



PROPOSAL FOR SITE INVESTIGATION AND REMEDIAL ACTION OPTIONS EVALUATION

MIDDLETON CLEANERS SITE 6617-6619 UNIVERSITY AVENUE MIDDLETON, WISCONSIN

Prepared for Northern Properties and Michael Best & Friedrich

February 3, 2000



February 3, 2000

25 Kessel Court, Suite 201 Madison, Wisconsin 53711-6227 608 273 2886 Tel 608 273 3415 Fax

Mr. Donald P. Gallo Michael Best & Friedrich 100 East Milwaukee Avenue Milwaukee, Wisconsin 53202-4108

Re:

Dames & Moore Proposal No. 133-02-999

Site Investigation and Remedial Action Options Evaluation

Middleton Cleaners, 6617-6619 University Avenue, Middleton, Wisconsin

Dear Mr. Gallo:

Please find enclosed our proposal for completion of a site investigation at the above site. Our proposed investigation includes the installation additional of monitoring wells, the installation of a soil vapor extraction (SVE), an SVE pilot test, and the collection of two rounds of groundwater samples. We intend to use data collected from this investigation and from previous investigations to evaluate potential remedial actions. Supplemental site investigation results and a description of remedial actions evaluated will be presented in a report for submittal to the Wisconsin Department of Natural Resources.

We appreciate this opportunity to provide this proposal for environmental consulting/scientific services for you. If you have any questions please call us at (608) 273-2886.

Sincerely yours,

Dames & Moore

Mark S. McColloch, P.G.

**Project Geologist** 

David P. Trainer (MSH)
David P. Trainor, P.E., P.G.

Managing Principal

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# **ATTACHMENTS**

Attachment A General Conditions and Standard Schedule of Charges

## 1.0 INTRODUCTION

## 1.1 Site Description

The Middleton Cleaners site is located at 6617-6619 University Avenue in Middleton, Wisconsin, in the northeast 1/4 of the southwest 1/4 of Section 12, Township 7 North, Range 8 East. A two story building is centered on the property surrounded by an asphalt driveway and parking lot. Several retail/commercial business are located in the building. The store fronts face University Avenue, and the site is accessed from University Avenue. A small separate building is located behind the main building. This building contains the boiler room and dry cleaning equipment. An alley borders the property to the southwest, and a church and residential properties are located south of the alley. Other retail/commercial business are located west-northwest of the site building. A closed gasoline service station is located on the adjacent property to the east-southeast. Commercial businesses are also located on th north side of University Avenue.

## 1.2 Background

The property is currently owned by Northern Properties, and has been leased to commercial/retail businesses since the 1950's. Prior to the 1950's the property was used as agricultural land. Dry Cleaners (Hi-Way) operated a garment dry cleaning facility at the site from the 1950's through 1995. Hi-Way stored stoddard solvent in four underground storage tanks (USTs) located near the boiler room behind the main building. Stoddard solvent was used as the dry-cleaning solvent until the early 1980s. The USTs were subsequently removed and tetrachloroethene (PCE) replaced stoddard solvent as the dry cleaning solvent. Middleton Cleaners began operation of the facility in May, 1996. Equipment formerly used by Hi-Way continues to be used by Middleton Cleaners.

Soil and groundwater samples have been collected during several phase of site investigation. Soil samples were collected from Geoprobe borings in January and February 1996 by Eder and Associates. Additional soil and groundwater samples were collected by Strand Associates, Inc. from Geoprobe borings advanced in June 1996. Strand subsequently coordinated the installation of monitoring wells and the collection of groundwater samples between July and August, 1999. Stoddard solvent and PCE were identified in soil and groundwater samples collected in the vicinity of the former USTs and dry cleaning equipment room. PCE was also detected in groundwater samples collected from monitoring wells at locations downgradient and side gradient from this source area. Results of the investigative work completed by Strand were presented in an October

1999 report. This report, entitled *Site Investigation Report/Source Area Remedial Action Plan*, also evaluated potential remedial alternatives.

# 1.3 Purpose and Scope

The purpose of this proposed site investigation is to identify the lateral and vertical extent of groundwater contamination. Accordingly, we recommend the installation of additional monitoring wells to identify the lateral extent of groundwater contamination. Groundwater samples collected from these wells will be used to determine baseline conditions prior to site remediation, and evaluate the off-site extent of groundwater contamination. Dames & Moore also recommends that soil vapor extraction (SVE) be evaluated to remove contaminants from the unsaturated zone. An SVE recovery well should be installed and a pilot test completed to determine the optimum screened intervals and placement of additional SVE wells. The pilot test will also be used to size a blower to be used for remediation, and evaluate the potential need for an air discharge permit, or air treatment. The pilot test and groundwater monitoring results will be used to prepare a conceptual design for the installation of a full-scale SVE system.

## 2.0 TECHNICAL APPROACH

Dames & Moore has reviewed the October 1999 Site Investigation Report/Source Area Remedial Action Plan prepared by Strand. A Dames & Moore representative has also visited the site to view the site and surrounding properties. In general, we are in agreement with the interpretation of site investigation results and the need for an additional site investigation. However, there are several inconsistencies in the report. Figure 3.03-5 shows an elevated stoddard solvent concentration at GP-17, but Table 3.03-2 indicates that stoddard solvent was not detected in samples collected from this boring. Additionally, Figure 3.04-1 shows isconcentration contours for PCE in groundwater samples collected from the monitoring wells. Groundwater samples collected from GP-8, GP-10, GP-17, GP-18, GP-19, and GP-20 indicate that the area within the 1,000  $\mu$ g/L isconcentration contour may be smaller than shown; PCE was detected at concentrations between 15 and 440  $\mu$ g/L in these samples.

We believe the extent of soil contamination has been adequately identified. Figure 3.03-3 in the Strand report shows that the concentration of PCE at depth is low beneath the source area. Several soil samples in this area were collected at depths below 40 feet. These samples were likely collected from the "smear zone," the zone between the seasonal high and seasonal low water table elevation. The seasonal groundwater high may represent the migration of contamination from an upgradient source area. This results in a re-distribution of contamination over an area larger than the source area. Remedial efforts should include remediation of the smear zone.

Dames & Moore recommends that the full extent of groundwater contamination be identified prior to the installation of a remediation system. SVE is likely the most efficient remediation method for contamination within the unsaturated zone because contaminants are volatile, groundwater is encountered at depth, and subsurface soil units are sandy. Strand did not recommend a pilot test prior to the design of an SVE system. Based on our experience, the vertical permeability is critical to the placement of SVE well screens. Stratigraphic units are shown on the cross-section included in the Strand report that will influence the horizontal permeability and air flow paths. However, boring logs are not as detailed. Consequently, we recommend that a pilot test be performed. We recommend that a pilot test be completed on an SVE well installed with a well screen installed between 10 and 30 feet. During the subsequent polit test, pressure readings will be measured at the existing monitoring wells. These wells are screened between 45 to 55 feet, and will be used to evaluate the influence that stratigraphic layers have on vertical permeability.

Because site investigation results indicate that contamination is present within the smear zone, we conceptually recommend that the SVE system operate for a minimum of one year. Groundwater

samples will be collected quarterly during this first year of operation, and results will be used to evaluate remedial alternatives for the saturated zone. This may not eliminate the need for groundwater remediation, but removal of the source may reduce the level of effort needed to restore groundwater quality. Potential groundwater remedial alternatives that will be evaluated may include pump and treat, ozone sparging, and natural attenuation. Natural attenuation is defined in Wisconsin Administrative Code sections NR 140.05(14 m) and NR 700.03(38 m) as the "reduction in the concentration and mass of a substance and its breakdown products in groundwater due to naturally occurring physical, chemical, and biological processes without human intervention or enhancement. These processes include, but are not limited to, dispersion, diffusion, sorption and retardation, and degradation processes such as biodegradation, abiotic degradation and radioactive decay."

# 3.0 SCOPE OF SERVICES

Dames & Moore proposes to complete the following five tasks.

## 3.1 Task 1 - Project Preparation

Dames & Moore will prepare a Work Plan for submittal to the Wisconsin Department of Natural Resources (WDNR) in accordance with Wisconsin Admin. Code NR 169 and 700 requirements. This Work Plan will describe the procedures that will be implemented for the installation of additional monitoring wells, the collection of groundwater samples, the installation of an SVE well, and completion of an SVE pilot test.

Dames & Moore will contact the Wisconsin Department of Natural Resources (WDNR) and request to review the project file for the gas station property adjacent to the Middleton Cleaners property. Monitoring wells were observed on this property, and previous groundwater monitoring and groundwater elevation data may be useful to identify the width of the PCE plume downgradient from the suspected source area located near the former USTs.

Prior to beginning site activities, Dames & Moore will prepare a Health and Safety Plan in accordance with Wisconsin, federal, and local requirements. Dames & Moore will also notify "diggers hotline" to request clearance of underground utilities in the site vicinity. If clearance of onsite utilities cannot be cleared by "diggers hotline," or by a representative of Northern Properties, a private utility locating service may be needed. For the purpose of preparing this proposal, we have not included costs for a private utility locating service because we have assumed this service will not be needed.

## 3.2 Task 2 - Monitoring Well Installation and Development

Dames & Moore recommends that five additional monitoring wells be installed around the perimeter of the Middleton Cleaners facility. Water table observation wells should be installed at the following locations.

• South-southwest of the site within the City right-of-way of Elmwood Avenue. This well will be located upgradient from the facility. Groundwater samples will be collected from this well and used to determine upgradient groundwater quality.

- West-northwest of well MW-4 on the north side of the alley or in the alley. Samples collected from this well will be used to identify the lateral extent of contamination west of MW-4.
- In the driveway/parking lot between University Avenue and the site building. Samples collected from this well will be used to identify the lateral extent of contamination downgradient from MW-4.
- A well nest should also be installed on the north side of University Avenue. This well nest
  will include a water table observation well, and a piezometer installed 25 deeper than the
  water table well. Groundwater samples collected from this well nest will be used to identify
  the off-site extent of contamination.

All wells will be installed in boreholes advanced with a truck mounted rotary drill rig using 4 1/4-inch ID hollow stem augers. For the purpose of preparing this proposal, we have assumed that groundwater will be encountered at a depth between 45 and 47 below the ground surface. Accordingly, all water table observation wells will be advanced to 55 feet. Each piezometer will be constructed with schedule 40 PVC well casings and screens. Well screens with 0.010-inch slot size openings will be installed between 45 and 55 feet below ground surface. A sand pack will be placed around the well screen as the augers are removed, and a bentonite seal will be installed above the sand pack. The annular space seal will be backfilled with bentonite. Each well will be encased in a flush mount or stickup protective well casing as needed, and secured with a locking cap.

Following well installation, each well will be developed by surging and purging until 10 well volumes have been removed. All soil cuttings and purge water will be placed in 55 gallon DOT approved drums. Dames & Moore will assist Northern Properties with the soil and water disposal following the collection of groundwater samples. All drilling, well construction, and well development work will be completed in accordance with Wisconsin Administration Code NR 141 requirements. Additionally, the top of each PVC well casing elevation will be surveyed relative to mean sea level datum. Static water levels will be measured in each well prior to sample collection to determine groundwater elevations and flow conditions.

## 3.3 Task 3 - Groundwater Sample Collection

Dames & Moore proposes the collection of groundwater samples from existing and proposed monitoring wells. For the purpose of preparing this proposal, we have also assumed that samples

will also be collected from two wells located on the gasoline service station property. Groundwater samples will be collected from each well a minimum of one week following well development. Samples will be analyzed for VOCs by USEPA Method 8021 and geochemical indicator parameters. Geochemical indicator parameters include chloride, dissolved iron, nitrogen, sulfate, dissolved oxygen, oxidation reduction potential, and temperature. Samples will be held on ice and shipped along with the appropriate chain of custody forms to a Wisconsin certified laboratory.

To assess the biodegradation of contaminants, geochemical indicator parameters will be used for preliminary screening to determine if biodegradation is occurring in accordance with procedures outlined in the *United States Air Force Guidance November 1996 document entitled Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater*. As described in this document, chlorinated hydrocarbons may undergo biodegradation. Typically, chlorinated hydrocarbons are indirectly degraded by microorganisms that use petroleum hydrocarbons or another substrate as a source of energy.

## 3.4 Task 4 - Soil Vapor Extraction Well Installation and Pilot Test

Concurrent with the installation of additional monitoring wells, Dames & Moore recommends that an SVE recovery well be installed. This well should be installed near the boiler room building centered between the GP-5 and GP-12 boring locations. The SVE well will be installed in a boring advanced with 6.25-inch ID hollow stem augers, and constructed with 4-inch diameter schedule 40 PVC well casing and screen. A well screen 20 feet in length will be placed between 10 and 30 feet below ground surface. A sand pack will be placed around the well screen as the augers are removed, and a bentonite seal will be installed above the sand pack. The annular space seal will be backfilled with bentonite, and the well will be encased in a flush mount protective well casing, and secured with a locking cap. All soil cuttings and purge water will be placed in 55 gallon DOT approved drums. Drilling and well construction will be completed in accordance with Wisconsin Administration Code NR 141 requirements.

A pilot test will then be performed to determine optimum air flow rates for the SVE well. The portable blower will be connected to the SVE well, and operated at a minimum of three different flow rates up to 100 cubic feet per minute for up to 8 hours. The pressure will be measured at wells MW-1, MW-4, and MW-3 located at distances 10, 40, and 50-feet, respectively, away from the SVE well. Field measurements will be used to size a blower, and to determine optimum locations for additional SVE wells and well screen placement. Additionally, a minimum of four air samples will be collected to identify effluent concentrations that will be discharged to the atmosphere. This

information will be used to evaluate the need for an air permit, and possibly the need for air treatment prior to discharge.

# 3.5 Task 5 - Data Analysis, Conceptual Design, and Status Report Preparation

After competing the pilot test, and upon receipt of all laboratory data, Dames & Moore will summarize the results in a status report. This report will include the description of existing site conditions, a description of the work performed, groundwater monitoring results, and results of the SVE pilot test. Groundwater monitoring data and groundwater elevations will be tabulated. A site map will be prepared to show all sample locations, the location of site features (buildings and roads), and the locations of the former USTs. A water table map, a potentiometric surface map, and plume maps will also be prepared as needed. Soil boring logs, well construction forms, well development forms, and laboratory reports will be included as appendices to the report in accordance with WDNR guidelines. The installation of additional monitoring wells may be recommended at this time if the lateral extent of groundwater contamination has not been identified.

If the extent of groundwater contamination is identified, Dames & Moore will present a conceptual design for the installation of an SVE system to remove contaminants from the unsaturated zone. The SVE system will utilize the SVE well installed during the pilot test. Based on our experience with SVE systems at other sites, we anticipate that three to four additional SVE wells will be needed. Additional SVE wells will likely be needed on the south and east sides of the dry cleaning equipment room building. Well screens for these wells will be installed to intersect the smear zone because previous site investigation results have identified contamination at these depths at these locations. We will also evaluate the installation of the SVE blower in the blower room or dry cleaning equipment room, if site conditions permit. Significant savings can be realized if construction of a remediation building is not needed.

Dames & Moore will also recommend that groundwater samples be collected quarterly during the first year of operation. These results will be used to evaluate potential remedial alternatives for groundwater.

## 4.0 PROJECT TEAM

Dames & Moore will assemble a staff with relevant qualifications and appropriate experience for preparation of the work plan, implementation of the site investigation, and preparation of the report. A brief description of key staff members for this work follows:

David Trainor, P.E., P.G., Principal in Charge in the Madison office, will be responsible for overall technical supervision and coordination, and scheduling of the project. Mr. Trainor has over 20 years of experience in the environmental field. As an engineer, he has worked in varying capacities on a variety of hazardous waste projects. He has served as project director for various Dames & Moore subsurface contaminant investigations in Wisconsin and other midwestern states. Mr. Trainor will be responsible for technical review and assist in negotiations with the Agency.

Mr. Mark McColloch, P.G., will serve as Project Manager and will be responsible for day-to-day project management duties. Mr. McColloch is a professional geologist registered in the State of Wisconsin and geologic engineer with 10 years of experience in the environmental field. He has supervised drilling activities, interpreted hydrogeologic conditions, and prepared subsurface investigation reports for numerous contamination sites throughout the Midwest. Mr. McColloch has also served as project manager for several remediation project which have included SVE, bioventing, ozone sparging, and groundwater extraction and treatment. He will be responsible for overseeing all field activities, and preparing the status report.

Other Dames & Moore staff will be utilized as necessary for field and office tasks.

## 5.0 ESTIMATED FEES

Estimated fees to complete the scope of services outlined in this proposal have been included on Table 1. Estimated fees for the design, installation, and operation of a remediation system

#### Labor

Projected Dames & Moore labor is itemized in accordance with the standard Schedule of Charges, a copy of which is attached and made part of this proposal.

### Expenses

Expenses include transportation and subsistence costs of \$75. We anticipate that site work will require five days for drilling, one day for well development, two days for groundwater sample collection, and one day for the pilot test.

#### **Equipment**

Equipment requirements will include well development equipment, survey equipment, groundwater sampling equipment, and in-situ hydraulic conductivity test equipment.

#### Subcontractor Services

Subcontractor services needed for this project will include drilling and laboratory services. For the purpose of preparing this proposal, we have obtained cost estimates from Badger State drilling for drilling services, and Northern Lake Services, Inc. for laboratory services. A 10 percent handling charge has been added to each subcontractor service listed in Table 1.

Table 1 - Estimated Fees

		<u> </u>		Cost			
Task	Rate	Units	Qty	Dames & Moore	Subcontractor		
Task 1 - Project Preparation				•			
Project Manager Project Geologist Accounting/Clerical	\$90 \$80 \$45	Hour Hour Hour	2 8 2	\$180 \$640 \$90			
	Subtotal	\$910	\$0				
Task 2 - Monitoring Well Installation and De	velopment						
Project Manager Staff Geologist - drilling supervision Staff Geologist - well development Expenses Equipment Well Installation - Drilling 1	\$90 \$55 \$55 \$75 \$25	Hour Hour Hour Day Day Estimate	6 50 10 6 6	\$540 \$2,750 \$550 \$450 \$150	\$10,000		
m 12.6			Subtotal	\$4,440	\$10,000		
Project Manager Field Manager Expenses Equipment Laboratory - Stoddard Solvent & VOCs 1 Laboratory - Geochem. Indic. Parameters 1	\$90 \$55 \$75 \$75 \$170 \$50	Hour Hour Day Day Each Each	2 16 2 2 13 13	\$180 \$880 \$150 \$150	\$2,210 \$650		
Subtotal \$1,360 \$2,860							
Task 4 - Soil Vapor Extraction Well Installat	ion and Pi	lot Test					
Project Manager Field Manager Expenses Equipment - Blower Rental <sup>1'</sup> Laboratory - Stoddard Solvent & VOCs <sup>1'</sup>	\$90 \$55 \$75 \$1,500 \$170	Hour Hour Day Estimate Each	2 10 1 1 4	\$180 \$550 \$75	\$1,500 \$680		
Subtotal \$1,030 \$2,180							
Task 5 - Data Analysis, Conceptual Remediation System Design , and Status Report Preparation							
Project Director Project Manager Project Geologist/Engineer Staff Geologist/Engineer Technical Illustrations Accounting/Clerical Expenses	\$125\$9 0 \$80 \$75 \$65 \$45 \$500	Hour Hour Hour Hour Hour Hour Estimate	6 8 40 24 16 8 1	\$750 \$720 \$3,200 \$1,800 \$1,040 \$360 \$500			
Subtotal \$8,370 \$0							
			T-4-1	\$16,110	\$15,040		
	Total	\$31,150					

<sup>1 -</sup> Includes 10% Dames & Moore handling charge.

## 6.0 SCHEDULE

Dames & Moore is prepared to begin Task 1 within one week following authorization to proceed. We will schedule a drill rig for installation of the monitoring wells as soon as possible. We anticipate that the drill crew can be scheduled within two weeks, and that 6 days will be required for well installation and development. The pilot test and collection of groundwater samples will be collected one week following well installation. We anticipate that it will take three weeks for laboratory analysis of the groundwater samples. A draft report will be prepared within four weeks following the completion of the pilot test and collection of groundwater samples.

## 7.0 TERMS AND CONDITIONS

Dames & Moore will provide consulting services on a time and materials basis for the scope of services outlined in Section 3.0 of this proposal in accordance with our General Conditions - Form A which is attached. Our estimated fees have been prepared in accordance with Dames & Moore's Schedules of Charges as (also attached). Dames & Moore agrees not to exceed these estimated fees without written approval. These estimated fees have been itemized in Table 1.

Please sign and return a copy of Form A authorizing Dames & Moore to proceed with the project.

# ATTACHMENT A GENERAL CONDITIONS AND STANDARD SCHEDULE OF CHARGES

#### **GENERAL CONDITIONS - FORM A**

#### 1.0 BILLING

- 1.1 Invoices will be issued every four weeks, payable upon receipt, unless otherwise agreed.
- 1.2 Interest of 1½% per month (but not exceeding the maximum rate allowable by law) will be payable on any amounts not paid within 30 days, payment thereafter to be applied first to accrued interest and then to the principal unpaid amount. Any attorney's fees or other costs incurred in collecting any delinquent amount shall be paid by the Client.
- 1.3 In the event that the Client requests termination of the work prior to completion of a report, Dames & Moore reserves the right to complete such analyses and records as are necessary to place its files in order and, where considered by it necessary to protect its professional reputation, to complete a report on the work performed to date. A termination charge to cover the cost thereof in an amount not to exceed 30% of all charges incurred up to the date of the stoppage of the work may, at the discretion of Dames & Moore, be made.

#### 2.0 WARRANTY AND LIABILITY

- 2.1 Dames & Moore warrants that its services are performed, within the limits prescribed by its Clients, in a manner consistent with that level of care and skill ordinarily exercised by members of the same professions currently practicing in the same locality under similar conditions. No other warranty or representation, either expressed or implied, is included or intended in its proposals, contracts, or reports.
- 2.2 Dames & Moore has neither created nor contributed to the existence of any hazardous, radioactive, toxic or otherwise dangerous substance or condition at the site, and its compensation hereunder is in no way commensurate with the potential risk of injury or loss that may be caused by exposure to such substances or conditions. Accordingly, notwithstanding any other provision herein, the liability of Dames & Moore, it employees, subcontractors and agents for any injury or loss arising from any such pre-existing or client generated dangerous substance or condition at or near the project site, shall not exceed \$1,000.
- 2.3 Dames & Moore, its employees, subcontractors and agents shall not be liable for indirect or consequential damages, including without limitation loss of use and loss of profits.
- 2.4 In addition to the limitations provided in 2.2 and 2.3, and notwithstanding any other provision herein, the liability of Dames & Moore, its employees, subcontractors and agents shall be limited to injury or loss to the extent caused by the negligence of Dames & Moore its subcontractors and/or agents hereunder, and the liability of Dames & Moore for injury or loss arising from (1) professional errors or omissions and/or (2) environmental impairment or pollution and/or (3) radiation, nuclear reaction, or radioactive substances or conditions shall not exceed \$1,000,000.
- 2.5 The liability of Dames & Moore, its employees, subcontractors and agents for any other claim(s) of any kind shall not exceed \$500,000.
- 2.6 Increased liability limits may be negotiated upon client's written request, prior to commencement of services, and agreement to pay an additional fee.
- 2.7 The Client agrees to indemnify and hold harmless Dames & Moore, its employees, subcontractors and agents against and from any claim, liability, attorneys' fees or other defense costs incurred because of (I) injury or loss caused by the actions or omissions of the Client, its employees or its other agents, contractors or subcontractors, or (ii) any third party claim arising from the performance of services hereunder by Dames & Moore, its agents or subcontractors to the extent the liability and cost exceed the relevant amount of Dames & Moore's liability specified in section 2.2-2.6 above and does not result solely from the negligence or willful misconduct of Dames & Moore, its agents or subcontractors.
- 2.8 In the event the Client makes a claim against Dames & Moore, at law or otherwise, for any alleged error, omission, or other act arising out of the performance of the professional services, and to the extent the Client fails to prove such claim, then the Client shall pay all costs, including attorney's fees, incurred by Dames & Moore in defending itself against the claim.

#### 3.0 AUTHORIZED LIMITS OF LIABILITY

3.1 Client authorization to proceed without execution of this section indicates acceptance of the standard terms and conditions described above in 2.0. Fees for limits of liability selected below shall be payable upon authorization to proceed, and every 12 months thereafter (subject to annual adjustment) until final payment for services under this authorization has been received.

3.2 Type of	Liability	Reference	<u>Liability Limit</u>	Annual Fee		
Professi	Professional Liability		<b>\$</b>	S		
Nuclear Liability		2.4(3)	\$ <u>1,000,000</u>	\$0		
Non-nuc	lear Seepage and Pollution					
Liability (Environmental Impairment)		2.4(2)	\$	\$		
Comprehensive General and Automobile Liability		2.5	\$	s		
Client Name:	Northern Properties	· · · · · · · · · · · · · · · · · · ·	DA	MES & MOORE		
Client Address	: <u>1625 N. Golf Glen #E</u>		25	Kessel Court, Suite 201		
<u></u>	Madison, WI 53704		Ma	dison, WI 53711		
Signed By:			Pau	l P. Trues (HSM)		
Title:			Pri:	Principal-In-Charge		
Date:			Feb	February 3, 2000		
	•		posal No. 133-02-999			

## DAMES & MOORE SCHEDULE OF CHARGES

The compensation to Dames & Moore for our professional services is based upon and measured by the following elements, which are computed as set forth below.

#### 1.0 PERSONNEL CHARGES

- 1.1 Charges for employees are computed by multiplying the total direct salary cost of our personnel (expressed as an hourly rate) by a factor of 2.5. The total direct salary cost shall be a sum equal to the direct payroll cost (computed by dividing the annual payroll cost by 1,940 hours) plus 40 percent of same to cover payroll taxes, insurance incident to employment, sick leave and other employee benefits. The time of an employee of subsidiary companies or a retained consultant devoted to the project is charged at an assigned billing rate.
- 1.2 The 40 percent employee benefit factor is used for work performed by personnel assigned to offices in the United States. For work performed by personnel in our offices in other countries, it will vary depending on the employee benefits paid in the particular location.
- 1.3 Time spent in either local or inter-city travel, when travel is in the interest of the work, will be charged for in accordance with the foregoing schedule; when traveling by public carrier, a maximum charge of eight hours per day will be made.
- 1.4 Time spent in responding to any subpoena or other judicial or governmental request for documents or testimony in connection with the Scope of Services shall be compensated without regard to any other limitation on compensation.

#### 2.0 EQUIPMENT CHARGES

- 2.1 Computer control of project and (non-CADD/GIS related) computer equipment costs will be billed at a rate of \$1.50 per each \$50 of job charges or fraction thereof.
- 2.2 Communication charges including facsimile charges, will be billed at the rate of 1.25 percent of total job charges. No billing backup will be supplied for these charges.
- 2.3 Duplicating costs will be billed at 1.0 percent of total job charges. No billing backup will be supplied for these charges.
- Other Dames & Moore equipment, if used, will be billed at the rates noted in the proposal. Where not noted in the proposal, equipment will be billed in accordance with the published rates in the current Dames & Moore Equipment Rate Catalog.

#### 3.0 OTHER SERVICES AND SUPPLIES

- 3.1 Charges for services, equipment and facilities not furnished directly by Dames & Moore, and any unusual items of expense not customarily incurred in our normal operations, are computed as follows, unless otherwise indicated in the proposal or scope of services:
  - 3.1.1 Non-personnel costs, including attorney's fees, incurred in responding to any subpoena or other judicial or governmental request for documents or testimony in connection with the Scope of Services, without regard to any other limitation or compensation.
  - 3.1.2 Cost plus 10 percent includes shipping charges, professional services, subsistence, transportation, printing, miscellaneous supplies and rentals.
  - 3.1.3 Cost plus 15 percent includes surveying services, land drilling equipment, construction equipment, and testing laboratories.
  - 3.1.4 Cost plus 15 percent for contract labor, unless indicated otherwise.
  - 3.1.5 Cost plus 25 percent for aircraft, watercraft, helicopter and marine drilling equipment and operation.
- 3.2 Client shall be responsible to Dames & Moore for payment of all costs, including attorney fees, for services necessary to respond to any subpoena or other judicial or administrative request for documents or testimony in connection with the Scope of Services.