BUCK ENVIRONMENTAL SERVICES

FINAL REPORT
OF
SITE REMEDIATION ACTIVITIES
AT
7 BADGER AVENUE
ENDICOTT, NEW YORK

AUGUST 13, 1991

PREPARED FOR:

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INTRODUCTION

Buck Engineering performed a Phase I site assessment of real property located at 7 Badger Avenue in the Village of Endicott, New York in April 1991. The site assessment included research into the past uses of the property, records searches by the Broome County Department of Health and the New York State Department of Environmental Conservation (NYSDEC), a visual inspection of the property and the analysis of a groundwater sample obtained from a backhoe test pit.

The visual inspection conducted for the April 1991 site assessment revealed the following environmentally significant situations for which action was recommended:

- two unregistered underground petroleum storage tanks;
- a small quantity of damaged asbestos containing thermal system insulation;
- several floor drains; and
- the existence of moderate levels of trichloroethene (TCE) in the groundwater at the location of tank #1.

The conclusion of the Phase I site assessment was that potentially significant environmental liability existed at the site. Action was recommended to remove the damaged asbestos containing pipe insulation and the underground storage tanks. Further investigation was recommended relative to the presence of contaminants in the floor drains and groundwater.

Buck Engineering and Buck Environmental Laboratories, Inc. were subsequently retained to provide the following professional and analytical services related to remediation activities at the subject site:

- provide oversight during the excavation of two (2) underground petroleum storage tanks;
- provide on-site field measurements to determine if there was aromatic hydrocarbon contamination in the tank excavations;
- provide oversight for the installation of four (4) groundwater monitoring wells;
- develop and sample the groundwater monitoring wells;

Introduction (Con't.)

- provide the initial analysis of groundwater samples from the groundwater monitoring wells;

- provide a building "walk-through" for prospective asbestos abatement contractors;

- provide assistance to the Owner, as required, in the selection of remediation contractors;

- provide sampling and analysis services for floor drain and drywell debris;

- obtain elevations of groundwater depths;

- prepare a site plan showing the location of buildings, groundwater monitoring wells and other prominent features along with groundwater level contours and groundwater flow direction;

- provide air monitoring and analysis services and contractor oversight during the removal of asbestos containing materials; and

- prepare a final report containing a description of the remediation actions, laboratory reports, a site plan and other applicable material.

This report describes the remediation actions taken at the subject site.

EXECUTIVE SUMMARY

This report presents the methodology, conclusions and recommendations of remediation actions taken at 7 Badger Avenue, Endicott, New York during the period from April through July 1991.

A small quantity of damaged asbestos containing material was removed from the building. The analysis of air samples taken at the conclusion of the abatement project provide evidence that the air quality is well within the limits set be regulatory authority for re-occupancy. Approximately 200 to 300 ln. ft. of asbestos containing pipe insulation was found in the rear of the building between the roof and a suspended ceiling. The material is in good condition, does not represent an imminent hazard to health and no action is recommended relative to this material.

Four underground petroleum storage tanks were excavated and removed from the site. One of the tanks contained contaminated sand/concrete slurry. With the exception of a small quantity of contaminated soil that was removed from one excavation, no indication of aromatic hydrocarbon contamination was found.

Four groundwater monitoring wells were installed. Samples from three of the wells showed levels of trichloroethene (TCE) ranging from 2.6 ug/L in monitoring well #2 to 286 ug/L in monitoring well #1. Groundwater flow direction was established as being slightly north of east. The data obtained from the monitoring well elevations and samples did not allow a positive conclusion to be reached relative to the source of the TCE in the groundwater. Therefore, a soil gas survey was conducted to further investigate this issue.

Four soil gas samples were taken from the area around monitoring well #1. The levels of TCE found in these soil gas samples ranged from 5,900 ug/m3 to 87,400 ug/m3 with the highest level found at SG#2, taken near the northeast corner of the building on the opposite (west) side of the street from the subject site.

Based on the direction of groundwater flow, the monitoring well and soil gas sample analyses, it is concluded that the source of the TCE contamination in the groundwater is a location up-gradient from the subject site and not the site itself. It is recommended that the results of the groundwater and soil gas sample analysis be communicated to the NYSDEC.

Four samples were obtained from floor drains and a dry well.

Executive Summary Con't.)

A low level of TCE contamination was found in the dry well sample. It is believed that this contamination is from the groundwater beneath the site.

In summary, it is believed that the environmental issues identified in the initial site evaluation in the areas of asbestos containing materials and the underground petroleum storage tanks have been resolved and are no longer of concern.

The issue of the floor drains has been addressed from the perspective of potential contaminants in the drains and successfully resolved. The floor drains remain a concern from the perspective that they provide a potential path for contamination to enter the soil and groundwater beneath the site. It is recommended that the floor drains and drywells be permanently sealed with concrete.

The issue of TCE contamination of the groundwater beneath the site has been successfully resolved from the standpoint that it is believed that source of the TCE is not the subject site. However, the presence of the contaminant remains a concern. The NYSDEC should be notified of the presence of this substance and further investigation may be necessary to locate the source. However, it is believed that the owner of the 7 Badger Avenue will not be held responsible for future investigative or remediation action.

ASBESTOS ABATEMENT

The site inspection performed for the Phase I site assessment revealed a small quantity (i.e., less than 25 ln. ft.) of damaged thermal system insulation in two rooms at the rear of the building. The Phase I site assessment report recommended removal of the damaged material.

Two local asbestos abatement contractors were invited to submit proposals for the removal of the damaged asbestos containing materials. The contract for asbestos removal was awarded to Sunstream Construction and Energy Systems of Binghamton, New York.

Due to the small quantity of damaged material, the asbestos abatement was performed using the tent and glovebag method. Air sampling was performed before and after the abatement work.

The areas containing the damaged asbestos containing material were inspected by personnel from Buck Engineering at the conclusion of the abatement activities. All damaged materials were removed. Air sampling results provided evidence that the air quality met or exceeded that standards established by regulatory authorities for re-occupancy of the abated areas.

(Note: At some point after the Phase I site assessment on-site inspection, several ceiling panels from the rear room of the building collapsed as a result of water leaking through the roof. The collapse of these panels revealed a space between the panels and the roof that contains an estimated 200 to 300 ln. ft. of asbestos containing pipe insulation. This material is in relatively good condition and does not constitute an imminent hazard to health. The material was not removed during the abatement activities. It is recommended that the material be left in place until such time as the building is renovated or demolished.)

UNDERGROUND TANK REMOVAL

The Phase I site assessment revealed that an underground petroleum storage tank had been removed from the property in early 1990. The former location of this tank is noted on the enclosed site plan and is labelled Tank 5. The on-site inspection performed for the Phase I site assessment revealed the presence of two additional underground petroleum storage tanks. One tank (labelled Tank 1) was located in front of the building, between the 7 Badger Avenue building and the building on the opposite (west) side of Badger Avenue. The second tank (labelled Tank 2) was located inside a recent addition to the 7 Badger Avenue building, immediately east of the front of the original building.

Subsequent to the Phase I site inspection and prior to the start of the remediation activities, a third underground tank (labelled Tank 3) was located, also inside the recent addition to the building and in front of the original building.

Two local contractors experienced in underground tank removal submitted proposals for the removal of the underground tanks. The contract for tank excavation was awarded to Gary Dyer, Inc. of Endicott, New York.

Buck Engineering personnel were on-site during the excavation of the underground tanks. In compliance with applicable regulations, advance notice of the excavation activity was provided to the local office of the NYSDEC. Representatives of the NYSDEC were on-site during significant portions of the excavation activity.

Prior to the start of excavation activity, tank #1 was emptied of approximately 2,000 gal. of contaminated water. The contaminated water was processed through granular activated carbon and disposed of at the local waste water treatment plant. After excavation, the tank exterior showed moderate corrosion but there were no obvious holes through the tank walls. HNu photoionization detector measurements were taken on the excavated material, on the exterior of the tank and in the bottom of the excavation (underneath the tank). No aromatic hydrocarbon contamination was found.

Tank #2, estimated to be of 1,000 gal. capacity, was located inside the addition to the building beneath a concrete floor. The concrete floor was broken-up and excavation started. The tank exterior showed moderate corrosion but there were no obvious holes through the tank walls. HNu photoionization detector measurements were taken on the excavated material, on the exterior of the tank and in the bottom of the

Underground Tank Removal (Con't.)

excavation from underneath the tank. No aromatic hydrocarbon contamination was found.

Tank #3, estimated to be of 5,000 gal. capacity, was located inside the addition to the building beneath a concrete floor. The concrete floor was broken-up and excavation started. It was determined that this tank had been filled with a sand/concrete slurry prior to being abandoned. The tank exterior showed moderate corrosion. Due to the weight of the tank and contents, this tank could not be removed from the excavation intact. The tank shell was opened in the excavation and the contents of the tank were removed and disposed of as contaminated material. HNu meter measurements of the tank contents showed aromatic hydrocarbon contamination in the 150 ppm range. After removal of the tank contents and tank shell, HNu meter readings were taken in the bottom of the excavation. With the exception of a small quantity of contaminated soil that was removed from the north end of the excavation, no significant aromatic hydrocarbon contamination was found.

During the excavation of tank #3, a fourth tank was discovered. Tank 4 was located immediately adjacent to the north end of tank #3. Tank 4 was removed. HNu detector measurements were taken on the excavated material, on the exterior of the tank and in the bottom of the excavation from underneath the tank. No aromatic hydrocarbon contamination was found.

When removal of the underground tanks was completed, the excavations were back-filled with clean bank-run gravel. Concrete patches were poured over the inside excavations.

GROUNDWATER MONITORING WELL INSTALLATION

A backhoe test pit was excavated in front of the building during the Phase I site assessment. A groundwater sample from this excavation was analyzed in the laboratory and found to contain low levels of TCE. The Phase I site assessment report recommended that four groundwater monitoring wells be installed on the property to further investigate this contamination.

Two local drilling contractors submitted proposals for groundwater monitoring well installation. The contract was awarded to C.J. Martin's Son Well Drilling of Binghamton, New York.

The location of the monitoring wells was determined by Buck Engineering and a representative of the firm was present to supervise monitoring well installation. The wells were constructed to NYSDEC specifications. Split spoon samples were taken every five feet for soil characterization purposes and to check for contamination.

Monitoring well #1 was placed in a paved area near the northwest corner of the building. Groundwater was encountered at 20 ft. Boring was terminated at 25 ft. A 2 in. PVC well casing was installed with 10 ft. of slotted well screen. The well casing was equipped with a locking cap and protected by a flush mounted curb box. HNu photoionization detector readings were taken of each split spoon sample and no significant aromatic hydrocarbon contamination was detected.

Monitoring well #2 was placed on a paved area near the southwest corner of the building. Groundwater was encountered at 14 ft. Boring was terminated at 17 ft. A 2 in. PVC well casing was installed with 10 ft. of slotted well screen. The well casing was equipped with a locking cap and protected by a flush mounted curb box. HNu photoionization detector readings were taken of each split spoon sample and no significant aromatic hydrocarbon contamination was detected.

Monitoring well #3 was placed on a paved area immediately adjacent to the truck loading dock on the south side of the building. Groundwater was encountered at 8 ft. Boring was terminated at 13 ft. A 2 in. PVC well casing was installed with 10 ft. of slotted well screen. The well casing was equipped with a locking cap and protected by a flush mounted curb box. HNu photoionization detector readings were taken of each split spoon sample and no significant aromatic hydrocarbon contamination was detected.

Groundwater Monitoring Well Installation (Con't.)

Monitoring well #4 was placed on a paved area near the southeast corner of the building. Groundwater was encountered at 15 ft. Boring was terminated at 20 ft. A 2 in. PVC well casing was installed with 10 ft. of slotted well screen. The well casing was equipped with a locking cap and protected by a flush mounted curb box. HNu photoionization detector readings were taken of each split spoon sample and no significant aromatic hydrocarbon contamination was detected.

After well installation was complete, all monitoring wells were developed and sampled. Elevations of the monitoring well guard casings were taken and equilibrium groundwater depths were obtained. Groundwater elevations were calculated and groundwater flow direction was determined. Groundwater flow at the site is in a northeasterly direction.

SOIL GAS SURVEY

After monitoring well installation, sampling and analysis was completed, it was found that the issue of the source of the groundwater contamination could not be positively concluded with the data available. This situation led to the execution of a soil gas survey to resolve the issue.

Four (4) soil gas samples were obtained from a depth of 12 ft. in the general vicinity of monitoring well #1. SG#1 was taken at a location directly west of MW#1, adjacent to the chain link fence on the northern edge of the property. SG#2 was taken at a location southwest of MW#1, near the northeast corner of the building across the street from the subject property and up-gradient from MW#1. SG#3 was taken from a location south of MW#1, at the edge of the 1990 underground tank excavation. SG#4 was taken at a location in close proximity to MW#1.

FLOOR DRAIN AND DRY WELL SAMPLING

The Phase I site assessment revealed a number of floor drains located in various parts of the building. There is a drain approximately 30 ft. long located in a recent addition to the building, near the northwest corner. Liquid sludge was present in the west end of this drain. A series of floor drains, apparently interconnected, was found in the southern portion of the original building. No liquid was apparent in these drains. Finally, a number of floor drains and a dry well were found in the eastern portion of the original building in what was apparently the bottling room when the structure was used for soft drink bottling. A small quantity of liquid and some sludge was apparent in these locations. The Phase I report recommended that samples be taken from the floor drains and dry wells and analyzed for contaminants.

A sample of sludge was obtained from the floor drain in the northwest portion of the building.

An attempt was made to trace the interconnected floor drains in the southern portion of the original building to determine if these drains led to a dry well. The attempt was unsuccessful in that no dry well was located. A sample of dry debris was taken from a floor drain.

A sample of damp sludge was taken from the dry well located in the northeast portion of the original building.

A liquid sample was taken from a floor drain located in the southeast corner of the original building bottling room.

ANALYTICAL RESULTS

No indication of aromatic hydrocarbon contamination was found in any of the groundwater samples.

The floor drain and dry well samples were analyzed for purgeable halocarbons using EPA method 601. No contaminants were found in the three floor drain samples. A low level of TCE was found in the sample from the floor drain in the northeast corner of the building. It is believed that the groundwater beneath the site may be the source of this contamination.

The groundwater samples obtained from the monitoring wells were analyzed for volatile aromatic and unsaturated organic compounds using EPA method 503.1 and for purgeable halocarbons using EPA method 601. Both methods are performed via gas chromatography.

The level of trichloroethene (TCE) found in MW#1 is considered elevated and in clear contravention of groundwater standards. TCE was found in the samples from MW#2 and 3 at less than 5 ug/L the Maximum Contaminant Level (MCL) for drinking water and the NYSDEC groundwater standards (NYSCRR, Title 6, X, Part 703). No contaminants were found in the sample from MW#4.

The soil gas samples were analyzed for purgeable halocarbons using NYSDOH method 311-2 via gas chromatography. Tetrachloroethene, 1,1,1-trichloroethane (TCA) and trichloroethene (TCE) were found in all of the soil gas samples with the largest concentrations in SG#2.

CONCLUSIONS

1. The damaged asbestos containing materials have been removed. The asbestos containing material remaining in the building is in relatively good condition and does not constitute an imminent hazard to health.

2. No underground aromatic hydrocarbon contamination was found in the areas where underground tanks were located. The absence of underground hydrocarbon contamination was confirmed by the analytical results from the groundwater monitoring well samples.

3. The groundwater under a portion of the site is contaminated with TCE with concentrations ranging from 3.8 to 286 ug/L. The direction of groundwater flow is slightly north of east. The well showing the highest level of contamination (286 ug/L) is MW#1, at the northwest corner of the building. The level of contamination drops significantly as one moves south from MW#1, with a level of 2.6 ug/L at MW#2. However, the data obtained from the monitoring wells was inconclusive relative to the source of the contamination.

4. A soil gas survey was conducted in the general vicinity of MW#1. Levels of TCE in the four soil gas samples ranged from 5,900 to 87,400 ug/m3. In combination with the monitoring well data, the results of the soil gas survey support the conclusion that the source of the TCE is a location up-gradient from the subject site and not the site itself.

5. The trace level of TCE contamination in the dry well sample is thought to have originated from the groundwater beneath the site and not from the site itself.

RECOMMENDATIONS

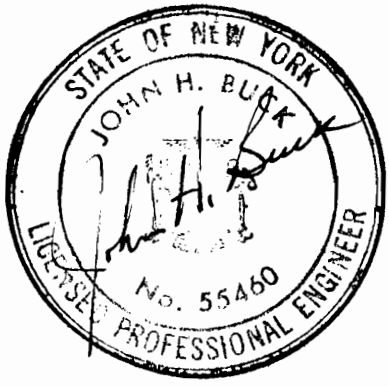
1. It is recommended that the NYSDEC be advised of the analytical results showing TCE contamination in the groundwater.

2. It is recommended that the floor drains in the building be sealed with concrete to prevent further contamination of the soil and groundwater beneath the site.

3. No action is recommended on the remaining asbestos containing pipe insulation in the building unless the portion of the building containing the material is to undergo demolition or renovation which would cause the insulating material to be disturbed.

CERTIFICATION STATEMENT

The Engineer does not imply an overall assessment of environmental quality of the subject property beyond the specific observations and test results given in this survey. The Engineer certifies that to the best of his knowledge, belief, and information the descriptions given in this remediation report are true.



John H. Buck, P.E.
NYS LN 055460

QUALIFICATIONS

The Engineer represents himself to be an expert in environmental matters by virtue of the following qualifications:

- NYS Licensed Professional Engineer (#055460)
- NYS DOH ELAP approved Environmental Laboratory Director (ELAP #10795)
- EPA accredited AHERA Asbestos Building Inspector, Management Planner, and Abatement Designer
- NYS DEC Department of Solid and Hazardous Waste Technically Acceptable List for analysis of solid and hazardous wastes
- NIOSH-OSHA approved for Method 7400 air sampling
- EPA Radon proficiency participant
- Education: BSIE Syracuse University, MSCEE Cornell University, MBA Syracuse University
- Professional Memberships: American Water Works Association, National and State Societies of Professional Engineers, Water Pollution Control Federation, American Public Health Association, American Society for Testing and Materials, American Society of Civil Engineers

APPENDIX A

SITE PLAN

A plan of the subject site is provided on the following page which shows the location of the monitoring wells, the soil gas sampling points, the tank excavations and the dry well and floor drain samples.

APPENDIX B

LABORATORY REPORTS

The laboratory reports resulting from the analysis of the samples obtained from the subject site and from the air monitoring conducted during the asbestos abatement are provided on the following pages.

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

LABORATORY REPORT

Client: **TOUHEY ASSOCIATES**
Site: 7 Badger Avenue
Sample: Water

Report Date: 6/27/91
Sampling Date: 6/13/91
Sampled By: D. Dockstater
Analysis Date: 6/24/91
Lab Log No: 9106137

Volatile Aromatic and Unsaturated Organics by EPA 503.1

	MW-1	MW-2	MW-3	MW-4
Benzene	ND	ND	ND	ND
Bromobenzene	ND	ND	ND	ND
n-Butylbenzene	ND	ND	ND	ND
sec-Butylbenzene	ND	ND	ND	ND
tert-Butylbenzene	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
2-Chlorotoluene	ND	ND	ND	ND
4-Chlorotoluene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Hexachlorobutadiene	ND	ND	ND	ND
Isopropylbenzene	ND	ND	ND	ND
p-Isopropyltoluene	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND
n-Propylbenzene	ND	ND	ND	ND
Styrene	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
1,2,3-Trichlorobenzene	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	ND	ND
Trichloroethene	286.	2.6	3.8	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND
m & p-Xylene	ND	ND	ND	ND

All concentrations are reported as ug/L.
ND - None detected greater than detection limit of 1.0 ug/L.

This analysis is certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

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LABORATORY REPORT

Client: **TOUHEY ASSOCIATES**
Site: 7 Badger Avenue
Sample: Water

Report Date: 6/27/91
Sampling Date: 6/13/91
Sampled By: D. Dockstater
Analysis Date: 6/24/91
Lab Log No: 9106137

Purgeable Halocarbons (By EPA 601)

CAS No.	Compound	MW-1	MW-2	MW-3
75-27-4	bromodichloromethane	ND	ND	ND
75-25-2	bromoform	ND	ND	ND
74-83-9	bromomethane	ND	ND	ND
56-23-5	carbon tetrachloride	ND	ND	ND
108-90-7	chlorobenzene	ND	ND	ND
75-00-3	chloroethane	ND	ND	ND
100-75-8	2-chloroethylvinylether	ND	ND	ND
67-66-3	chloroform	ND	ND	ND
74-87-3	chloromethane	ND	ND	ND
124-38-1	dibromochloromethane	ND	ND	ND
95-50-1	1,2-dichlorobenzene	ND	ND	ND
541-73-1	1,3-dichlorobenzene	ND	ND	ND
106-46-7	1,4-dichlorobenzene	ND	ND	ND
75-71-8	dichlorodifluoromethane	ND	ND	ND
75-34-3	1,1-dichloroethane	ND	ND	ND
107-06-2	1,2-dichloroethane	ND	ND	ND
75-35-4	1,1-dichloroethene	ND	ND	ND
156-60-5	trans-1,2-dichloroethene	ND	ND	ND
78-87-5	1,2-dichloropropane	ND	ND	ND
10061-01-5	cis-1,3-dichloropropene	ND	ND	ND
10061-01-6	trans-1,3-dichloropropene	ND	ND	ND
75-09-2	methylene chloride	ND	ND	ND
79-34-5	1,1,2,2-tetrachloroethane	ND	ND	ND
127-18-4	tetrachloroethene	ND	ND	ND
71-55-6	1,1,1-trichloroethane	1.5	ND	ND
79-00-5	1,1,2-trichloroethane	ND	ND	ND
79-01-6	trichloroethene	320.	ND	1.0
75-69-4	trichlorofluoromethane	ND	ND	ND
75-01-4	vinyl chloride	ND	ND	ND

All concentrations are reported as ug/L.
ND - None detected greater than detection limit of 1.0 ug/L.

These analyses are certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck

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LABORATORY REPORT

Client: **TOUHEY ASSOCIATES**
Site: 7 Badger Avenue
Sample: Water

Report Date: 6/27/91
Sampling Date: 6/13/91
Sampled By: D. Dockstater
Analysis Date: 6/24/91
Lab Log No: 9106137

Purgeable Halocarbons (By EPA 601)

CAS No.	Compound	MW-4		
75-27-4	bromodichloromethane	ND		
75-25-2	bromoform	ND		
74-83-9	bromomethane	ND		
56-23-5	carbon tetrachloride	ND		
108-90-7	chlorobenzene	ND		
75-00-3	chloroethane	ND		
100-75-8	2-chloroethylvinylether	ND		
67-66-3	chloroform	ND		
74-87-3	chloromethane	ND		
124-38-1	dibromochloromethane	ND		
95-50-1	1,2-dichlorobenzene	ND		
541-73-1	1,3-dichlorobenzene	ND		
106-46-7	1,4-dichlorobenzene	ND		
75-71-8	dichlorodifluoromethane	ND		
75-34-3	1,1-dichloroethane	ND		
107-06-2	1,2-dichloroethane	ND		
75-35-4	1,1-dichloroethene	ND		
156-60-5	trans-1,2-dichloroethene	ND		
78-87-5	1,2-dichloropropane	ND		
10061-01-5	cis-1,3-dichloropropene	ND		
10061-01-6	trans-1,3-dichloropropene	ND		
75-09-2	methylene chloride	ND		
79-34-5	1,1,2,2-tetrachloroethane	ND		
127-18-4	tetrachloroethene	ND		
71-55-6	1,1,1-trichloroethane	ND		
79-00-5	1,1,2-trichloroethane	ND		
79-01-6	trichloroethene	ND		
75-69-4	trichlorofluoromethane	ND		
75-01-4	vinyl chloride	ND		

All concentrations are reported as ug/L.
ND - None detected greater than detection limit of 1.0 ug/L.

These analyses are certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

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100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

LABORATORY REPORT

Client: Touhey Associates
Site: 7 Badger Avenue
Sample: Soil Gas Vapor

Report Date: 8/14/91
Sampling Date: 7/31/91
Sampled By: M.H.
Analysis Date: 7/31/91
Lab Log No: 9108002

Soil Gas Vapor by EPA 8010 Instrumentation

Sample Description Air Volume (liters)	SG-1 20.0	SG-2* 20.0	SG-3 20.0	SG-4 20.0
bromodichloromethane	ND	ND	ND	ND
bromoform	ND	ND	ND	ND
bromomethane	ND	ND	ND	ND
carbon tetrachloride	ND	ND	ND	ND
chlorobenzene	ND	ND	ND	ND
chloroethane	ND	ND	ND	ND
2-chloroethylvinylether	ND	ND	ND	ND
chloroform	ND	ND	ND	ND
dibromochloromethane	ND	ND	ND	ND
1,2-dichlorobenzene	ND	ND	ND	ND
1,3-dichlorobenzene	ND	ND	ND	ND
1,4-dichlorobenzene	ND	ND	ND	ND
dichlorodifluoromethane	ND	ND	ND	ND
1,1-dichloroethane	ND	ND	ND	ND
1,2-dichloroethane	ND	ND	ND	ND
1,1-dichloroethene	ND	ND	ND	ND
trans-1,2-dichlorothene	ND	ND	ND	ND
1,2-dichloropropane	ND	ND	ND	ND
cis-1,3-dichloropropene	ND	ND	ND	ND
trans-1,3-dichloropropene	ND	ND	ND	ND
methylene chloride	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	ND	ND	ND	ND
tetrachloroethene	23.3	123.	127.	10.4
1,1,1-trichloroethane	42.2	188.	51.1	96.4
1,1,2-trichloroethane	ND	ND	ND	ND
trichloroethene	5,900	87,400	10,700	8,420

All concentrations are reported as ug/m3.
ND - None detected greater than detection limit of 10 ug/m3.
* - Detection limit for this sample is 100 ug/m3.

These analyses are certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. · CORTLAND, N.Y. 13045
607-753-3403

LABORATORY REPORT

Client: **TOUHEY ASSOCIATES**
Site: 7 Badger Avenue
Samples: Sludge
1. South Floor Drain
2. Dry Well

Report Date: 7/25/91
Sampling Date: 7/17/91
Sampled By: P. Shaffner
Analysis Date: 7/18/91
Lab Log No: 9107129

Purgeable Halocarbons (By EPA 5030 and 8010)

CAS No.	Compound	1*	2	
75-27-4	bromodichloromethane	ND	ND	
75-25-2	bromoform	ND	ND	
74-83-9	bromomethane	ND	ND	
56-23-5	carbon tetrachloride	ND	ND	
108-90-7	chlorobenzene	ND	ND	
75-00-3	chloroethane	ND	ND	
100-75-8	2-chloroethylvinylether	ND	ND	
67-66-3	chloroform	ND	ND	
74-87-3	chloromethane	ND	ND	
124-38-1	dibromochloromethane	ND	ND	
95-50-1	1,2-dichlorobenzene	ND	ND	
541-73-1	1,3-dichlorobenzene	ND	ND	
106-46-7	1,4-dichlorobenzene	ND	ND	
75-71-8	dichlorodifluoromethane	ND	ND	
75-34-3	1,1-dichloroethane	ND	ND	
107-06-2	1,2-dichloroethane	ND	ND	
75-35-4	1,1-dichloroethene	ND	ND	
156-60-5	trans-1,2-dichloroethene	ND	ND	
78-87-5	1,2-dichloropropane	ND	ND	
10061-01-5	cis-1,3-dichloropropene	ND	ND	
10061-01-6	trans-1,3-dichloropropene	ND	ND	
75-09-2	methylene chloride	ND	ND	
79-34-5	1,1,2,2-tetrachloroethane	ND	ND	
127-18-4	tetrachloroethene	ND	ND	
71-55-6	1,1,1-trichloroethane	ND	ND	
79-00-5	1,1,2-trichloroethane	ND	ND	
79-01-6	trichloroethene	ND	5.4	
75-69-4	trichlorofluoromethane	ND	ND	
75-01-4	vinyl chloride	ND	ND	

* - Detection limit for this sample is 3.0 ug/kg.
All concentrations are reported as ug/kg.
ND - None detected greater than detection limit of 2.0 ug/kg.

These analyses are certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

LABORATORY REPORT

Client: **TOUHEY ASSOCIATES**
Site: 7 Badger Avenue
Samples: Water
1. East Floor Drain
2. North Floor Drain

Report Date: 7/25/91
Sampling Date: 7/17/91
Sampled By: P. Shaffner
Analysis Date: 7/18/91
Lab Log No: 9107129

Purgeable Halocarbons (By EPA 601)

CAS No.	Compound	1*	2	
75-27-4	bromodichloromethane	ND	ND	
75-25-2	bromoform	ND	ND	
74-83-9	bromomethane	ND	ND	
56-23-5	carbon tetrachloride	ND	ND	
108-90-7	chlorobenzene	ND	ND	
75-00-3	chloroethane	ND	ND	
100-75-8	2-chloroethylvinylether	ND	ND	
67-66-3	chloroform	ND	ND	
74-87-3	chloromethane	ND	ND	
124-38-1	dibromochloromethane	ND	ND	
95-50-1	1,2-dichlorobenzene	ND	ND	
541-73-1	1,3-dichlorobenzene	ND	ND	
106-46-7	1,4-dichlorobenzene	ND	ND	
75-71-8	dichlorodifluoromethane	ND	ND	
75-34-3	1,1-dichloroethane	ND	ND	
107-06-2	1,2-dichloroethane	ND	ND	
75-35-4	1,1-dichloroethene	ND	ND	
156-60-5	trans-1,2-dichloroethene	ND	ND	
78-87-5	1,2-dichloropropane	ND	ND	
10061-01-5	cis-1,3-dichloropropene	ND	ND	
10061-01-6	trans-1,3-dichloropropene	ND	ND	
75-09-2	methylene chloride	ND	ND	
79-34-5	1,1,2,2-tetrachloroethane	ND	ND	
127-18-4	tetrachloroethene	ND	ND	
71-55-6	1,1,1-trichloroethane	ND	ND	
79-00-5	1,1,2-trichloroethane	ND	ND	
79-01-6	trichloroethene	ND	ND	
75-69-4	trichlorofluoromethane	ND	ND	
75-01-4	vinyl chloride	ND	ND	

* - Detection limit for this sample is 5.0 ug/L.
All concentrations are reported as ug/L.
ND - None detected greater than detection limit of 2.0 ug/L.

These analyses are certified as conforming to generally accepted laboratory practices and requirements of the New York State Health Department ELAP program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

Date of Report: 6/21/91
Lab Log Number: AA91098

AIR SAMPLING REPORT

Client: Touhey Associates
Pine West Plaza, Building 2
Washington Avenue, Extension
Albany, NY 12205

Sample Location: **7 Badger Ave**, Endicott, NY

Method: NIOSH 7400

Pump Location	Sampling Date	Type of Sampling	Sample Volume	Fibers/cc
MAIN FLOOR				
Outside Work Area				
Outside, North	6/17/91	Background	1245 L	0.001
Outside, Central	6/17/91	Background	1245 L	0.001
NW Room @ Boiler	6/17/91	Background	1245 L	0.003
Inside Work Area				
Main Floor, North	6/17/91	Background	1526 L	0.003
Main Floor, Center	6/17/91	Background	1635 L	0.002
Main Floor, South	6/17/91	Background	1635 L	0.002
2ND FLOOR				
Outside Work Area				
Outside, North	6/17/91	Background	1245 L	0.001
Outside, Central	6/17/91	Background	1245 L	0.001
NW Room @ Boiler	6/17/91	Background	1245 L	< 0.001
Inside Work Area				
2nd Floor, North	6/17/91	Background	1230 L	0.004
2nd Floor, Center	6/17/91	Background	1230 L	0.004
2nd Floor, South	6/17/91	Background	1230 L	0.002

I certify that the analysis above was conducted in accordance with the NIOSH method cited, NYCRR Title 12 Part 56, and the New York State Department of Health Environmental Laboratory Approval Program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. · CORTLAND, N.Y. 13045
607-753-3403

AIR SAMPLING REPORT

Client: Touhey Associates
Pine West Plaza, Building 2
Washington Avenue, Extension
Albany, NY 12205

Sample Location: **7 Badger Ave**, Endicott, NY

Method: NIOSH 7400

Pump Location	Sampling Date	Type of Sampling	Sample Volume	Fibers/cc
MAIN FLOOR				
Outside Work Area				
Outside, North	6/18/91	Clearance	1230 L	0.001
Outside, Central	6/18/91	Clearance	1230 L	0.001
NW Room @ Boiler	6/18/91	Clearance	1215 L	< 0.001
Inside Work Area				
Main Floor, North	6/18/91	Clearance	1230 L	0.001
Main Floor, Center	6/18/91	Clearance	1230 L	0.001
Main Floor, South	6/18/91	Clearance	1230 L	< 0.001
Field Blank	6/18/91	blank	0 L	<.01 f/mm2

NOTE : Each clearance result must be less than 0.010 fibers per cc or not greater than the corresponding background result.

I certify that the analysis above was conducted in accordance with the NIOSH method cited, NYCRR Title 12 Part 56, and the New York State Department of Health Environmental Laboratory Approval Program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

AIR SAMPLING REPORT

Client: Touhey Associates
Pine West Plaza, Building 2
Washington Avenue, Extension
Albany, NY 12205

Sample Location: **7 Badger Ave**, Endicott, NY

Method: NIOSH 7400

Pump Location	Sampling Date	Type of Sampling	Sample Volume	Fibers/cc
2ND FLOOR				
Outside Work Area				
Outside, North	6/18/91	Clearance	1200 L	< 0.001
Outside, Central	6/18/91	Clearance	1200 L	0.002
NW Room @ Boiler	6/18/91	Clearance	1200 L	0.001
Inside Work Area				
2nd Floor, North	6/18/91	Clearance	1200 L	0.001
2nd Floor, Center	6/18/91	Clearance	1200 L	0.001
2nd Floor, South	6/18/91	Clearance	1200 L	0.001
Field Blank	6/18/91	blank	0 L	<.01 f/mm2

NOTE : Each clearance result must be less than 0.010 fibers per cc or not greater than the corresponding background result.

I certify that the analysis above was conducted in accordance with the NIOSH method cited, NYCRR Title 12 Part 56, and the New York State Department of Health Environmental Laboratory Approval Program.

John H. Buck, P.E.
Laboratory Director
NYS ELAP CERT 10795

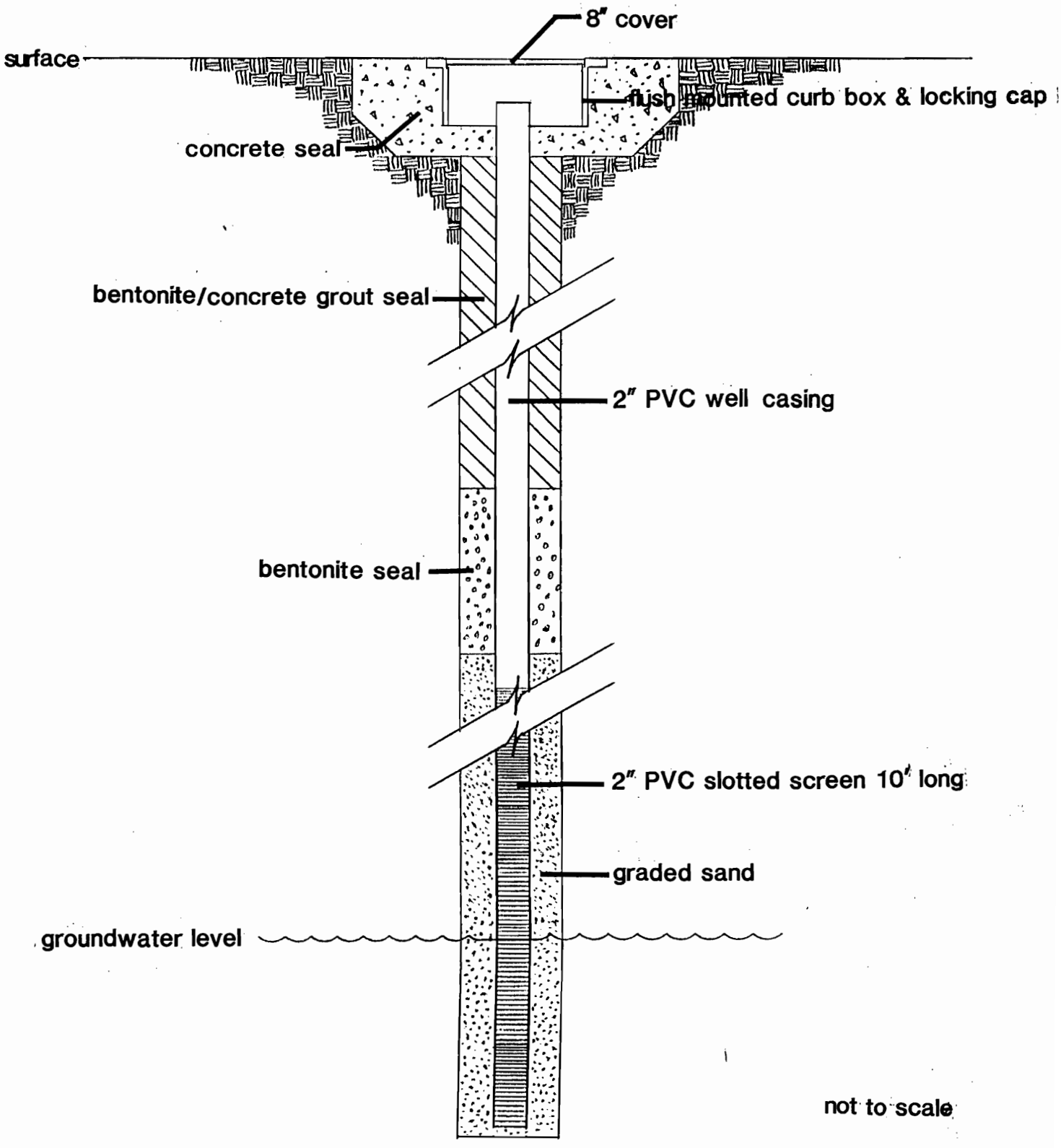
APPENDIX C

MONITORING WELL DRILLING LOGS

The drilling logs that resulted from the installation of the four groundwater monitoring wells are provided on the following pages.

BUCK ENGINEERING
& ENVIRONMENTAL LABORATORY
CONSULTING ENGINEERS & ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. • CORTLAND, N.Y. 13045
607-753-3403

TYPICAL MONITORING WELL DETAIL



BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. · CORTLAND, N.Y. 13045
607-753-3403

DRILLING/BORING LOG

Client: Touhey Associates
Pine West Plaza, Building 2
Washington Avenue Extension
Albany, NY 12205

Project: 7 Badger Avenue
Endicott, NY

Driller: C.J. Martin's Son Well Drilling
Pierce Creek Road
Binghamton, NY

Boring No: Monitoring Well #1
Location: Northwest corner of building near railroad tracks
Date Started: June 12, 1991
Date Completed: June 12, 1991
Auger Size: 4 1/4" I.D. Hollow Stem Augers
Soil Sampler: 2" O.D. Split Spoon
Sample Hammer: 140 lb. 30 in. fall

Sample No.	Depth	Blows on Hammer 0' to 0.5'	0.5 to 1.0'	1.0' to 1.5'	1.5' to 2.0'
1	0' to 2' Sandy Clay	4	4	2	2
2	8' to 10' Sandy Clay	2	2	7	10
3	13' to 15' Rock, some sand	20	38	26	19
4	18' to 20' Gray silt	3	4	4	6

Groundwater encountered at 20 ft.
Boring terminated at 25 ft.

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. · CORTLAND, N.Y. 13045
607-753-3403

DRILLING/BORING LOG

Client: Touhey Associates
Pine West Plaza, Building 2
Washington Avenue Extension
Albany, NY 12205

Project: 7 Badger Avenue
Endicott, NY

Driller: C.J. Martin's Son Well Drilling
Pierce Creek Road
Binghamton, NY

Boring No: Monitoring Well #2
Location: West side of parking area, near street and utility pole.
Date Started: June 12, 1991
Date Completed: June 12, 1991
Auger Size: 4 1/4" I.D. Hollow Stem Augers
Soil Sampler: 2" O.D. Split Spoon
Sample Hammer: 140 lb. 30 in. fall

Sample No.	Depth	Blows on Hammer 0' to 0.5'	0.5 to 1.0'	1.0' to 1.5'	1.5' to 2.0'
1	0' to 2' Sandy Clay	6	4	3	4
2	8' to 10' Gravel, clay	7	12	17	24
3	13' to 15' Gravel	13	24	32	34
4	18' to 20' Gray silt	3	4	4	6

Groundwater encountered at 14 ft.
Boring terminated at 17 ft.

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. · CORTLAND, N.Y. 13045
607-753-3403

DRILLING/BORING LOG

Client: Touhey Associates
Pine West Plaza, Building 2
Washington Avenue Extension
Albany, NY 12205

Project: 7 Badger Avenue
Endicott, NY

Driller: C.J. Martin's Son Well Drilling
Pierce Creek Road
Binghamton, NY

Boring No: Monitoring Well #3
Location: South side of building in depression on west side of loading dock.
Date Started: June 13, 1991
Date Completed: June 13, 1991
Auger Size: 4 1/4" I.D. Hollow Stem Augers
Soil Sampler: 2" O.D. Split Spoon
Sample Hammer: 140 lb. 30 in. fall

Sample No.	Depth	Blows on Hammer 0' to 0.5'	0.5 to 1.0'	1.0' to 1.5'	1.5' to 2.0'
1	0' to 2' Gravel	6	6	8	7
2	8' to 10' Gravel, clay	2	1	0	1

Groundwater encountered at 8 ft.
Boring terminated at 13 ft.

BUCK ENVIRONMENTAL LABORATORIES INC.
ACCREDITED ENVIRONMENTAL ANALYSIS
100 TOMPKINS ST. · CORTLAND, N.Y. 13045
607-753-3403

DRILLING/BORING LOG

Client: Touhey Associates
Pine West Plaza, Building 2
Washington Avenue Extension
Albany, NY 12205

Project: 7 Badger Avenue
Endicott, NY

Driller: C.J. Martin's Son Well Drilling
Pierce Creek Road
Binghamton, NY

Boring No: Monitoring Well #4
Location: In parking area at southeast corner of building.
Date Started: June 13, 1991
Date Completed: June 13, 1991
Auger Size: 4 1/4" I.D. Hollow Stem Augers
Soil Sampler: 2" O.D. Split Spoon
Sample Hammer: 140 lb. 30 in. fall

Sample No.	Depth	Blows on Hammer 0' to 0.5'	0.5 to 1.0'	1.0' to 1.5'	1.5' to 2.0'
1	0' to 2' Sandy Clay	3	3	4	5
2	8' to 10' Sand	4	5	5	7
3	13' to 15' Gravel	10	19	22	19

Groundwater encountered at 15 ft.
Boring terminated at 20 ft.

APPENDIX D

CERTIFICATION

Copies of the appropriate engineering and laboratory certifications are provided on the following page.

NEW YORK STATE DEPARTMENT OF HEALTH

DAVID AXELROD, M. D. *COMMISSIONER*

Expires 12:01 AM April 1, 1992
ISSUED April 1, 1991
REVISED June 13, 1991

INTERIM CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

Lab ID No.: 10795

Director: MR. JOHN BUCK
Lab Name: BUCK ENVIRONMENTAL LABORATORIES INC
Address : 100 TOMPKINS STREET
CORTLAND NY 13045

is hereby APPROVED as an Environmental Laboratory for the category

ENVIRONMENTAL ANALYSES/SOLID AND HAZARDOUS WASTE

All approved subcategories and/or analytes are listed below:

Characteristic Testing :
- Corrosivity
- Ignitability
- Reactivity
- TCLP
- Toxicity - Metals Only

Miscellaneous :
- Asbestos

Metals I (ALL)
Purgeable Aromatics (ALL)

Polychlorinated Biphenyls (ALL)
Purgeable Halocarbons (ALL)

Herbert W. Dickerman

Serial No.: 08697

Herbert W. Dickerman, M.D., Ph.D., Director
Wadsworth Center for Laboratories and Research

Property of the New York State Department of Health. Valid only at the address shown.
Must be conspicuously posted. Valid certificate has a red serial number.

DOH-3317 (11/90)

NEW YORK STATE DEPARTMENT OF HEALTH

DAVID AXELROD, M. D. *COMMISSIONER*

Expires 12:01 AM April 1, 1992
ISSUED April 1, 1991
REVISED June 13, 1991

INTERIM CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

Lab ID No.: 10795

Director: MR. JOHN BUCK
Lab Name: BUCK ENVIRONMENTAL LABORATORIES INC
Address : 100 TOMPKINS STREET
CORTLAND NY 13045

is hereby APPROVED as an Environmental Laboratory for the category

ENVIRONMENTAL ANALYSES/AIR AND EMISSIONS

All approved subcategories and/or analytes are listed below:

Miscellaneous Air : Fibers	Purgeable Aromatics (ALL)

Herbert W. Dickerman

Serial No.: 08696

Herbert W. Dickerman, M.D., Ph.D., Director
Wadsworth Center for Laboratories and Research

Property of the New York State Department of Health. Valid only at the address shown.
Must be conspicuously posted. Valid certificate has a red serial number.

DOH-3317 (11/90)

NEW YORK STATE DEPARTMENT OF HEALTH

DAVID AXELROD, M. D. *COMMISSIONER*

Expires 12:01 AM April 1, 1992
ISSUED April 1, 1991
REVISED June 13, 1991

INTERIM CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

Lab ID No.: 10795

Director: MR. JOHN BUCK
Lab Name: BUCK ENVIRONMENTAL LABORATORIES INC
Address : 100 TOMPKINS STREET
CORTLAND NY 13045

is hereby APPROVED as an Environmental Laboratory for the category

ENVIRONMENTAL ANALYSES/ POTABLE WATER

All approved subcategories and/or analytes are listed below:

Drinking Water Non-Metals :
- Alkalinity
- Calcium Hardness
- Chloride
- Color
- Fluoride, Total
- Nitrate (as N)
- Hydrogen Ion (pH)
- Solids, Total Dissolved
- Sulfate (as SO4)

Drinking Water Bacteriology (ALL)
Microextractables (ALL)
Volatile Halocarbons (ALL)

Drinking Water Trihalomethane (ALL)
Pesticide/Herbicides (ALL)

Drinking Water Metals (ALL)
Volatile Aromatics (ALL)

Herbert W. Dickerman

Serial No.: 08695

Herbert W. Dickerman, M.D., Ph.D., Director
Wadsworth Center for Laboratories and Research

Property of the New York State Department of Health. Valid only at the address shown.
Must be conspicuously posted. Valid certificate has a red serial number.

DOH-3317 (11/90)

NEW YORK STATE DEPARTMENT OF HEALTH

DAVID AXELROD, M. D. *COMMISSIONER*

Expires 12:01 AM April 1, 1992
ISSUED April 1, 1991
REVISED June 13, 1991

INTERIM CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

Lab ID No.: 10795

Director: MR. JOHN BUCK
Lab Name: BUCK ENVIRONMENTAL LABORATORIES INC
Address : 100 TOMPKINS STREET
CORTLAND NY 13045

is hereby APPROVED as an Environmental Laboratory for the category

ENVIRONMENTAL ANALYSES NON POTABLE WATER

All approved subcategories and/or analytes are listed below:

Chlor. Hydrocarbon Pesticides :
- 4,4'-DDD
- 4,4'-DDE
- 4,4'-DDT
- alpha-BHC
- Aldrin
- beta-BHC
- Chlordane Total
- delta-BHC
- Dieldrin
- Endrin aldehyde
- Endrin
- Endosulfan I
- Endosulfan II
- Endosulfan sulfate
- Heptachlor
- Heptachlor epoxide
- Lindane
- Methoxychlor
- Toxaphene

Wastewater Metals II :
- Aluminum, Total
- Arsenic, Total
- Beryllium, Total
- Mercury, Total
- Antimony, Total
- Selenium, Total
- Zinc, Total

Chlorophenoxy Acid Pesticides :
- 2,4-D
- 2,4,5-TP (Silvex)

Wastewater Metals III :
- Thallium, Total

Chlorinated Hydrocarbons (ALL)
Wastewater Metals I (ALL)
Polynuclear Aromatics (ALL)
Priority Pollutant Phenols (ALL)
TCLP Only (ALL)

Mineral :
- Alkalinity
- Calcium Hardness
- Chloride
- Fluoride, Total
- Sulfate (as SO4)
- Hardness, Total

Nutrient :
- Kjeldahl Nitrogen, Total
- Ammonia (as N)
- Nitrate (as N)
- Phosphorus, Total

Benzidines (ALL)
Demand (ALL)
Nitroaromatics and Isophorone (ALL)
Polychlorinated Biphenyls (ALL)
Purgeable Aromatics (ALL)

Wastewater Miscellaneous :
- Color
- Phenols
- Oil & Grease Total Recoverable
- Hydrogen Ion (pH)
- Temperature
- Organic Carbon, Total

Wastewater Bacteriology :
- Coliform, fecal
- Coliform, Total

Residue :
- Solids, Total Dissolved
- Solids, Total Suspended

Haloethers (ALL)
Nitrosoamines (ALL)
Phthalate Esters (ALL)
Purgeable Halocarbons (ALL)

Herbert W. Dickerman, M.D., Ph.D., Director
Wadsworth Center for Laboratories and Research

Serial No.: 08694

Property of the New York State Department of Health. Valid only at the address shown.
Must be conspicuously posted. Valid certificate has a red serial number.

DOH-3317 (11/90)

STATE OF NEW YORK - DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
Asbestos Control Program
ONE MAIN STREET
BROOKLYN, NY 11201

ASBESTOS HANDLING LICENSE

LICENSE NUMBER: AC-91-0413
DATE OF ISSUE: 04-25-91
EXPIRATION DATE: 04-30-92

Contractor: BUCK ENVIRONMENTAL LABORATORIES, INC.

Address: 100 TOMPKINS STREET
CORTLAND, NY 13045

Duly Authorized Representative: JOHN H. BUCK

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12NYCRR Part 56). It is subject to suspension or revocation for serious violations of the aforementioned Laws, Codes, Rules and Regulations.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite . The licensee verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Handling Certificate by the New York State Department of Labor.

ROBERT F. GOLLNICK, Director
FOR THE COMMISSIONER OF LABOR

DOSH-480 (2-88)

THE UNIVERSITY OF THE STATE OF NEW YORK

EDUCATION DEPARTMENT

BE IT KNOWN THAT

JOHN H. BUCK

HAVING GIVEN SATISFACTORY EVIDENCE OF THE COMPLETION OF PROFESSIONAL AND OTHER REQUIREMENTS PRESCRIBED BY LAW IS QUALIFIED TO PRACTICE AS A

PROFESSIONAL ENGINEER

IN THE STATE OF NEW YORK

IN WITNESS WHEREOF THE EDUCATION DEPARTMENT GRANTS THIS LICENSE UNDER ITS SEAL AT ALBANY, NEW YORK THIS TWENTY-FIRST DAY OF APRIL, 1978.

Gordon M. Ambach
PRESIDENT OF THE UNIVERSITY
AND COMMISSIONER OF EDUCATION

Stanley M. Greenwald
EXECUTIVE SECRETARY

LICENSE NUMBER
55460

UNIVERSITIES OCCUPATIONAL SAFETY AND HEALTH EDUCATIONAL RESOURCE CENTER

certifies that

JOHN BUCK

has completed a
Continuing Education Post-Graduate
course entitled

POLARIZING LIGHT MICROSCOPY FOR ASBESTOS IDENTIFICATION

CENTER DIRECTOR

COURSE DIRECTOR

OCTOBER 26-29, 1987
DATE

A NIOSH-Sponsored Educational Resource Center

UNIVERSITIES OCCUPATIONAL SAFETY AND HEALTH EDUCATIONAL RESOURCE CENTER

certifies that

JOHN H. BUCK

has completed a
Continuing Education Post-Graduate
course entitled

SAMPLING AND EVALUATION AIRBORNE ASBESTOS DUST - NIOSH 582

CENTER DIRECTOR

JANUARY 19-22, 1988
DATE

COURSE DIRECTOR

A NIOSH-Sponsored Educational Resource Center

HYGEIA INC.

303 Bear Hill Road

Waltham, MA

Certifies that

PHILLIP W. SHAFFNER

has attended and

successfully completed the written examination

for the

AIRBORNE ASBESTOS SAMPLING AND EVALUATION TECHNIQUES; NIOSH 582 EQUIVALENCY

Course

April 10 - 14, 1989

Date

2204-109

Certificate Number

Expiration Date

Cynthia Whalen

Cynthia Whalen
Manager, Environmental Education

Charles M. Spooner

Charles M. Spooner, Ph.D
Certified Industrial Hygienist
Course Director

COMPREHENSIVE TRAINING SCHOOL

a division of COMPREHENSIVE ANALYTICAL GROUP, INC.

SYRACUSE, NEW YORK

HEREBY CERTIFIES THAT

Phillip W. Shaffner

SS # 123-28-8454

HAS ATTENDED AND SUCCESSFULLY PASSED

THE EXAMINATION WITH A GRADE OF 98% FOR

A 14 HOUR TRAINING COURSE ENTITLED

"RESTRICTED ASBESTOS HANDLER II -
ASBESTOS PROJECT SAMPLING TECHNICIAN"

INCLUDING CLASSROOM LECTURES AND HANDS-ON INSTRUCTION

ON THIS 7th DAY OF March , 19 89

Expiration Date: / /

Certificate No.:

APST — 00032

President

Director of Education

COMPREHENSIVE TRAINING SCHOOL

a division of COMPREHENSIVE ANALYTICAL GROUP, INC.

SYRACUSE, NEW YORK

HEREBY CERTIFIES THAT

Daniel M. Shearer

SS # 086-66-3533

HAS ATTENDED AND SUCCESSFULLY PASSED
THE EXAMINATION WITH A GRADE OF 98% FOR
A 24 HOUR TRAINING COURSE ENTITLED
Restricted Asbestos Handler II –
Asbestos Project Sampling Technician
INCLUDING CLASSROOM LECTURES AND HANDS-ON INSTRUCTION
ON THIS 9th DAY OF November, 19 90

Expiration Date: / /

Certificate No.:

APST — 00163

Robert J Boulware
President

Director of Education

John H. Buck

Has attended the course:

Recertification of Building Inspector

a course developed pursuant to the regulations of 40 CFR 763.

This course was conducted by

O'Brien & Gere Engineers, Inc.

P.O. Box 4873, Syracuse, New York 13221; telephone (315)437-6100.

This course is accredited by the U.S. Environmental Protection Agency.

Certificate number: 70-089-36-3453

Date of course: May 23, 1991

Expiration date: May 23, 1992

Vice President

Instructor

The accredited inspector who holds this certificate must display his or her initial and current certificates at the location where he or she is working as required by the regulations of the federal Toxic Substances Control Act.

Phillip W. Shaffner

Has attended the course:

Recertification of Building Inspector

a course developed pursuant to the regulations of 40 CFR 763.

This course was conducted by

O'Brien & Gere Engineers, Inc.

P.O. Box 4873, Syracuse, New York 13221; telephone (315)437-6100.

This course is accredited by the U.S. Environmental Protection Agency.

Certificate number: 70-123-28-8454

Date of course: May 23, 1991

Expiration date: May 23, 1992

Vice President

Instructor

The accredited inspector who holds this certificate must display his or her initial and current certificates at the location where he or she is working as required by the regulations of the federal Toxic Substances Control Act.

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John H. Buck

Has attended the course:

Recertification of Management Planner

a course developed pursuant to the regulations of 40 CFR 763.

This course was conducted by

O'Brien & Gere Engineers, Inc.

P.O. Box 4873, Syracuse, New York 13221; telephone (315)437-6100.

This course is accredited by the U.S. Environmental Protection Agency.

Certificate number: 80-089-36-3453

Date of course: May 23, 1991

Expiration date: May 23, 1992

Vice President

Instructor

Phillip W. Shaffner

Has attended the course:

Recertification of Management Planner

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