg/kg
Benzo(a)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	0.09	mg/kg
Carbazole	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.066	<0.066	mg/kg
Chrysene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	0.08	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
Dibenzofuran	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.025	0.066	<0.066	mg/kg
Fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.066	0.18	mg/kg
Fluorene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0090	0.066	<0.066	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
2-Methylnaphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.031	0.066	<0.066	mg/kg
Naphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.066	<0.066	mg/kg
Phenanthrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	0.12	mg/kg
Pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	0.13	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	76	% rec
Nitrobenzene-d5	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	76	% rec
Terphenyl-d14	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	99	% rec
Inorganic									
Solids, Total	-	-	EPA 160.3	06/10/98	1.0	-	-	93	%
Metals									
Arsenic, Total	-	-	SW-846 6010	06/17/98	1.0	0.74	2.2	<2.2	mg/kg
Barium, Total	-	-	SW-846 6010	06/17/98	1.0	0.16	1.0	40	mg/kg
Cadmium, Total	-	-	SW-846 6010	06/17/98	1.0	0.089	0.50	<0.50	mg/kg
Chromium, Total	-	-	SW-846 6010	06/17/98	1.0	0.28	1.0	8.8	mg/kg
Lead, Total	-	-	SW-846 6010	06/17/98	1.0	0.62	1.9	7.4	mg/kg
Mercury, Total	-	-	SW-846 7471	06/15/98	1.0	0.006	0.02	<0.02	mg/kg
Selenium, Total	-	-	SW-846 6010	06/17/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/17/98	1.0	0.17	1.0	<1.0	mg/kg

(Report continued on next page)

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	10%		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-02				

Client Sample ID/Description: ST5-2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	5.0	5.0	<5.0	mg/kg
Allyl Chloride	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Benzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.03	0.03	<0.03	mg/kg
Bromobenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Bromochloromethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Bromodichloromethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Bromoform	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Bromomethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
n-Butylbenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
sec-Butylbenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
tert-Butylbenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Carbon Tetrachloride	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorobenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorodibromomethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroform	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Chloromethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.5	0.5	<0.5	mg/kg
2-Chlorotoluene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
4-Chlorotoluene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	1.0	1.0	<1.0	mg/kg
1,2-Dibromoethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Dibromomethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.5	0.5	<0.5	mg/kg
1,2-Dichlorobenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichlorobenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,4-Dichlorobenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,2-Dichloroethylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.02	0.02	<0.02	mg/kg
trans-1,2-Dichloroethylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.02	0.02	<0.02	mg/kg
Dichlorodifluoromethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Dichlorofluoromethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloropropane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichloropropane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
2,2-Dichloropropane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloro-1-propylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Ethyl Benzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.03	0.03	<0.03	mg/kg
Ethyl Ether	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Hexachlorobutadiene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg

(Report continued on next page)

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	10%		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-02				

Client Sample ID/Description: ST5-2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Isopropyltoluene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Methyl Ethyl Ketone	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.5	0.5	<0.5	mg/kg
Methyl Isobutyl Ketone	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.5	0.5	<0.5	mg/kg
Methyl Tertiary Butyl Ether	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Methylene Chloride	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	1.0	1.0	<1.0	mg/kg
Naphthalene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
n-Propylbenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Styrene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,1,2-Tetrachloroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2,2-Tetrachloroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Tetrachloroethylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Tetrahydrofuran	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.5	0.5	<0.5	mg/kg
Toluene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.03	0.03	<0.03	mg/kg
1,2,3-Trichlorobenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,4-Trichlorobenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,1-Trichloroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2-Trichloroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2-Trichloroethylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.05	0.05	<0.05	mg/kg
Trichlorofluoromethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,3-Trichloropropane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Trichlorotrifluoroethane	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,4-Trimethylbenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
1,3,5-Trimethylbenzene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
Vinyl Chloride	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.1	0.1	<0.1	mg/kg
m,p-Xylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.03	0.03	<0.03	mg/kg
o-Xylene	SW-846 5030	06/13/98	MDH 466A	06/13/98	1.0	0.03	0.03	<0.03	mg/kg
Petroleum Hydrocarbons									
Diesel Range Organics (dry weight)	WI DRO	06/16/98	WI DRO	06/18/98	1.0	0.89	10	<10	mg/kg
Gasoline Range Organics (dry weight)	SW-846 5030	06/18/98	WI GRO	06/18/98	1.0	10	10	<10	mg/kg
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.011	0.065	<0.065	mg/kg
Acenaphthylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.065	<0.065	mg/kg
Anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0050	0.065	<0.065	mg/kg
Benzo(a)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.065	<0.065	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.065	<0.065	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.065	<0.065	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.065	<0.065	mg/kg
Benzo(a)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.065	<0.065	mg/kg
Carbazole	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.065	<0.065	mg/kg
Chrysene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.065	<0.065	mg/kg

(Report continued on next page)

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	10%		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-02				

Client Sample ID/Description: ST5-2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Dibenzo(a,h)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.065	<0.065	mg/kg
Dibenzofuran	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.025	0.065	<0.065	mg/kg
Fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.065	<0.065	mg/kg
Fluorene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0090	0.065	<0.065	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.065	<0.065	mg/kg
2-Methylnaphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.031	0.065	<0.065	mg/kg
Naphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.065	<0.065	mg/kg
Phenanthrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.065	<0.065	mg/kg
Pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.065	<0.065	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	74	% rec
Nitrobenzene-d5	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	62	% rec
Terphenyl-d14	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	94	% rec
Inorganic									
Solids, Total	-	-	EPA 160.3	06/10/98	1.0	-	-	90	%
Metals									
Arsenic, Total	-	-	SW-846 6010	06/17/98	1.0	0.74	2.2	5.8	mg/kg
Barium, Total	-	-	SW-846 6010	06/17/98	1.0	0.16	1.0	45	mg/kg
Cadmium, Total	-	-	SW-846 6010	06/17/98	1.0	0.089	0.50	<0.50	mg/kg
Chromium, Total	-	-	SW-846 6010	06/17/98	1.0	0.28	1.0	8.8	mg/kg
Lead, Total	-	-	SW-846 6010	06/17/98	1.0	0.62	1.9	8.3	mg/kg
Mercury, Total	-	-	SW-846 7471	06/15/98	1.0	0.006	0.02	<0.02	mg/kg
Selenium, Total	-	-	SW-846 6010	06/17/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/17/98	1.0	0.17	1.0	<1.0	mg/kg

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-03				

Client Sample ID/Description: ST5-22'-25'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	20	20	<20	ug/l
Allyl Chloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
Bromobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.5	2.5	<2.5	ug/l
n-Butylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chloromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.5	2.5	<2.5	ug/l
2-Chlorotoluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dibromoethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,4-Dichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.3	<0.3	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.5	2.5	<2.5	ug/l
Dichlorofluoromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
1,2-Dichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-03				

Client Sample ID/Description: ST5-22'-25'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Isopropylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Isopropyltoluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Methyl Ethyl Ketone	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
Methyl Isobutyl Ketone	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
Methyl Tertiary Butyl Ether	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Methylene Chloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.0	2.0	<2.0	ug/l	
Naphthalene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
n-Propylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Styrene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,1,2-Tetrachloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
1,1,2,2-Tetrachloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
Tetrachloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Tetrahydrofuran	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
Toluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,3-Trichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,4-Trichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,1-Trichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
1,1,2-Trichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,2-Trichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
Trichlorofluoromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,3-Trichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Trichlorotrifluoroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
1,2,4-Trimethylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,3,5-Trimethylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Vinyl Chloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
m,p-Xylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
o-Xylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Petroleum Hydrocarbons										
Diesel Range Organics	WI DRO	06/15/98	WI DRO	06/15/98	1.0	27	100	<100	ug/l	hm
Gasoline Range Organics	SW-846 5030	06/22/98	WI GRO	06/22/98	1.0	100	100	<100	ug/l	
Polynuclear Aromatic Hydrocarbons (PAHs) (GC/MS)										
Acenaphthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.59	1.0	<1.0	ug/l	
Acenaphthylene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.61	1.0	<1.0	ug/l	
Anthracene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.35	1.0	<1.0	ug/l	
Benzo(a)anthracene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.20	1.0	<1.0	ug/l	
Benzo(b)fluoranthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.29	1.0	<1.0	ug/l	
Benzo(k)fluoranthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.41	1.0	<1.0	ug/l	
Benzo(g,h,i)perylene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.37	1.0	<1.0	ug/l	
Benzo(a)pyrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.36	1.0	<1.0	ug/l	
Carbazole	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.50	2.6	<2.6	ug/l	
Chrysene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.25	1.0	<1.0	ug/l	

hm The sample pH was greater than 2, which is an exception to the WI DRO method.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-03				

Client Sample ID/Description: ST5-22'-25'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Dibenzo(a,h)anthracene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.41	1.0	<1.0	ug/l
Dibenzofuran	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	1.4	2.6	<2.6	ug/l
Fluoranthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.28	1.0	<1.0	ug/l
Fluorene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.58	1.0	<1.0	ug/l
Indeno(1,2,3-cd)pyrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.40	1.0	<1.0	ug/l
2-Methylnaphthalene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	1.7	2.6	<2.6	ug/l
Naphthalene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.74	2.6	<2.6	ug/l
Phenanthrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.40	1.0	<1.0	ug/l
Pyrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	0.24	1.0	<1.0	ug/l
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	-	-	32	% rec
Nitrobenzene-d5	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	-	-	45	% rec
Terphenyl-d14	SW-846 3520	06/16/98	SW-846 8270	06/17/98	0.50	-	-	31	% rec
Organochlorine Pesticides									
Aldrin	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.031	0.093	<0.093	ug/l
a-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.031	0.093	<0.093	ug/l
b-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.063	0.19	<0.19	ug/l
d-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.055	0.16	<0.16	ug/l
g-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.034	0.10	<0.10	ug/l
Chlordane	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.25	0.75	<0.75	ug/l
4,4-DDD	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.034	0.10	<0.10	ug/l
4,4-DDE	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.045	0.13	<0.13	ug/l
4,4-DDT	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.041	0.12	<0.12	ug/l
Dieldrin	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.036	0.11	<0.11	ug/l
Endosulfan I	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.042	0.13	<0.13	ug/l
Endosulfan II	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.026	0.078	<0.078	ug/l
Endosulfan Sulfate	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.023	0.069	<0.069	ug/l
Endrin	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.043	0.13	<0.13	ug/l
Endrin Aldehyde	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.018	0.054	<0.054	ug/l
Heptachlor	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.027	0.081	<0.081	ug/l
Heptachlor Epoxide	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.044	0.13	<0.13	ug/l
Methoxychlor	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.044	0.13	<0.13	ug/l
Toxaphene	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	1.0	3.0	<3.0	ug/l
Herbicides/Pesticides (GC/MS)									
Acetochlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.676	<0.676	ug/l
Alachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.035	0.676	<0.676	ug/l
Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.676	<0.676	ug/l
Desethyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.051	0.676	<0.676	ug/l
Deisopropyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.089	0.676	<0.676	ug/l
Chlorpyrifos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.676	<0.676	ug/l
Cyanazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.06	0.270	<0.270	ug/l
EPTC	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.676	<0.676	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-03				

Client Sample ID/Description: ST5-22'-25'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Ethalfluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.676	<0.676	ug/l	
Fonofos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.676	<0.676	ug/l	
Metolachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.032	0.676	<0.676	ug/l	
Metribuzin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.676	<0.676	ug/l	
Pendimethalin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.03	0.676	<0.676	ug/l	
Phorate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.038	0.405	<0.405	ug/l	
Prometon	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.063	0.676	<0.676	ug/l	
Propachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.676	<0.676	ug/l	
Propazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.034	0.676	<0.676	ug/l	
Simazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.057	0.676	<0.676	ug/l	
Terbufos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.270	<0.270	ug/l	
Triallate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.042	0.676	<0.676	ug/l	
Trifluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.075	0.676	<0.676	ug/l	
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	116	% rec	
Diazinon-d10	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	111	% rec	
Acid Herbicides (GC/MS)										
Bentazon	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.30	0.3	<0.3	ug/l	ga
2,4-D	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.37	0.3	<0.3	ug/l	ga
2,4-DB	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.34	0.3	<0.3	ug/l	ga
Dicamba	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.27	0.3	<0.3	ug/l	ga
MCPA	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.32	0.2	<0.2	ug/l	ga
Picloram	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.17	0.3	<0.3	ug/l	ga
2,4,5-T	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.34	0.3	<0.3	ug/l	ga
2,4,5-TP (Silvex)	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.41	0.3	<0.3	ug/l	ga
Triclopyr	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	0.35	0.3	<0.3	ug/l	ga
*** Semi-Volatile Surrogates ***										
2,4-DCAA	SW-846 8151	06/17/98	SW-846 8270	06/18/98	0.50	-	-	33	% rec	
Metal										
Arsenic, Total	-	-	EPA 200.7	06/16/98	5.0	37	550	880	ug/l	ga
Barium, Total	-	-	EPA 200.7	06/16/98	5.0	1.0	50	1900	ug/l	ga
Cadmium, Total	-	-	EPA 200.7	06/16/98	5.0	2.0	50	<50	ug/l	ga
Chromium, Total	-	-	EPA 200.7	06/16/98	5.0	1.7	50	1000	ug/l	ga
Lead, Total	-	-	EPA 200.7	06/16/98	5.0	13	200	720	ug/l	ga
Mercury, Total	-	-	EPA 245.1	06/15/98	1.0	0.1	0.3	1.6	ug/l	
Selenium, Total	-	-	EPA 200.7	06/16/98	5.0	36	550	<550	ug/l	ga
Silver, Total	-	-	EPA 200.7	06/16/98	5.0	2.0	50	<50	ug/l	ga

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-04				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.011	0.067	<0.067	mg/kg
Acenaphthylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0050	0.067	<0.067	mg/kg
Benzo(a)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
Benzo(a)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Carbazole	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.067	<0.067	mg/kg
Chrysene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
Dibenzofuran	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.025	0.067	<0.067	mg/kg
Fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.067	<0.067	mg/kg
Fluorene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0090	0.067	<0.067	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
2-Methylnaphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.031	0.067	<0.067	mg/kg
Naphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.067	<0.067	mg/kg
Phenanthrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
Pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	73	% rec
Nitrobenzene-d5	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	76	% rec
Terphenyl-d14	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	97	% rec

(Report continued on next page)

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-05				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Polynuclear Aromatic Hydrocarbons (PAHs) (GC/MS)									
Acenaphthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.59	2.0	<2.0	ug/l
Acenaphthylene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.61	2.0	<2.0	ug/l
Anthracene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.35	2.0	<2.0	ug/l
Benzo(a)anthracene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.20	2.0	<2.0	ug/l
Benzo(b)fluoranthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.29	2.0	<2.0	ug/l
Benzo(k)fluoranthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.41	2.0	<2.0	ug/l
Benzo(g,h,i)perylene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.37	2.0	<2.0	ug/l
Benzo(a)pyrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.36	2.0	<2.0	ug/l
Carbazole	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.50	5.0	<5.0	ug/l
Chrysene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.25	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.41	2.0	<2.0	ug/l
Dibenzofuran	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	1.4	5.0	<5.0	ug/l
Fluoranthene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.28	2.0	<2.0	ug/l
Fluorene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.58	2.0	<2.0	ug/l
Indeno(1,2,3-cd)pyrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.40	2.0	<2.0	ug/l
2-Methylnaphthalene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	1.7	5.0	<5.0	ug/l
Naphthalene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.74	5.0	<5.0	ug/l
Phenanthrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.40	2.0	<2.0	ug/l
Pyrene	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	0.24	2.0	<2.0	ug/l
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	-	-	60	% rec
Nitrobenzene-d5	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	-	-	70	% rec
Terphenyl-d14	SW-846 3520	06/16/98	SW-846 8270	06/17/98	1.0	-	-	76	% rec
Herbicides/Pesticides (GC/MS)									
Acetochlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.500	<0.500	ug/l
Alachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.035	0.500	<0.500	ug/l
Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.500	<0.500	ug/l
Desethyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.051	0.500	<0.500	ug/l
Deisopropyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.089	0.500	<0.500	ug/l
Chlorpyrifos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.500	<0.500	ug/l
Cyanazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.06	0.200	<0.200	ug/l
EPTC	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.500	<0.500	ug/l
Ethalfluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.500	<0.500	ug/l
Fonofos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.500	<0.500	ug/l
Metolachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.032	0.500	<0.500	ug/l
Metribuzin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.500	<0.500	ug/l
Pendimethalin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.03	0.500	<0.500	ug/l
Phorate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.038	0.300	<0.300	ug/l
Prometon	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.063	0.500	<0.500	ug/l
Propachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.500	<0.500	ug/l
Propazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.034	0.500	<0.500	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/10/98
Log-in:	98-4737	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/10/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/23/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:		**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4737-05				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Simazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.057	0.500	<0.500	ug/l
Terbufos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.200	<0.200	ug/l
Triallate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.042	0.500	<0.500	ug/l
Trifluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.075	0.500	<0.500	ug/l
*** Semi-Volatile Surrogates ***									
Atrazine-d5	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	134	% rec
Diazinon-d10	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	126	% rec
Acid Herbicides (GC/MS)									
Bentazon	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.30	0.5	<0.5	ug/l
2,4-D	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.37	0.5	<0.5	ug/l
2,4-DB	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.34	0.5	<0.5	ug/l
Dicamba	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.27	0.5	<0.5	ug/l
MCPA	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.32	0.3	<0.3	ug/l
Picloram	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.17	0.5	<0.5	ug/l
2,4,5-T	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.34	0.5	<0.5	ug/l
2,4,5-TP (Silvex)	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.41	0.5	<0.5	ug/l
Triclopyr	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.35	0.5	<0.5	ug/l
*** Semi-Volatile Surrogates ***									
2,4-DCAA	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	-	-	68	% rec

(End of Report)

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98-4737

BRAUN INTERTEC℠
Braun Intertec Corporation
6875 Washington Ave. S.
Edina, MN 55439-0108
(612) 942-4930 Fax (612) 942-4844
labservices@brauncorp.com

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: _____
Time _____
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote # _____

For Braun Intertec Use Only
Braun Intertec Project No.
CMXX-98-0416

REPORT RESULTS TO
Contact Name ERIC DOTTU | Project ID/Project Name | P.O. #
Company
Mailing Address
City, State, Zip
Telephone # | Fax #

SEND INVOICE TO
Contact Name | Company
Address
City, State, Zip
Telephone # | Fax #

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	Metals Field Filtered Y/N	GRO	DRO	VOCs	PAHs	RCRA METAL	LIST 1-PESTICIDES	LIST 2-PESTICIDES	ORGANOPHOSPHOR. PESTICIDES			FOR LAB USE ONLY
ST2 - 4.0'	6/10	10:58	S		4			X		X	X						98-4737-01
ST5 - 2.5'	6/10	10:33	S		5		X	X	X	X	X						-02
ST5 - 22'-25'	6/10	12:30	W		11		X	X	X	X	X	X	X	X			-03
	6/10																
	6/10																
	6/10																
	6/10																
	6/10																
	6/10																
	6/10																
	6/10																
	6/10																

CHAIN OF CUSTODY
Collected by: DAN HIGGINBOTTOM (print) | Collector's Signature:
Relinquished by: | Date/Time 6/10/98 | Received by: | Date/Time 6/10/98 1650
Relinquished by: | Date/Time | Received by: | Date/Time

Evidence Tape Intact ☐ Yes ☐ No ☒ N/A
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other _____
Temperature _____ °C ☒ Received on Ice

Comments:

E.D. ✓

BRAUNSM
INTERTEC

To: Eric Dott/E2

From: Barbara Maki

Re: CMXX-98-0416/98-4737

Date: June 10, 1998

This letter is to acknowledge receipt of the following samples June 10, 1998 for chemical analyses. Please find attached the laboratory draft invoice. This invoice will be sent to Judy Wolf (BST) upon completion of the analyses by the laboratory. Please proof the following information including the draft invoice and notify your project manager of any changes. A final report will be forthcoming.

Client Information

Braun Intertec

Sample Information

Braun Intertec I.D.	Client Sample I.D.	Sample Date	Sample Matrix
98-4737-01	ST2-4.0'	10-JUN-98	Solid
98-4737-02	ST5-2.5'	10-JUN-98	Solid
98-4737-03	ST5-22'-25'	10-JUN-98	Liquid
98-4737-04	Method Blank	10-JUN-98	Solid
98-4737-05	Method Blank	10-JUN-98	Liquid

Analyses Information

Parameter	Matrix	Braun Intertec Sample Number (98-4737-XX)	
Total Solids	Solid	01	02
Silver, Total	Liquid	03	
Arsenic, Total	Liquid	03	
Barium, Total	Liquid	03	
Cadmium, Total	Liquid	03	
Chromium, Total	Liquid	03	
Lead, Total	Liquid	03	
Selenium, Total	Liquid	03	
Silver, Total	Solid	01	02
Arsenic, Total	Solid	01	02
Barium, Total	Solid	01	02

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Analyses Information Continued

Parameter	Matrix	Braun Intertec Sample Number (98-4737-XX)			
Cadmium, Total	Solid	01	02		
Chromium, Total	Solid	01	02		
Lead, Total	Solid	01	02		
Selenium, Total	Solid	01	02		
Mercury, Total	Liquid	03			
Mercury, Total	Solid	01	02		
Metals Digestion	Solid	01	02		
Pesticide Extraction	Liquid	03			
Acid Herbicide Extraction	Liquid	03			
MS PAH Extraction	Liquid	03			
MS PAH Extraction	Solid	01	02		
Volatile Organic Compounds, by MDH 465E	Liquid	03			
Volatile Organic Compounds	Solid	02			
Gasoline Range Organics	Liquid	03			
Gasoline Range Organics	Solid	02			
Diesel Range Organics	Liquid	03			
Diesel Range Organics	Dry Weight	01	02		
GCMS Polynuclear Aromatic Hydrocarbons	Liquid	05			
GCMS Polynuclear Aromatic Hydrocarbons	Solid	01	02	03	04
Organochlorine Pesticides	Solid	03			
MDA List 1 Pesticides	Liquid	03	05		
MDA List 2 Pesticides	Liquid	03	05		

Your samples have been assigned to our report number 98-4737. The samples will be held by the laboratory for 14 days after your report has been issued. Disposal or return of the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time. If you have any questions or need additional information, please call Barbara Maki at 612-942-4820.

Attachments
Chain of Custody
Draft Invoice

BRAUN℠
INTERTEC

June 25, 1998

Report 98-4799
Project CMXX-98-0416

Mr. Eric Dott/E2
Braun Intertec Corporation

Re: Braun Intertec

MCDA-Linden Yard

Braun Intertec Corporation received your analytical request on June 12, 1998. Analytical results are summarized on the following laboratory report.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed.

When possible these samples will be held by the laboratory for 14 days from the date of this report. The process of disposing or returning the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time.

We appreciate the opportunity to meet your analytical needs. If you have any questions or would like additional information, please call Barbara Maki at 612-942-4820.

Sincerely,

Barbara J. Maki

Barbara J. Maki
Project Manager

Attachments
Chain of Custody
Laboratory Results

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-01				

Client Sample ID/Description: ST#1 5.0' Soils

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Petroleum Hydrocarbons									
Diesel Range Organics (dry weight)	WI DRO	06/16/98	WI DRO	06/18/98	1.0	0.89	10	<10	mg/kg
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.011	0.066	<0.066	mg/kg
Acenaphthylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	<0.066	mg/kg
Anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0050	0.066	<0.066	mg/kg
Benzo(a)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	<0.066	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.066	<0.066	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.066	<0.066	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
Benzo(a)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	<0.066	mg/kg
Carbazole	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.066	<0.066	mg/kg
Chrysene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.066	<0.066	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
Dibenzofuran	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.025	0.066	<0.066	mg/kg
Fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.066	<0.066	mg/kg
Fluorene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0090	0.066	<0.066	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.066	<0.066	mg/kg
2-Methylnaphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.031	0.066	<0.066	mg/kg
Naphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.066	<0.066	mg/kg
Phenanthrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	<0.066	mg/kg
Pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.066	<0.066	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	64	% rec
Nitrobenzene-d5	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	62	% rec
Terphenyl-d14	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	95	% rec
Inorganic									
Solids, Total	-	-	EPA 160.3	06/14/98	1.0	-	-	94	%
Metals									
Arsenic, Total	-	-	SW-846 6010	06/17/98	1.0	0.74	2.2	2.6	mg/kg
Barium, Total	-	-	SW-846 6010	06/17/98	1.0	0.16	1.0	28	mg/kg
Cadmium, Total	-	-	SW-846 6010	06/17/98	1.0	0.089	0.50	<0.50	mg/kg
Chromium, Total	-	-	SW-846 6010	06/17/98	1.0	0.28	1.0	8.1	mg/kg
Lead, Total	-	-	SW-846 6010	06/17/98	1.0	0.62	1.9	<1.9	mg/kg
Mercury, Total	-	-	SW-846 7471	06/15/98	1.0	0.006	0.02	<0.02	mg/kg
Selenium, Total	-	-	SW-846 6010	06/17/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/17/98	1.0	0.17	1.0	<1.0	mg/kg

(Report continued on next page)

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-02				

Client Sample ID/Description: ST#1 20.0' Water

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	20	20	<20	ug/l
Allyl Chloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
Bromobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.5	2.5	<2.5	ug/l
n-Butylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Chloromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.5	2.5	<2.5	ug/l
2-Chlorotoluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dibromoethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,4-Dichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.3	<0.3	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.5	2.5	<2.5	ug/l
Dichlorofluoromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
1,2-Dichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-02				

Client Sample ID/Description: ST#1 20.0' Water

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Hexachlorobutadiene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Isopropylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Isopropyltoluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Methyl Ethyl Ketone	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
Methyl Isobutyl Ketone	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
Methyl Tertiary Butyl Ether	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Methylene Chloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	2.0	2.0	<2.0	ug/l	
Naphthalene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
n-Propylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Styrene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,1,2-Tetrachloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
1,1,2,2-Tetrachloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
Tetrachloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Tetrahydrofuran	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
Toluene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,3-Trichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,4-Trichlorobenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,1-Trichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
1,1,2-Trichloroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,2-Trichloroethylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	0.5	0.5	<0.5	ug/l	
Trichlorofluoromethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,3-Trichloropropane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Trichlorotrifluoroethane	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	5.0	5.0	<5.0	ug/l	
1,2,4-Trimethylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
1,3,5-Trimethylbenzene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Vinyl Chloride	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
m,p-Xylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
o-Xylene	SW-846 5030	06/17/98	MDH 465E	06/17/98	1.0	1.0	1.0	<1.0	ug/l	
Petroleum Hydrocarbons										
Diesel Range Organics	WI DRO	06/17/98	WI DRO	06/18/98	1.0	27	100	<100	ug/l	hm
Gasoline Range Organics	SW-846 5030	06/20/98	WI GRO	06/20/98	1.0	100	100	<100	ug/l	
Polynuclear Aromatic Hydrocarbons (PAHs) (GC/MS)										
Acenaphthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.59	2.1	<2.1	ug/l	
Acenaphthylene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.61	2.1	<2.1	ug/l	
Anthracene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.35	2.1	<2.1	ug/l	
Benzo(a)anthracene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.20	2.1	<2.1	ug/l	
Benzo(b)fluoranthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.29	2.1	<2.1	ug/l	
Benzo(k)fluoranthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.41	2.1	<2.1	ug/l	
Benzo(g,h,i)perylene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.37	2.1	<2.1	ug/l	
Benzo(a)pyrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.36	2.1	<2.1	ug/l	

hm The sample pH was greater than 2, which is an exception to the WI DRO method.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-02				

Client Sample ID/Description: ST#1 20.0' Water

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Carbazole	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.50	5.2	<5.2	ug/l
Chrysene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.25	2.1	<2.1	ug/l
Dibenzo(a,h)anthracene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.41	2.1	<2.1	ug/l
Dibenzofuran	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	1.4	5.2	<5.2	ug/l
Fluoranthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.28	2.1	<2.1	ug/l
Fluorene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.58	2.1	<2.1	ug/l
Indeno(1,2,3-cd)pyrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.40	2.1	<2.1	ug/l
2-Methylnaphthalene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	1.7	5.2	<5.2	ug/l
Naphthalene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.74	5.2	<5.2	ug/l
Phenanthrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.40	2.1	<2.1	ug/l
Pyrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.24	2.1	<2.1	ug/l
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	41	% rec
Nitrobenzene-d5	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	65	% rec
Terphenyl-d14	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	70	% rec
Organochlorine Pesticides									
Aldrin	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.031	0.093	<0.093	ug/l
a-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.031	0.093	<0.093	ug/l
b-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.063	0.19	<0.19	ug/l
d-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.055	0.16	<0.16	ug/l
g-BHC	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.034	0.10	<0.10	ug/l
Chlordane	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.25	0.75	<0.75	ug/l
4,4-DDD	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.034	0.10	<0.10	ug/l
4,4-DDE	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.045	0.13	<0.13	ug/l
4,4-DDT	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.041	0.12	<0.12	ug/l
Dieldrin	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.036	0.11	<0.11	ug/l
Endosulfan I	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.042	0.13	<0.13	ug/l
Endosulfan II	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.026	0.078	<0.078	ug/l
Endosulfan Sulfate	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.023	0.069	<0.069	ug/l
Endrin	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.043	0.13	<0.13	ug/l
Endrin Aldehyde	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.018	0.054	<0.054	ug/l
Heptachlor	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.027	0.081	<0.081	ug/l
Heptachlor Epoxide	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.044	0.13	<0.13	ug/l
Methoxychlor	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	0.044	0.13	<0.13	ug/l
Toxaphene	SW-846 3510	06/15/98	SW-846 8081	06/17/98	1.0	1.0	3.0	<3.0	ug/l
Herbicides/Pesticides (GC/MS)									
Acetochlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.546	<0.546	ug/l
Alachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.035	0.546	<0.546	ug/l
Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.546	<0.546	ug/l
Desethyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.051	0.546	<0.546	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-02				

Client Sample ID/Description: ST#1 20.0' Water

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Deisopropyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.089	0.546	<0.546	ug/l
Chlorpyrifos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.546	<0.546	ug/l
Cyanazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.06	0.218	<0.218	ug/l
EPTC	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.546	<0.546	ug/l
Ethalfluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.546	<0.546	ug/l
Fonofos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.546	<0.546	ug/l
Metolachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.032	0.546	<0.546	ug/l
Metribuzin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.546	<0.546	ug/l
Pendimethalin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.03	0.546	<0.546	ug/l
Phorate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.038	0.328	<0.328	ug/l
Prometon	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.063	0.546	<0.546	ug/l
Propachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.546	<0.546	ug/l
Propazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.034	0.546	<0.546	ug/l
Simazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.057	0.546	<0.546	ug/l
Terbufos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.218	<0.218	ug/l
Triallate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.042	0.546	<0.546	ug/l
Trifluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.075	0.546	<0.546	ug/l
*** Semi-Volatile Surrogates ***									
Atrazine-d5	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	114	% rec
Diazinon-d10	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	111	% rec
Acid Herbicides (GC/MS)									
Bentazon	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.30	0.5	<0.5	ug/l
2,4-D	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.37	0.5	<0.5	ug/l
2,4-DB	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.34	0.5	<0.5	ug/l
Dicamba	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.27	0.5	<0.5	ug/l
MCPA	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.32	0.3	<0.3	ug/l
Picloram	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.17	0.5	<0.5	ug/l
2,4,5-T	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.34	0.5	<0.5	ug/l
2,4,5-TP (Silvex)	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.41	0.5	<0.5	ug/l
Triclopyr	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	0.35	0.5	<0.5	ug/l
*** Semi-Volatile Surrogates ***									
2,4-DCAA	SW-846 8151	06/17/98	SW-846 8270	06/19/98	1.0	-	-	67	% rec
Metal									
Arsenic, Total	-	-	EPA 200.7	06/17/98	1.0	37	110	<110	ug/l
Barium, Total	-	-	EPA 200.7	06/17/98	1.0	1.0	10	4300	ug/l
Cadmium, Total	-	-	EPA 200.7	06/17/98	1.0	2.0	10	<10	ug/l
Chromium, Total	-	-	EPA 200.7	06/17/98	1.0	1.7	10	810	ug/l
Lead, Total	-	-	EPA 200.7	06/17/98	1.0	13	40	420	ug/l
Mercury, Total	-	-	EPA 245.1	06/15/98	1.0	0.1	0.3	3.0	ug/l

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-02				

Client Sample ID/Description: ST#1 20.0' Water

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Selenium, Total	-	-	EPA 200.7	06/17/98	1.0	36	110	<110	ug/l
Silver, Total	-	-	EPA 200.7	06/17/98	1.0	2.0	10	<10	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-03				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.011	0.067	<0.067	mg/kg
Acenaphthylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0050	0.067	<0.067	mg/kg
Benzo(a)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
Benzo(a)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Carbazole	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.067	<0.067	mg/kg
Chrysene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.01	0.067	<0.067	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
Dibenzofuran	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.025	0.067	<0.067	mg/kg
Fluoranthene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.067	<0.067	mg/kg
Fluorene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0090	0.067	<0.067	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.016	0.067	<0.067	mg/kg
2-Methylnaphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.031	0.067	<0.067	mg/kg
Naphthalene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.012	0.067	<0.067	mg/kg
Phenanthrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
Pyrene	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	0.0070	0.067	<0.067	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	73	% rec
Nitrobenzene-d5	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	76	% rec
Terphenyl-d14	SW-846 3540	06/15/98	SW-846 8270	06/16/98	1.0	-	-	97	% rec

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-04				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Polynuclear Aromatic Hydrocarbons (PAHs) (GC/MS)									
Acenaphthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.59	2.0	<2.0	ug/l
Acenaphthylene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.61	2.0	<2.0	ug/l
Anthracene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.35	2.0	<2.0	ug/l
Benzo(a)anthracene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.20	2.0	<2.0	ug/l
Benzo(b)fluoranthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.29	2.0	<2.0	ug/l
Benzo(k)fluoranthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.41	2.0	<2.0	ug/l
Benzo(g,h,i)perylene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.37	2.0	<2.0	ug/l
Benzo(a)pyrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.36	2.0	<2.0	ug/l
Carbazole	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.50	5.0	<5.0	ug/l
Chrysene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.25	2.0	<2.0	ug/l
Dibenzo(a,h)anthracene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.41	2.0	<2.0	ug/l
Dibenzofuran	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	1.4	5.0	<5.0	ug/l
Fluoranthene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.28	2.0	<2.0	ug/l
Fluorene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.58	2.0	<2.0	ug/l
Indeno(1,2,3-cd)pyrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.40	2.0	<2.0	ug/l
2-Methylnaphthalene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	1.7	5.0	<5.0	ug/l
Naphthalene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.74	5.0	<5.0	ug/l
Phenanthrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.40	2.0	<2.0	ug/l
Pyrene	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.24	2.0	<2.0	ug/l
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	60	% rec
Nitrobenzene-d5	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	67	% rec
Terphenyl-d14	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	75	% rec
Herbicides/Pesticides (GC/MS)									
Acetochlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.500	<0.500	ug/l
Alachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.035	0.500	<0.500	ug/l
Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.029	0.500	<0.500	ug/l
Desethyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.051	0.500	<0.500	ug/l
Deisopropyl-Atrazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.089	0.500	<0.500	ug/l
Chlorpyrifos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.500	<0.500	ug/l
Cyanazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.06	0.200	<0.200	ug/l
EPTC	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.500	<0.500	ug/l
Ethalfluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.071	0.500	<0.500	ug/l
Fonofos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.046	0.500	<0.500	ug/l
Metolachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.032	0.500	<0.500	ug/l
Metribuzin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.500	<0.500	ug/l
Pendimethalin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.03	0.500	<0.500	ug/l
Phorate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.038	0.300	<0.300	ug/l
Prometon	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.063	0.500	<0.500	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/12/98
Log-in:	98-4799	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/12/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	06/25/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4799-04				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Propachlor	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.049	0.500	<0.500	ug/l
Propazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.034	0.500	<0.500	ug/l
Simazine	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.057	0.500	<0.500	ug/l
Terbufos	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.028	0.200	<0.200	ug/l
Triallate	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.042	0.500	<0.500	ug/l
Trifluralin	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	0.075	0.500	<0.500	ug/l
*** Semi-Volatile Surrogates ***									
Atrazine-d5	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	134	% rec
Diazinon-d10	SW-846 3520	06/15/98	SW-846 8270	06/16/98	1.0	-	-	126	% rec
Acid Herbicides (GC/MS)									
Bentazon	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.30	0.5	<0.5	ug/l
2,4-D	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.37	0.5	<0.5	ug/l
2,4-DB	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.34	0.5	<0.5	ug/l
Dicamba	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.27	0.5	<0.5	ug/l
MCPA	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.32	0.3	<0.3	ug/l
Picloram	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.17	0.5	<0.5	ug/l
2,4,5-T	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.34	0.5	<0.5	ug/l
2,4,5-TP (Silvex)	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.41	0.5	<0.5	ug/l
Triclopyr	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	0.35	0.5	<0.5	ug/l
*** Semi-Volatile Surrogates ***									
2,4-DCAA	SW-846 8151	06/17/98	SW-846 8270	06/18/98	1.0	-	-	68	% rec

(End of Report)

BRAUN INTERTEC
Braun Intertec Corporation
6875 Washington Ave. S.
Edina, MN 55439-0108
(612) 942-4930 Fax (612) 942-4844
labservices@brauncorp.com

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: _____
Time _____
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote # _____

For Braun Intertec Use Only
Braun Intertec Project No.
98-4799
CMXX-98-0416

REPORT RESULTS TO
Contact Name: Eric Dott
Company:
Mailing Address:
City, State, Zip:
Telephone #: Fax #:

Project ID/Project Name: MCDA - Linden Yard
P.O. #:

SEND INVOICE TO
Contact Name: Company:
Address:
City, State, Zip:
Telephone #: Fax #:

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	Metals Field Filtered Y/N	GRO	VOC	DRO	PAH	RCRA Metals	List 1 Pesticides	List 2 Pesticides	Organochlorine Pesticides			FOR LAB USE ONLY
ST#1 5.0' Soils	6/12/98	9:15a.	Soils		4		X	X	X	X	X						
ST#1 20.0' Water	6/12/98	10:10a.	Water		12		X	X	X	X	X	X	X	X			

CHAIN OF CUSTODY
Collected by: Randy J. Peterson (print)
Relinquished by: Randy J. Peterson — Date/Time 6/12/98 12:40p.
Relinquished by: P A McElligott — Date/Time 6/12/98 1510
Collector's Signature: R J Peterson
Received by: P A McElligott — Date/Time 6/12/98 1240
Received by: April C Hagman — Date/Time 6/12/98 1510

Evidence Tape Intact ☐ Yes ☐ No ☒ N/A
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other _____
Temperature _____ °C ☒ Received on Ice
Comments:

BRAUNSM
INTERTEC

To: Eric Dott/E2

From: Barbara Maki

Re: CMXX-98-0416/98-4799

Date: June 12, 1998

This letter is to acknowledge receipt of the following samples June 12, 1998 for chemical analyses. Please find attached the laboratory draft invoice. This invoice will be sent to Judy Wolf (BST) upon completion of the analyses by the laboratory. Please proof the following information including the draft invoice and notify your project manager of any changes. A final report will be forthcoming.

Client Information

Braun Intertec

Re: MCDA-Linden Yard

Sample Information

Braun Intertec I.D.	Client Sample I.D.	Sample Date	Sample Matrix
98-4799-01	ST#1 5.0' Soils	12-JUN-98	Solid
98-4799-02	ST#1 20.0' Water	12-JUN-98	Liquid
98-4799-03	Method Blank	12-JUN-98	Solid
98-4799-04	Method Blank	12-JUN-98	Liquid

Analyses Information

Parameter	Matrix	Braun Intertec Sample Number (98-4799-XX)
Total Solids	Solid	01
Silver, Total	Liquid	02
Arsenic, Total	Liquid	02
Barium, Total	Liquid	02
Cadmium, Total	Liquid	02
Chromium, Total	Liquid	02
Lead, Total	Liquid	02
Selenium, Total	Liquid	02
Silver, Total	Solid	01
Arsenic, Total	Solid	01

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Analyses Information Continued

Parameter	Matrix	Braun Intertec Sample Number (98-4799-XX)	
Barium, Total	Solid	01	
Cadmium, Total	Solid	01	
Chromium, Total	Solid	01	
Lead, Total	Solid	01	
Selenium, Total	Solid	01	
Mercury, Total	Liquid	02	
Mercury, Total	Solid	01	
Metals Digestion	Solid	01	
Pesticide Extraction	Liquid	02	
Acid Herbicide Extraction	Liquid	02	
MS PAH Extraction	Liquid	02	
MS PAH Extraction	Solid	01	
Volatile Organic Compounds, by MDH 465E	Liquid	02	
Gasoline Range Organics	Liquid	02	
Diesel Range Organics	Liquid	02	
Diesel Range Organics	Dry Weight	01	
GCMS Polynuclear Aromatic Hydrocarbons	Liquid	02	04
GCMS Polynuclear Aromatic Hydrocarbons	Solid	01	03
Organochlorine Pesticides	Liquid	02	
MDA List 1 Pesticides	Liquid	02	04
MDA List 2 Pesticides	Liquid	02	04

Your samples have been assigned to our report number 98-4799. The samples will be held by the laboratory for 14 days after your report has been issued. Disposal or return of the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time. If you have any questions or need additional information, please call Barbara Maki at 612-942-4820.

Attachments
Chain of Custody
Draft Invoice

BRAUN[SM]
INTERTEC

July 30, 1998

Report 98-4907 (Revised)
Project CMXX-98-0416

Mr. Eric Dott/E2
Braun Intertec Corporation

Re: Braun Intertec

MCDA-Linden Yard

Braun Intertec Corporation received your analytical request on June 16, 1998. Analytical results are summarized on the following laboratory report.

This report has been revised to provide the correct reporting and method detection limits.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed.

When possible these samples will be held by the laboratory for 14 days from the date of this report. The process of disposing or returning the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time.

We appreciate the opportunity to meet your analytical needs. If you have any questions or would like additional information, please call Barbara Maki at 612-942-4820.

Sincerely,

Barbara J. Maki

Barbara J. Maki
Project Manager

Attachments
Chain of Custody
Laboratory Results

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-01				

Client Sample ID/Description: ST-7 2.5 ft.

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	5.0	5.0	<5.0	mg/kg
Allyl Chloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Benzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	<0.03	mg/kg
Bromobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromochloromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromodichloromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromoform	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromomethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
n-Butylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	0.2	mg/kg
sec-Butylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
tert-Butylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Carbon Tetrachloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorodibromomethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroform	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chloromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg
2-Chlorotoluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
4-Chlorotoluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	1.0	1.0	<1.0	mg/kg
1,2-Dibromoethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Dibromomethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg
1,2-Dichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,4-Dichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,2-Dichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.02	0.02	<0.02	mg/kg
trans-1,2-Dichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.02	0.02	<0.02	mg/kg
Dichlorodifluoromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Dichlorofluoromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
2,2-Dichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Ethyl Benzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	0.14	mg/kg
Ethyl Ether	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Hexachlorobutadiene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg

(Report continued on next page)

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-01				

Client Sample ID/Description: ST-7 2.5 ft.

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Isopropylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Isopropyltoluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Methyl Ethyl Ketone	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg	
Methyl Isobutyl Ketone	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg	
Methyl Tertiary Butyl Ether	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Methylene Chloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	1.0	1.0	<1.0	mg/kg	
Naphthalene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	0.4	mg/kg	
n-Propylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	0.1	mg/kg	
Styrene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,1,2-Tetrachloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,2,2-Tetrachloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Tetrachloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Tetrahydrofuran	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg	
Toluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	<0.03	mg/kg	
1,2,3-Trichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,2,4-Trichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,1-Trichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,2-Trichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,2-Trichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.05	0.05	<0.05	mg/kg	
Trichlorofluoromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,2,3-Trichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Trichlorotrifluoroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,2,4-Trimethylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	0.3	mg/kg	
1,3,5-Trimethylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Vinyl Chloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
m,p-Xylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	0.08	mg/kg	
o-Xylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	0.11	mg/kg	
Petroleum Hydrocarbons										
Diesel Range Organics (dry weight)	WI DRO	06/17/98	WI DRO	06/19/98	1.0	0.89	10	240	mg/kg	
Gasoline Range Organics (dry weight)	SW-846 5030	07/20/98	WI GRO	07/20/98	1.0	10	10	<10	mg/kg	
Semi-Volatiles (GC/MS)										
Acenaphthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.011	0.33	<0.33	mg/kg	ga
Acenaphthylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.01	0.33	<0.33	mg/kg	ga
Anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0050	0.33	<0.33	mg/kg	ga
Benzo(a)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0070	0.33	0.45	mg/kg	gb
Benzo(b)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0080	0.33	0.70	mg/kg	gb
Benzo(k)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0080	0.33	<0.33	mg/kg	ga
Benzo(g,h,i)perylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.016	0.33	<0.33	mg/kg	ga
Benzo(a)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.01	0.33	0.46	mg/kg	gb
Carbazole	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.029	0.33	<0.33	mg/kg	ga
Chrysene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.01	0.33	0.72	mg/kg	gb

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
gb The reporting limit (RL) was raised. A dilution of the sample was necessary due to high concentrations of this analyte.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-01				

Client Sample ID/Description: ST-7 2.5 ft.

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Dibenzo(a,h)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.016	0.33	<0.33	mg/kg	ga
Dibenzofuran	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.025	0.33	<0.33	mg/kg	ga
Fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.012	0.33	0.68	mg/kg	gb
Fluorene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0090	0.33	<0.33	mg/kg	ga
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.016	0.33	<0.33	mg/kg	ga
2-Methylnaphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.031	0.33	1.4	mg/kg	gb
Naphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.012	0.33	<0.33	mg/kg	ga
Phenanthrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0070	0.33	1.6	mg/kg	gb
Pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0070	0.33	0.93	mg/kg	gb
*** Semi-Volatile Surrogates ***										
2-Fluorobiphenyl	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	-	0	76	% rec	
Nitrobenzene-d5	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	-	0	79	% rec	
Terphenyl-d14	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	-	0	86	% rec	
Organophosphorus Pesticides										
Azinphos-methyl	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.017	12	<12	mg/kg	ga
Carbophenothion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0072	6.2	<6.2	mg/kg	ga
Chlorpyrifos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0049	4.9	<4.9	mg/kg	ga
Demeton-o	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0059	4.9	<4.9	mg/kg	ga
Demeton-s	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0044	4.9	<4.9	mg/kg	ga
Diazinon	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0073	6.2	<6.2	mg/kg	ga
Dimethoate	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0042	4.9	<4.9	mg/kg	ga
Dioxathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.01	7.4	<7.4	mg/kg	ga
Disulfoton	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0065	4.9	<4.9	mg/kg	ga
Ethion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0070	6.2	<6.2	mg/kg	ga
Ethoprop	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0050	4.9	<4.9	mg/kg	ga
Famphur	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0086	7.4	<7.4	mg/kg	ga
Fonofos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0051	4.9	<4.9	mg/kg	ga
Malathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0030	4.9	<4.9	mg/kg	ga
Methyl Parathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0024	4.9	<4.9	mg/kg	ga
e-Parathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0060	4.9	<4.9	mg/kg	ga
Phorate	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0043	4.9	<4.9	mg/kg	ga
Phosmet	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.01	8.6	<8.6	mg/kg	ga
Terbufos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	250	0.0066	4.9	<4.9	mg/kg	ga
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	0	<0	% rec	vo
Diazinon-d10	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	0	<0	% rec	vo
Herbicides/Pesticides (GC/MS)										
Acetochlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0034	9.7	<9.7	mg/kg	ga
Alachlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0041	9.7	<9.7	mg/kg	ga
Atrazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0028	9.7	<9.7	mg/kg	ga
Desethyl-Atrazine M2	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0023	9.7	<9.7	mg/kg	ga
Deiso-Atrazine M1	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0034	9.7	<9.7	mg/kg	ga

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
gb The reporting limit (RL) was raised. A dilution of the sample was necessary due to high concentrations of this analyte.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-01				

Client Sample ID/Description: ST-7 2.5 ft.

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Chlorpyrifos	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0052	9.7	<9.7	mg/kg	ga
Cyanazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0039	9.7	<9.7	mg/kg	ga
EPTC	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0037	9.7	<9.7	mg/kg	ga
Ethalfluralin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0024	9.7	<9.7	mg/kg	ga
Fonofos	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0031	9.7	<9.7	mg/kg	ga
Metolachlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0024	9.7	<9.7	mg/kg	ga
Metribuzin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0031	9.7	<9.7	mg/kg	ga
Pendimethalin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0029	9.7	<9.7	mg/kg	ga
Phorate	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0028	9.7	<9.7	mg/kg	ga
Prometon	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0022	9.7	<9.7	mg/kg	ga
Propachlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0023	9.7	<9.7	mg/kg	ga
Propazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0024	9.7	<9.7	mg/kg	ga
Simazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0022	9.7	<9.7	mg/kg	ga
Terbufos	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0026	9.7	<9.7	mg/kg	ga
Triallate	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0029	9.7	<9.7	mg/kg	ga
Trifluralin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	0.0023	9.7	<9.7	mg/kg	ga
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	-	0	<0	% rec	vo
Diazinon-d10	SW-846 3540	06/17/98	SW-846 8270	06/24/98	500	-	0	<0	% rec	vo
Acid Herbicides (GC/MS)										
Bentazon	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.025	4.8	<4.8	mg/kg	ga
2,4-D	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0051	2.4	<2.4	mg/kg	ga
2,4-DB	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.4	<2.4	mg/kg	ga
Dicamba	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0056	2.4	<2.4	mg/kg	ga
MCPA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0099	2.4	<2.4	mg/kg	ga
Picloram	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.021	4.8	<4.8	mg/kg	ga
2,4,5-T	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.4	<2.4	mg/kg	ga
2,4,5-TP (Silvex)	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0048	2.4	<2.4	mg/kg	ga
Triclopyr	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0042	2.4	<2.4	mg/kg	ga
*** Semi-Volatile Surrogates ***										
2,4-DCAA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	-	0	<0	% rec	vo
Inorganic										
Solids, Total	-	-	EPA 160.3	06/16/98	1.0	-	-	94	%	
Metals										
Arsenic, Total	-	-	SW-846 6010	06/25/98	1.0	0.74	2.2	2.8	mg/kg	
Barium, Total	-	-	SW-846 6010	06/25/98	1.0	0.16	1.0	83	mg/kg	
Cadmium, Total	-	-	SW-846 6010	06/25/98	1.0	0.089	0.50	<0.50	mg/kg	
Chromium, Total	-	-	SW-846 6010	06/25/98	1.0	0.28	1.0	14	mg/kg	
Lead, Total	-	-	SW-846 6010	06/25/98	1.0	0.62	1.9	23	mg/kg	
Mercury, Total	-	-	SW-846 7471	06/18/98	1.0	0.006	0.02	0.02	mg/kg	

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-01				

Client Sample ID/Description: ST-7 2.5 ft.

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Selenium, Total	-	-	SW-846 6010	06/25/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/25/98	1.0	0.17	1.0	<1.0	mg/kg

(Report continued on next page)

Client: Braun Intertec
Log-in: 98-4907
Project Number: CMXX-98-0416
PO Number:
Client Reference: MCDA-Linden Yard
Matrix: Solid
Lab Sample ID: 98-4907-02

Laboratory: Braun Intertec Corporation
Lab Contact/Phone: B. Maki/612-942-4820
Sampler: Braun Intertec
% Moisture: 6%
MDL: Method Detection Limit
RL: Reporting Limit

Date Sampled: 06/16/98
Date Received: 06/16/98
Date Reported: 07/30/98

Client Sample ID/Description: ST-10 2.5

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	5.0	5.0	<5.0	mg/kg
Allyl Chloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Benzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	<0.03	mg/kg
Bromobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromochloromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromodichloromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromoform	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Bromomethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
n-Butylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
sec-Butylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
tert-Butylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Carbon Tetrachloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorodibromomethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroform	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Chloromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg
2-Chlorotoluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
4-Chlorotoluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	1.0	1.0	<1.0	mg/kg
1,2-Dibromoethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Dibromomethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg
1,2-Dichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,4-Dichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,2-Dichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.02	0.02	<0.02	mg/kg
trans-1,2-Dichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.02	0.02	<0.02	mg/kg
Dichlorodifluoromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Dichlorofluoromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
2,2-Dichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Ethyl Benzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	<0.03	mg/kg
Ethyl Ether	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg
Hexachlorobutadiene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-02				

Client Sample ID/Description: ST-10 2.5

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Isopropylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Isopropyltoluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Methyl Ethyl Ketone	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg	
Methyl Isobutyl Ketone	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg	
Methyl Tertiary Butyl Ether	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Methylene Chloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	1.0	1.0	<1.0	mg/kg	
Naphthalene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
n-Propylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Styrene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,1,2-Tetrachloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,2,2-Tetrachloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Tetrachloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Tetrahydrofuran	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.5	0.5	<0.5	mg/kg	
Toluene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	<0.03	mg/kg	
1,2,3-Trichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,2,4-Trichlorobenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,1-Trichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,2-Trichloroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,1,2-Trichloroethylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.05	0.05	<0.05	mg/kg	
Trichlorofluoromethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,2,3-Trichloropropane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Trichlorotrifluoroethane	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,2,4-Trimethylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
1,3,5-Trimethylbenzene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
Vinyl Chloride	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.1	0.1	<0.1	mg/kg	
m,p-Xylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	<0.03	mg/kg	
o-Xylene	SW-846 5030	06/21/98	MDH 466A	06/21/98	1.0	0.03	0.03	<0.03	mg/kg	
Petroleum Hydrocarbons										
Diesel Range Organics (dry weight)	WI DRO	06/17/98	WI DRO	06/19/98	10	0.89	100	2100	mg/kg	gb
Gasoline Range Organics (dry weight)	SW-846 5030	07/20/98	WI GRO	07/20/98	1.0	10	10	45	mg/kg	hj
Semi-Volatiles (GC/MS)										
Acenaphthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.011	0.33	0.34	mg/kg	gb
Acenaphthylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.01	0.33	<0.33	mg/kg	ga
Anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0050	0.33	<0.33	mg/kg	ga
Benzo(a)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0070	0.33	<0.33	mg/kg	ga
Benzo(b)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0080	0.33	<0.33	mg/kg	ga
Benzo(k)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0080	0.33	<0.33	mg/kg	ga
Benzo(g,h,i)perylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.016	0.33	<0.33	mg/kg	ga
Benzo(a)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.01	0.33	<0.33	mg/kg	ga
Carbazole	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.029	0.33	<0.33	mg/kg	ga
Chrysene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.01	0.33	0.49	mg/kg	gb

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
gb The reporting limit (RL) was raised. A dilution of the sample was necessary due to high concentrations of this analyte.
hj The sample chromatogram indicates the presence of higher boiling hydrocarbons than is expected in a gasoline range organic (GRO) chromatogram.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-02				

Client Sample ID/Description: ST-10 2.5

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Dibenzo(a,h)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.016	0.33	<0.33	mg/kg	ga
Dibenzofuran	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.025	0.33	<0.33	mg/kg	ga
Fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.012	0.33	<0.33	mg/kg	ga
Fluorene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0090	0.33	0.51	mg/kg	gb
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.016	0.33	<0.33	mg/kg	ga
2-Methylnaphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.031	0.33	3.4	mg/kg	gb
Naphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.012	0.33	<0.33	mg/kg	ga
Phenanthrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0070	0.33	1.6	mg/kg	gb
Pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	0.0070	0.33	0.74	mg/kg	gb
*** Semi-Volatile Surrogates ***										
2-Fluorobiphenyl	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	-	0	66	% rec	
Nitrobenzene-d5	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	-	0	63	% rec	
Terphenyl-d14	SW-846 3540	06/18/98	SW-846 8270	06/23/98	5.0	-	0	101	% rec	
Herbicides/Pesticides (GC/MS)										
Acetochlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0034	0.95	<0.95	mg/kg	ga
Alachlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0041	0.95	<0.95	mg/kg	ga
Atrazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0028	0.95	<0.95	mg/kg	ga
Desethyl-Atrazine M2	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0023	0.95	<0.95	mg/kg	ga
Deiso-Atrazine M1	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0034	0.95	<0.95	mg/kg	ga
Chlorpyrifos	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0052	0.95	<0.95	mg/kg	ga
Cyanazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0039	0.95	<0.95	mg/kg	ga
EPTC	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0037	0.95	<0.95	mg/kg	ga
Ethalfluralin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0024	0.95	<0.95	mg/kg	ga
Fonofos	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0031	0.95	<0.95	mg/kg	ga
Metolachlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0024	0.95	<0.95	mg/kg	ga
Metribuzin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0031	0.95	<0.95	mg/kg	ga
Pendimethalin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0029	0.95	<0.95	mg/kg	ga
Phorate	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0028	0.95	<0.95	mg/kg	ga
Prometon	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0022	0.95	<0.95	mg/kg	ga
Propachlor	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0023	0.95	<0.95	mg/kg	ga
Propazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0024	0.95	<0.95	mg/kg	ga
Simazine	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0022	0.95	<0.95	mg/kg	ga
Terbufos	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0026	0.95	<0.95	mg/kg	ga
Triallate	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0029	0.95	<0.95	mg/kg	ga
Trifluralin	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	0.0023	0.95	<0.95	mg/kg	ga
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	-	0	<0	% rec	vo
Diazinon-d10	SW-846 3540	06/17/98	SW-846 8270	06/24/98	50	-	0	<0	% rec	vo
Acid Herbicides (GC/MS)										
Bentazon	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.025	4.9	<4.9	mg/kg	ga
2,4-D	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0051	2.5	<2.5	mg/kg	ga

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
gb The reporting limit (RL) was raised. A dilution of the sample was necessary due to high concentrations of this analyte.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	6%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-02				

Client Sample ID/Description: ST-10 2.5

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
2,4-DB	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.5	<2.5	mg/kg	ga
Dicamba	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0056	2.5	<2.5	mg/kg	ga
MCPA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0099	2.5	<2.5	mg/kg	ga
Picloram	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.021	4.9	<4.9	mg/kg	ga
2,4,5-T	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.5	<2.5	mg/kg	ga
2,4,5-TP (Silvex)	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0048	2.5	<2.5	mg/kg	ga
Triclopyr	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0042	2.5	<2.5	mg/kg	ga
*** Semi-Volatile Surrogates ***										
2,4-DCAA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	-	0	<0	% rec	vo
Inorganic										
Solids, Total	-	-	EPA 160.3	07/15/98	1.0	-	-	94	%	
Metals										
Arsenic, Total	-	-	SW-846 6010	06/25/98	1.0	0.74	2.2	<2.2	mg/kg	
Barium, Total	-	-	SW-846 6010	06/25/98	1.0	0.16	1.0	46	mg/kg	
Cadmium, Total	-	-	SW-846 6010	06/25/98	1.0	0.089	0.50	<0.50	mg/kg	
Chromium, Total	-	-	SW-846 6010	06/25/98	1.0	0.28	1.0	11	mg/kg	
Lead, Total	-	-	SW-846 6010	06/25/98	1.0	0.62	1.9	19	mg/kg	
Mercury, Total	-	-	SW-846 7471	06/18/98	1.0	0.006	0.02	<0.02	mg/kg	
Selenium, Total	-	-	SW-846 6010	06/25/98	1.0	0.97	3.0	<3.0	mg/kg	
Silver, Total	-	-	SW-846 6010	06/25/98	1.0	0.17	1.0	<1.0	mg/kg	

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	9%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-03				

Client Sample ID/Description: ST#6 2.5 ft.

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Petroleum Hydrocarbons									
Diesel Range Organics (dry weight)	WI DRO	06/17/98	WI DRO	06/19/98	1.0	0.89	10	<10	mg/kg
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.011	0.066	<0.066	mg/kg
Acenaphthylene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.01	0.066	<0.066	mg/kg
Anthracene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0050	0.066	<0.066	mg/kg
Benzo(a)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0070	0.066	<0.066	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0080	0.066	<0.066	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0080	0.066	<0.066	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.016	0.066	<0.066	mg/kg
Benzo(a)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.01	0.066	<0.066	mg/kg
Carbazole	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.029	0.066	<0.066	mg/kg
Chrysene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.01	0.066	<0.066	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.016	0.066	<0.066	mg/kg
Dibenzofuran	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.025	0.066	<0.066	mg/kg
Fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.012	0.066	<0.066	mg/kg
Fluorene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0090	0.066	<0.066	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.016	0.066	<0.066	mg/kg
2-Methylnaphthalene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.031	0.066	<0.066	mg/kg
Naphthalene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.012	0.066	<0.066	mg/kg
Phenanthrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0070	0.066	<0.066	mg/kg
Pyrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0070	0.066	<0.066	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	-	-	58	% rec
Nitrobenzene-d5	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	-	-	60	% rec
Terphenyl-d14	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	-	-	93	% rec
Inorganic									
Solids, Total	-	-	EPA 160.3	06/16/98	1.0	-	-	91	%
Metals									
Arsenic, Total	-	-	SW-846 6010	06/25/98	1.0	0.74	2.2	2.8	mg/kg
Barium, Total	-	-	SW-846 6010	06/25/98	1.0	0.16	1.0	40	mg/kg
Cadmium, Total	-	-	SW-846 6010	06/25/98	1.0	0.089	0.50	<0.50	mg/kg
Chromium, Total	-	-	SW-846 6010	06/25/98	1.0	0.28	1.0	7.0	mg/kg
Lead, Total	-	-	SW-846 6010	06/25/98	1.0	0.62	1.9	21	mg/kg
Mercury, Total	-	-	SW-846 7471	06/18/98	1.0	0.006	0.02	<0.02	mg/kg
Selenium, Total	-	-	SW-846 6010	06/25/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/25/98	1.0	0.17	1.0	<1.0	mg/kg

(Report continued on next page)

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-04				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.011	0.067	<0.067	mg/kg
Acenaphthylene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.01	0.067	<0.067	mg/kg
Anthracene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0050	0.067	<0.067	mg/kg
Benzo(a)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0070	0.067	<0.067	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0080	0.067	<0.067	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.016	0.067	<0.067	mg/kg
Benzo(a)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.01	0.067	<0.067	mg/kg
Carbazole	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.029	0.067	<0.067	mg/kg
Chrysene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.01	0.067	<0.067	mg/kg
Dibenzo(a,h)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.016	0.067	<0.067	mg/kg
Dibenzofuran	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.025	0.067	<0.067	mg/kg
Fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.012	0.067	<0.067	mg/kg
Fluorene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0090	0.067	<0.067	mg/kg
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.016	0.067	<0.067	mg/kg
2-Methylnaphthalene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.031	0.067	<0.067	mg/kg
Naphthalene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.012	0.067	<0.067	mg/kg
Phenanthrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0070	0.067	<0.067	mg/kg
Pyrene	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	0.0070	0.067	<0.067	mg/kg
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	-	-	58	% rec
Nitrobenzene-d5	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	-	-	70	% rec
Terphenyl-d14	SW-846 3540	06/18/98	SW-846 8270	06/20/98	1.0	-	-	90	% rec
Herbicides/Pesticides (GC/MS)									
Acetochlor	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0034	0.02	<0.02	mg/kg
Alachlor	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0041	0.02	<0.02	mg/kg
Atrazine	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0028	0.02	<0.02	mg/kg
Desethyl-Atrazine M2	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0023	0.02	<0.02	mg/kg
Deiso-Atrazine M1	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0034	0.02	<0.02	mg/kg
Chlorpyrifos	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0052	0.02	<0.02	mg/kg
Cyanazine	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0039	0.02	<0.02	mg/kg
EPTC	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0037	0.02	<0.02	mg/kg
Ethalfluralin	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0024	0.02	<0.02	mg/kg
Fonofos	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0031	0.02	<0.02	mg/kg
Metolachlor	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0024	0.02	<0.02	mg/kg
Metribuzin	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0031	0.02	<0.02	mg/kg
Pendimethalin	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0029	0.02	<0.02	mg/kg
Phorate	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0028	0.02	<0.02	mg/kg
Prometon	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0022	0.02	<0.02	mg/kg
Propachlor	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0023	0.02	<0.02	mg/kg
Propazine	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0024	0.02	<0.02	mg/kg

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/16/98
Log-in:	98-4907	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/16/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/30/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4907-04				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Simazine	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0022	0.02	<0.02	mg/kg
Terbufos	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0026	0.02	<0.02	mg/kg
Triallate	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0029	0.02	<0.02	mg/kg
Trifluralin	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	0.0023	0.02	<0.02	mg/kg
*** Semi-Volatile Surrogates ***									
Atrazine-d5	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	-	-	135	% rec
Diazinon-d10	SW-846 3540	06/17/98	SW-846 8270	06/19/98	1.0	-	-	129	% rec
Acid Herbicides (GC/MS)									
Bentazon	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.025	0.10	<0.10	mg/kg
2,4-D	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0051	0.05	<0.05	mg/kg
2,4-DB	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0054	0.05	<0.05	mg/kg
Dicamba	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0056	0.05	<0.05	mg/kg
MCPA	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0099	0.05	<0.05	mg/kg
Picloram	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.021	0.10	<0.10	mg/kg
2,4,5-T	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0054	0.05	<0.05	mg/kg
2,4,5-TP (Silvex)	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0048	0.05	<0.05	mg/kg
Triclopyr	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0042	0.05	<0.05	mg/kg
*** Semi-Volatile Surrogates ***									
2,4-DCAA	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	-	-	108	% rec

(End of Report)

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98-4401

BRAUN INTERTEC
Braun Intertec Corporation
6875 Washington Ave. S.
Edina, MN 55439-0108
(612) 942-4930 Fax (612) 942-4844
labservices@brauncorp.com

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: _____
Time _____
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote # _____

For Braun Intertec Use Only
Braun Intertec Project No.
CMXX-98-0416

REPORT RESULTS TO
Contact Name: Eric Dotz
Company:
Mailing Address:
City, State, Zip:
Telephone #: Fax #:

Project ID/Project Name: MCDA - Linden Yard
P.O. #:

SEND INVOICE TO
Contact Name: Company:
Address:
City, State, Zip:
Telephone #: Fax #:

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	Metals Field Filtered Y/N	DROS	PAHs	RCRA Metals								FOR LAB USE ONLY
ST #6 2.5 ft.	6-16-98	8:15a	Soil		4		X	X	X								98-4907-03

CHAIN OF CUSTODY
Collected by: Randy J. Peterson (print)
Collector's Signature: Randy J. Peterson
Relinquished by: Randy J. Peterson — Date/Time 6/16/98 4:36p
Received by: Andrew W. Wahlstrom — Date/Time 6/16/98 1638
Relinquished by: — Date/Time
Received by: — Date/Time

Evidence Tape Intact ☐ Yes ☐ No ☒ N/A
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other _____
Temperature _____ °C ☒ Received on Ice

Comments:

10/97

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98-4907 WD

BRAUN INTERTEC℠
Braun Intertec Corporation
6875 Washington Ave. S.
Edina, MN 55439-0108
(612) 942-4930 Fax (612) 942-4844
labservices@brauncorp.com

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: _____
Time _____
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote # _____

For Braun Intertec Use Only
Braun Intertec Project No.
CMXX-98-0416

REPORT RESULTS TO
Contact Name: ERIC DOTT
Project ID/Project Name: MCDA - LINDEN YARD
P.O. #:
Company:
Mailing Address:
City, State, Zip:
Telephone #:
Fax #:

SEND INVOICE TO
Contact Name:
Company:
Address:
City, State, Zip:
Telephone #:
Fax #:

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	Metals Field Filtered Y/N	DRO	GRO	VOCs	RCRA METALS	PAHs	LIST 1 - PESTICIDES	LIST 2 - PESTICIDES	ORTHOPHOSPHORUS PEST.			FOR LAB USE ONLY
ST-7 2.5'	6-16-98	2:16	S		6		X	X	X	X	X	X	X	X			98-4907-01
ST-10 2.5'	6-16-98	11:20	S		6		X	X	X	X	X	X	X	X			98-4907-02

CHAIN OF CUSTODY
Collected by: DAN HIGGINBOTTOM (print)
Collector's Signature: [signature]
Relinquished by: [signature] Date/Time 6/16/98 4:36
Received by: [signature] Date/Time 6/16/98 16:38
Relinquished by: Date/Time
Received by: Date/Time

Evidence Tape Intact ☐ Yes ☐ No ☐ N/A
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other _____
Temperature _____ °C ☐ Received on Ice

Comments:

BRAUNSM
INTERTEC

To: Eric Dott/E2

From: Barbara Maki

Re: CMXX-98-0416/98-4907

Date: June 16, 1998

This letter is to acknowledge receipt of the following samples June 16, 1998 for chemical analyses. Please find attached the laboratory draft invoice. This invoice will be sent to Judy Wolf (BST) upon completion of the analyses by the laboratory. Please proof the following information including the draft invoice and notify your project manager of any changes. A final report will be forthcoming.

Client Information

Braun Intertec

Re: MCDA-Linden Yard

Sample Information

Braun Intertec I.D.	Client Sample I.D.	Sample Date	Sample Matrix
98-4907-01	ST-7 2.5 ft.	16-JUN-98	Solid
98-4907-02	ST-10 2.5	16-JUN-98	Solid
98-4907-03	ST#6 2.5 ft.	16-JUN-98	Solid
98-4907-04	method blank	16-JUN-98	Solid

Analyses Information

Parameter	Matrix	Braun Intertec Sample Number (98-4907-XX)		
Total Solids	Solid	01	03	
Silver, Total	Solid	01	02	03
Arsenic, Total	Solid	01	02	03
Barium, Total	Solid	01	02	03
Cadmium, Total	Solid	01	02	03
Chromium, Total	Solid	01	02	03
Lead, Total	Solid	01	02	03
Selenium, Total	Solid	01	02	03
Mercury, Total	Solid	01	02	03
Metals Digestion	Solid	01	02	03

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Analyses Information Continued

Parameter	Matrix	Braun Intertec Sample Number (98-4907-XX)			
Pesticides Extraction	Solid	01	02		
Acid Herbicide Extraction	Solid	01	02		
MS PAH Extraction	Solid	01	02	03	
Volatile Organic Compounds	Solid	01	02		
Gasoline Range Organics	Solid	01	02		
Diesel Range Organics	Dry Weight	01	02	03	
GCMS Polynuclear Aromatic Hydrocarbons	Solid	01	02	03	04
Organophosphorus Pesticides	Solid	01			
MDA List 1 Pesticides	Solid	01	02	04	
MDA LIST 2 Pesticides	Solid	01	02	04	

Your samples have been assigned to our report number 98-4907. The samples will be held by the laboratory for 14 days after your report has been issued. Disposal or return of the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time. If you have any questions or need additional information, please call Barbara Maki at 612-942-4820.

Attachments
Chain of Custody
Draft Invoice

BRAUN℠
INTERTEC

July 28, 1998

Report 98-4986 (Revised)
Project CMXX-98-0416

Mr. Eric Dott/E2
Braun Intertec Corporation

Re: Braun Intertec

MCDA-Linden Yard

Braun Intertec Corporation received your analytical request on June 17, 1998. Analytical results are summarized on the following laboratory report.

This report has been revised to provide the correct reporting and method detection limits.

Routine Braun Intertec Corporation QA/QC was followed. Quality control data have been reviewed.

When possible these samples will be held by the laboratory for 14 days from the date of this report. The process of disposing or returning the samples will occur at that time. Arrangements can be made for extended sample storage by contacting us at this time.

We appreciate the opportunity to meet your analytical needs. If you have any questions or would like additional information, please call Barbara Maki at 612-942-4820.

Sincerely,

Barbara J. Maki

Barbara J. Maki
Project Manager

Attachments
Chain of Custody
Laboratory Results

Client:	Braun Intertec	Laboratory:	Braun Intertec Corporation	Date Sampled:	06/17/98
Log-in:	98-4986	Lab Contact/Phone:	B. Maki/612-942-4820	Date Received:	06/17/98
Project Number:	CMXX-98-0416	Sampler:	Braun Intertec	Date Reported:	07/28/98
PO Number:		% Moisture:	10%		
Client Reference:	MCDA-Linden Yard	MDL:	Method Detection Limit		
Matrix:	Solid	RL:	Reporting Limit		
Lab Sample ID:	98-4986-01				

Client Sample ID/Description: ST#9 2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	5.0	5.0	<5.0	mg/kg
Allyl Chloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Benzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
Bromobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromochloromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromodichloromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromoform	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromomethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
n-Butylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
sec-Butylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
tert-Butylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Carbon Tetrachloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorodibromomethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroform	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chloromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
2-Chlorotoluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
4-Chlorotoluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	1.0	1.0	<1.0	mg/kg
1,2-Dibromoethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Dibromomethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
1,2-Dichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,4-Dichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,2-Dichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.02	0.02	<0.02	mg/kg
trans-1,2-Dichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.02	0.02	<0.02	mg/kg
Dichlorodifluoromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Dichlorofluoromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
2,2-Dichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloro-1-propylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Ethyl Benzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
Ethyl Ether	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Hexachlorobutadiene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	10%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-01				

Client Sample ID/Description: ST#9 2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Isopropyltoluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Methyl Ethyl Ketone	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
Methyl Isobutyl Ketone	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
Methyl Tertiary Butyl Ether	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Methylene Chloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	1.0	1.0	<1.0	mg/kg
Naphthalene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
n-Propylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Styrene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,1,2-Tetrachloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2,2-Tetrachloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Tetrachloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Tetrahydrofuran	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
Toluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
1,2,3-Trichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,4-Trichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,1-Trichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2-Trichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2-Trichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.05	0.05	<0.05	mg/kg
Trichlorofluoromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,3-Trichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Trichlorotrifluoroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,4-Trimethylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,3,5-Trimethylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Vinyl Chloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
m,p-Xylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
o-Xylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
Petroleum Hydrocarbons									
Diesel Range Organics (dry weight)	WI DRO	06/23/98	WI DRO	06/25/98	1.0	0.89	10	<10	mg/kg
Gasoline Range Organics (dry weight)	SW-846 5030	06/21/98	WI GRO	06/21/98	1.0	10	10	<10	mg/kg
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.011	0.065	<0.065	mg/kg
Acenaphthylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.01	0.065	0.13	mg/kg
Anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0050	0.065	0.12	mg/kg
Benzo(a)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0070	0.065	0.44	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0080	0.065	0.85	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0080	0.065	0.27	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.016	0.065	0.20	mg/kg
Benzo(a)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.01	0.065	0.54	mg/kg
Carbazole	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.029	0.065	0.08	mg/kg
Chrysene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.01	0.065	0.44	mg/kg

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	10%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-01				

Client Sample ID/Description: ST#9 2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Dibenzo(a,h)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.016	0.065	<0.065	mg/kg	
Dibenzofuran	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.025	0.065	<0.065	mg/kg	
Fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.012	0.065	1.0	mg/kg	
Fluorene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0090	0.065	<0.065	mg/kg	
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.016	0.065	0.20	mg/kg	
2-Methylnaphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.031	0.065	0.11	mg/kg	
Naphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.012	0.065	0.07	mg/kg	
Phenanthrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0070	0.065	0.52	mg/kg	
Pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0070	0.065	0.60	mg/kg	
*** Semi-Volatile Surrogates ***										
2-Fluorobiphenyl	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	-	72	% rec	
Nitrobenzene-d5	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	-	58	% rec	
Terphenyl-d14	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	-	78	% rec	
Organophosphorus Pesticides										
Azinphos-methyl	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.017	2.3	<2.3	mg/kg	ga
Carbophenothion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0072	1.16	<1.16	mg/kg	ga
Chlorpyrifos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0049	0.93	<0.93	mg/kg	ga
Demeton-o	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0059	0.93	<0.93	mg/kg	ga
Demeton-s	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0044	0.93	<0.93	mg/kg	ga
Diazinon	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0073	1.16	<1.16	mg/kg	ga
Dimethoate	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0042	0.93	<0.93	mg/kg	ga
Dioxathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.01	1.4	<1.4	mg/kg	ga
Disulfoton	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0065	0.93	<0.93	mg/kg	ga
Ethion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.007	1.16	<1.16	mg/kg	ga
Ethoprop	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.005	0.93	<0.93	mg/kg	ga
Famphur	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0086	1.4	<1.4	mg/kg	ga
Fonofos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0051	0.93	<0.93	mg/kg	ga
Malathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.003	0.93	<0.93	mg/kg	ga
Methyl Parathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0024	0.93	<0.93	mg/kg	ga
e-Parathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.006	0.93	<0.93	mg/kg	ga
Phorate	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0043	0.93	<0.93	mg/kg	ga
Phosmet	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.01	1.62	<1.62	mg/kg	ga
Terbufos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	46	0.0066	0.93	<0.93	mg/kg	ga
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	0	<0	% rec	vo
Diazinon-d10	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	0	<0	% rec	vo
Herbicides/Pesticides (GC/MS)										
Acetochlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0034	0.39	<0.39	mg/kg	ga
Alachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0041	0.39	<0.39	mg/kg	ga
Atrazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0028	0.39	<0.39	mg/kg	ga
Desethyl-Atrazine M2	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0023	0.39	<0.39	mg/kg	ga
Deiso-Atrazine M1	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0034	0.39	<0.39	mg/kg	ga

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	10%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-01				

Client Sample ID/Description: ST#9 2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Chlorpyrifos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0052	0.39	<0.39	mg/kg	ga
Cyanazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0039	0.39	<0.39	mg/kg	ga
EPTC	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0037	0.39	<0.39	mg/kg	ga
Ethafluralin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0024	0.39	<0.39	mg/kg	ga
Fonofos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0031	0.39	<0.39	mg/kg	ga
Metolachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0024	0.39	<0.39	mg/kg	ga
Metribuzin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0031	0.39	<0.39	mg/kg	ga
Pendimethalin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0029	0.39	<0.39	mg/kg	ga
Phorate	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0028	0.39	<0.39	mg/kg	ga
Prometon	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0022	0.39	<0.39	mg/kg	ga
Propachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0023	0.39	<0.39	mg/kg	ga
Propazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0024	0.39	<0.39	mg/kg	ga
Simazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0022	0.39	<0.39	mg/kg	ga
Terbufos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0026	0.39	<0.39	mg/kg	ga
Triallate	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0029	0.39	<0.39	mg/kg	ga
Trifluralin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0023	0.39	<0.39	mg/kg	ga
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	-	0	62	% rec	
Diazinon-d10	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	-	0	60	% rec	
Acid Herbicides (GC/MS)										
Bentazon	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.025	5.0	<5.0	mg/kg	ga
2,4-D	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0051	2.5	<2.5	mg/kg	ga
2,4-DB	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.5	<2.5	mg/kg	ga
Dicamba	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0056	2.5	<2.5	mg/kg	ga
MCPA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0099	2.5	<2.5	mg/kg	ga
Picloram	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.021	5.0	<5.0	mg/kg	ga
2,4,5-T	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.5	<2.5	mg/kg	ga
2,4,5-TP (Silvex)	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0048	2.5	<2.5	mg/kg	ga
Triclopyr	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0042	2.5	<2.5	mg/kg	ga
*** Semi-Volatile Surrogates ***										
2,4-DCAA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	-	0	<0	% rec	vo
Inorganic										
Solids, Total	-	-	EPA 160.3	06/16/98	1.0	-	-	90	%	
Metals										
Arsenic, Total	-	-	SW-846 6010	06/25/98	1.0	0.74	2.2	8.1	mg/kg	
Barium, Total	-	-	SW-846 6010	06/25/98	1.0	0.16	1.0	59	mg/kg	
Cadmium, Total	-	-	SW-846 6010	06/25/98	1.0	0.089	0.50	<0.50	mg/kg	
Chromium, Total	-	-	SW-846 6010	06/25/98	1.0	0.28	1.0	10	mg/kg	
Lead, Total	-	-	SW-846 6010	06/25/98	1.0	0.62	1.9	40	mg/kg	
Mercury, Total	-	-	SW-846 7471	06/23/98	1.0	0.006	0.02	0.13	mg/kg	

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	10%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-01				

Client Sample ID/Description: ST#9 2.5'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Selenium, Total	-	-	SW-846 6010	06/25/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/25/98	1.0	0.17	1.0	<1.0	mg/kg

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Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	3%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-02				

Client Sample ID/Description: ST#8 5.0'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	5.0	5.0	<5.0	mg/kg
Allyl Chloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Benzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
Bromobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromochloromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromodichloromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromoform	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Bromomethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
n-Butylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
sec-Butylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
tert-Butylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Carbon Tetrachloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chlorodibromomethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chloroform	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Chloromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
2-Chlorotoluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
4-Chlorotoluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	1.0	1.0	<1.0	mg/kg
1,2-Dibromoethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Dibromomethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
1,2-Dichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,4-Dichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,2-Dichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.02	0.02	<0.02	mg/kg
trans-1,2-Dichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.02	0.02	<0.02	mg/kg
Dichlorodifluoromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Dichlorofluoromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2-Dichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,3-Dichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
2,2-Dichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1-Dichloro-1-propylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Ethyl Benzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
Ethyl Ether	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Hexachlorobutadiene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	3%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-02				

Client Sample ID/Description: ST#8 5.0'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Isopropylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Isopropyltoluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Methyl Ethyl Ketone	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
Methyl Isobutyl Ketone	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
Methyl Tertiary Butyl Ether	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Methylene Chloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	1.0	1.0	<1.0	mg/kg
Naphthalene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
n-Propylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Styrene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,1,2-Tetrachloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2,2-Tetrachloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Tetrachloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Tetrahydrofuran	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.5	0.5	<0.5	mg/kg
Toluene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
1,2,3-Trichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,4-Trichlorobenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,1-Trichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2-Trichloroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,1,2-Trichloroethylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.05	0.05	<0.05	mg/kg
Trichlorofluoromethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,3-Trichloropropane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Trichlorotrifluoroethane	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,2,4-Trimethylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
1,3,5-Trimethylbenzene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
Vinyl Chloride	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.1	0.1	<0.1	mg/kg
m,p-Xylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
o-Xylene	SW-846 5030	06/20/98	MDH 466A	06/20/98	1.0	0.03	0.03	<0.03	mg/kg
Petroleum Hydrocarbons									
Diesel Range Organics (dry weight)	WI DRO	06/23/98	WI DRO	06/25/98	1.0	0.89	10	<10	mg/kg
Gasoline Range Organics (dry weight)	SW-846 5030	06/21/98	WI GRO	06/21/98	1.0	10	10	<10	mg/kg
Semi-Volatiles (GC/MS)									
Acenaphthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.011	0.066	0.37	mg/kg
Acenaphthylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.01	0.066	0.21	mg/kg
Anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0050	0.066	0.47	mg/kg
Benzo(a)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0070	0.066	0.81	mg/kg
Benzo(b)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0080	0.066	1.7	mg/kg
Benzo(k)fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0080	0.066	0.60	mg/kg
Benzo(g,h,i)perylene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.016	0.066	0.26	mg/kg
Benzo(a)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.01	0.066	1.0	mg/kg
Carbazole	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.029	0.066	0.24	mg/kg
Chrysene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.01	0.066	0.95	mg/kg

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	3%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-02				

Client Sample ID/Description: ST#8 5.0'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Dibenzo(a,h)anthracene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.016	0.066	<0.066	mg/kg	
Dibenzofuran	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.025	0.066	0.30	mg/kg	
Fluoranthene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.012	0.066	2.1	mg/kg	
Fluorene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0090	0.066	0.40	mg/kg	
Indeno(1,2,3-cd)pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.016	0.066	0.23	mg/kg	
2-Methylnaphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.031	0.066	0.45	mg/kg	
Naphthalene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.012	0.066	0.55	mg/kg	
Phenanthrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0070	0.066	1.8	mg/kg	
Pyrene	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	0.0070	0.066	1.4	mg/kg	
*** Semi-Volatile Surrogates ***										
2-Fluorobiphenyl	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	-	70	% rec	
Nitrobenzene-d5	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	-	62	% rec	
Terphenyl-d14	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	-	76	% rec	
Organophosphorus Pesticides										
Azinphos-methyl	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.017	2.5	<2.5	mg/kg	ga
Carbophenothion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0072	1.25	<1.25	mg/kg	ga
Chlorpyrifos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0049	1.0	<1.0	mg/kg	ga
Demeton-o	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0059	1.0	<1.0	mg/kg	ga
Demeton-s	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0044	1.0	<1.0	mg/kg	ga
Diazinon	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0073	1.25	<1.25	mg/kg	ga
Dimethoate	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0042	1.0	<1.0	mg/kg	ga
Dioxathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.01	1.5	<1.5	mg/kg	ga
Disulfoton	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0065	1.0	<1.0	mg/kg	ga
Ethion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.007	1.25	<1.25	mg/kg	ga
Ethoprop	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.005	1.0	<1.0	mg/kg	ga
Famphur	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0086	1.5	<1.5	mg/kg	ga
Fonofos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0051	1.0	<1.0	mg/kg	ga
Malathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.003	1.0	<1.0	mg/kg	ga
Methyl Parathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0024	1.0	<1.0	mg/kg	ga
e-Parathion	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.006	1.0	<1.0	mg/kg	ga
Phorate	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0043	1.0	<1.0	mg/kg	ga
Phosmet	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.01	1.75	<1.75	mg/kg	ga
Terbufos	SW-846 3540	06/18/98	SW-846 8270	06/23/98	50	0.0066	1.0	<1.0	mg/kg	ga
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	0	<0	% rec	vo
Diazinon-d10	SW-846 3540	06/18/98	SW-846 8270	06/23/98	1.0	-	0	<0	% rec	vo
Herbicides/Pesticides (GC/MS)										
Acetochlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0034	0.40	<0.40	mg/kg	ga
Alachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0041	0.40	<0.40	mg/kg	ga
Atrazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0028	0.40	<0.40	mg/kg	ga
Desethyl-Atrazine M2	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0023	0.40	<0.40	mg/kg	ga
Deiso-Atrazine M1	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0034	0.40	<0.40	mg/kg	ga

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	3%		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-02				

Client Sample ID/Description: ST#8 5.0'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Chlorpyrifos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0052	0.40	<0.40	mg/kg	ga
Cyanazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0039	0.40	<0.40	mg/kg	ga
EPTC	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0037	0.40	<0.40	mg/kg	ga
Ethafluralin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0024	0.40	<0.40	mg/kg	ga
Fonofos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0031	0.40	<0.40	mg/kg	ga
Metolachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0024	0.40	<0.40	mg/kg	ga
Metribuzin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0031	0.40	<0.40	mg/kg	ga
Pendimethalin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0029	0.40	<0.40	mg/kg	ga
Phorate	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0028	0.40	<0.40	mg/kg	ga
Prometon	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0022	0.40	<0.40	mg/kg	ga
Propachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0023	0.40	<0.40	mg/kg	ga
Propazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0024	0.40	<0.40	mg/kg	ga
Simazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0022	0.40	<0.40	mg/kg	ga
Terbufos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0026	0.40	<0.40	mg/kg	ga
Triallate	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0029	0.40	<0.40	mg/kg	ga
Trifluralin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	0.0023	0.40	<0.40	mg/kg	ga
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	-	0	95	% rec	
Diazinon-d10	SW-846 3540	06/19/98	SW-846 8270	06/23/98	20	-	0	78	% rec	
Acid Herbicides (GC/MS)										
Bentazon	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.025	4.9	<4.9	mg/kg	ga
2,4-D	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0051	2.4	<2.4	mg/kg	ga
2,4-DB	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.4	<2.4	mg/kg	ga
Dicamba	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0056	2.4	<2.4	mg/kg	ga
MCPA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0099	2.4	<2.4	mg/kg	ga
Picloram	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.021	4.9	<4.9	mg/kg	ga
2,4,5-T	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0054	2.4	<2.4	mg/kg	ga
2,4,5-TP (Silvex)	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0048	2.4	<2.4	mg/kg	ga
Triclopyr	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	0.0042	2.4	<2.4	mg/kg	ga
*** Semi-Volatile Surrogates ***										
2,4-DCAA	SW-846 8151	06/19/98	SW-846 8270	07/01/98	50	-	0	<0	% rec	vo
Inorganic										
Solids, Total	-	-	EPA 160.3	06/16/98	1.0	-	-	97	%	
Metals										
Arsenic, Total	-	-	SW-846 6010	06/25/98	1.0	0.74	2.2	<2.2	mg/kg	
Barium, Total	-	-	SW-846 6010	06/25/98	1.0	0.16	1.0	20	mg/kg	
Cadmium, Total	-	-	SW-846 6010	06/25/98	1.0	0.089	0.50	<0.50	mg/kg	
Chromium, Total	-	-	SW-846 6010	06/25/98	1.0	0.28	1.0	8.7	mg/kg	
Lead, Total	-	-	SW-846 6010	06/25/98	1.0	0.62	1.9	2.9	mg/kg	
Mercury, Total	-	-	SW-846 7471	06/23/98	1.0	0.006	0.02	0.04	mg/kg	

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.
vo The surrogates were diluted out of range.

(Report continued on next page)

Client:	Braun Intertec	Laboratory:	Braun Intertec Corporation	Date Sampled:	06/17/98
Log-in:	98-4986	Lab Contact/Phone:	B. Maki/612-942-4820	Date Received:	06/17/98
Project Number:	CMXX-98-0416	Sampler:	Braun Intertec	Date Reported:	07/28/98
PO Number:		% Moisture:	3%		
Client Reference:	MCDA-Linden Yard	MDL:	Method Detection Limit		
Matrix:	Solid	RL:	Reporting Limit		
Lab Sample ID:	98-4986-02				

Client Sample ID/Description: ST#8 5.0'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Selenium, Total	-	-	SW-846 6010	06/25/98	1.0	0.97	3.0	<3.0	mg/kg
Silver, Total	-	-	SW-846 6010	06/25/98	1.0	0.17	1.0	<1.0	mg/kg

(Report continued on next page)

Client:	Braun Intertec	Laboratory:	Braun Intertec Corporation	Date Sampled:	06/17/98
Log-in:	98-4986	Lab Contact/Phone:	B. Maki/612-942-4820	Date Received:	06/17/98
Project Number:	CMXX-98-0416	Sampler:	Braun Intertec	Date Reported:	07/28/98
PO Number:		% Moisture:	Not Applicable		
Client Reference:	MCDA-Linden Yard	MDL:	Method Detection Limit		
Matrix:	Liquid	RL:	Reporting Limit		
Lab Sample ID:	98-4986-03				

Client Sample ID/Description: ST#10 35'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Volatile Organic Compounds									
Acetone	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	20	20	<20	ug/l
Allyl Chloride	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Benzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l
Bromobenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Bromochloromethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Bromodichloromethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.3	0.3	<0.3	ug/l
Bromoform	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l
Bromomethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	2.5	2.5	<2.5	ug/l
n-Butylbenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
sec-Butylbenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
tert-Butylbenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Carbon Tetrachloride	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Chlorobenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Chlorodibromomethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Chloroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Chloroform	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Chloromethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	2.5	2.5	<2.5	ug/l
2-Chlorotoluene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
4-Chlorotoluene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dibromo-3-Chloropropane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dibromoethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.2	0.2	<0.2	ug/l
Dibromomethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dichlorobenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.2	0.2	<0.2	ug/l
1,3-Dichlorobenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
1,4-Dichlorobenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.2	0.2	<0.2	ug/l
1,1-Dichloroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
1,2-Dichloroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.3	0.3	<0.3	ug/l
1,1-Dichloroethylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
cis-1,2-Dichloroethylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.2	0.3	<0.3	ug/l
trans-1,2-Dichloroethylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.2	0.2	<0.2	ug/l
Dichlorodifluoromethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	2.5	2.5	<2.5	ug/l
Dichlorofluoromethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l
1,2-Dichloropropane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
1,3-Dichloropropane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
2,2-Dichloropropane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
1,1-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l
cis-1,3-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l
trans-1,3-Dichloro-1-propylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l
Ethyl Benzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Ethyl Ether	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l
Hexachlorobutadiene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-03				

Client Sample ID/Description: ST#10 35'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Isopropylbenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Isopropyltoluene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Methyl Ethyl Ketone	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	5.0	5.0	<5.0	ug/l	
Methyl Isobutyl Ketone	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	5.0	5.0	<5.0	ug/l	
Methyl Tertiary Butyl Ether	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Methylene Chloride	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	2.0	2.0	<2.0	ug/l	
Naphthalene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
n-Propylbenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Styrene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,1,2-Tetrachloroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l	
1,1,2,2-Tetrachloroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l	
Tetrachloroethylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Tetrahydrofuran	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	5.0	5.0	<5.0	ug/l	
Toluene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,3-Trichlorobenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,4-Trichlorobenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,1-Trichloroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l	
1,1,2-Trichloroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
1,1,2-Trichloroethylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	0.5	0.5	<0.5	ug/l	
Trichlorofluoromethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
1,2,3-Trichloropropane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Trichlorotrifluoroethane	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	5.0	5.0	<5.0	ug/l	
1,2,4-Trimethylbenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
1,3,5-Trimethylbenzene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Vinyl Chloride	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
m,p-Xylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
o-Xylene	SW-846 5030	06/21/98	MDH 465E	06/21/98	1.0	1.0	1.0	<1.0	ug/l	
Petroleum Hydrocarbons										
Diesel Range Organics	WI DRO	06/19/98	WI DRO	06/23/98	1.0	27	100	<100	ug/l	hm
Gasoline Range Organics	SW-846 5030	06/21/98	WI GRO	06/21/98	1.0	100	100	<100	ug/l	hj
Polynuclear Aromatic Hydrocarbons (PAHs) (GC/MS)										
Acenaphthene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.59	2.2	<2.2	ug/l	
Acenaphthylene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.61	2.2	<2.2	ug/l	
Anthracene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.35	2.2	<2.2	ug/l	
Benzo(a)anthracene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.20	2.2	<2.2	ug/l	
Benzo(b)fluoranthene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.29	2.2	<2.2	ug/l	
Benzo(k)fluoranthene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.41	2.2	<2.2	ug/l	
Benzo(g,h,i)perylene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.37	2.2	<2.2	ug/l	
Benzo(a)pyrene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.36	2.2	<2.2	ug/l	
Carbazole	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.50	5.5	<5.5	ug/l	
Chrysene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.25	2.2	<2.2	ug/l	

hj The sample chromatogram indicates the presence of higher boiling hydrocarbons than is expected in a gasoline range organic (GRO) chromatogram.
hm The sample pH was greater than 2, which is an exception to the WI DRO method.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-03				

Client Sample ID/Description: ST#10 35'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Dibenzo(a,h)anthracene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.41	2.2	<2.2	ug/l
Dibenzofuran	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	1.4	5.5	<5.5	ug/l
Fluoranthene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.28	2.2	<2.2	ug/l
Fluorene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.58	2.2	<2.2	ug/l
Indeno(1,2,3-cd)pyrene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.40	2.2	<2.2	ug/l
2-Methylnaphthalene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	1.7	5.5	<5.5	ug/l
Naphthalene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.74	5.5	<5.5	ug/l
Phenanthrene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.40	2.2	<2.2	ug/l
Pyrene	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	0.24	2.2	<2.2	ug/l
*** Semi-Volatile Surrogates ***									
2-Fluorobiphenyl	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	-	-	44	% rec
Nitrobenzene-d5	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	-	-	55	% rec
Terphenyl-d14	SW-846 3520	06/18/98	SW-846 8270	06/20/98	1.0	-	-	52	% rec
Organophosphorus Pesticides									
Azinphos-methyl	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.084	0.7	<0.7	ug/l
Carbophenothion	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.076	0.7	<0.7	ug/l
Chlorpyrifos	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.14	0.7	<0.7	ug/l
Demeton-o	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.089	0.7	<0.7	ug/l
Demeton-s	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.11	0.7	<0.7	ug/l
Dimethoate	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.071	0.7	<0.7	ug/l
Dioxathion	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.094	0.7	<0.7	ug/l
Disulfoton	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.17	0.7	<0.7	ug/l
Ethion	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.068	0.7	<0.7	ug/l
Ethoprop	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.11	0.7	<0.7	ug/l
Famphur	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.066	0.7	<0.7	ug/l
Fonofos	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.091	0.7	<0.7	ug/l
Malathion	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.075	0.7	<0.7	ug/l
Methyl Parathion	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.11	0.7	<0.7	ug/l
e-Parathion	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.1	0.7	<0.7	ug/l
Phorate	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.11	0.7	<0.7	ug/l
Phosmet	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.049	0.7	<0.7	ug/l
Terbufos	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.097	0.7	<0.7	ug/l
*** Semi-Volatile Surrogates ***									
Atrazine-d5	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	-	-	98	% rec
Diazinon-d10	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	-	-	94	% rec
Herbicides/Pesticides (GC/MS)									
Acetochlor	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.071	0.71	<0.71	ug/l
Alachlor	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.035	0.71	<0.71	ug/l
Atrazine	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.029	0.71	<0.71	ug/l
Desethyl-Atrazine	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.051	0.71	<0.71	ug/l
Deisopropyl-Atrazine	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.089	0.71	<0.71	ug/l

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	06/17/98
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Liquid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-03				

Client Sample ID/Description: ST#10 35'

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result		
Chlorpyrifos	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.028	0.71	<0.71	ug/l	
Cyanazine	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.06	0.28	<0.28	ug/l	
EPTC	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.046	0.71	<0.71	ug/l	
Ethalfluralin	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.071	0.71	<0.71	ug/l	
Fonofos	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.046	0.71	<0.71	ug/l	
Metolachlor	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.032	0.71	<0.71	ug/l	
Metribuzin	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.049	0.71	<0.71	ug/l	
Pendimethalin	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.03	0.71	<0.71	ug/l	
Phorate	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.038	0.43	<0.43	ug/l	
Prometon	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.063	0.71	<0.71	ug/l	
Propachlor	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.049	0.71	<0.71	ug/l	
Propazine	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.034	0.71	<0.71	ug/l	
Simazine	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.057	0.71	<0.71	ug/l	
Terbufos	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.028	0.28	<0.28	ug/l	
Triallate	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.042	0.71	<0.71	ug/l	
Trifluralin	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	0.075	0.71	<0.71	ug/l	
*** Semi-Volatile Surrogates ***										
Atrazine-d5	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	-	-	122	% rec	
Diazinon-d10	SW-846 3520	06/19/98	SW-846 8270	06/23/98	1.0	-	-	117	% rec	
Metal										
Arsenic, Total	-	-	EPA 200.7	06/19/98	5.0	37	550	940	ug/l	ga
Barium, Total	-	-	EPA 200.7	06/19/98	5.0	1.0	50	14000	ug/l	ga
Cadmium, Total	-	-	EPA 200.7	06/19/98	5.0	2.0	50	62	ug/l	ga
Chromium, Total	-	-	EPA 200.7	06/19/98	5.0	1.7	50	3000	ug/l	ga
Lead, Total	-	-	EPA 200.7	06/19/98	5.0	13	200	1000	ug/l	ga
Mercury, Total	-	-	EPA 245.1	06/24/98	1.0	0.1	0.3	1.7	ug/l	
Selenium, Total	-	-	EPA 200.7	06/19/98	5.0	36	550	<550	ug/l	ga
Silver, Total	-	-	EPA 200.7	06/19/98	5.0	2.0	50	<50	ug/l	ga

ga The reporting limit (RL) was raised. A dilution of the sample was necessary due to matrix interferences.

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-04				

Client Sample ID/Description: Trip Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result

NO ANALYSIS PERFORMED ON THIS SAMPLE

(Report continued on next page)

Client:	Braun Intertec	**Laboratory:**	Braun Intertec Corporation	**Date Sampled:**	
Log-in:	98-4986	**Lab Contact/Phone:**	B. Maki/612-942-4820	**Date Received:**	06/17/98
Project Number:	CMXX-98-0416	**Sampler:**	Braun Intertec	**Date Reported:**	07/28/98
PO Number:		**% Moisture:**	Not Applicable		
Client Reference:	MCDA-Linden Yard	**MDL:**	Method Detection Limit		
Matrix:	Solid	**RL:**	Reporting Limit		
Lab Sample ID:	98-4986-05				

Client Sample ID/Description: Method Blank

Compound	Extract Method	Extract Date	Analysis Method	Analysis Date	Dilution Factor	MDL	RL	Sample Result	
Herbicides/Pesticides (GC/MS)									
Acetochlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0034	0.02	<0.02	mg/kg
Alachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0041	0.02	<0.02	mg/kg
Atrazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0028	0.02	<0.02	mg/kg
Desethyl-Atrazine M2	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0023	0.02	<0.02	mg/kg
Deiso-Atrazine M1	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0034	0.02	<0.02	mg/kg
Chlorpyrifos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0052	0.02	<0.02	mg/kg
Cyanazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0039	0.02	<0.02	mg/kg
EPTC	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0037	0.02	<0.02	mg/kg
Ethafluralin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0024	0.02	<0.02	mg/kg
Fonofos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0031	0.02	<0.02	mg/kg
Metolachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0024	0.02	<0.02	mg/kg
Metribuzin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0031	0.02	<0.02	mg/kg
Pendimethalin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0029	0.02	<0.02	mg/kg
Phorate	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0028	0.02	<0.02	mg/kg
Prometon	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0022	0.02	<0.02	mg/kg
Propachlor	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0023	0.02	<0.02	mg/kg
Propazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0024	0.02	<0.02	mg/kg
Simazine	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0022	0.02	<0.02	mg/kg
Terbufos	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0026	0.02	<0.02	mg/kg
Triallate	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0029	0.02	<0.02	mg/kg
Trifluralin	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	0.0023	0.02	<0.02	mg/kg
*** Semi-Volatile Surrogates ***									
Atrazine-d5	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	-	-	107	% rec
Diazinon-d10	SW-846 3540	06/19/98	SW-846 8270	06/23/98	1.0	-	-	103	% rec
Acid Herbicides (GC/MS)									
Bentazon	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.025	0.10	<0.10	mg/kg
2,4-D	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0051	0.05	<0.05	mg/kg
2,4-DB	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0054	0.05	<0.05	mg/kg
Dicamba	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0056	0.05	<0.05	mg/kg
MCPA	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0099	0.05	<0.05	mg/kg
Picloram	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.021	0.10	<0.10	mg/kg
2,4,5-T	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0054	0.05	<0.05	mg/kg
2,4,5-TP (Silvex)	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0048	0.05	<0.05	mg/kg
Triclopyr	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	0.0042	0.05	<0.05	mg/kg
*** Semi-Volatile Surrogates ***									
2,4-DCAA	SW-846 8151	06/19/98	SW-846 8270	06/24/98	1.0	-	-	108	% rec

(End of Report)

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BRAUN INTERTEC
Braun Intertec Corporation
6875 Washington Ave. S.
Edina, MN 55439-0108
(612) 942-4930 Fax (612) 942-4844
labservices@brauncorp.com

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: _____
Time _____
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote # _____

For Braun Intertec Use Only
Braun Intertec Project No.
98-4986
CMXX-98-0416

REPORT RESULTS TO
Contact Name: Eric Dokt
Company:
Mailing Address:
City, State, Zip:
Telephone #: Fax #:

Project ID/Project Name: MCDA – Linden Yard
P.O. #:

SEND INVOICE TO
Contact Name: Company:
Address:
City, State, Zip:
Telephone #: Fax #:

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	Metals Field Filtered Y/N	VOC	GRO	DRO	PAH	RCRA Metals	List 1 Pesticides	List 2 Pesticides	Organophosphorus Pesticides			FOR LAB USE ONLY
ST #9 2.5'	6-17-98	9:20a	Soil		6		X	X	X	X	X	X	X	X			
ST #8 5.0'	6-17-98	11:00a	Soil		7		X	X	X	X	X	X	X	X			
ST #10 35'	6-17-98	2:00p	Water		11		X	X	X	X	X	X	X	X			
Trip Blank							→ HOLD NC										

CHAIN OF CUSTODY
Collected by: Randy J. Peterson (print)
Collector's Signature: Randy J. Peterson
Relinquished by: Randy J. Peterson — Date/Time 6/17/98 4:30p
Received by: Andrew Walter — Date/Time 6/17/98 1634
Relinquished by: — Date/Time
Received by: — Date/Time

Evidence Tape Intact ☐ Yes ☐ No ☒ N/A
Sample Condition Upon Receipt: ☒ Acceptable ☐ Other _____
Temperature _____ °C ☒ Received on Ice

Comments: