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Spills - SP
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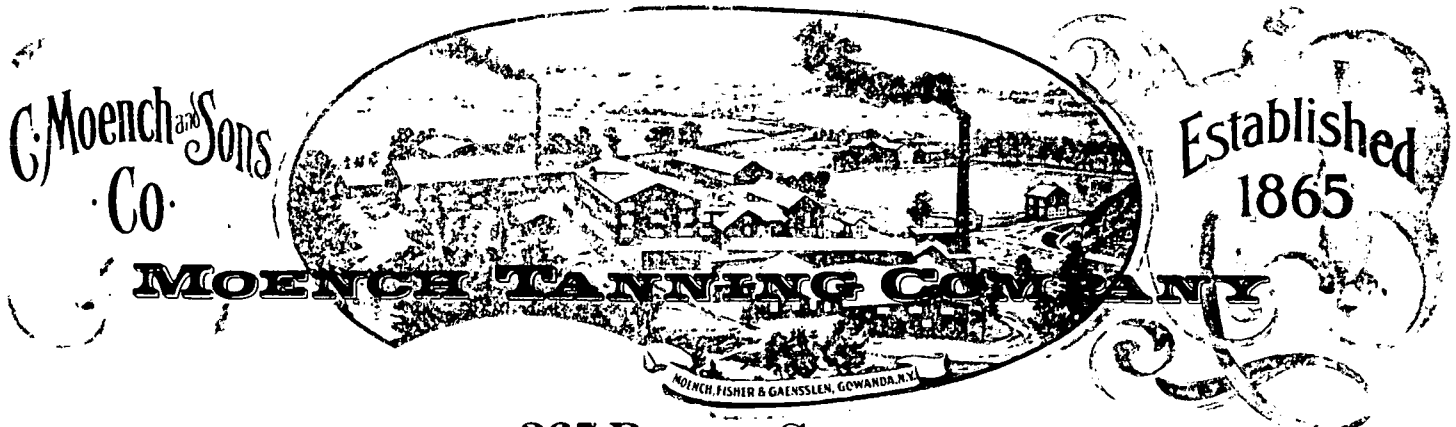

265 PALMER STREET
GOWANDA, NEW YORK 14070

TEL. 716-532-2201 **FAX 716-532-5518**

May 27, 1999

Mr. David Stever
NYSDEC- 9
270 Michigan Ave.
Buffalo, New York 14203-2999

Re: Tannery Site Work Plan

Dear Mr. Stever:

Enclosed is a copy of the "Tannery site groundwater monitoring work plan", for installation of a system on the former tannery site. Moench has edited the original "draft" version, submitted in July of 1996. The Edits reflect revisions/concerns, which have occurred since 8/96, from Stan Radon and myself. Mr. Radon and I have discussed and agree on these items.

Mr. Radon has indicated that acceptance by the NYSDEC of the last submittal of the "Order On Consent", from Nixon-Hargrave and Moench, may be imminent.

Mr. Radon requested that a "non-draft" version of the Work Plan, as a prerequisite to the NYSDEC acceptance.

Please call me if you have any further questions.

Sincerely,

Jeffrey Smith

Jeffrey Smith
Environmental Engineer

Cc:Lloyd Brunkhorst-Brown Group
John Greenthal-Nixon Hargrave
Stan Radon-NYSDEC-9

SR

MALCOLM PIRNIE

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TANNERY SITE GROUNDWATER MONITORING WORK PLAN

BROWN GROUP, INC.
GOWANDA, NEW YORK

JULY 1996
MAY 1999-EDITED BY MOENCH CO./BROWN GROUP

MALCOLM PIRNIE, INC.

S-3515 Abbott Road
P. O. Box 1938
Buffalo, New York 14219

0605-243-100

5/99

MALCOLM PIRNIE

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TANNERY SITE GROUNDWATER MONITORING WORK PLAN

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1.0 INTRODUCTION

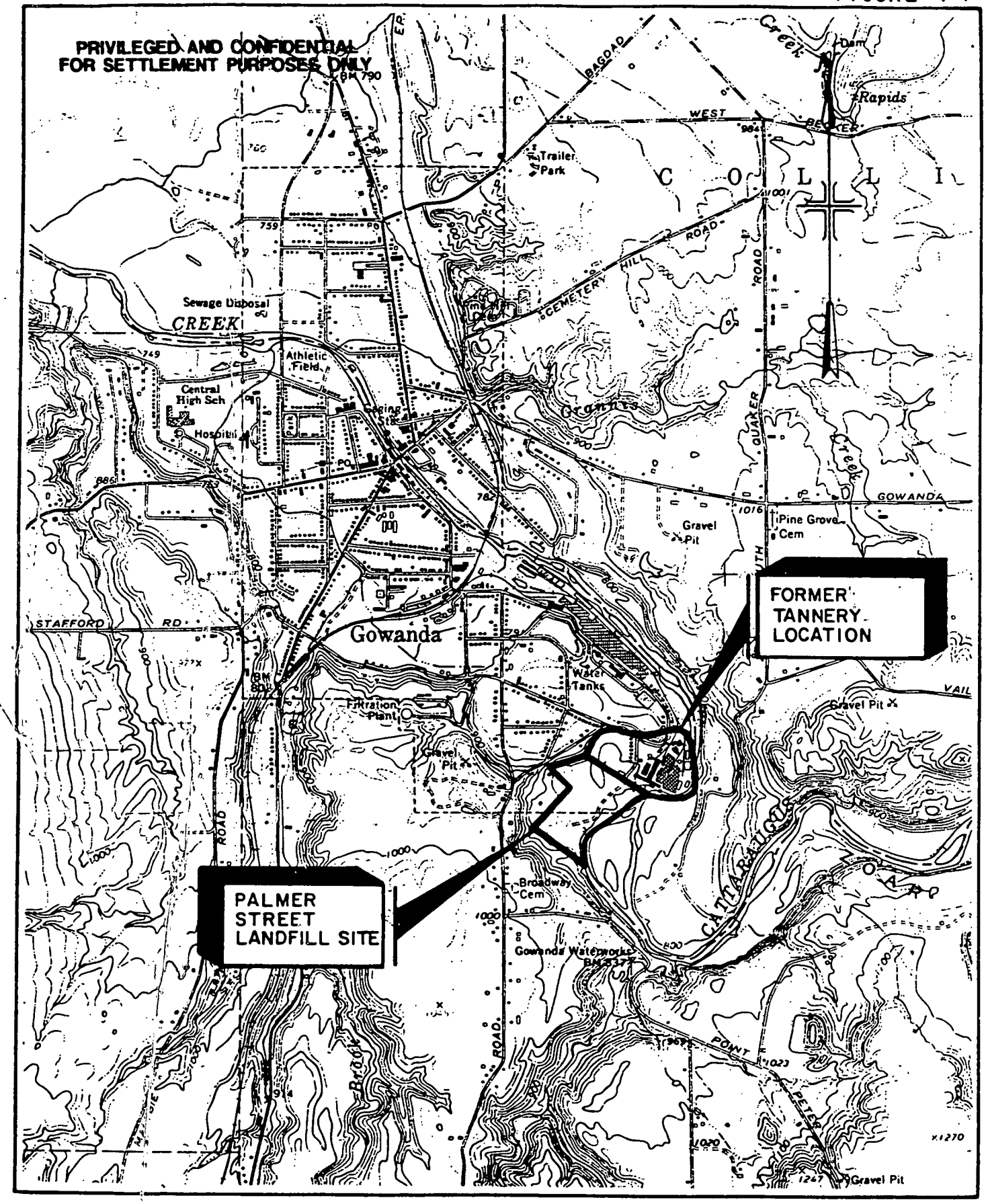
1.1 Site Background

The Moench Tanning Company operated a tannery in Gowanda, New York (see Figure 1-1) from the late 1800's until 1992. The tannery complex comprised of over 30 buildings and a wastewater treatment plant, was demolished between November 1993 and February 1994. The purpose of the demolition was to substantially reduce the potential future nuisances and physical hazards associated with the site. Demolition included:

- Disconnection and decommissioning of all utilities including electric, natural gas, water service, and sanitary and storm sewers.
- Asbestos removal.
- Demolition of all buildings (except the office building and a small, new waste water treatment plant).
- Demolition of the fire protection reservoir.
- Demolition of ten houses along Moench Street owned by the Brown Group.
- Cracking and backfilling all pits, vaults and other depressions, including all below grade tanks of the wastewater treatment plant (equalization, aeration and clarification).
- Construction of a new storm sewer section.
- Placement of a minimum of 12 inches of soil cover over all areas of the site.
- Establishing a vegetative cover across the site.
- Fencing the property.

A variety of chemicals were used in the tanning process, most notably, trivalent chromium. Prior to site demolition, an environmental mitigation plan was implemented which included removal of chromium contamination from concrete walls, floors and other

5/94 FIGURE 1-1



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TANNERY SITE
GROUNDWATER MONITORING WORK PLAN
SITE LOCATION

MOE - 24

MOENCH TANNING COMPANY APRIL 1995

surfaces; removal of chromium contaminated sediment and residue; and removal of a small volume of soil contaminated with PAHs (benzo(a)anthracene, benzo(b)fluoranthene, and benzo(k)fluoranthene). Verification sampling was conducted following completion of mitigation actions.

1.2 Purpose

Presently there are no groundwater wells at the tannery site to investigate groundwater quality. Thus, the purpose of the tannery site groundwater monitoring program is to install and sample wells in the uppermost water bearing zone to determine if there is an impact to the groundwater & potentially Cattaraugus crk. The Tannery Site Groundwater Monitoring Work Plan presents the well location, installation, construction and development details; sampling and analytical plan; and data evaluation procedures.

2.0 WELL INSTALLATION

At the request of the NYSDEC, a total of three wells (T-1, T-2 and T-3) will be installed in the uppermost water bearing zone on the tannery site at the proposed locations illustrated on Figure 2-1. This section describes the drilling methods, equipment decontamination procedures, well installation and construction details, well development and slug testing procedures, and survey requirements. Detailed well installation procedures are presented in "Post Closure Groundwater Detection Monitoring Program for the Palmer Street Landfill", (Malcolm Pirnie, 1989).

Three temporary well points will also be installed west of the proposed monitoring wells (see Figure 2-1) to provide additional groundwater level data for determining the hydraulic gradient across the site. Also, Moench Tanning may elect to install a monitoring well upgradient of the former tannery site to determine upgradient groundwater quality. The decision to install an upgradient well will be based on the results of groundwater quality sampling from T-1, T-2, and T-3; and on the groundwater flow directions.

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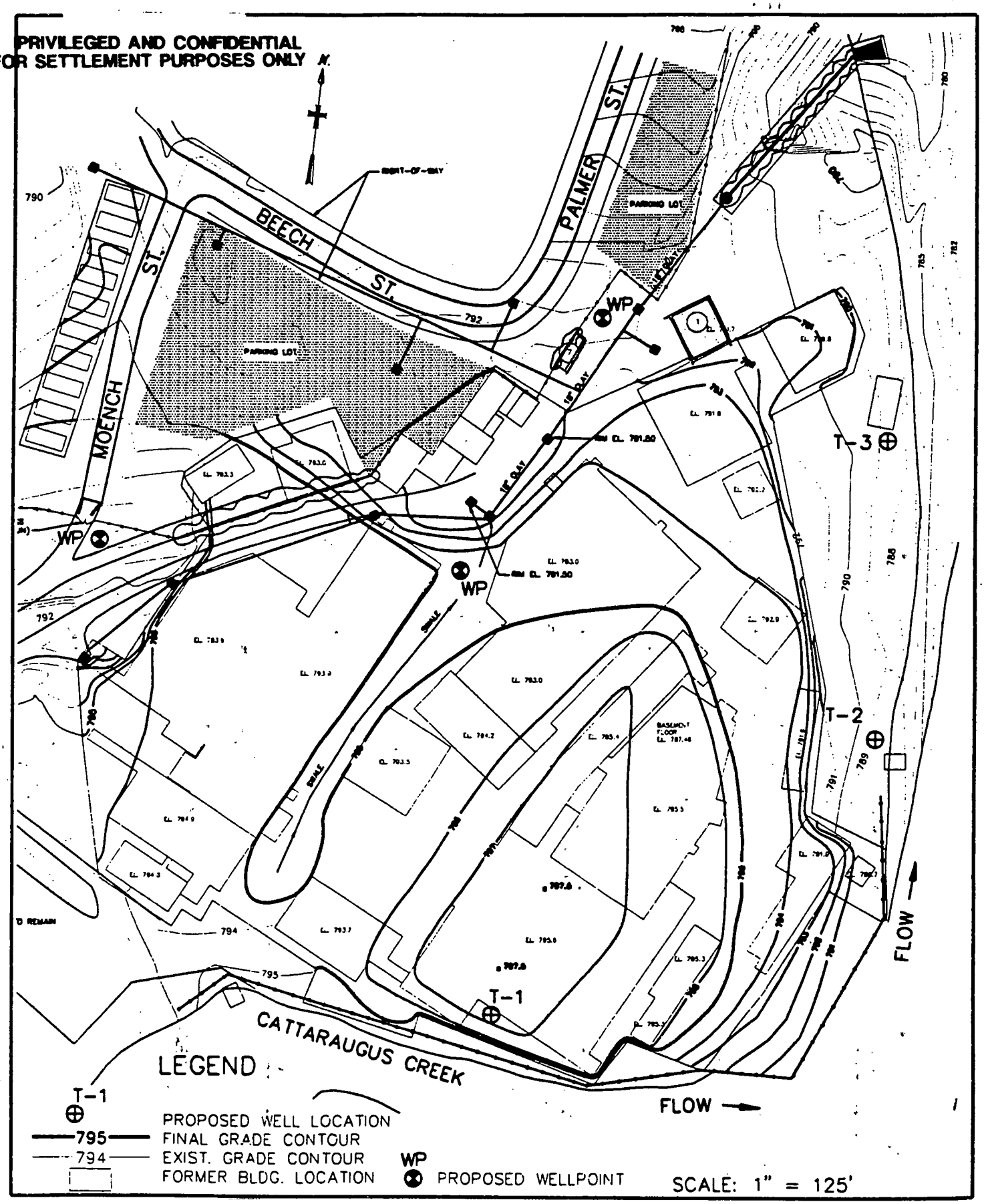

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MTC-24-MWL

TANNERY SITE
GROUNDWATER MONITORING WORK PLAN
PROPOSED MONITORING WELL LOCATIONS

MOENCH TANNING COMPANY JULY 1996

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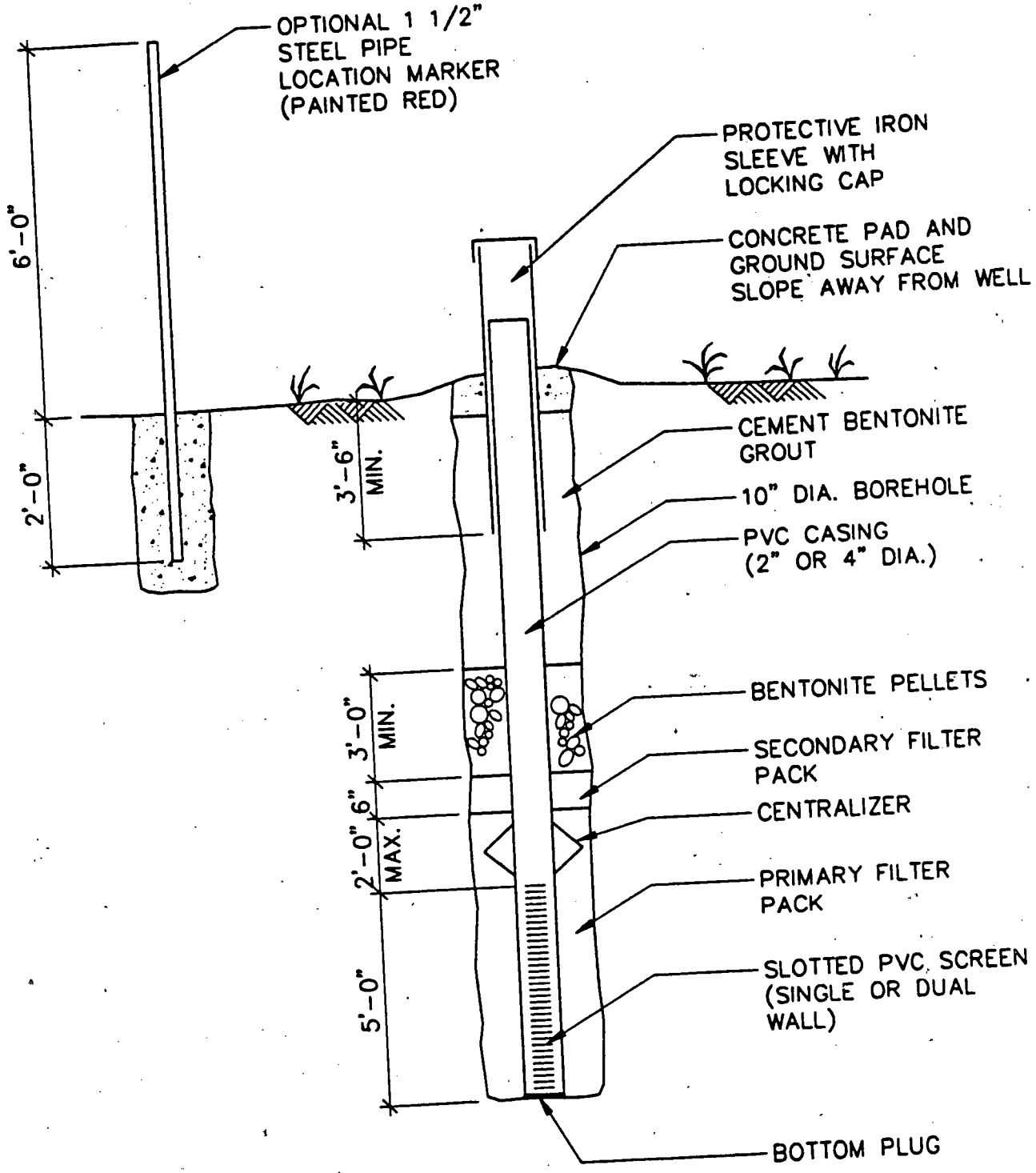

TANNERY SITE
GROUNDWATER MONITORING WORK PLAN
WELL CONSTRUCTION DETAILS

MOENCH TANNING COMPANY JULY 1996

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MTC-24-OWC

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2.1 Drilling Methods

The borings for T-1 through T-3 will be advanced with 6¼-inch hollow stem augers. Continuous split spoon sampling will be performed to determine the depth of the first water bearing zone encountered in the overburden. Split spoon samples will be screened for organic vapors using an HNu analyzer, visually classified, and retained in clean one-quart jars for future reference. If a water bearing zone is not encountered in the lower overburden, the 6¼-inch hollow stem auger will be advanced to the top of bedrock and a temporary casing installed through the augers. The boring will be further advanced with an HX core barrel to obtain rock core every 5 feet until a water bearing zone is encountered. Rock core will be described by a Malcolm Pirnie geologist and retained in wooden core boxes.

2.2 Drilling Equipment Decontamination

To prevent cross-contamination between boring locations, the drilling rig and all drilling accessories will be thoroughly decontaminated using low-pressure steam before arriving on-site and between wells. Split spoon samplers will be brushed clean of soil and steam cleaned between wells. Decon water will be discharged to the ground surface.

2.3 Well Installation

Overburden monitoring wells will be installed according to the design shown on Figure 2-2. Overburden well materials will consist of 2-inch flush threaded Schedule 40 PVC with 5 feet of 6 slot screen and #1 sand. If a water bearing zone is not encountered in the overburden, the well will be screened in the uppermost bedrock water bearing zone. All bedrock wells will be installed with well screens as illustrated on Figure 2-2, but with the bentonite pellet seal across or just below the overburden-bedrock contact. Bedrock well materials will include 2-inch flush threaded Schedule 40 PVC with 5 feet of 10 slot screen and #2 sand. The screened interval will be selected by the Malcolm Pirnie field geologist based on soil/rock core observations.

The well points will be driven to refusal using the drilling rig, and a bentonite seal will be placed around the riser from the ground surface to approximately one foot below ground.

2.4 Well Development, Testing, and Survey

All newly-installed monitoring wells will be developed to remove introduced sediment and to improve the hydraulic properties of the sand pack. Wells will be pumped or bailed until a turbidity reading of <50 NTU is obtained or until the turbidity level stabilizes, indicating that additional development will be ineffective. Field measurements of pH, conductivity and temperature will be recorded for each volume of water recovered during development.

In-situ hydraulic conductivity testing (slug testing) will be conducted on each new well following development. The slug testing will not be initiated until the wells have returned to static water level conditions after development. The tests will be conducted by displacing water in the well and monitoring the rate at which the water level recovers to static conditions. During slug testing, water level data will be collected using a down hole pressure transducer linked to a data logger, or water level will be collected manually. Water level recovery data will be analyzed by the method of Bouwer and Rice (1976, 1989).

Monitoring well and wellpoint locations will be surveyed following installation. Both the ground elevation and the top of riser will be surveyed. A point at the top of the former wastewater treatment plant headwall will be surveyed to provide a gauge point for monitoring the water surface elevation in Cattaraugus Creek. The exact location of the gauge point will be determined in the field, and should be directly above a point at which the water surface contacts the headwall during all seasons. Measurements will be made from the top of the wall to the water surface using an electric groundwater level meter. Surface water and groundwater levels will be measured during each groundwater sampling event.

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2.5 Well Installation Report

Prior to the first round of sampling, a well installation report will be prepared and submitted to the NYSDEC. The report will include boring logs, well construction diagrams, well development, slug testing, and survey data, and a groundwater isopotential map for the former tanner site.

3.0 SAMPLING AND ANALYSIS PLAN

3.1 Frequency

As agreed to with NYSDEC, the tannery site groundwater monitoring program will have a limited duration provided that contaminant concentrations, if any, do not exceed trigger limits. The tannery site monitoring wells will be sampled and analyzed four times over a two year period. Monitoring will be conducted on a seasonal basis, with sampling being conducted during a high groundwater period (spring) and a low groundwater period (late fall). One round of sampling will be conducted during each of the four monitoring events, in conjunction with the Palmer st. landfill groundwater monitoring.

3.2 Parameters

The recommended monitoring parameters are listed in Table 3-1. These parameters are the same as those analyzed in the Palmer Street Landfill detection monitoring program. Laboratory analyses will include soluble arsenic, soluble chromium, soluble lead, and volatile organic compounds. Samples that will be analyzed for metals will be filtered to eliminate interference from metal-bearing sediment which may be present in the sample. To mitigate potential effects of the filtering process, filtration will be performed under pressure (as opposed to vacuum) with an in-line filter.

3.3 Sampling and Analysis Methods

The three newly installed monitoring wells on the tannery site will be purged, sampled and analyzed according to the procedures presented in Sections 3.0 and 4.0 of

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TABLE 3-1

MOENCH TANNING COMPANY
TANNERY SITE GROUNDWATER
MONITORING WORK PLAN

GROUNDWATER QUALITY MONITORING PARAMETERS

Soluble Arsenic
Soluble Chromium
Soluble Lead

Volatile Organics(2)

pH(1)

Conductivity(1)
Turbidity(1)
Groundwater Elevation(1)
Temperature(1)

All samples collected for analysis of soluble metals will be pressure-filtered in the field immediately upon sample collection.

NOTES:

1. All field parameters (i.e., pH, specific conductance, temperature and turbidity) will be measured in the field. No analysis of these parameters will be required by the laboratory.

2. Volatile organic compounds will be those compounds determined by SW-846, Method 8260.

the Sampling Plan and Quality Assurance Plan for Monitoring Activities at the Palmer Street Landfill (Appendix 2 of the Palmer Street Landfill Post Closure Plan, Malcolm Pirnie, revised March, 1994). Static water levels will be monitored in each well prior to purging.

4.0 DATA EVALUATION

Data will be evaluated after all four rounds of groundwater samples have been collected and analyzed. Only laboratory analyzed parameters will be considered. An exceedance of Class GA groundwater standards presented in 6NYCRR Part 703.5 (see Table 4-1) will indicate the need for further evaluation, including a determination of the impact to Cattaraugus Creek and a determination if the tannery site is the source of contamination. If no concentrations above Class GA groundwater standards are detected, the results will be reported to the NYSDEC, the tannery site monitoring wells will be decommissioned, and the tannery site groundwater monitoring program will be considered complete.

If groundwater concentrations exceed the Class GA standards, a calculation of mass loading to Cattaraugus Creek will be performed in concert with the Palmer Street Landfill Cover System Performance Evaluation scheduled for spring 2003. The loading calculation will use the average groundwater concentrations from four rounds of sampling and an estimate of average groundwater flow to the Creek (average flow of the four sampling events). The mass load will be converted into surface water concentrations using the average flow and the low flow of Cattaraugus Creek reported for the USGS flow monitoring station in the Village of Gowanda. The potential impacts to the Creek will be evaluated based upon a comparison of calculated surface water concentrations (attributable to site groundwater discharge), to Class C surface water quality standards.

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TABLE 4-1

MOENCH TANNING COMPANY
TANNERY SITE GROUNDWATER MONITORING WORK PLAN

UPPER BEDROCK GROUNDWATER TRIGGER LIMITS

Parameter	6NYCRR Part 703.5 Class GA Standards (mg/l)
Inorganics:	
Arsenic (Soluble)	0.025
Chromium (Soluble)	0.050
Lead (Soluble)	0.025
Organics:	
Benzene	0.0007
Bromobenzene	0.005
Bromochloromethane	0.005
Bromodichloromethane	0.050
Bromoform	0.050
Bromomethane	0.005
n-Butylbenzene	0.005
sec-Butylbenzene	0.005
tert-Butylbenzene	0.005
Carbon tetrachloride	0.005
Clorobenzene	0.005
Chloroethane	0.005
Chloroform	0.007
Chloromethane	0.005
2-Chlorotoluene	0.005
4-Chlorotoluene	0.005
Dibromochloromethane	0.050
1,2-Dibromo-3-chloropropane	0.005
1,2-Dibromoethane	0.005[1]
Dibromoethane	0.005
1,2-Dichlorobenzene	(2)
1,3-Dichlorobenzene	0.005
1,4-Dichlorobenzene	(2)
Dichlorodifluoromethane	0.005
1,1-Dichloroethane	0.005
1,2-Dichloroethane	0.005
1,1-Dichloroethene	0.005

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TABLE 4-1

MOENCH TANNING COMPANY
TANNERY SITE GROUNDWATER MONITORING
WORK PLAN

UPPER BEDROCK GROUNDWATER TRIGGER LIMITS

Parameter	6NYCRR Part 703.5 Class GA Standards (mg/l)
Cis-1,2-Dichloroethene	0.005
Trans-1,2-Dichloropropane	0.005[1]
1,2-Dichloropropane	0.005
1,3-Dichloropropane	0.005
2,2-Dichloropropane	0.005
1,1-Dichlropropene	0.005
Ethylbenzene	0.005
Hexachlorobutadiene	0.005
Isopropylbenzene	0.005
p-Isopropyltoluene	0.005
Methylene chloride	0.005
Naphthalene	0.010
n-Propylbenzene	0.005
Styrene	0.005
1,1,1,2-Tetrachloroethane	0.005
1,1,2,2-Tetrachloroethane	0.005
Tetrachloroethene	0.005
Toluene	0.005
1,2,3-Trichlorobenzene	0.005
1,2,4-Trichlorobenzene	0.005
1,1,1-Trichloroethane	0.005
1,1,2-Trichloroethane	0.005
Trichloroethene	0.005
Trichlorofluoromethane	0.005
1,2,3-Trichloropropane	0.005
1,2,4-Trimethylbenzene	0.005
1,3,5-Trimethylbenzene	0.005
Vinyl Chloride	0.002
O-xylene	0.005
M-xylene	0.005
P-xylene	0.005

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TABLE 4-1

MOENCH TANNING COMPANY
TANNERY SITE GROUNDWATER MONITORING
WORK PLAN

UPPER BEDROCK GROUNDWATER TRIGGER LIMITS

Parameter	6NYCRR Part 703.5 Class GA Standards (mg/l)

Notes:

1. Meets the definition of a Class 1 (Halogenated Alkane) Principle Organic Compoind (POC). POC groundwater standard of 0.005 mg/l applies.
2. Sum of 1,2-dichlorobenzene and 1,4-dichlorobenzene shall not exceed 0.0047 mg/l.

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5.0 REFERENCES

Malcolm Pirnie, Inc., Revised March 1994. "Palmer Street Landfill Post Closure Plan, Appendix 2, Sampling Plan and Quality Assurance Plan for Monitoring Activities at the Palmer Street Landfill".

Malcolm Pirnie, Inc., 1989. "Post Closure Groundwater Detection Monitoring Program for
the Palmer Street Landfill: Work Plan for Supplemental Site Assessments".

Bouwer, H., 1989. "The Bouwer and Rice Slug Test-An Update." Ground Water, 27, pp. 304-309.

Bouwer, H., and R. C. Rice, 1976. "A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells." Water Resources, Volume 12, No. 3, pp. 423-428.

265 PALMER STREET
GOWANDA, NEW YORK 14070

TEL. 716-532-2201 FAX 716-532-5518

February 2, 1999

MR. STAN RADON
NYSDEC-9
270 MICHIGAN AVE.
BUFFALO, NEW YORK 14203-2999

RE: PALMER ST. LANDFILL, NOVEMBER 1998, SAMPLE/REPORT.

DEAR MR. RADON:

ENCLOSED IS A NOTE FROM MALCOLM PIRNIE(1/13/99) AND A "REANALYSIS" OF MONITORING LOCATIONS, DETECTING ARSENIC, IN AN INITIAL SAMPLE, BY COLUMBIA ANALYTICAL SERVICES(1/11/99).

MONITOR LOCATION BS-1(WAS A CREEK SAMPLE), DID NOT DETECT ARSENIC(SOLUBLE) IN THE "REANALYSIS". IT DID SO IN THE INITIAL ANALYSIS.

BS-3 WAS NOT ANALYZED AGAIN FOR ARSENIC, BUT DETECTED IN THE INITIAL ANALYSIS.

MW-1D DID DETECT ARSENIC IN THE INITIAL ANALYSIS AND THE "REANALYSIS". THIS IS AN "UPGRADIANT" WELL.

MARY MC INTOSH MENTIONED, IN A RECENT CORRESPONDENCE,THAT ARSENIC HAD BEEN FALSELY DETECTED IN OTHER LANDFILLS THAT USE COLUMBIA ANALYTICAL SERVICES AS THEIR LAB. SHE SUGGESTS THAT THERE MAY BE A PROBLEM WITH THEIR "ICP METHOD 6010B". THE DETECTION OF ARSENIC HAS BEEN SPORADIC, BUT WE WILL BE OBSERVANT TO A TREND.

CALL ME IF YOU HAVE ANY FURTHER QUESTIONS.

SINCERELY,

J. Smith

JEFFREY SMITH
ENVIRONMENTAL ENGR.

CC:LLOYD BRUNKHORST-BROWN GROUP INC.
KENT MC MANUS-MALCOLM PIRNIE INC.

MALCOLM PIRNIE

LETTER OF TRANSMITTAL

To: Moench Company
625 Palmer Street
Gowanda, NY 14070

Attention: Jeff Smith

Date: January 13, 1999
Re: Palmer Street Landfill
Reanalysis of Analytical Results
for Arsenic.

We are sending you X Enclosed ☐ Under separate cover via ☐ Mail ☐ Messenger, the following items:

☐ shop drawings ☐ prints ☐ data sheets _____

☐ specifications ☐ sketches ☐ brochures ☐ _____

COPIES	PREPARED BY	REFERENCE NO.	DESCRIPTION
1			ANALYTICAL DATA PACKET
			FOR THE PALMER STREET LANDFILL.

THESE ARE TRANSMITTED AS CHECKED BELOW:

☐ As requested
X For your use
☐ For review & comment
X For your information

☐ Approved
☐ Approved as Corrected
☐ Revise and Resubmit
☐ Not Approved

☐ Resubmit _____ copies for approval
☐ Submit _____ copies for distribution
☐ Return _____ corrected Prints
☐ _____

Remarks: Jeff,

Enclosed for your information and files, are analytical results for the groundwater monitoring event completed during the November 1998 sampling event at the Palmer Street Landfill. As requested, the samples for the monitoring locations BS-1 (Creek sample) and the upgradient well MW-1D were submitted for reanalysis due to the detection of elevated levels of arsenic. Results of the reanalysis indicate a non-detect arsenic result for sample BS-1. However, I'm told the reanalysis of sample MW-1D found a similar concentration of arsenic as detected during the original analyses. Results of the MW-1D reanalyses will be forwarded to your attention as soon as possible. A narrative provided by Columbia Analytical attributed the elevated arsenic levels to analytical methodology and matrix interferences. Please call if you have any questions.

Copies to:

Very truly yours,
MALCOLM PIRNIE, INC.

John P. Hilton
Project Geologist

40 Centre Drive P.O. Box 1938 Buffalo, New York 14219 716-667-0900 / 716-667-0279 FAX

January 11, 1999

Columbia Analytical Services INC.

Mr. John Hilton
Malcolm Pirnie, Inc.
40 Centre Drive
Buffalo, NY 14219

Re: Palmer Street
Submission # 9810000399

Dear Mr. Hilton:

Enclosed is the corrected data page and case narrative for the above referenced site. Should you have any further questions, please contact me at (716) 288-5380.

Thank you for your continued use of our services.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

Janice M. Jaeger
Project Chemist

enc.

CASE NARRATIVE

COMPANY: Malcolm Pirnie
Project: Palmer Street
SUBMISSION #: 9810000399

Water samples were collected on 11/03-05/98 and received at CAS on 11/04-06/98 in good condition at a cooler temperatures of 2.3-6.0 C.

INORGANIC ANALYSIS

Eleven water samples were analyzed for metals by SW-846 method 6010B.

MS/MSD was performed on MW-6D Soluble. All MS/MSD and Blank spike recoveries were within limits. All RPD's were within limits.

Due to matrix interferences, a false positive and a falsely elevated level of Arsenic was detected in BS-1. This sample was reanalyzed by Graphite Furnace AA, Method 7060A. All other samples were also reanalyzed by Method 7060A and the results confirmed what was initially reported.

No analytical or QC problems were encountered.

VOLATILE ORGANICS

Thirteen water samples were analyzed for the TCL list of volatiles by method 8260 from SW-846.

All tuning criteria for BFB were within limits.

All the initial and continuing calibration criteria were met for all analytes.

Internal standard areas were within QC limits.

All surrogate standard recoveries were within acceptance limits.

The Laboratory Blanks associated with these analyses were free of contamination.

MS/MSD was performed on MW-6D. All MS/MSD recoveries and Laboratory Reference Spike recoveries were within limits. All RPD's were within limits.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

COLUMBIA ANALYTICAL SERVICES

Reported: 01/11/99

Malcolm Pirnie, Inc.
Project Reference: PALMER STREET
Client Sample ID : BS-1-SOLUBLE — ACTUALLY CREEK

Date Sampled : 11/03/98 **Order #:** 250420 **Sample Matrix:** WATER
Date Received: 11/04/98 **Submission #:** 9810000399

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
METALS					
ARSENIC	0.0100	0.0100 U	MG/L	01/08/99	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	11/30/98	1.0
LEAD	0.00500	0.00500 U	MG/L	11/30/98	1.0

2ND ANALYSIS