Remedial Investigation
Final Work Plan

June 1997
1st Revision: February 1998
2nd Revision: July 1998

Prepared for:

National Rubber Adhesives Inc.
38-31 9th Street
Long Island City, New York 11101

Prepared by:

CDM Camp Dresser & McKee
100 Crossways Park Drive West
Woodbury, New York 11797-2012

Phase II Site Assessment
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(nra/figureb)

Section 1
Purpose and Scope

1.1 Introduction

Camp Dresser & McKee (CDM) has prepared this Phase II Environmental Assessment Work Plan for the National Rubber Adhesives, Inc. Site (the site) located at 38-31 9th Street, Long Island City, Queens, New York. The site consists of a 30,000 square foot one story building which has been the site of adhesives manufacturing for at least 62 years. Current operations at the site include the manufacture of latex and solvent based adhesive products. Hazardous materials including heptane and chloroform are currently used and stored on-site. Five underground storage tanks (USTs) were closed in-place, including one toluene, two gasoline, one methyl ethyl ketone (MEK) and one heptane UST. Two USTs with a capacity of 1,500-gallons are currently in service at the site storing heptane.

In 1996, the site operator who took over the site in May of 1995, conducted a voluntary investigation which revealed the presence of soil and groundwater contamination from a number of volatile organic compounds (VOCs), including: benzene, toluene, xylene, tetrachloroethene and chloroform. These findings were reported to the New York State Department of Environmental Conservation (NYSDEC) which subsequently issued spill identification number 9602231 for the site.

This Work Plan provides a detailed description of the tasks to be completed by CDM as part of the Phase II Environmental Site Assessment of the site and any Interim Remedial Measures (IRMs) that are currently considered appropriate based on existing data. The scope of work presented in this Work Plan has been developed in order to meet the investigative requirements of both the NYSDEC's Spills Management Section and Hazardous Waste Remediation Section as described in the NYSDEC letter concerning the site, dated September 18, 1996. Additionally, this scope of work takes into consideration site assessment guidance presented in NYSDEC's SPOTS Memo No. 14, dated August 1, 1994.

Based on the findings of the Phase II Environmental Investigation (Phase II), CDM will propose the completion of appropriate IRMs. Consistent with NYSDEC requirements, CDM has planned to include the installation of a product recovery system within the two monitoring wells exhibiting the greatest product thickness as a site IRM. This IRM can be under taken shortly after receiving laboratory data concerning the chemical makeup of the product encountered. The need for any additional IRMs or further remedial investigations will be determined based on the results of the completed Phase II.

The scope of the Phase II takes into consideration a number of physical site constraints including the fact that the majority of the site property is occupied by the site building and the fact that the five underground storage tanks (USTs) of concern have been abandoned in place by filling with concrete slurry. Given the USTs are situated within a small courtyard of very limited area, approximately 20 feet by 60 feet, and are surrounded on three sides by the site building prevents the safe removal of

the now closed USTs. Therefore, at this time, it is anticipated that the closed USTs will remain in place.

1.2 Investigation Objectives

Considering the physical limitations of the site, CDM will install five shallow groundwater monitoring wells, four inside the building and one within the site courtyard. Soil and groundwater samples collected for laboratory analysis in order to define the nature and extent of subsurface contamination associated with the five closed USTs as well as other potential sources of contamination within the site.

The specific objectives of the Phase II include:

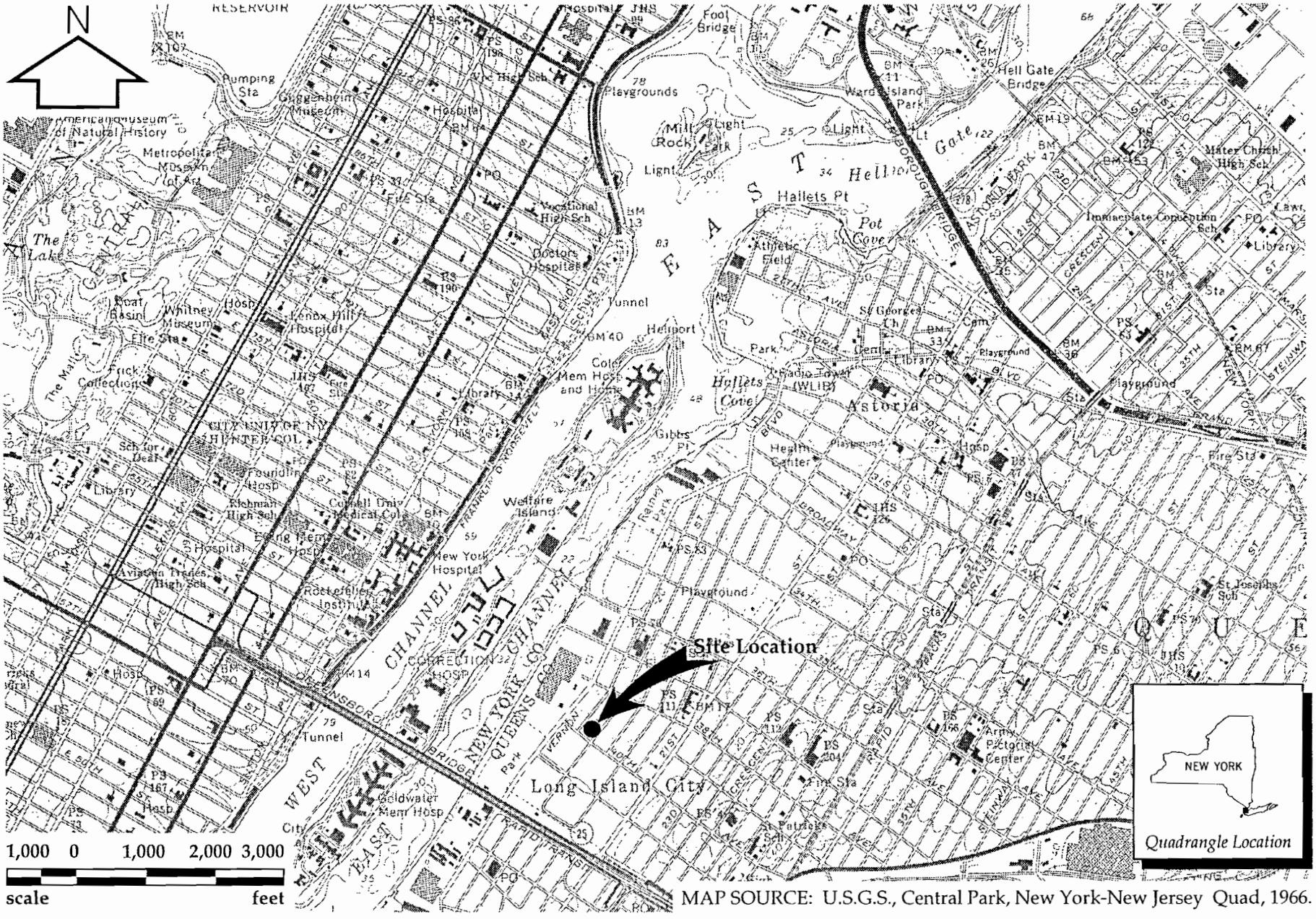
- Obtain site specific hydrogeologic data such as soil characteristics, depth to groundwater, groundwater flow direction, etc.;
- Identify possible off-site sources of subsurface contamination that may be contributing to site contamination;
- Identify the source or sources of on-site contamination;
- Identify the nature and extent of contamination present within the site including the vertical and horizontal extent of soil and groundwater contamination and the types of contaminants present; and
- Further assess on site USTs as a ptential source of contamination.
- Determine the appropriate type and size of the product recovery system to be used as an IRM at the site.

1.3 Site Description

The site is located on the west side of 9th Street approximately 0.4 mile north of the Queenboro Bridge, and 600 feet south of 38th Avenue. Surrounding properties are classified as industrial and commercial. Figure 1 consists of a site location map.

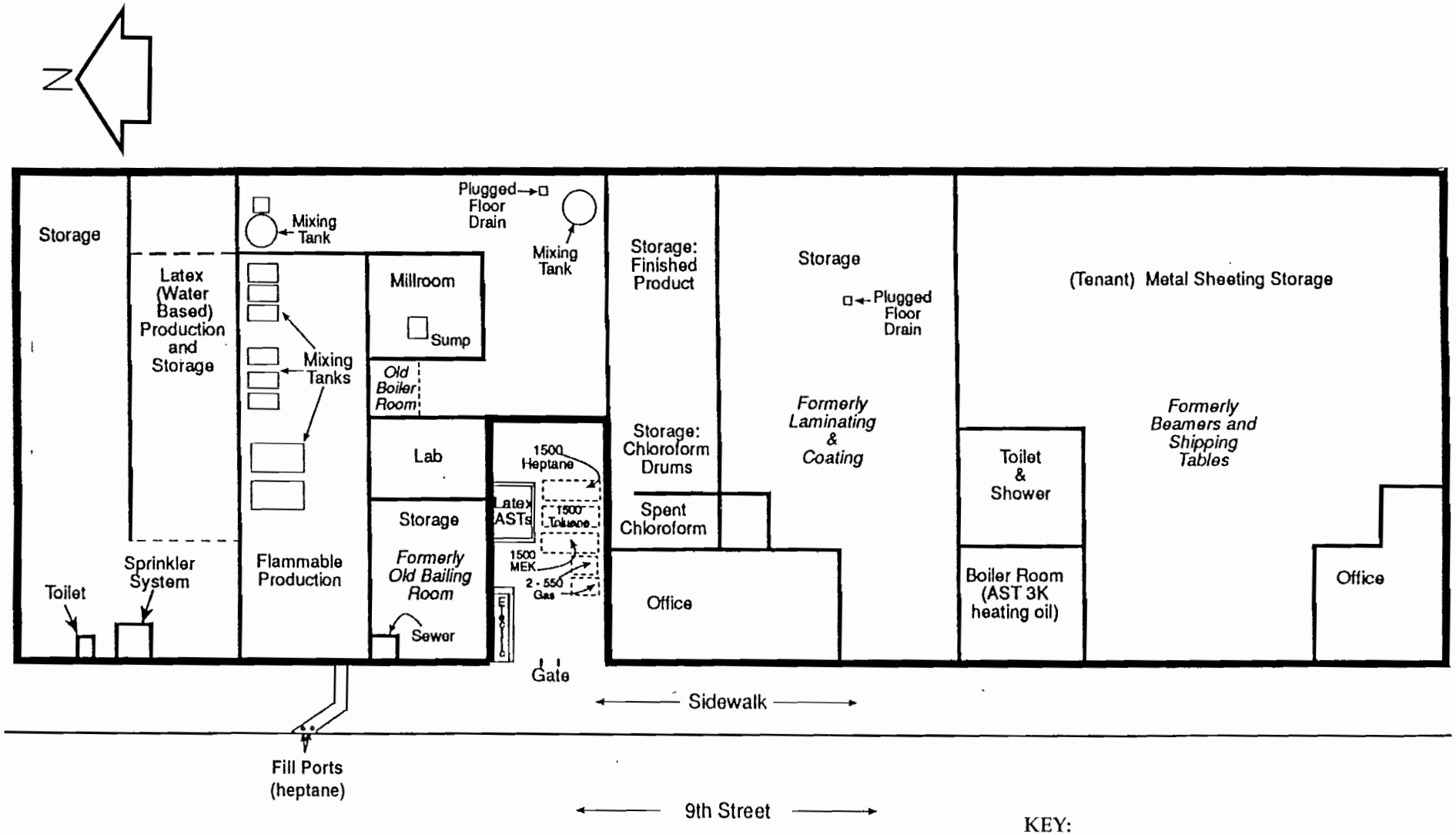
Presently, the site is occupied by a 30,000 square foot, one story building. The northern two-thirds of the building is in use by National Rubber Adhesives Inc. for adhesives manufacturing, equipment and materials storage, and office space. Figure 2 is a facility layout of the site. Operations on the site have consisted primarily of adhesives manufacturing for at least 62 years. Both latex (water based) and solvent based products are manufactured. A tenant now occupies the southernmost 1/3 of the subject building. This space is used for storage of sheet metal and supplies for an off-site manufacturing business. No metal fabrication, cutting or manufacturing associated with this business takes place on the property.

Surrounding properties consist of light and heavy industrial facilities, and residential properties. Across 9th Street, to the west, is a newspaper printing and publishing facility. Adjoining properties to the south and north are residential single family homes or apartments. Adjoining properties to



MAP SOURCE: U.S.G.S., Central Park, New York-New Jersey Quad, 1966.

Figure 1
Site Location
Phase II Site Assessment Work Plan, National Rubber Adhesives Inc.



KEY:

- Underground Storage Tank (UST)

25 0 25

scale feet

MAP SOURCE: U.S. Hydrogeologic, Inc.

Figure 2
Site Map
Phase II Site Assessment Work Plan, National Rubber Adhesives Inc.

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the east are light and heavy industrial facilities, including automotive repair and salvage, metal fabrication, and stoneworks.

Five underground storage tanks (USTs) were abandoned in-place within the site courtyard area of the site. The approximate location of each UST is shown in Figure 2. The location of decommissioned fill ports for these tanks is indicated by a pavement patch in the sidewalk outside the courtyard gate. Tightness test records indicate that one 550-gallon gasoline UST, one 1,500-gallon toluene UST, and one 1,500-gallon heptane UST were tested for tightness in 1990, and passed the tightness test. The other 550-gallon gasoline UST, and one 1,500-gallon Methyl ethyl Ketone UST were previously tested in 1987, and passed. According to the plant manager, all five of the courtyard USTs have been permanently closed in place by filling them with concrete. Appendix A includes closure documentation for the five USTs.

Two 1,500-gallon heptane USTs are still in use on the plant. Test records indicate that the two 1,500-gallon heptane USTs were tested for tightness in 1993, and passed.

1.4 Site Geology and Hydrogeology

Topography

The site is located in an area of Queens County, New York consisting of relatively flat, gently south sloping, glacial outwash plain. The site is approximately 15 to 20 feet above mean sea level (MSL), flat with no apparent slope.

Site Stratigraphy

Beneath the site area are unconsolidated sediments of Pleistocene and Cretaceous age, which is underlain by Crystalline bedrock of Pre-Cambrian age, as shown in Figure 3.

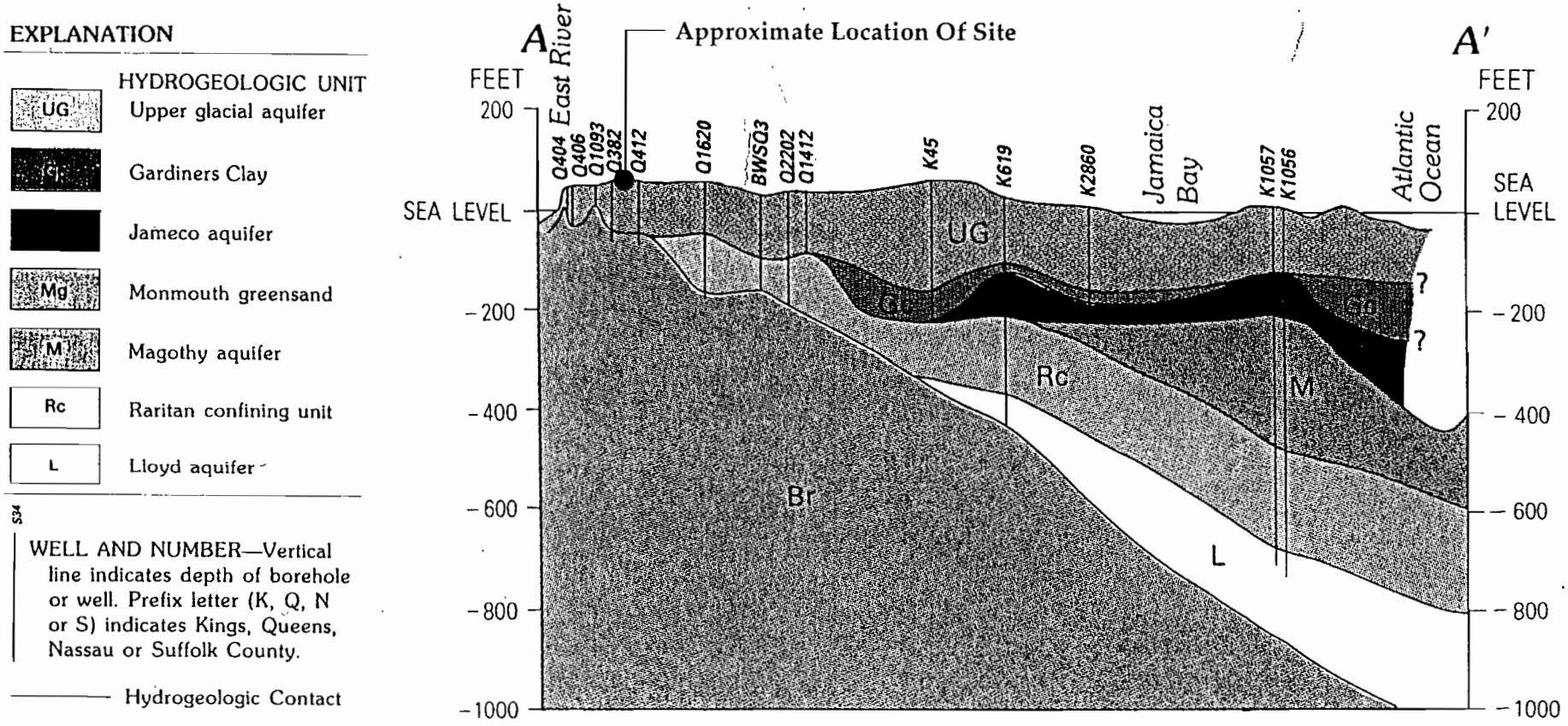
The area is directly underlain by glacial till deposits consisting of moderately permeable fine to coarse quartzitic sands with gravel and localized areas of clay. These glacial deposits comprise the Upper Glacial aquifer and are approximately 100 feet thick within the site area. Porosity within such deposits can be as high as 30 to 40 percent (Veatch et al, 1906) and average hydraulic conductivities of 1.8 x 103 gpd/ft2, and transmissivities of 2.3 x 105 gpd/ft are common (McClymonds & Franke, 1972).

The Raritan Clay consisting of Cretaceous aged deltaic clay and silty clay beds underlie the glacial aquifer within the site area and acts as an effective aquiclude or confining unit having a hydraulic conductivity of approximately 1.0 x103 ft/day. Below the Raritan Clay is Pre-Cambrian aged bedrock.

Groundwater Flow

According to groundwater contour maps produced by the United States Geological Survey (USGS); groundwater within the general area of the site flows in a westerly direction, towards the East River. Depth to groundwater likely ranges from 10 to 15 feet below grade within the site. Groundwater velocities (horizontal) within the Upper Glacial aquifer range between one (1) and four (4) feet per day (McClymonds & Frank, 1972).

There are no surface water bodies located onsite. The nearest surface water body is the East River, approximately one quarter mile west of the site.



SOURCE: U.S.G.S. Hydrologic Atlas HA-709.

Figure 3
Generalized Geologic Cross Section Of Subject Site
Phase II Site Assessment Work Plan, National Rubber Adhesives Inc.

Section 2
Previous Site Investigation

As part of a Preliminary Subsurface Investigation conducted in January of 1996 by U. S. Hydrogeologic Inc. soil and groundwater samples were collected from shallow Geoprobe borings at selected locations within the plant. Continuous soil samples were collected in 4-foot cores (2-inch diam.) Using direct -push techniques. In two locations (SB-7 and SB-8), soil samples were collected using a hand auger because doorways were too narrow for Geoprobe rig access. Sample locations for the 1996 Investigation are shown in Figure 4.

Two Geoprobe borings (SB-4 and SB-5) were converted to Monitoring Wells MW-1 and MW-2. These wells are constructed of 1-inch OD PVC. A 5-foot slotted well screen spans the water table in each location. These wells were left in place to permit future resampling. Eight soil samples and two groundwater samples were submitted for laboratory analysis for volatile organic compounds (VOCs) via EPA method 8240.

Based on a review of the March 6, 1996 U. S. Hydrogeologic Inc. Investigation Report, the following are the most significant findings of the completed Investigation:

- All eight out of ten samples contained one or more VOCs at concentrations exceeding regulatory limits.

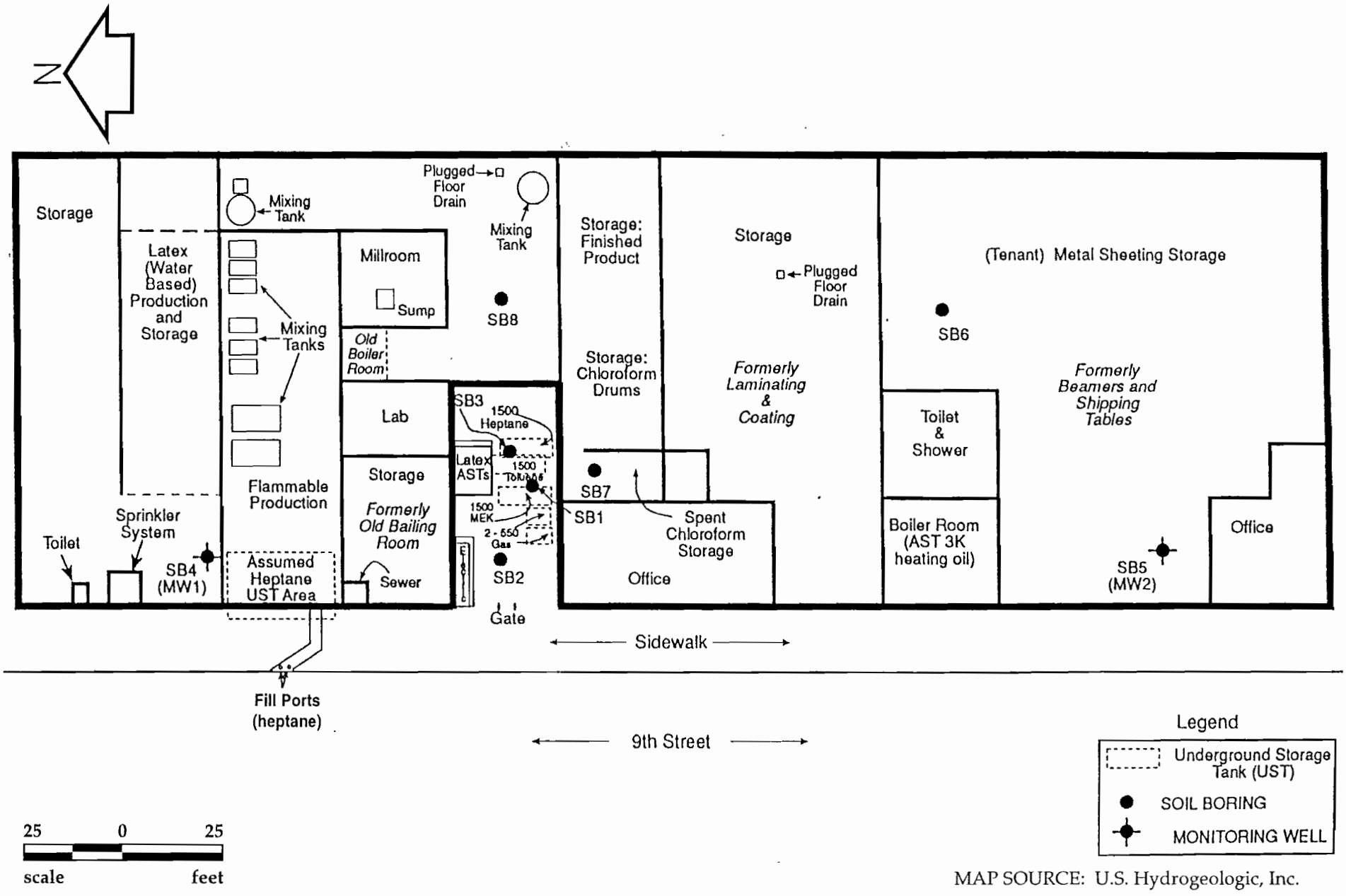
- Groundwater collected from monitoring well MW-1 in the existing Latex Production Area contains benzene (280 ug/l); toluene (52,000 ug/l); and xylene (1,310 ug/l).

- Soil samples SB-4(0-4') and SB-4(4-8') were collected from the boring which was converted to Monitoring Well MW-1. Soil samples SB-4(0-4') contained only a trace of toluene (9 ug./l). Soil sample SB-4(4-8'), however, contained toluene (9,100 ug/l); ethylbenzene (600 ug/l); and xylenes (3,130 ug/l).

- Groundwater collected from Monitoring Well MW-2 near the southern end of the property contains toluene (280,000,000 ug/l); ethylbenzene (890,000 ug/l); and xylenes (3,170,000 ug/l). A layer of undissolved, floating product was present on the water table in MW-2.

- Soil samples SB-5(4') and SB-5(4-8') were collected from the boring which was converted to Monitoring well MW-2. Soil sample SB-5(4') contained tetrachloroethene (6 ug/l [estimated]) and toluene (54 ug/l). Soil sample SB-5(4-8') contained tetrachloroethene (14 ug/l) and toluene (78 ug/l).

- All of the chemical constituents detected in MW-1, MW-2, and SB-4 are contained in products known to be stored on the premises in the underground tanks and/or used in the production of adhesives products. Tetrachloroethene is known to have been used and stored at this facility.



MAP SOURCE: U.S. Hydrogeologic, Inc.

Figure 4
Sample Locations From 1996 Partial Phase II Environmental Assessment
Phase II Site Assessment Work Plan, National Rubber Adhesives Inc.

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- Soil samples SB-1(0-2') and SB-3(0-2') were collected from borings in the outdoor storage area, immediately adjacent to decommissioned underground storage tanks that formerly contained toluene, gasoline, methyl ethyl ketone, and hexane. Sampling depth was limited to the uppermost 2 feet of soil in the outdoor storage area because the sampling tools met refusal at that depth due to the presence of buried concrete.

- Soil samples SB-1(0-2') contained methylene chloride (220 ug/l [estimated]); tetrachloroethene (710 ug/l); and toluene (16,000 ug/l). Soil sample SB-3(0-2') contained tetrachloroethene (630 ug/l [estimated]); toluene (82,000 ug/l); ethylbenzene (2,900 ug/l); and xylene (830 ug/l [estimated]).

- Soil sample SB-7(0-1') was collected from the uppermost 1 foot of soil from beneath the floor of the room where chloroform is stored in drums. Sampling depth was limited by the presence of bricks and other obstacles at a depth of 1 foot. Sample SB-7(0-1') contained chloroform (18 ug/l) and toluene (5 ug/l [estimated]).

- Soil sample SB-8(6') was collected from beneath the floor of the area adjacent to the Millroom. Sampling depth was limited by the presence of bricks and fill at a depth of approximately 6 feet. Sample SB-8(6') contained chloroform (2 ug/l [estimated]) and toluene (5 ug./l [estimated]).

Section 3
Scope of Work

Task 1 - Phase II Environmental Site Assessment

CDM proposes to install up to seven shallow groundwater monitoring wells within accessible areas of the site building and/or surrounding site property. Two monitoring wells will be installed along the eastern side of the building interior to serve as up gradient monitoring wells. A third monitoring well will be installed immediately west, downgradient, of the current location of the five closed USTs. A fourth monitoring well will be installed immediately east of the five closed USTs. Three additional groundwater monitoring wells will be installed within the southwestern portion of the site within the general area of existing monitoring well MW-2. Figure 5 provides the proposed locations of the seven monitoring wells.

Subtask 1.1 Soil Sampling

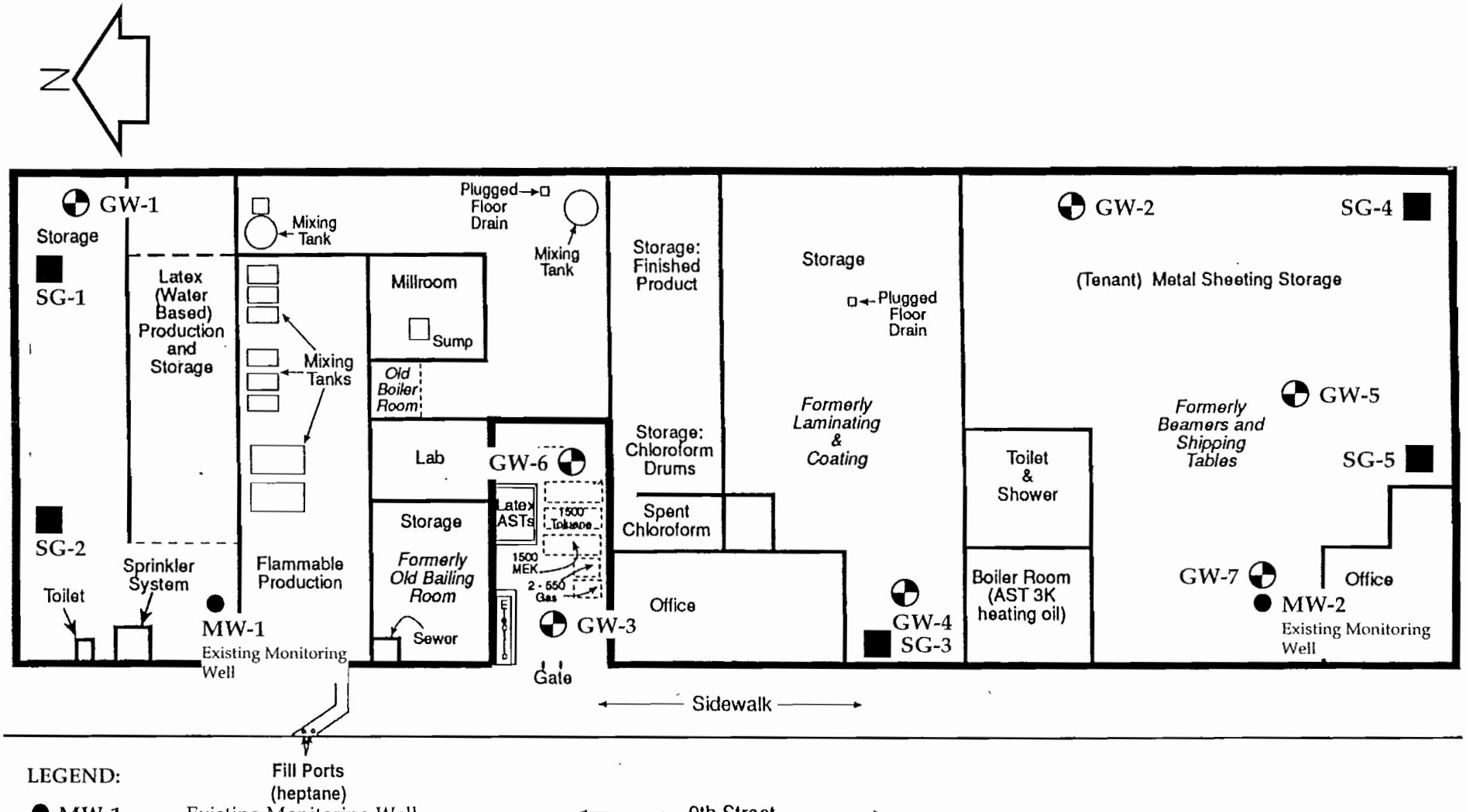
During installation of the seven monitoring wells, CDM will collect soil samples for field screening and laboratory analysis. A total of three soil samples per location will be collected, one above the local water table, one at the water table and one below the water table. Each soil sample will be screened in the field for the presence of VOCs using an Organic Vapor Monitor (OVM). All field screening measurements will be recorded by CDM. The two soil samples from each well location with the highest observed VOC concentration will be selected for laboratory analysis. In the case of the two monitoring wells located adjacent to the closed USTs, MW-3 and MW-6, soil samples collected at the approximate depth equal to the bottom of the USTs, between seven and ten feet below grade, will be automatically selected for lab analysis. Analysis of soil samples will be in accordance with NYSDEC requirements and will include:

- TCL Volatile Organics
- TCL Semi-Volatile Organics
- TCL Pesticides/PCBs
- TAL Metals
- Hexane, Heptane and MEK
- Methyl Tertiary Butyl Ether (MTBE)

Addition of heptane, hexane, MEK and MTBE to the standard VOC analysis is needed in order to fully assess the impact to soil as the result of any potential releases from the closed USTs.

One field blank, one trip blank and one blind duplicate sample will also be collected as part of the soil sampling program in accordance with NYSDEC sampling protocols. Analysis of soil samples will be conducted by NY Test Environmental Inc., a NYSDEC ASP certified laboratory. Table 1 Summarizes the number of samples to be collected, sample preservative, sample containers and analytical methods.

During the collection of split spoon soil samples, blow counts and soil descriptions will be recorded by CDM. The soil descriptions will be consistent with Burmeister soil classification systems and all observations which could further clarify the characteristics of the site geology will be noted , as



LEGEND:

- ● MW-1 - Existing Monitoring Well
- GW-1 - Proposed Monitoring Well
- ■ SG-1 - Proposed Soil Gas Sampling Point

25 0 25
scale feet

KEY:

- ⬚ - Underground Storage Tank (UST)

MAP SOURCE: U.S. Hydrogeologic, Inc.

Figure 5
Proposed Monitoring Well And Soil Gas Locations
Phase II Site Assessment Work Plan, National Rubber Adhesives Inc.

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Sample Matrix	Number Of Samples (Including QA/QC Samples)	Analytical Reference Method	Sample Preservation	Holding Time (a)	Container
A. SOIL ANALYSIS					
1. Soil Analysis					
VOAs	18	CLP *(b)*	Cool to 4C	7 days	2 x 40-ml vials
Including: Hexane, Heptane, Methyl Ethyl Ketone, MTBE					
BNAs/Pest/PCBs	18	CLP *(c)*	Cool to 4C	5 days extraction 40 days analysis	1 x 8 oz. glass jar
Metals	18	CLP (d)	Cool to 4C	6 months Hg - 26 days	1 x 8 oz. glass jar
2. Soil Field Blank (Aqueous)					
VOAs	1	CLP *(b)*	Cool to 4C	7 days	2 x 40-ml vials
Including: Hexane, Heptane, Methyl Ethyl Ketone, MTBE					
BNAs/Pest/PCBs	1	CLP *(c)*	Cool to 4C	5 days extraction 40 days analysis	2 x 8 oz. amber or 4 x 1 liter amber
Metals	1	CLP *(d)*	HNO3 to <2 Cool to 4C	6 months Hg - 26 days	1 x 8 oz. glass jar
3. Soil Trip Blank Analysis					
VOAs	1	CLP *(b)*	Cool to 4C	7 days	2 x 40-ml vials
Including: Hexane, Heptane, Methyl Ethyl Ketone, MTBE					
B. GROUNDWATER ANALYSIS					
1. Groundwater					
VOAs	12	CLP *(b)*	Cool to 4C	7 days	2 x 40-ml vials
Including: Hexane, Heptane, Methyl Ethyl Ketone, MTBE					
BNAs/Pest/PCBs	12	CLP *(c)*	Cool to 4C	5 days extraction 40 days analysis	2 x 8 oz. amber or 4 x 1 liter amber
Metals	12	CLP *(d)*	HNO3 to <2 Cool to 4C	6 months Hg - 26 days	1 liter poly

Sheet 1 of 2

Table 1
Sample Parameters

Sample Matrix	Number Of Samples (Including QA/QC Samples)	Analytical Reference Method	Sample Preservation	Holding Time (a)	Container
2. Groundwater Field Blank (Aqueous)					
VOAs	1	CLP *(b)*	Cool to 4C	7 days	2 x 40-ml vials
Including: Hexane, Heptane, Methyl Ethyl Ketone, MTBE					
BNAs/Pest/PCBs	1	CLP *(c)*	Cool to 4C	5 days extraction 40 days analysis	2 x 8 oz. amber or 4 x 1 liter amber
Metals	1	CLP *(d)*	HNO3 to <2 Cool to 4C	6 months Hg - 26 days	1 liter poly
3. Trip Blank Analysis					
VOAs	1	CLP *(b)*	Cool to 4C	7 days	2 x 40-ml vials
Including: Hexane, Heptane, Methyl Ethyl Ketone, MTBE					
C. SOIL GAS ANALYSIS					
VOAs	5	EPA TO-14	NA	14 days	6 liter Summa Canister
Including: Hexane, Heptane, Methyl Ethyl Ketone, MTBE					

KEY:

(a) - Unless otherwise noted, all holding times are from Verified Time of Sample Receipt (VTSR) at the laboratory.

(b) - Analysis will be performed in accordance with NYSDEC Analytical Services Protocol (ASP) 1991, Exhibit D, Part II (NYSDEC Method 91-1).

(c) - Analysis will be performed in accordance with NYSDEC ASP 1991, Volume 2, Exhibit D, Part III and IV (NYSDEC Methods 91-2 and 91-3).

(d) - Analysis will be performed in accordance with NYSDEC ASP 1991, Volume 2, Exhibit D, Part V.

appropriate. The presence of any unnatural stain, foreign objects or other sample attributes which could further classify the sample will also be noted. A representative portion of the sample will be placed in a bottle (if there is adequate sample volume). The sample bottle will be labeled with the boring number, split spoon number, and sample depth.

Subtask 1.2 Monitoring Well Installation

Monitoring wells will be installed using a truck mounted hollow-stem auger rig. Based on available information, depth to groundwater is estimated to be approximately 5 to 10 feet below grade. Therefore, monitoring wells will be approximately 15 to 20 feet deep and will consist of 4-inch, schedule 40, PVC riser pipe connected to a 10-foot length of wirewound stainless steel well screen. Slot size of the well screen and appropriate gravel pack size will be dependent on aquifer characteristics. Figure 4 is a construction schematic for the proposed well construction. Four inch stainless steel well screens are strongly recommended given the concentration of VOC's within groundwater may damage a PVC well screen. Four inch monitoring wells are recommended because they can be converted to recovery wells. Given existing information concerning the soil and groundwater quality, it is anticipated that all drill cuttings and development water will require drumming to allow for off-site disposal.

In the event that refusal is encountered with use of hollow stem augers, a 3.5 - inch O.D. solid stem auger will be utilized to drill through the obstructing object. In the event that the solid stem auger does not successfully penetrate the obstruction, CDM will abandon the borehole and move over 3 to 5 feet and attempt a second hole. If continued refusal is encountered, other drilling methods may be considered.

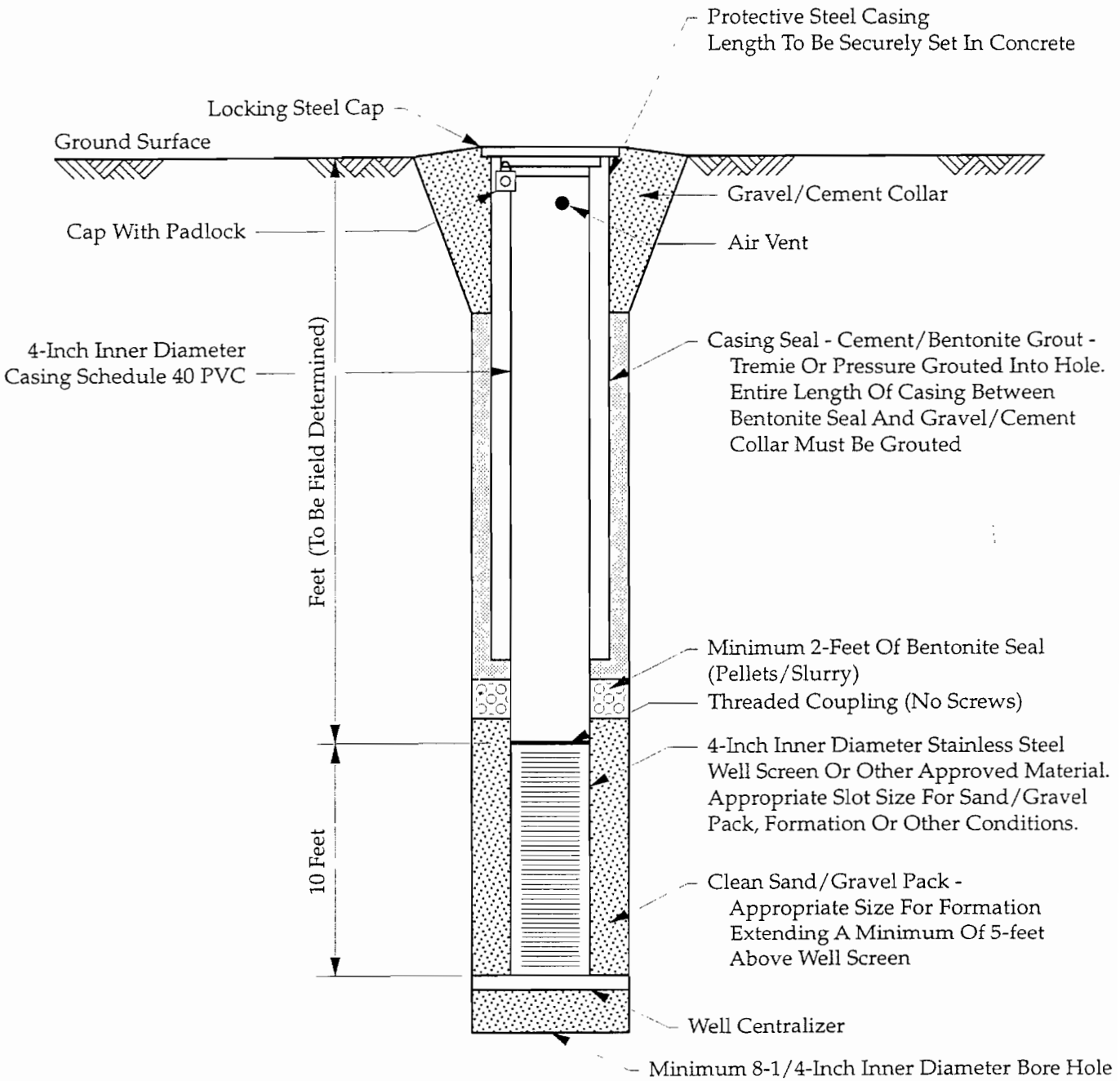
The wells will be installed so that the well screen will intercept free floating product. All wells will be sand packed and grouted in place and completed with a flush mounted locking manhole. After installation, the monitoring wells will be developed by pumping and surging until a proper hydraulic connection is made between the well screen and aquifer.

Upon completion of the seven groundwater monitoring wells, CDM will survey the location of the five wells in addition to the two existing monitoring wells using an arbitrary datum in order to obtain water table elevations that will be used to determine groundwater flow directions within the site. Up to two rounds of static water level measurements will be collected by CDM at each well location to the nearest 0.01 foot using an interface probe which will also be capable of measuring floating product within the wells.

Subtask 1.3 Groundwater Sampling

Under this subtask, CDM will collect one round of groundwater samples from the seven monitoring wells installed and the existing monitoring well MW-1. Sampling procedures will be in accordance with NYSDEC protocols. Analysis of samples will include:

- TCL Volatile Organics
- TCL Semi-Volatile Organics
- TCL Pesticides/PCBs
- TAL Metals
- Hexane, Heptane, and MEK
- Methyl Tertiary Butyl Ether (MTBE)



Not To Scale

Figure 6
Monitoring Well Specifications
For Unconsolidated Formations

Addition of heptane, hexane, MEK and MTBE to the standard VOC analysis is needed in order to fully assess the impact to groundwater as the result of any potential releases from the closed USTs.

One field blank, one trip blank and one blind duplicate sample will also be collected as part of the groundwater sampling task in accordance with NYSDEC sampling protocols. Analysis of groundwater samples will be conducted by NY Test Environmental Inc., a NYSDEC ASP certified laboratory. Table 1 summarizes the number of samples to be collected, sample preservative, sample containers and analytical methods.

Subtask 1.4 Soil Gas Sampling

Based on discussions with New York State Department of Health (NYSDOH) personnel, it was agreed that collection of five soil gas samples for VOC analysis would be sufficient to address their concern with regard to assessing the potential for offsite migration of VOCs via the soil gas pathway. NYSDOH required two samples be collected on the north and south sides of the building given residential properties appear to be located adjacent to these areas. A fifth sample was requested adjacent to the sidewalk located along the western side of the building.

CDM will collect five soil gas samples at the perimeter of the site property as shown in Figure 3. Samples will be collected by driving a temporary soil gas probe approximately three feet below the building concrete slab. Once in place, each soil gas probe will be fitted with a polyethylene tube and purged using a vacuum pump gas probe and a total VOC measurement collected using a PID.

After purging, a soil gas sample will be collected by connecting the tubing to a Summa canister. A Summa canister is a stainless steel vessel which has been decontaminated and certified to be free of VOCs. The Summa canister is prepared by the contract laboratory so that the sample vessel is under a high vacuum (<1 hr torr: <28" Hg). A grab sample from each soil gas probe will be collected by opening the canister valve and the vacuum is used to "pull" the sample into the canister.

Each soil gas sample will be analyzed for VOCs by EPA Method TO-14. Analysis will include hexane, heptane, MEK and MTBE.

Task 2- Phase II Environmental Assessment Report

CDM will complete a Phase II Environmental Site Assessment Report for review by NYSDEC. The report will provide a summary of CDM's findings from Task 1. CDM will provide a water table contour map, boring logs, well construction logs, and analytical summary tables. The report will include a description of the nature and extent of contamination observed at the site based on field and laboratory data. The report will include CDM's recommendations concerning the need for any IRMs and/or any additional investigations, if appropriate. Based on the results of the Phase II investigation, CDM will discuss with NYSDEC the need for additional soil and/or groundwater sampling to be conducted at the site.

If appropriate, CDM will propose the installation of a product recovery system within two or more installed monitoring wells as an IRM. If selected for use, CDM will provide the following information in the report concerning the product recovery system:

- calculation of the amount of the product to be recovered;

- list of equipment to be used and its technical characteristics;
- site plan depicting the locations of the recovery wells, equipment, and reservoirs for the collection of the recovered product;
- disposal methods for the recovered product;
- description of how the recovery process will be monitored, and criteria to cease operation of the recovery system.

Up to six (6) copies of the Draft Report will be submitted to the NYSDEC for review and comment. CDM will address one set of comments from NYSDEC and revise the report accordingly. Up to six (6) copies of the Final Report will be submitted to the NYSDEC.

Section 4

Project Staffing and Management

The CDM team, under the direction of Bruce Weinstein, as officer-in-charge and Thomas Fox as project manager represents the firm's most qualified and experienced staff in their specific areas of responsibility and expertise.

Bruce Weinstein, P.E., will serve as officer-in-charge for this project. As a CDM senior associate, he has directed the activities of teams of engineers, scientists, and technical specialists for numerous projects. Mr. Weinstein has more than 20 years of experience in the environmental planning and engineering field including the planning, design and implementation of major projects in hazardous waste remediation and remedial investigations.

Thomas P. Fox, P.G., will serve as project manager. A senior environmental scientist, Mr. Fox will act as a point of contact for the NYSDEC. Internally, he will coordinate and schedule subcontractors and CDM field personnel. He will be responsible for development of a site specific health and safety plan under which all field activities will be performed. Mr. Fox has managed dozens of similar site investigations and has carried many of them through the design, construction and operations and maintenance phases. Through his tenure, he has developed a sound working relationship with all local and state regulatory agencies.

Drew B. Bennett will serve as QA/QC Officer for this project. Mr. Bennett is a senior environmental scientist with 12 years of experience in hydrology, water resources management, contamination remediation, environmental management, and air toxics. As the project manager and QA/QC Officer for the Brookfield Avenue landfill remediation project, Mr. Bennett managed an extensive groundwater and leachate sampling and analysis program. He also has designed groundwater extraction and effluent reinjection systems, and conducted a treatability study to evaluate forms of soil vapor extraction technologies for removing volatile and semi-volatile soil contaminants at the Old Bethpage incinerator site, Town of Oyster Bay. Mr. Bennett's resume is provided for review in Appendix C.

Section 5
Project Schedule

The project schedule is presented in Figure 7 and has been updated to reflect completed tasks and events as of February 20, 1998. Based on CDM's experience with similar projects and discussions with NYSDEC project personnel, project schedule assumes the following with regard to future project tasks and events:

- NYSDEC will approve the final work plan within one week of receipt and CDM will undertake the field work within two weeks of NYSDEC approval.
- All field investigation tasks will be completed within two weeks of starting the work.
- The laboratory data report will be submitted to CDM by the contract laboratory within three weeks of the laboratory receiving all samples selected for analysis.
- The product recovery system will be installed by CDM within two weeks of receiving the lab data report.
- It will take two weeks to complete the draft Phase II Environmental Assessment Report from the date of receiving all lab data.
- NYSDEC review of the draft Report will take four weeks.
- CDM will take two weeks to address NYSDEC comments and finalize the report.

Task/Subtask	Weeks																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1.0 Investigation Work Plan																				
- Submit Draft Work Plan To NYSDEC (COMPLETED)																				
- Review Of Draft By NYSDEC (COMPLETED)																				
- Address NYSDEC Comments And Revise Work Plan (COMPLETED)																				
- NYSDEC Approval Of Final Work Plan		1																		
2.0 Field Investigation																				
- Field Mobilization			2																	
- Install Monitoring Wells, Sample And Analyze Soil And Soil Gas																				
- Sample Monitoring Wells																				
- Laboratory Analysis										3										
3.0 Report Preparation																				
- Develop Draft Report												4								
- NYSDEC Review Of Draft Report																				
- Address NYSDEC Comments And Revise Report																				
- NYSDEC Approval Of Final Report																			5	
4.0 Completion Of Interim Remedial Measure (Schedule To Be Determined)																				

Project Milestones (Dates To Be Provided Upon NYSDEC Work Plan Approval And Authorization To Proceed From Client)

1 - NYSDEC Approval Of Final Work Plan, National Rubber Authorizes CDM To Proceed With Work

2 - CDM Starts Field Investigation

3 - Laboratory Submits Lab Data Package To CDM

4 - CDM Submits Draft Report To NYSDEC

5 - NYSDEC Approval Of Final Report

Figure 7
Project Schedule
Phase II Site Assessment Work Plan, National Rubber Adhesives Inc.

Appendix A

UST Closure Documentation

NATIONAL
RUBBER ADHESIVES
Since 1909

38-31 NINTH STREET, LONG ISLAND CITY, NY 11101 (718) 784-7945-6-7-8 Fax (718) 784-7957

APRIL 7, 1995

New York City Fire Department
Division of Fire Prevention
250 Livingston Street
Brooklyn, NY 11201

RE: Tank Yard at 38-33 9th Street, Long Island City, NY 11101

Gentlemen:

Due to the fact that we are no longer in need of three (3) 1500 gallon solvent tanks, we have engaged RGJ Contracting Company, Inc. to seal these tanks in accordance with New York City regulations. These tanks were emptied and thoroughly cleaned and purged.

To our knowledge, there are no leaks or defects in this system.

Very truly yours,

Marc Halpern

Marc Halpern, President
National Rubber Adhesives

MSH/mw

Sworn to before me
this 11th day of April, 1995

Ann Collaras
Notary

ANN COLLARAS
Notary Public, State of New York
No. 41-4983774
Qualified In Queens County
Commission Expires July 8, 1995

R G J CONTRACTING CO., INC.

35-56 9TH STREET LONG ISLAND CITY, N.Y. 11106 718/721-3400
FAX# 718/721-3528

April 3, 1995

Department of Environmental Conservation
47-40 21st Street
Long Island City, N.Y. 11101

Re: National Rubber & Backing Corp.
38-31 9th Street
Long Island City, N.Y. 11106

Gentlemen:

This is to inform you that we are permanently sealing three (3) 1,500 gallon solvent tanks at the above premises.

1 - 1,500 gallon MEK
1 - 1,500 gallon HEPTHANE
1 - 1,500 gallon TOLUOL

Very truly yours,
R G J CONTRACTING CO., INC.

Herbert Brezak

Herbert Brezak

HB/jh

NATIONAL
RUBBER ADHESIVES
Since 1909

38-31 NINTH STREET, LONG ISLAND CITY, NY 11101 (718) 784-7945-6-7-8 Fax (718) 784-7957

APRIL 7, 1995

New York City Fire Department
Division of Fire Prevention
250 Livingston Street
Brooklyn, NY 11201

RE: Tank Yard at 38-33 9th Street, Long Island City, NY 11101

Gentlemen:

Due to the fact that we are no longer in need of three (3) 1500 gallon solvent tanks, we have engaged RGJ Contracting Company, Inc. to seal these tanks in accordance with New York City regulations. These tanks were emptied and thoroughly cleaned and purged.

To our knowledge, there are no leaks or defects in this system.

Very truly yours,

Marc Halpern

Marc Halpern, President
National Rubber Adhesives

MSH/mw

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Since 1909

38-31 NINTH STREET, LONG ISLAND CITY, NY 11101 (718) 784-7945-6-7-8 Fax (718) 784-7957

APRIL 7, 1995

New York City Fire Department
Division of Fire Prevention
250 Livingston Street
Brooklyn, NY 11201

RE: Tank Yard at 38-33 9th Street, Long Island City, NY 11101

Gentlemen:

Due to the fact that we are no longer in need of three (3) 1500 gallon solvent tanks, we have engaged RGJ Contracting Company, Inc. to seal these tanks in accordance with New York City regulations. These tanks were emptied and thoroughly cleaned and purged.

To our knowledge, there are no leaks or defects in this system.

Very truly yours,

Marc Halpern

Marc Halpern, President
National Rubber Adhesives

MSH/mw

Sworn to before me

this 11th day of April, 1995

Ann Collaras
Notary

ANN COLLARAS
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No. 41-4983774
Qualified in Queens County
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NATIONAL
RUBBER ADHESIVES
Since 1909

38-31 NINTH STREET, LONG ISLAND CITY, NY 11101 (718) 784-7945-6-7-8 Fax (718) 784-7957

APRIL 7, 1995

New York City Fire Department
Division of Fire Prevention
250 Livingston Street
Brooklyn, NY 11201

RE: Tank Yard at 38-33 9th Street, Long Island City, NY 11101

Gentlemen:

Due to the fact that we are no longer in need of three (3) 1500 gallon solvent tanks, we have engaged RGJ Contracting Company, Inc. to seal these tanks in accordance with New York City regulations. These tanks were emptied and thoroughly cleaned and purged.

To our knowledge, there are no leaks or defects in this system.

Very truly yours,

Marc Halpern

Marc Halpern, President
National Rubber Adhesives

MSH/mw

Sworn to before me

this 11th day of April, 1995

Ann Collaras
Notary

ANN COLLARAS
Notary Public, State of New York
No. 41-4983774
Qualified In Queens County
Commission Expires July 8, 1995

R G J CONTRACTING CO., INC.

35-56 9TH STREET LONG ISLAND CITY, N.Y. 11106 718/721-3400
FAX# 718/721-3528

May 3, 1995

New York City Fire Department
Division of Fire Prevention
250 Livingston Street
Brooklyn, N.Y. 11201

Attn: Buried Tank Division

Re: National Rubber Adhesives
38-33 9th Street
Long Island City, N.Y.

Gentlemen:

This is to certify that we have permanently sealed three (3) 1,500 gallon solvent tanks at the above premises, on May 2, 1995.

Tanks were emptied, all product removed, cleaned and purged and filled with concrete.

Vent pipes were removed and all openings sealed.

Enclosed please find copy of customer's affidavit and site sketch.

Very truly yours,
R G J CONTRACTING CO., INC.

Herbert Brezak
Lic.# 61129631

HB/jk

enc.

STATE OF NEW YORK
COUNTY OF QUEENS

Sworn before me this 3 day of May, 1995.

FRANK A. BUCCHERI, JR.
Notary Public, State of New York
No. 24-4785590

R G J CONTRACTING CO., INC.

35-56 9TH STREET LONG ISLAND CITY, N.Y. 11106 718/721-3400
FAX# 718/721-3528

September 22, 1994

Department of Environmental Conservation
47-40 21st Street
Long Island City, N.Y. 11101

Re: National Rubber & Backing Corp.
38-31 9th Street
Long Island City, N.Y. 11106

Gentlemen:

This is to inform you that we are permanently sealing (1) one 550 gallon gasoline tank at the above premises.

Very truly yours,
R G J CONTRACTING CO., INC.

Herbert Brezak

HB/jk

R G J CONTRACTING CO., INC.

35-56 9TH STREET LONG ISLAND CITY, N.Y. 11106 718/721-3400
FAX# 718/721-3528

September 30, 1994

New York City Fire Department
Division of Fire Prevention
250 Livingston Street
Brooklyn, N.Y. 11201

Attn: Buried Tank Division

Re: National Rubber Adhesives
38-33 9th Street
Long Island City, N.Y.

Gentlemen:

This is to certify that we have permanently sealed one (1) 550 gallon gasoline tank at the above premises, on September 28, 1994.

Tank was emptied, all product removed, cleaned and purged and filled with concrete.

Vent pipes were removed and all openings sealed.

Enclosed please find copy of customer's affidavit and site sketch.

Very truly yours,
R G J CONTRACTING CO., INC.

Herbert Brezak
Lic.# 61129631

HB/jk

enc.

STATE OF NEW YORK
COUNTY OF QUEENS

Sworn before me this 30th day of September, 1994.

PAUL MASTROGIANNIS
NOTARY PUBLIC, State of New York
No. 41-4965145

FENLEY & NICOL ENVIRONMENTAL INC.
NON-HAZARDOUS / NON-REGULATED WASTE MANIFEST

PLEASE TYPE OR PRINT CLEARLY

DATE 9/23/94 NUMBER 2691 42732

GENERATOR OF WASTE

NAME NATIONAL RUBBER (RGT CONT.)

ADDRESS 38-31 5TH ST

PHONE NUMBER 718-721-8400

SITE LOCATION L.I.C.

2. IDENTIFICATION OF WASTE

PROPER U.S. D.O.T. SHIPPING NAME	STATE CODE	CONTAINER TYPE	GAL
WASTE GASOLINE HAZ CL 3 UN1203 CP11	N014	TT	45
Spill # (if applicable) ERC# 27			

3. GENERATOR'S CLASSIFICATION

This is to certify that the herein named materials are properly described, classified and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, Environmental Protection Administration and Local State regulations. The wastes are described herein were consigned to the transporter named. The TSD Facility can and will accept the shipment of waste, and has a valid permit to do so. I certify that the foregoing is true and correct to the best of my knowledge.

GENERATOR'S CONTACT SUPERVISOR and/or (Authorized Agent) Jim Powell please print or type

SUPERVISOR'S SIGNATURE _____ TITLE _____

4. TRANSPORTER NAME AND ADDRESS

NAME FENLEY & NICOL ENVIRONMENTAL INC.

ADDRESS 445 BROOK AVENUE, DEER PARK, NY 11729

PHONE NUMBER 24 Hour Emergency# (516) 586-4900

SUPERVISOR _____ SIGNATURE _____

DRIVER'S NAME MICHAEL R HALL SIGNATURE Michael R Hall

INDUSTRIAL WASTE HAULER PERMIT # 1A-036 VEHICLE PLATE # NZ-3240

5. DISPOSAL SITE (Must be filled in by disposal site)

NAME OF FACILITY CARTER OIL RECOVERY

ADDRESS OF FACILITY 136 GRACY AVE MERIDEN CT

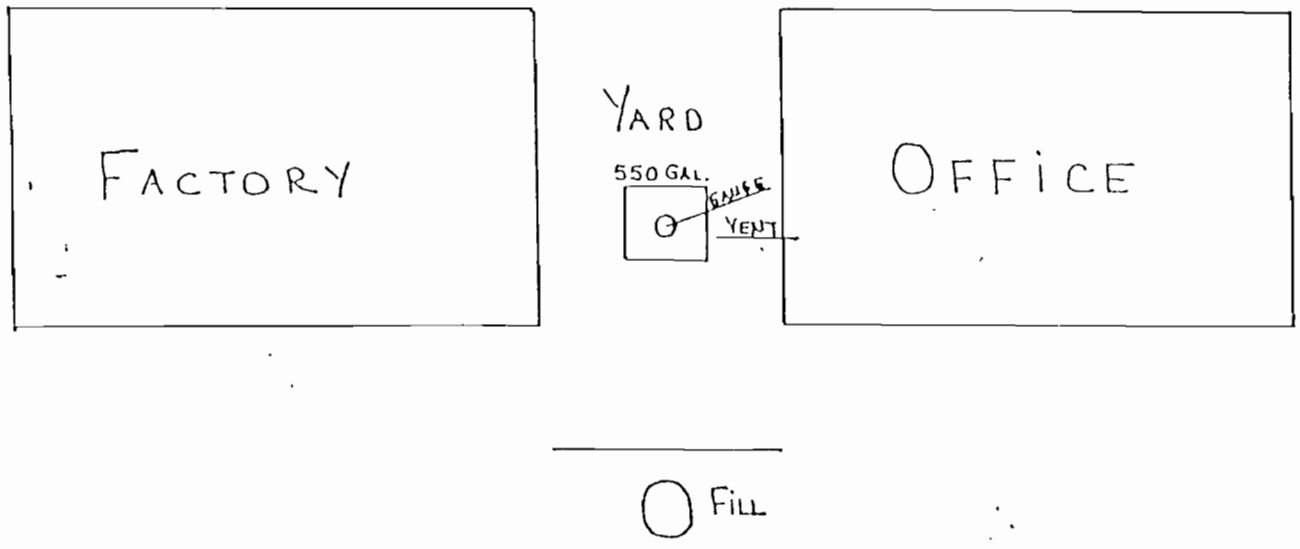
PHONE NUMBER 203-235-3753

This load was received as stated by generator YES ☐ NO ☐

DISPOSAL SITE IDENTIFICATION NUMBER (if applicable) _____

DISPOSAL SITE INSPECTOR NAME _____

NATIONAL RUBBER



93-... (1/90)—2cc

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF WATER • BUREAU OF SPILL PREVENTION AND RESPONSE

PETROLEUM BULK STORAGE APPLICATION

Pursuant to the Petroleum Bulk Storage Law,
Article 17, Title 10 of ECL; and 6 NYCRR 612-614.

Please Type or Print Clearly and Complete All Items

(Continued on Reverse Side—Please Be Sure to Complete Section B)

SECTION A—See Instructions on Cover Sheet

PBS NUMBER: 145203

Indicate Other Existing DEC Numbers, if any, for this Facility:

CBS Number:

SPDES Number:

TRANSACTION TYPE (Check all that apply)
NOTE: Transaction Types 1, 2 and 5 require a fee.

1. ☐ Initial/New Facility
2. ☐ Change of Ownership
3. ☐ Substantial Tank Modification
4. ☐ Information Correction
5. ☐ Renewal

Geographical Locator for this Facility: (If known)

LATITUDE: DEG. MIN SEC

LONGITUDE: DEG MIN SEC

FACILITY

NAME: NATIONAL RUBBER & BACKING CORP.

LOCATION (Not P.O. Boxes): 38-31 9TH STREET

LOCATION (Continued):

CITY/TOWN/VILLAGE: LONG ISLAND CITY | STATE: NY | ZIP CODE: 11101

COUNTY: QUEENS | TOWNSHIP OR CITY: NEW YORK

NAME OF OPERATOR AT FACILITY: ROCCO BUONASORA | FACILITY TELEPHONE NUMBER: (718) 734-7945

EMERGENCY CONTACT NAME: ROCCO | EMERGENCY CONTACT PHONE NO.: (718) 545-9516

OWNER

NAME: NATIONAL RUBBER & BACKING CORP.

ADDRESS (Street and/or P.O. Box): 38-31 9TH STREET

CITY: LONG ISLAND CITY | STATE: NY | ZIP CODE: 11101

FEDERAL TAX ID NO.: 11-1115730 | OWNER TELEPHONE NUMBER: (718) 784-7945

TYPE OF OWNER (Check only one)
1 ☐ Private Resident 2 ☐ State Government 3 ☐ Local Government
4 ☐ Federal Government 5 ☒ Corporate/Commercial

MAILING CORRESPONDENCE

ATTENTION: MARK HALPERN

NAME OF COMPANY: NATIONAL RUBBER & BACKING CORP.

ADDRESS: 30-31 9TH STREET

ADDRESS:

CITY/STATE/ZIP CODE: LONG ISLAND CITY, N.Y. 11101

TELEPHONE NUMBER: (718) 784-7945

TYPE OF PETROLEUM FACILITY:
(Check all that apply)

A. ☐ Storage Terminal/Petroleum Distributor
B. ☐ Retail Gasoline Sales
C. ☐ Other Retail Sales
D. ☒ Manufacturing
E. ☐ Utility
F. ☐ Trucking/Transportation
G. ☐ Apartment Building
H. ☐ School
I. ☐ Farm
J. ☐ Private Residence
K. ☐ Airline (Air Taxi)
L. ☐ Other (Specify)

I hereby certify under penalty of perjury that the information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

NAME OF OWNER OR AUTHORIZED REPRESENTATIVE: MARK HALPERN | AMOUNT ENCLOSED: $

TITLE: President

SIGNATURE: Mark Halpern | DATE: 9/28/94

OFFICIAL USE ONLY

Page ____ of ____

Date Received: ___/___/___

Date Processed: ___/___/___

Amount Received $ ____

Reviewed By: ____

S N: 145203

Tank Information for Petroleum Bulk Storage Facility

SECTION B—See Instructions on Cover Sheet

Action	Tank Number	Tank Location	Status	Installation or Permanent Closure Date (MO)	(YR)	Capacity (Gallons)	Product Stored	Tank Type	Tank Internal Prot.	Tank External Protection	Piping Location	Piping Type	Piping Internal Prot.	Piping External Protection	Secondary Containment	Leak Detection	Spill/ Overfill Prevention	Dispenser	Last Test Date (underground Tank) (MO)	(YR)
3	1	4	4	0 9	9 4	550	2	1	0	0 0	2	1	0	0 0	0	0	0	2	0 8	9

KEY FOR SECTION B

ACTION
1 Initial Listing
2 Add Tank
3 Close/Remove Tank
4 Information Correction
5 Recondition/Repair/ Reline Tank

TANK LOCATION
1 Aboveground
2 Aboveground on saddles legs, stilts, rack, or cradle
3 Aboveground: 10% or more below ground
4 Underground
5 Underground, vaulted, with access

STATUS
1 In-service
2 Temporarily out-of-service
3 Closed—Removed
4 Closed—In Place
5 Tank Converted to Non-Regulated Use

PRODUCT STORED
0 Empty
1 Leaded Gasoline
2 Unleaded Gasoline
3 Nos. 1, 2, or 4 Fuel Oil
4 Nos. 5 or 6 Fuel Oil
5 Kerosene
6 Diesel
A Lube Oil
9 Other*

TANK TYPE
1 Steel/Carbon Steel
2 Stainless Steel Alloy
3 Concrete
4 Fiberglass Coated Steel
5 Fiberglass Reinforced Plastic (FRP)
6 Equivalent Technology
9 Other*

PIPING TYPE
0 None
1 Steel/Iron
2 Galvanized Steel
3 Fiberglass (FRP)
4 Copper
9 Other*

INTERNAL PROTECTION: Tank/Piping
0 None
1 Epoxy Liner
2 Rubber Liner
3 Fiberglass Liner (FRP)
4 Glass Liner
9 Other*

EXTERNAL PROTECTION: Tank/Piping
0 None
1 Painted/Asphalt Coating
2 Sacrificial Anode
3 Impressed Current
4 Fiberglass
5 Jacketed
6 Wrapped (Piping)
9 Other*

PIPING LOCATION
0 None
1 Aboveground
2 Underground
3 Aboveground/Underground Combination

SECONDARY CONTAINMENT
0 None
1 Vault
2 Double-Walled Tank
3 Excavation Liner
4 Cut-off Walls
5 Impervious Underlayment
6 Earthen Dike
7 Prefabricated Steel Dike
8 Concrete Dike
A Synthetic Liner
B Natural Liner
9 Other*

LEAK DETECTION
0 None
1 Interstitial Monitoring
2 Vapor Well
3 Groundwater Well
4 In-tank System
5 Concrete Pad w/channels
6 Double Bottom

SPILL/OVERFILL PREVENTION
0 None
1 Float Vent Valve
2 High Level Alarm
3 Automatic Shut-off
4 Product Level Gauge
5 Catch Basin
6 Vent Whistle
9 Other*

DISPENSER
1 Submersible
2 Suction
3 Gravity

* If Other, please list on separate sheet including the Tank Number

R G J CONTRACTING CO., INC.

35-56 9TH STREET LONG ISLAND CITY, N.Y. 11106 718/721-3400

July 1, 1993

New York City Fire Department
Division of Fire Prevention
Buried Tank Division
250 Livingston Street
Brooklyn, New York 11201

RE: 38-31 Ninth Street
LOng Island City, New York 11106

Gentlemen;

This is to certify that we have permanently sealed one (1) 550 gallon solvent tank (Ethyl Acetate) at the above captioned premises.

The tank has been filled with a mixture of sand and cement. All openings have been sealed with cement.

Attached please find applicant's affidavit.

Very truly yours,

R G J CONTRACTING CO., INC.

Herbert Brezak

Herbert Brezak
License #255

HB/rg
Encl.

Sworn to before me this
1st day of July, 1993

ANN COLLARAS
Notary Public, State of New York

NATIONAL RUBBER & BACKING CORP.
38-31 NINTH STREET • LONG ISLAND CITY, N.Y. 11101
PHONE: (212) 784-7945
ESTABLISHED 1909

INDUSTRIAL ADHESIVES
FOAM • FABRIC LAMINATORS

October 30, 1987

New York City Fire Department
Division of Fire Prevention
250 Livingston Street
Brooklyn, New York 11201

Re: Premises: 38-31 Ninth Street
Long Island City, N.Y.

Gentlemen:

Due to the fact that we are no longer in need of dispensing Ethyl Acetate, we no longer require the use of one (1) 550 gallon solvent tank, There are no leaks or defects in this system.

We have engaged R.G.J. Contracting Company, Inc. to seal this tank in accordance with New York City regulations.

Very truly yours,

NATIONAL RUBBER & BACKING CORPORATION

A. J. Halpern
President

AJ;mt

Queens NY
30 Oct 1987

FRANK R. PECCHIE
Notary Public, State of New York
No. 41-3040125
Qualified In Queens County
Commission Expires September 30, 1989

R G J CONTRACTING CO., INC.

35-56 9TH STREET LONG ISLAND CITY, N.Y. 11106 718/721-3400

October 30, 1987

New York City Fire Department
Division of Fire Prevention
Buried Tank Division
250 Livingston Street
Brooklyn, New York 11201

RE: 38-31 Ninth Street
LOng Island City, New York 11106

Gentlemen;

This is to certify that we have permanently sealed one (1) 550 gallon solvent tank (Ethyl Acetate) at the above captioned premises.

The tank has been filled with a mixture of sand and cement. All openings have been sealed with cement.

Attached please find applicant's affidavit.

Very truly yours,

R G J CONTRACTING CO., INC.

Herbert Brezak
License #255

HB/rg
Encl.

State of New York

R G J CONTRACTING CO., INC.

35-56 9TH STREET LONG ISLAND CITY, N.Y. 11106 718/721-3400

December 23, 1987

NYS Enviormental Conservation
Hunters Point Plaza
2nd. Floor
47-40 21st. Street
Long Island City, New York 11101

National Rubber & Backing Co.
RE: 38-31 Ninth Street
Long Island City, NY 11106

Gentlemen;

This is to certify that we have permanently sealed one (1) 550 gallon solvent tank (Ethyl Acetate) at the above captioned premises.

The tank has been filled with a mixture of sand and cement. All openings have been sealed with cement.

Attached please find applicants's affidavit.

Also attached please find copy of our affidavit which was filed with the New York City Fire Department.

Very truly yours,

Herbert Brezak

Herbert Brezak
License #255

HB/rg
2 Encl.

1500 gal Toluene Tank passed
- .01 g.p.h. STD. .003
8/23/93

M. Fort
671 Edgewater Rd
Staten Is NY 10310

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

CLIENT
NAME OF SUPPLIER, OWNER OR DEALER: Natl. Rubber Co.
ADDRESS (NO. & STREET): 38-31 Thn St
CITY AND STATE: L.I.C. NY
DATE OF TEST: 8/23/93
WEATHER: Sunny
TEMPERATURE: 75°F

TANK INFORMATION
CAPACITY (NOMINAL): 1500 GALS.
CAPACITY (CHART): GALS.
DIMENSIONS: DIAMETER 4'05" LENGTH
SIZE OF FILL OR TEST OPENING: 2" IN.
TOP OFF TIME: 20 hrs GALLONS
NUMBER OF GALLONS ADDED TO START TEST: 0.5
TANK NO.: TOLUENE
INCHES OF WATER – BEFORE TEST: 0" AFTER TEST: 0"
CONTENTS (PRODUCT): Toluene
TANK MATERIAL: Steel
APPROX. AGE
PUMP SYSTEM (TYPE)

TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: .05 ÷ 34.3 (μLM) = .00145 (FACTOR A)

LINE MOVEMENT

1	10 to 46	= 36	LINES	
2	13 to 46	= 33	LINES	
3	12 to 46	= 34	LINES	
TOTAL		103	LINES ÷ 3 =	34.3 (μLM) LINES

END OF TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: .05 ÷ 32.66 (μLM) = .00153 (FACTOR A)

LINE MOVEMENT

1	12 to 52	= 40	LINES	
2	12 to 40	= 28	LINES	
3	10 to 42	= 32	LINES	
TOTAL		98	LINES ÷ 3 =	32.66 (μLM) LINES

MEASURED API SPECIFIC GRAVITY: .71
PRODUCT TEMPERATURE: 70°
API SPECIFIC GRAVITY @ 60° F: 58.7 (FROM TABLE A)
COEFFICIENT OF EXPANSION: .000630 (FROM TABLE B)

.000630 (COE) × 1505 (TOTAL CAPACITY (GAL)) = .94815 (VOL. CHANGE) (FACTOR B)

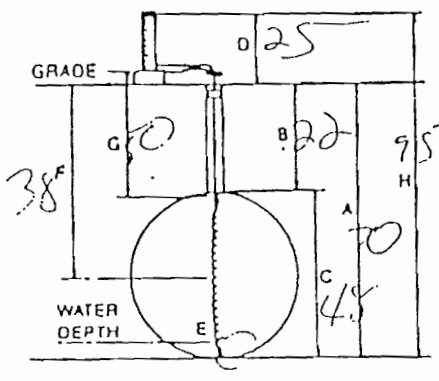
TANK LAYOUT

ADDITIONAL NOTES OR COMMENTS

Sec 5/28 2

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

Time (Military)	Reading No.	PRODUCT MONITORING ON LLR Start	End	+Gain -Loss	X Factor A	Product +Gain -Loss	TEMPERATURE COMPENSATION A Start	End	+Gain -Loss	X Factor B	Product +Gain -Loss	TEMPERATURE COMPENSATION B Start	End	+Gain -Loss	X Factor B	+Expansion -Contraction	NET CL CHANGE	LLR
1:00	1	49	50	+1	.00145	+.00145						878	878	0	.74815	0	-	.00145
1:05	2	50	51	+1		+.00145						878	878	0		0	-	.00145
1:10	3	51	51	0		0						878	878	0		0		0
1:15	4	51	51	0		0						878	880	+2		+.00181	-	.00181
1:20	5	51	51	0		0						880	880	0		0		0
1:25	6	51	51	0		0						880	880	0		0		0
1:30	7	51	51	0		0						880	880	0		0		0
1:35	8	51	51	0		0						880	881	+1		+.00091	-	.00091
1:40	9	51	51	0		0						881	882	+1		+.00091	-	.00091
1:45	10	51	51	0		0						882	882	0		0		0
1:50	11	51	51	0		0						882	882	0		0		0
1:55	12	51	51	0		0						882	882	0		0		0
2:00	13	51	52	+1		+.00145						882	882	0		0		0
2:05	14	52	52	0		0						882	882	0		0	-	0.0145
2:10	15	52	52	0		0						882	884	+1		+.00181	-	.00181
2:15	16	52	52	0		0						884	884	0		0		0
2:20	17	52	52	0		0						884	884	0		0		0
2:25	18	52	52	0		0						884	884	0		0		0
2:30	19	52	52	0		0						884	884	0		0		0
2:35	20	52	52	0		0						884	884	0		0		0



A. Tank Bot. to Grade 70
B. Tank Top to Grade 22
C. Tank Diameter 48
D. Test Level above grade 25
E. Depth of water in tank 0
F. Depth for taking sample 38
G. Temp. Probe depth (connector) 50
H. Test level to Tank Bot. 45
I. Groundwater above tank bottom 0
J. Product Pressure per 1" height .036 PSI

Test Pressure Formula
45 (H) × .036 (J) − (0 (I) × .036) = 3.47 NET TEST PRESSURE

Send Report to: Natl Rubber Co
Client
Address 38-31 9th St
City, State LIC NY
Phone ( )
Attn:

-.01 g.p.h

CERTIFICATION: This is to certify that the tank system was tested on date shown. Those indicated "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329

Tank No. Natl R Toluene
Tight Passed
Leakage Indicated -.01 g.p.h.
Technician M. Fite
Date Tested 8/23/93

Sec 5/Pg 3

Start
2
3
4
5
6
7
8

M. [illegible]
671 Edgegrove.
Station IS 1X1
1031

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

CLIENT
NAME OF SUPPLIER, OWNER OR DEALER: Natl. Rubber Co.
ADDRESS (NO. & STREET): 35-76 [illegible] ST
CITY AND STATE: L.I.C. NY
DATE OF TEST: 8-23-93
WEATHER: Sunny
TEMPERATURE: 7[illegible] F

TANK INFORMATION
CAPACITY (NOMINAL): 550 GALS.
CAPACITY (CHART): GALS.
DIMENSIONS: DIAMETER 48"
LENGTH
SIZE OF FILL OR TEST OPENING: 2" IN.
TOP OFF TIME: 24 hrs
GALLONS
NUMBER OF GALLONS ADDED TO START TEST: 3
TANK NO.: 550 gasoline
CONTENTS (PRODUCT): Gasoline
TANK MATERIAL: Steel
APPROX. AGE
PUMP SYSTEM (TYPE)
INCHES OF WATER – BEFORE TEST: 14" AFTER TEST: 14"

TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: .05 + 37.6 (MLM) = .00148 (FACTOR A)

LINE MOVEMENT
1: 11 to 45 = 34 LINES
2: 12 to 45 = 33 LINES
3: 12 to 46 = 34 LINES
TOTAL: 101 LINES ÷ 3 = 33.666 (MLM) LINES

END OF TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: .05 + 35.666 (MLM) = .00140 (FACTOR A)

LINE MOVEMENT
1: 14 to 50 = 36 LINES
2: 12 to 45 = 33 LINES
3: 12 to 47 = 35 LINES
TOTAL: 104 LINES ÷ 3 = 35.666 (MLM) LINES

MEASURED API SPECIFIC GRAVITY: 73.7
PRODUCT TEMPERATURE: 74° F
API SPECIFIC GRAVITY @ 60° F: 62.7 (FROM TABLE A)
COEFFICIENT OF EXPANSION: .000680 (FROM TABLE B)
.000680 (C.O.E.) × 553 (TOTAL CAPACITY (GAL)) = .3764 (VOL. CHANGE) (FACTOR B)

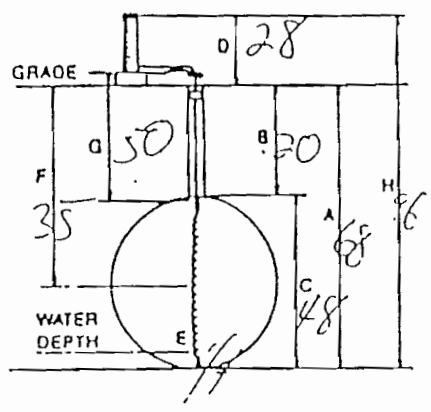
TANK LAYOUT

ADDITIONAL NOTES OR COMMENTS

Sec 5/Pg 2

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

Time (Military)	Reading No.	PRODUCT MONITORING ON LLR Start	End	+Gain -Loss	X Factor A	Product +Gain -Loss	TEMPERATURE COMPENSATION A Start	End	+Gain -Loss	X Factor B	Product +Gain -Loss	TEMPERATURE COMPENSATION B Start	End	+Gain -Loss	X Factor B	+Expansion -Contraction	NET LL CHANGE	LLR
9:15	1	50	50	0	.00145	0						308	308	+2	.37604	.00074	–	.00074
9:20	2	50	51	+1		+.00148						308	309	+1		.00316	–	.00232
9:25	3	51	51	0		0						309	309	0		0		0
9:30	4	51	51	0		0						309	309	0		0		0
9:35	5	51	51	0		0						309	308	-1		-.00316	+	.00316
9:40	6	51	51	0		0						308	308	0		0		0
9:45	7	51	51	0		0						308	310	+2		.00777	–	.00411
9:50	8	51	51	0		0						310	310	0		0		0
9:55	9	51	51	0		0						310	310	0		0		0
10:00	10	51	51	0		0						310	310	0		0		0
10:05	11	51	51	0		0						310	311	+1		.00316	–	.0003
10:10	12	51	51	0		0						311	311	0		0		0
10:15	13	51	51	0		0						311	311	0		0		0
10:20	14	51	51	0		0						311	311	0		0		0
10:25	15	51	51	0		0						311	312	+2		+ .00774	–	.0007
10:30	16	51	51	0		0						312	312	0		0		0
10:35	17	51	51	0		0						312	312	0		0		0
10:40	18	51	51	0		0						313	313	0		0		0
10:45	19	51	51	0		0						313	313	0		0		0
10:50	20	51	51	0		0						313	313	0		0		0



A. Tank Bot. to Grade 68"
B. Tank Top to Grade 20"
C. Tank Diameter 48"
D. Test Level above grade 28"
E. Depth of water in tank 1"
F. Depth for taking sample 35"
G. Temp. Probe depth (connector) 50"
H. Test level to Tank Bot. 96"
I. Groundwater above tank bottom 0"
J. Product Pressure per 1" height .036 PSI

Test Pressure Formula
96 (H) x .036 (J) – (0 (I) x .036) = 2.5 NET TEST PRESSURE

Send Report to:
Client Natl. Rubber Co
Address 38-31 9th St
City, State L.I.C. NY
Phone ( )
Attn:

CERTIFICATION This is to certify that the tank system was tested on date shown. Those indicated "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329

Tank No. Gasoline
Tight Passed
Leakage Indicated
Technician M. Fitzpatrick
Date Tested 5/13/93

.001
J.P.

Sec 5/Pg 3

BR 55140

93-06-5 (11/90)—26c

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 WOLF ROAD • ALBANY, NEW YORK 12233-3530
TELEPHONE NUMBER (518) 457-4351 OR 1-800-242-4351

HAZARDOUS SUBSTANCE BULK STORAGE REGISTRATION CERTIFICATE

Region Number 2

TANK NUMBER	DATE INSTALLED	TANK TYPE	CAPACITY	PRODUCT
00001	00/00	Steel/Carbon Steel	1,500	00108-88-3
00003	00/00	Steel/Carbon Steel	1,500	00078-93-3

OWNER

NATIONAL RUBBER BACKING CORP.
38-31 9TH STREET
LONG ISLAND CITY, NY 11101

SITE

NATIONAL RUBBER BACKING CORP.
38-31 9TH STREET
LONG ISLAND CITY, NY 11101

OPERATOR (Name and Telephone Number)

NATIONAL RUBBER BACKING CORP.
(718) 784-7945

EMERGENCY CONTACT (Name and Telephone Number)

MARC HALPERN
(914) 353-4838

As an authorized representative of the above named site, I affirm under penalty of perjury that the information displayed on this form is correct to the best of my knowledge. Additionally, I recognize that I am responsible for assuring that this facility is in compliance with all sections of ECL Article 40, not just those cited below:

- The facility must be re-registered if there is a transfer of ownership.
- The Department must be notified within 3 business days prior to adding, replacing, reconditioning, or permanently closing a stationary tank.
- This certificate must be posted on the premises at all times. Posting must be at the tank, at the entrance of the site or the main office at the site where the storage tanks are located.
- Any person with knowledge of a spill, leak or discharge must report the incident to DEC within two hours (1-800-457-7362).

ISSUED BY:
Commissioner Langdon Marsh

HAZARDOUS SUBSTANCE BULK STORAGE ID NUMBER
2-000015

DATE ISSUED: 11/16/94

EXPIRATION DATE: 02/17/97

FEE PAID: $ 250

MAILING CORRESPONDENCE

MARC HALPERN
NATIONAL RUBBER BACKING CORP.
38-31 9TH STREET
LONG ISLAND CITY, NY 11101

Signature of Authorized Representative/Owner — Date

Name of Authorized Representative/Owner (Please Print)

Title

THIS REGISTRATION CERTIFICATE IS NON-TRANSFERABLE

93-06-004 (1/91)—26c

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PETROLEUM BULK STORAGE REGISTRATION CERTIFICATE

NYS DEC - REGION 2
HUNTERS POINT PLAZA
47-40 21st STREET
LONG ISLAND CITY, NY 11101
(718) 482-4933

TANK NUMBER	DATE INSTALLED	TANK TYPE	CAPACITY (GALLONS)	DATE LAST TESTED	TESTING DUE DATE
001	00/00	Steel/Carbon Steel	550		
008	00/00	Steel/Carbon Steel	3,000		*1

*1 - Aboveground tanks require monthly visual inspections and documented internal inspections as described in 6 NYCRR Pt. 613.

OWNER

NATIONAL RUBBER & BACKING CORP
38-31 9TH ST
LONG ISLAND CITY, NY 11101

SITE

NATIONAL RUBBER & BACKING CORP
38-31 9TH ST
LONG ISLAND CITY, NY 11101

OPERATOR (Name and Telephone Number)

NATIONAL RUBBER & BACKING CORP
(718) 784-7945

EMERGENCY CONTACT (Name and Telephone Number)

ROCCO BUONASORA
(718) 545-9516

As an authorized representative of the above named facility, I affirm under penalty of perjury that the information displayed on this form is correct to the best of my knowledge. Additionally, I recognize that I am responsible for assuring that this facility is in compliance with all sections of 6 NYCRR Parts 612, 613 and 614, not just those cited below:

- The facility must be re-registered if there is a transfer of ownership.
- The Department must be notified within 30 days prior to adding, replacing, reconditioning, or permanently closing a stationary tank.
- The facility must be operated in accordance with the code for storing petroleum, 6 NYCRR Part 613.
- Any new facility or substantially modified facility must comply with the code for new and substantially modified facilities, 6 NYCRR Part 614.
- This certificate must be posted on the premises at all times. Posting must be at the tank, at the entrance of the facility, or the main office where the storage tanks are located.
- Any person with knowledge of a spill, leak or discharge must report the incident to DEC within two hours (1-800-457-7362).

Signature of Authorized Representative/Owner — Date

Name of Authorized Representative/Owner (Please Print)

Title

ISSUED BY:
Commissioner Thomas C. Jorling

PETROLEUM BULK STORAGE ID NUMBER
2-145203

DATE ISSUED: 06/05/92
EXPIRATION DATE: 05/07/97

FEE PAID
$ 150

MAILING CORRESPONDENCE

NATIONAL RUBBER & BACKING CORP
38-31 9TH ST
LONG ISLAND CITY, NY 11101

THIS REGISTRATION CERTIFICATE IS NON-TRANSFERABLE

Mitch Lefkowitz
671 Edgegrove Ave
Staten Is NY 10312

8/23/93

1500 gal Hexane
passed -.001 g.p.h.
STD 0.00

TEST NUMBER: 930823
LEAK COMPUTER S/N: 908200P06

Test address: 38-01 9TH ST QUEENS
Test operator: LEFKOWITZ, MITCH

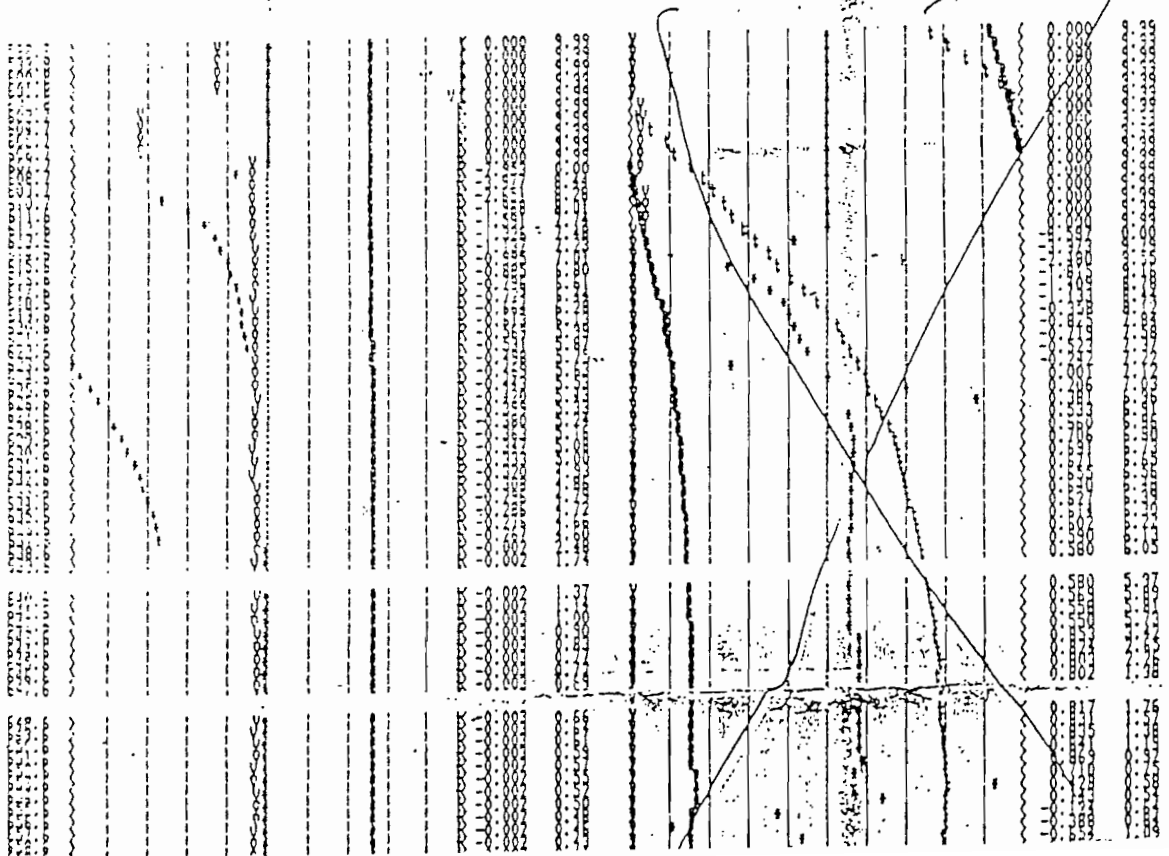
TANK TEMP > < = 10.0 F DELTA TEMP > < = .1 F LFD: 6:0 IPH
SAV: 30 LRA: 30 VOL > < = 0.1 GAL
t=dT, 0-Temp, *=LP, V=Volume

TIME	AVG. LEAK RATE	THREE STD DEV		AVG. LEAK RATE	THREE STD DEV
	< 0.000	0.00		< 0.000	0.00

A22/19/HEPTANE/ 1500/ 0.000203/ 0.81
Tank Temperature: 72.6
12429/1220 -995

B18/20/HEPTANE/ 1500/ 0.000740/ 0.85
Tank Temperature: 33.2
21524/1555-0898

Invalid



Test address: 38-01 9TH ST QUEENS
Test operator: LEFKOWITZ, MITCH

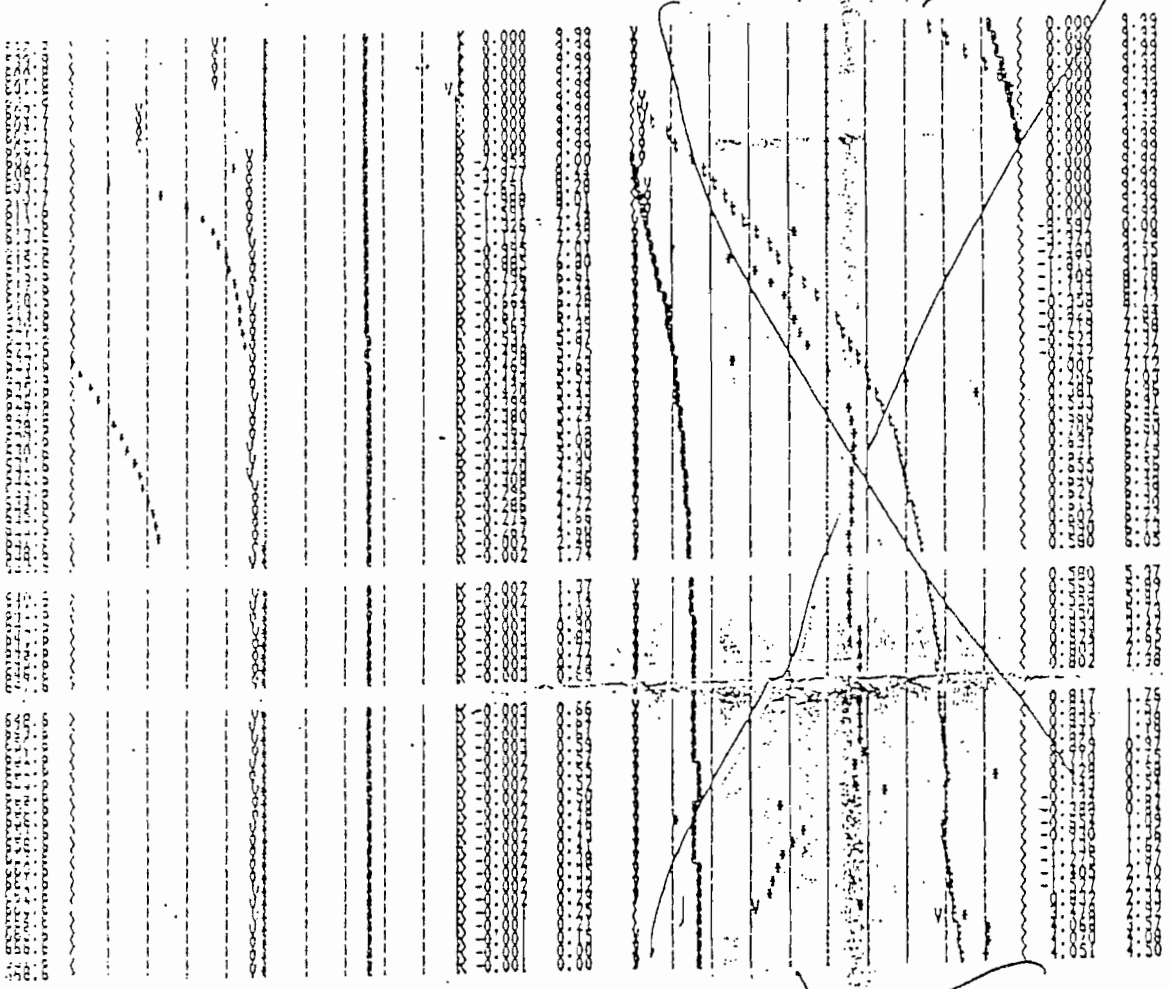
TANK TEMP > < = 10.0 F. DELTA TEMP > < = .1 F LFD: 6:0 IPH
SAV: 30 LRA: 30 VOL-> < = 0.1 GAL
t=dT, @=Temp, *=LP, V=Volume ,

TIME	AVG. LEAK RATE	THREE STD DEV		AVG. LEAK RATE	THREE STD DEV
			< 0.000 0.00 >		< 0.000 0.00

A22/13/HEXANE/ 1500/ 0.000803/ 0.81
Tank Temperature: 72.6
13489/1535-0705

B18/20/HEPTANE/ 1500/ 0.000740/ 0.85
Tank Temperature: 33.2
21524/1555-0838

Invalid



A22/13/HEXANE/ 1500/ 0.000803/ 0.81
Tank Temperature: 72.6
[illegible]55-0705

B18/20/HEPTANE/ 1500/ 0.000740/ 0.85
Tank Temperature: 36.6
21524/1555-0838

< 0.000 0.00 > < 0.000 4.50

Test Passed

Mitch Lefkowitz
671 Edgegrove Ave
Staten Is NY 10312
Mitch Lefkowitz

1500 ml MEK Passed
.009 g.p.h. STD 0.00
8/23/93

TEST NUMBER: 930823
LEAK COMPUTER S/N: 90820P06

Test address: 38-31 9TH ST
Test operator: LEFKOWITZ, MITCH

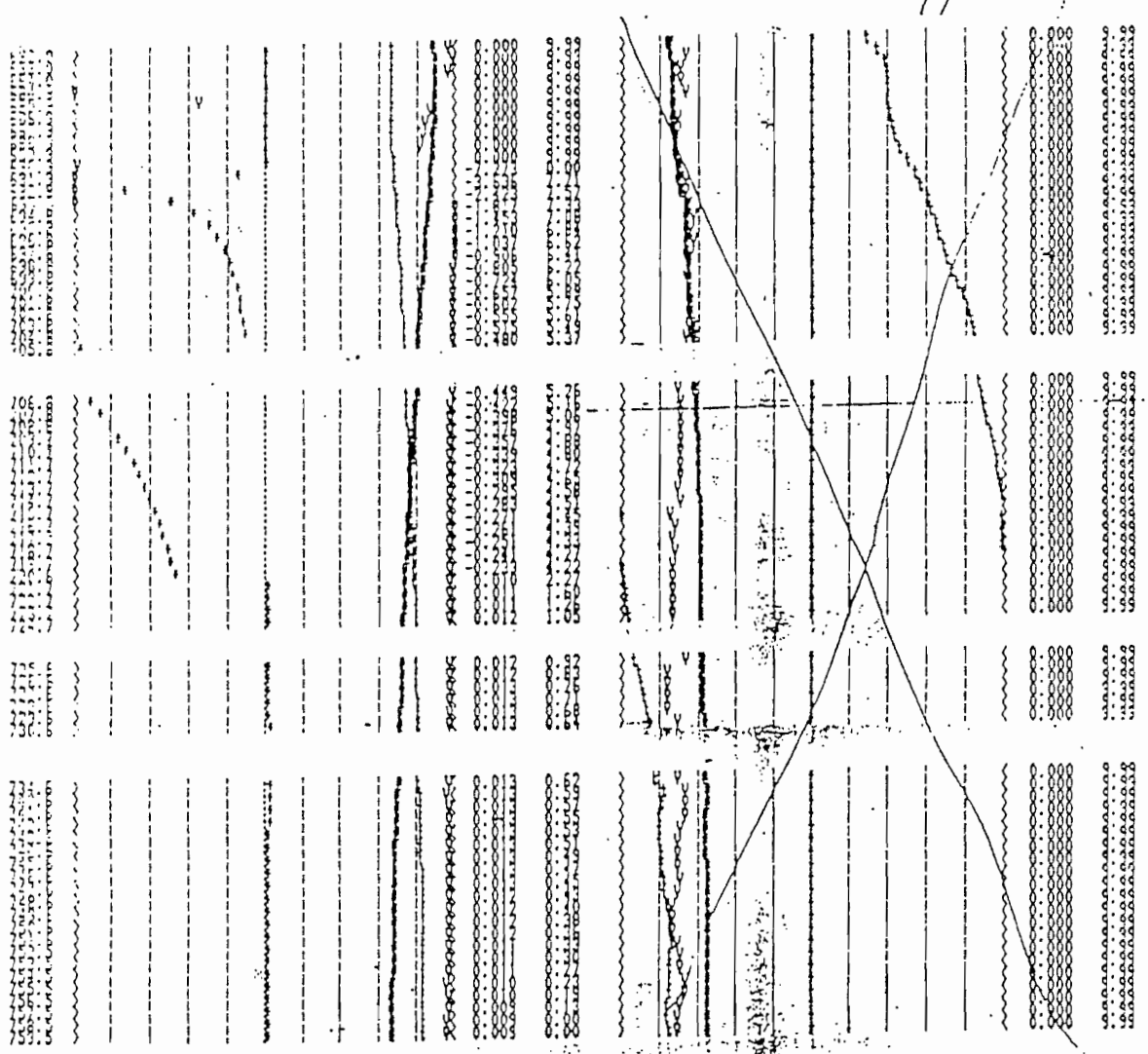
TANK TEMP < = 10.0 F DELTA TEMP > < = .1 F LFD: 6.0 IPH
SAV: 30 LRA: 30 VOL > < = 0.1 GAL
t=dT, @=Temp, *=LR, V=Volume

TIME	AVG. LEAK RATE	THREE STD DEV		AVG. LEAK RATE	THREE STD DEV
679.0	0.000	0.00		0.000	0.00

A23/21/MEK/ 1500/ 0.000731/ 0.74
Tank Temperature: 74.3
23489/1555-0905

B15/22/TOLUENE/ 1500/ 0.000630/ 0.80
Tank Temperature: 35.5
21524/1555-0898

Not valid



A23/21/MEK/ 1500/ 0.000731/ 0.74
Tank Temperature: 73.4
23489/1555-0905

B15/22/TOLUENE/ 1500/ 0.000630/ 0.80
Tank Temperature: 37.2
21524/1555-0898

Test - Passed

Mitch Lefkowitz
671 Edgegrove Ave
Staten Is NY 10312

8/23/93

1500 gal Hexane
passed -.001 g.p.h.
STD 0.00

TEST NUMBER: 930823
LEAK COMPUTER S/N: 90820P06

Test address: 38-01 9TH ST QUEENS
Test operator: LEFKOWITZ, MITCH

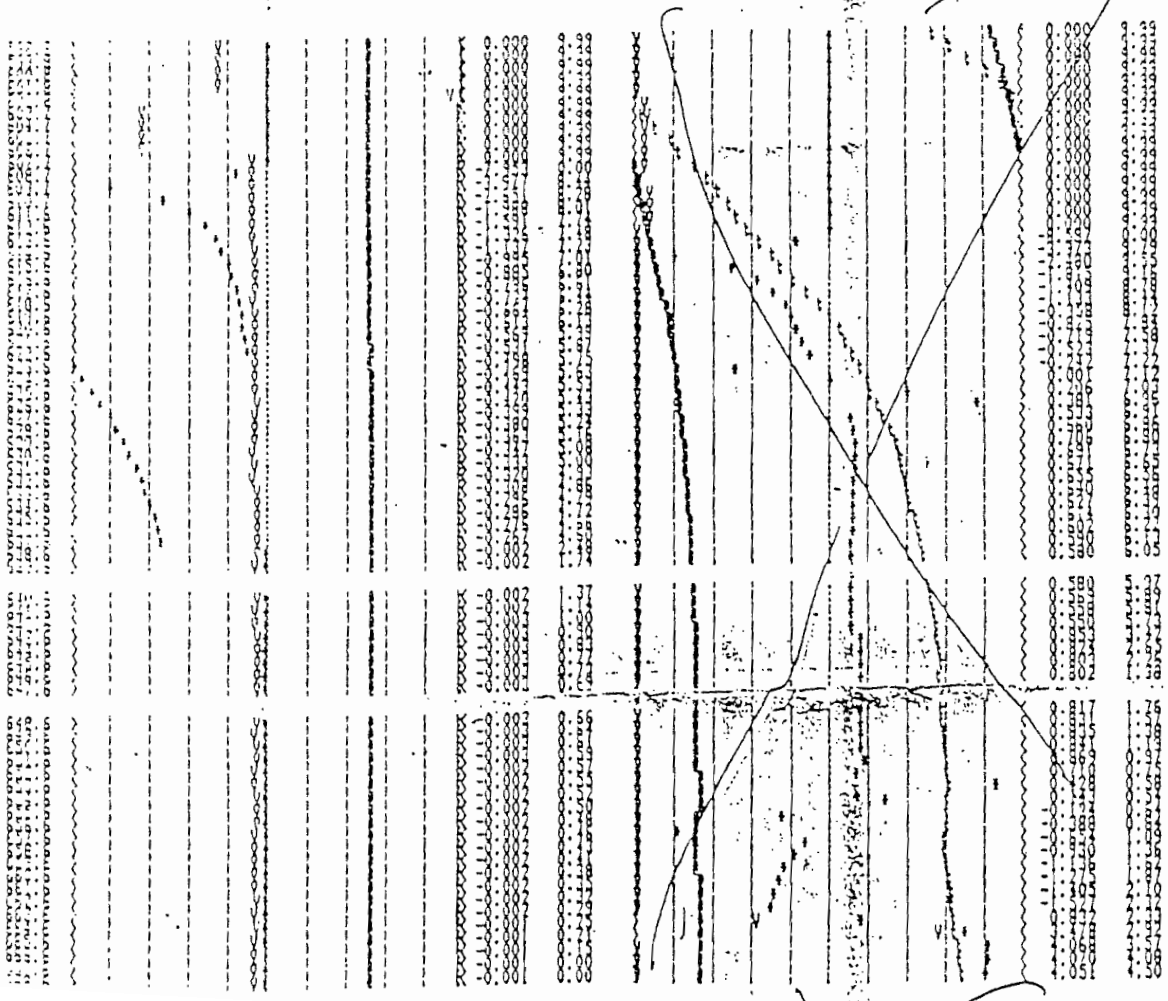
TANK TEMP > < = 10.0 F DELTA TEMP > < = .1 F LFD: 6:0 IPH
SAV: 30 LRA: 30 VOL > < = 0.1 BAL
t=dT, 0=Temp, *=LP, V=Volume

TIME	AVG. LEAK RATE	THREE STD DEV		AVG. LEAK RATE	THREE STD DEV
0:0	0.000	0.00		0.000	0.00

ALL/15/HEXANE/ 1500/ 0.000903/ 0.81
Tank Temperature: 72.6
23489/1524 -0.05

918/20/HEPTANE/ 1500/ 0.000740/ 0.85
Tank Temperature: 33.2
21524/1553-0898

Invalid



918/20/HEPTANE/ 1500/ 0.000740/ 0.85

1500 gal Hexane
passed -.001 g.p.h.
STD 0.00

TEST NUMBER: 930823
LEAK COMPUTER S/N: 90820P06

Test address: 38-31 9TH ST QUEENS
Test operator: LEFKOWITZ, MITCH

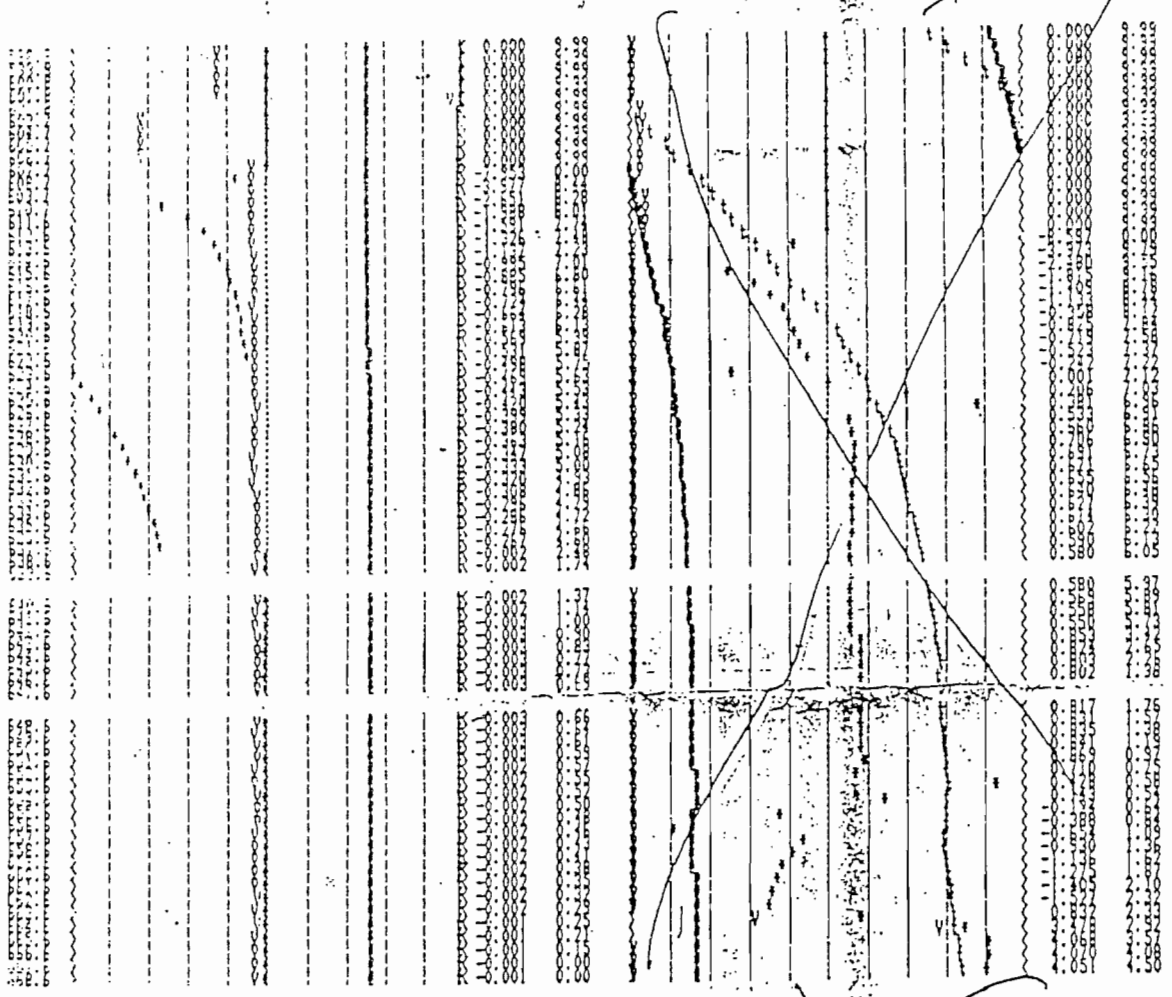
TANK TEMP > < = 10.0 F DELTA TEMP > < = .1 F LFD: 6:0 IPH
SAV: 30 LRA: 30 VOL > < = 0.1 GAL
t=dT, @=Temp, *=LR, V=Volume

TIME	AVG. LEAK RATE	THREE STD DEV		AVG. LEAK RATE	THREE STD DEV
	< 0.000	0.00 >		< 0.000	0.00

A22/13/HEXANE/ 1500/ 0.000803/ 0.81
Tank Temperature: 72.6
23489/1555-0905

B18/20/HEPTANE/ 1500/ 0.000740/ 0.85
Tank Temperature: 33.2
21524/1555-0898

Invalid



A22/13/HEXANE/ 1500/ 0.000803/ 0.81
Tank Temperature: 72.6
[illegible]55-0905

B18/20/HEPTANE/ 1500/ 0.000740/ 0.85
Tank Temperature: 36.6
21524/1555-0898

	< 0.000	0.00 >		< 0.000	4.50

Test-Passed

1500 gal. Hexane 8/24/93
Tank passed
.007 g.p.h. STD .008

M. [illegible]
671 Edgegrove Av
Staten Is NY
10312

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

CLIENT
NAME OF SUPPLIER, OWNER OR DEALER: Natl. Rubber
ADDRESS (NO. & STREET): 35-31 [illegible] St
CITY AND STATE: L.I.C. NY
DATE OF TEST: 8/24/93
WEATHER: Sun & Clouds
TEMPERATURE: 78°F

TANK INFORMATION
CAPACITY (NOMINAL): 1500 GALS.
CAPACITY (CHART): GALS.
DIMENSIONS: DIAMETER 48
LENGTH
SIZE OF FILL OR TEST OPENING: 2 IN.
TOP OFF TIME: 20 hrs GALLONS
NUMBER OF GALLONS ADDED TO START TEST: 5
TANK NO.: Hexane
CONTENTS (PRODUCT): Hexane
TANK MATERIAL: Steel
APPROX. AGE
PUMP SYSTEM (TYPE)
INCHES OF WATER – BEFORE TEST: 0" AFTER TEST: 0"

TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: .05 ÷ 35.333 (ALM) = .0014 (FACTOR A)

LINE MOVEMENT
1: 11 to 47 = 36 LINES
2: 11 to 47 = 36 LINES
3: 13 to 47 = 34 LINES
TOTAL: 106 LINES ÷ 3 = 35.333 (ALM) LINES

END OF TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: ÷ (ALM) = (FACTOR A)

LINE MOVEMENT
1: to = LINES
2: to = LINES
3: to = LINES
TOTAL: LINES ÷ 3 = (ALM) LINES

MEASURED API SPECIFIC GRAVITY: .83
PRODUCT TEMPERATURE
API SPECIFIC GRAVITY @ 60° F: [illegible] (FROM TABLE A)
COEFFICIENT OF EXPANSION: .000731 (FROM TABLE B)
.000731 (C.O.E.) × 1505 (TOTAL CAPACITY (GAL.)) = 1.100 (VOL. CHANGE) (FACTOR B)

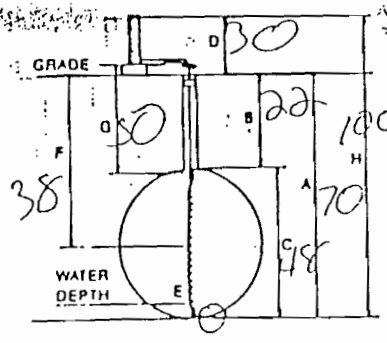
TANK LAYOUT

ADDITIONAL NOTES OR COMMENTS

Sec 5/Pg 2

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

Time (Military)	Reading No.	PRODUCT MONITORING GAUGE Start	End	+Gain -Loss	X Factor A	Product +Gain -Loss	TEMPERATURE COMPENSATION A Start	End	+Gain -Loss	X Factor B	Product +Gain -Loss	TEMPERATURE COMPENSATION B Start	End	+Gain -Loss	X Factor B	+Expansion -Contraction	NET CL CHANGE	LLR
1:15	1	49	50	+1	.00111	+.0001						680	681	+1	1.1001	+.0011	–	.0001
1:20	2	50	50	0		0						681	682	+1		+.0011	–	.0011
1:25	3	50	51	+1		+.0001						682	682	0		0	–	.0001
1:30	4	51	50	-1		-.0001						682	682	0		0	+	.0001
1:35	5	50	52	+2		+.00022						682	683	+1		+.0011	–	.0011
1:40	6	52	52	0		0						683	683	0		0		0
1:45	7	52	52	0		0						683	683	0		0		0
1:50	8	52	55	+3		+.00033						683	683	0		0		0
1:55	9	55	53	-2		-.00022						683	683	0		0		0
2:00	10	53	53	0		0						683	683	0		0		0
2:05	11	53	53	0		0						683	685	+2		+.0022	–	.0022
2:10	12	53	53	0		0						685	685	0		0		0
2:15	13	53	53	0		0						685	685	0		0		0
2:20	14	53	53	0		0						685	685	0		0		0
2:25	15	53	53	0		0						685	688	+3		+.0033	–	.0033
2:30	16	53	53	0		0						688	688	0		0		0
2:35	17	53	53	0		0						688	688	0		0		0
2:40	18	53	53	0		0						688	688	0		0		0
2:45	19	53	53	0		0						688	688	0		0		0



A. A. Tank Bot. to Grade 70"
B. Tank Top to Grade 22"
C. Tank Diameter 48"
D. Test Level above grade 30"
E. Depth of water in tank 0"
F. Depth for taking sample 38"
G. Temp. Probe depth (connector) 50"
H. Test level to Tank Bot. 100"
I. Groundwater above tank bottom ___"
J. Product Pressure per 1" height .036 PSI

Test Pressure Formula
(100 × .36 − (0 × .036) = 2.6
H J I — NET TEST PRESSURE

S. Send Report to:
Client Natl. Rubber Co
Address 38-31 9th St
City, State LIC NY
Phone ( )
Attn:

CERTIFICATION: This is to certify that the tank system was tested on date shown. Those indicated "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329

Tank No. 1 & 2
Tight
Leakage Indicated
Technician
Date Tested 8/7/13

.0011
J.P.

Sec 5/Pg 3

Start
End
1
2
3
4
5
7
8
BR 351 40

1500 gal Heptane
Tank passed
- .007 g.p.h.
STD .005

671 Edgegrove Ave
Staten Is NY
10311

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

CLIENT
NAME OF SUPPLIER, OWNER OR DEALER: Natl. Rubber Corp
ADDRESS (NO. & STREET): 55-31 47th St
CITY AND STATE: LIC NY
DATE OF TEST: 8/24/93
WEATHER: Sun & Clouds
TEMPERATURE: 78°F

TANK INFORMATION
CAPACITY (NOMINAL): 1500 GALS.
CAPACITY (CHART): GALS.
DIMENSIONS: DIAMETER: 48"
LENGTH:
SIZE OF FILL OR TEST OPENING: 3" IN.
TOP OFF TIME: 24 hr GALLONS:
NUMBER OF GALLONS ADDED TO START TEST: 5
TANK NO.: Heptane
INCHES OF WATER – BEFORE TEST: 11" AFTER TEST: 11"
CONTENTS (PRODUCT): Heptane
TANK MATERIAL: Steel
APPROX. AGE:
PUMP SYSTEM (TYPE):

TANK LAYOUT

TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: .05 ÷ 33.666 (ALM) = .00148 (FACTOR A)

LINE MOVEMENT
1: 11 to 42 = 31 LINES
2: 12 to 43 = 31 LINES
3: 12 to 42 = 30 LINES
TOTAL: 101 LINES ÷ 3 = 33.666 (ALM) LINES

END OF TEST CALIBRATION
SIZE OF CAL. BAR OR ML'S ADDED: .05 ÷ 35.666 (ALM) = .00140 (FACTOR A)

LINE MOVEMENT
1: 12 to 48 = 36 LINES
2: 12 to 48 = 36 LINES
3: 12 to 47 = 35 LINES
TOTAL: 107 LINES ÷ 3 = 35.666 (ALM) LINES

MEASURED API SPECIFIC GRAVITY: 70.3
PRODUCT TEMPERATURE: 78°
API SPECIFIC GRAVITY @ 60° F: .69 (FROM TABLE A)
COEFFICIENT OF EXPANSION: .000740 (FROM TABLE B)
.000740 (C.O.E.) × 1508 (TOTAL CAPACITY (GAL)) = 1.1157 (VOL. CHANGE) (FACTOR B)

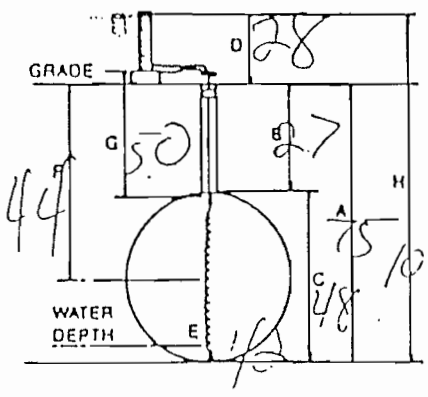
ADDITIONAL NOTES OR COMMENTS

Sec 5/Pg 2

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST
(EZY CHEK)

Time (Military)	Reading No.	PRODUCT MONITORING ON LLR Start	End	+Gain -Loss	X Factor A	Product +Gain -Loss	TEMPERATURE COMPENSATION A Start	End	+Gain -Loss	X Factor B	Product +Gain -Loss	TEMPERATURE COMPENSATION B Start	End	+Gain -Loss	X Factor B	+Expansion -Contraction	NET CL CHANGE	LLR
9:05	1	49	50	+1	.00148	+.00148						171	173	+2	1.1131	.00222	–	.00
9:10	2	50	51	+1		+.00148						173	173	0		0	–	.00
9:15	3	51	51	0		0						173	173	0		0		0
9:20	4	51	51	0		0						173	174	+1		.0011	–	.00
9:25	5	51	51	0		0						174	174	0		0		0
9:30	6	51	51	0		0						174	174	0		0		0
9:35	7	51	51	0		0						174	175	+1		.00111	–	.00
9:40	8	51	51	0		0						175	175	0		0		0
9:45	9	51	52	+1		+.00148						175	175	0		0		0
9:50	10	52	52	0		0						175	175	0		0		0
9:55	11	52	52	0		0						175	177	+2		.00222	–	.002
10:00	12	52	52	0		0						177	177	0		0		0
10:05	13	52	52	0		0						177	177	0		0		0
10:10	14	52	52	0		0						177	177	0		0		0
10:15	15	52	52	0		0						177	178	+1		.00111	–	.00
10:20	16	52	52	0		0						178	178	0		0		0
10:25	17	52	52	0		0						178	178	0		0		0
10:30	18	52	52	0		0						178	178	0		0		0
10:35	19	52	51	–1		–.00148						178	178	0		0		
10:40	20	51	51	0		0						178	178	0		0		0

.007 g.p.



A. Tank Bot. to Grade 75
B. Tank Top to Grade 27
C. Tank Diameter 48
D. Test Level above grade 28
E. Depth of water in tank 12
F. Depth for taking sample 44
G. Temp. Probe depth (connector) 50
H. Test level to Tank Bot. 103
I. Groundwater above tank bottom 0
J. Product Pressure per 1" height .036 PSI

Test Pressure Formula
103 (H) × .036 (J) – (0 (I) × .036) = 2.7 NET TEST PRESSURE

Send Report to:
Client Nat'l. Rubber Corp
Address 38-31 9th St
City, State L.I.C. NY
Phone ( )
Attn:

CERTIFICATION This is to certify that the tank system was tested on date shown. Those indicated "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329

Tank No. Heating
Tight Passed
Leakage Indicated .007 g.p.h.
Technician [illegible]
Date Tested 8/24/93

1500
8/24/1973
BR 55140

Appendix B

Health & Safety Plan

CDM Camp Dresser & McKee

HEALTH AND SAFETY PLAN FORM

CDM Health and Safety Program

This document is for the exclusive use of CDM and its subcontractors

CAMP DRESSER & McKEE INC.

PROJECT DOCUMENT #: _____

PROJECT NAME: **National Rubber Adhesives Inc.**

JOBSITE ADDRESS: 38-31 9th Street
Long Island City, New York 11101

PROJECT # _____ *REGION:* II

CLIENT: National Rubber Adhesives Inc.

CLIENT CONTACT: Yale Block, President

CLIENT CONTACT PHONE # _____

( ) *AMENDMENT TO EXISTING APPROVED H&SP?* .

( ) *H&SP AMENDMENT NUMBER?* .

DATE EXISTING H&SP WAS APPROVED? _____

OBJECTIVES OF FIELD WORK:

To determine groundwater characterisitcs, evaluate extent of contamination at the specified site, and install product recovery system. To determine if USTs can be removed.

- Install groundwater monitoring wells and sample groundwater to determine vertical and horizontal extent of on-site contamination.

TYPE: Check as many as applicable

Active	(x)	Landfill	( )	Unknown	( )
Inactive	( )	Uncontrolled	( )	Military	( )
Secure	(x)	Industrial	( )	Other	(*specify*)
Unsecure	( )	Recovery	( )	Residential	( )
Enclosed space	( )	Well Field	( )		

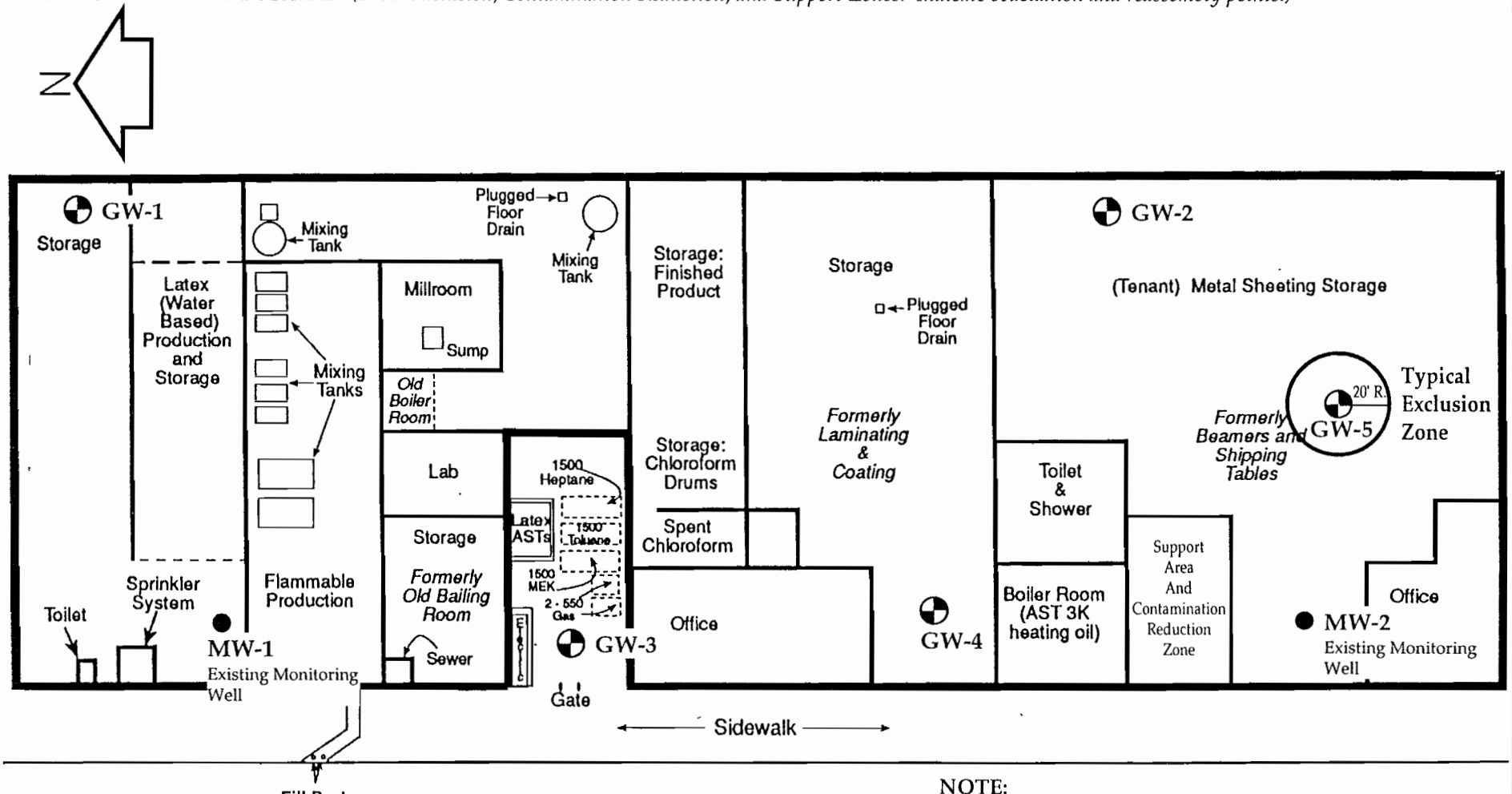
All requirements described in the **CDM Health and Safety Assurance Manual for Hazardous Waste Operations** are incorporated in this health and safety plan by reference.

DESCRIPTION AND FEATURES: Include principal operations and unusual features (containers, buildings, dikes, power lines, hills, slopes, rivers, etc.)

The property is occupied by National Rubber Adhesives Inc., a 30,000 sq. ft. one-story building. Operations at the site have consisted primarily of adhesives manufacturing for at least 62 years. Current operations at the site include the manufacture of latex and solvent based adhesive products. A tenant now occupies the southern most 1/3 of the subject building. This space is used for storage of sheet metal and supplies for an off-site manufacturing business. No metal fabrication, cutting or manufacturing associated with this business take place on the property.

SURROUNDING POPULATION: (x) Residential (x) Industrial (x) Commercial ( ) Rural (x) Urban OTHER:

THIS PAGE RESERVED FOR MAP (Show Exclusion, Contamination Reduction, and Support Zones. Indicate evacuation and reassembly points.)



LEGEND:

● MW-1 - Existing Monitoring Well

⊕ GW-1 - Proposed Monitoring Well

25 0 25
scale feet

KEY:

- Underground Storage Tank (UST)

NOTE:
See page 3 for description of work zones, exclusion zones, contaminant reduction zones and support zones.

MAP SOURCE: U.S. Hydrogeologic, Inc.

Proposed Monitoring Well Locations
Phase II Site Assessment Work Plan, National Rubber Adhesives Inc.

HISTORY: Summarize below. Include complaints from public, previous agency actions, known exposures or injuries, etc.

The site has been in use as a rubber adhesives manufacturer for approximately 62 years. Hazardous materials including heptane and MEK are currently used and stored on-site. Five underground storage tanks (1 toluene, 2 gasoline, 1 MEK and 1 heptane) were closed in-place on-site. Two, 1,500 gallon heptane USTs remain in service on-site. An investigation conducted at the site in 1996 revealed the presence of soil and groundwater contamination below the site building and concentrations summarized on Page 5 of this plan.

WASTE TYPES: (x) Liquid ( ) Solid ( ) Sludge ( ) Gas ( ) Unknown ( ) Other *specify:*

WASTE CHARACTERISTICS: Check as many as applicable.

( ) Corrosive ( ) Flammable ( ) Radioactive
(x) Toxic (x) Volatile ( ) Reactive
( ) Inert Gas ( ) Unknown ( ) Other *specify:*

WORK ZONES: Describe the Exclusion, Contamination Reduction, and Support Zones in terms on-site personnel will recognize

Four out of five monitoring wells will be completed within the interior of the building. The exclusion zone will exist around the drill rig at each well location and have a radius of approximately 20 feet from the well location. During well sampling, the exclusion zone will be around the well head only. A contaminant reduction and support zone will be established within the building near a large roll-up door.

HAZARDS OF CONCERN:

(x) Heat Stress *attach guidelines*
(x) Cold Stress *attach guidelines*
( ) Explosive/Flammable
( ) Oxygen Deficient
( ) Radiological
( ) Biological
( ) Other - *specify*
( ) Noise
(x) Inorganic Chemicals
(x) Organic Chemicals
(x) Motorized Traffic
(x) Heavy Machinery
(x) Slips, Trips, & Falls

FACILITY'S DISPOSAL METHODS AND PRACTICES: Summarize below.

It is not believed that the present facility generates hazardous materials. In the past when it did, wastes were allowed to enter building floor drains drummed and shipped off-site to a waste disposal facility.

HEALTH AND SAFETY PLAN FORM

CDM Health and Safety Program

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CAMP DRESSER & McKEE INC.

PROJECT DOCUMENT #: _____

HAZARDOUS MATERIAL SUMMARY: Circle waste type and estimate amounts by category

CHEMICALS: Amount/Units:	SOLIDS: Amount/Units:	SLUDGES: Amount/Units:	SOLVENTS: Amount/Units:	OILS: Amount/Units:	OTHER: Amount/Units:
Acids	Flyash	Paints	Halogenated (chloro, bromo) Solvents	Oily Wastes	Laboratory
Pickling Liquors	Mine or Mill Tailings	Pigments	Hydrocarbons	Gasoline	Pharmaceutical
Caustics	Asbestos	Metals Sludges	Alcohols	Diesel Oil	Hospital
Pesticides	Ferrous Smelter	POTW Sludge	Ketones	Lubricants	Radiological
Dyes / Inks	Non-Ferrous Smelter	Aluminum	Esters	PCBs	Municipal
Cyanides	Metals	Distillation Bottoms	Ethers	Polynuclear Aromatics	Construction
Phenols	Other *specify:*	Other *specify:*	Other *specify:*	Other *specify:*	Munitions
Halogens			Heptane		Other *specify:*
Other *specify:*					

OVERALL HAZARD EVALUATION: ( ) High ( ) Medium ( ) Low (x) Unknown *(Where tasks have different hazards, evaluate each)*

JUSTIFICATION: .

FIRE/EXPLOSION POTENTIAL: ( ) High ( ) Medium (x) Low ( ) Unknown

BACKGROUND REVIEW: ( ) COMPLETE (x) INCOMPLETE

KNOWN CONTAMINANTS	*HIGHEST OBSERVED CONCENTRATION (specify units and media)*	*PEL/TLV ppm or mg/m³ (specify)*	*IDLH ppm or mg/m³ (specify)*	*WARNING CONCENTRATION (in ppm)*	*SYMPTOMS & EFFECTS OF ACUTE EXPOSURE*	*PHOTO IONIZATION POTENTIAL*
Benzene	280 ppb (GW)	1 ppm	500 ppm	61 ppm	Eye and nose irritation, headache, giddiness, nausea, fatigue.	9.25 ev
Toluene (Skin)	280,000,000 ppb (GW) 82,000 ppb (S)	50 ppm	500 ppm	1.7 ppm	Fatigue, confusion, euphoria, dizziness, headache, tears.	8.82 ev
Ethyl Benzene	890,000 ppb (GW) 2,900 ppb (S)	100 ppm	800 ppm	200 ppm	Eye and nose irritation, headache, narcosis.	8.76 ev
Xylene	3,170,000 ppb (GW) 3,130 ppb (S)	100 ppm	900 ppm	5 ppm	Eye, nose and throat irritation, drowsiness, nausea, incoordination.	8.44 ev
Tetrachloroethene (Skin)	710 ppb (S)	1 ppm	150 ppm	7.3 ppm	Nausea, stomach pain, finger tremors.	11.1 ev
Chloroform	18 ppb (S)	2 ppm	1,000 ppm	192 ppm	Mental dullness, headaches, anesthesia, dizziness.	11.4 ev
Methylene Chloride	220 ppb (S)	50 ppm	5,000 ppm	160 ppm	Weakness, tingling and numbness, vertigo, nausea.	11.35 ev

NA - Not Available **NE** - None Established **U** - Unknown **Ca** - NIOSH has recommended that the substance be treated as a potential human carcinogen

S - Soil **SW** - Surface Water **T** - Tailings **W** - Waste **TK** - Tanks **SD** - Sediment

A - Air **GW** - Groundwater **SL** - Sludge **D** - Drums **L** - Lagoon **OFF** - Off-site

HEALTH AND SAFETY PLAN FORM

CDM Health and Safety Program

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CAMP DRESSER & McKEE INC.

PROJECT DOCUMENT #: _____

TASK DESCRIPTION/SPECIFIC TECHNIQUE/SITE LOCATION *(attach additional sheets as necessary)*	TYPE	Primary	Contingency	HAZARD & SCHEDULE
1. Installation of five (5) groundwater monitoring wells with hollow-stem auger.	Intrusive Non-intrusive	A B C D Modified	A B C D Exit Area	Hi Med Low Spring 1997
2. Collection of groundwater samples from seven (7) wells by pump and manual bailer.	Intrusive Non-intrusive	A B C D Modified	A B C D Exit Area	Hi Med Low Spring 1997
3.	Intrusive Non-intrusive	A B C D Modified	A B C D Exit Area	Hi Med Low
4. .	Intrusive Non-intrusive	A B C D Modified	A B C D Exit Area	Hi Med Low
5. .	Intrusive Non-intrusive	A B C D Modified	A B C D Exit Area	Hi Med Low
6.	Intrusive Non-intrusive	A B C D Modified	A B C D Exit Area	Hi Med Low

PERSONNEL AND RESPONSIBLITIES

NAME	FIRM/DIVISION	CDM HEALTH CLEARANCE	RESPONSIBILITIES	On site?
Thomas Fox	EMAU/WBY	B-T/D-S	Project or Task Manager	1 - 2 - 3 - 4 - 5
Thomas Fox	EMAU/WBY	B-T/D-S	Site Health and Safety Coordinator	1 - 2 - 3 - 4 - 5
Jon Bergman	ERKA	B-T	Alternate Site H & S Coordinator	1 - 2 - 3 - 4 - 5
				1 - 2 - 3 - 4 - 5
				1 - 2 - 3 - 4 - 5
				1 - 2 - 3 - 4 - 5

HEALTH AND SAFETY PLAN FORM

CDM Health and Safety Program

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CAMP DRESSER & McKEE INC.

PROJECT DOCUMENT #: _____

PROTECTIVE EQUIPMENT: Specify by task. Indicate type and/or material, as necessary. Group tasks if possible. Use copies of this sheet if needed.

BLOCK A

TASKS: (1 - 2) - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10
LEVEL: A - B - C - (D) - Modified
(x) Primary ( ) Contingency

Respiratory: ( ) Not needed
( ) SCBA, Airline: _____
( ) APR: _____
( ) Cartridge: _____
( ) Escape Mask: _____
( ) Other: _____

Head and Eye: ( ) Not needed
(x) Safety Glasses: _____
( ) Face Shield: _____
( ) Goggles: _____
(x) Hard Hat: _____
( ) Other: _____

Boots: ( ) Not Needed
(x) Steel-Toe ( ) Steel Shank
( ) Rubber ( ) Leather
(x) Overboots: If Muddy

Prot. Clothing ( ) Not needed
( ) Encapsulated Suit: _____
( ) Splash Suit: _____
( ) Apron: _____
( ) Tyvek Coverall
( ) Saranex Coverall
( ) Cloth Coverall: _____
( ) Other: _____

Gloves: ( ) Not Needed
(x) Undergloves: For Contact
(x) Gloves: For Contact
( ) Overgloves: _____
Other: *Specify below*
( ) Tick Spray
( ) Flotation Device
( ) Hearing Protection
( ) Sun Screen
( ) Traffic Vests

BLOCK B Exit Site

TASKS: (1 - 2) - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10
LEVEL: A - B - C - D - Modified
( ) Primary (x) Contingency

Respiratory: ( ) Not needed
( ) SCBA, Airline: _____
( ) APR: _____
( ) Cartridge: _____
( ) Escape Mask: _____
( ) Other: _____

Head and Eye: ( ) Not needed
( ) Safety Glasses: _____
( ) Face Shield: _____
( ) Goggles: _____
( ) Hard Hat: _____
( ) Other: _____

Boots: ( ) Not Needed
( ) Steel-Toe ( ) Steel Shank
( ) Rubber ( ) Leather
( ) Overboots: _____

Prot. Clothing ( ) Not needed
( ) Encapsulated Suit: _____
( ) Splash Suit: _____
( ) Apron: _____
( ) Tyvek Coverall
( ) Saranex Coverall
( ) Cloth Coverall: _____
( ) Other: _____

Gloves: ( ) Not Needed
( ) Undergloves: _____
( ) Gloves: _____
( ) Overgloves: _____
Other: *Specify below*
( ) Tick Spray
( ) Flotation Device
( ) Hearing Protection
( ) Sun Screen
( ) Traffic Vests

BLOCK C

TASKS: 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10
LEVEL: A - B - C - D - Modified
( ) Primary ( ) Contingency

Respiratory: ( ) Not needed
( ) SCBA, Airline: _____
( ) APR: _____
( ) Cartridge: _____
( ) Escape Mask: _____
( ) Other: _____

Head and Eye: ( ) Not needed
( ) Safety Glasses: _____
( ) Face Shield: _____
( ) Goggles: _____
( ) Hard Hat: _____
( ) Other: _____

Boots: ( ) Not Needed
( ) Steel-Toe ( ) Steel Shank
( ) Rubber ( ) Leather
( ) Overboots: _____

Prot. Clothing ( ) Not needed
( ) Encapsulated Suit: _____
( ) Splash Suit: _____
( ) Apron: _____
( ) Tyvek Coverall
( ) Saranex Coverall
( ) Cloth Coverall: _____
( ) Other: _____

Gloves: ( ) Not Needed
( ) Undergloves: _____
( ) Gloves: _____
( ) Overgloves: _____
Other: *Specify below*
( ) Tick Spray
( ) Flotation Device
( ) Hearing Protection
( ) Sun Screen
( ) Traffic Vests

BLOCK D

TASKS: 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10
LEVEL: A - B - C - D - Modified
( ) Primary ( ) Contingency

Respiratory: ( ) Not needed
( ) SCBA, Airline: _____
( ) APR: _____
( ) Cartridge: _____
( ) Escape Mask: _____
( ) Other: _____

Head and Eye: ( ) Not needed
( ) Safety Glasses: _____
( ) Face Shield: _____
( ) Goggles: _____
( ) Hard Hat: _____
( ) Other: _____

Boots: ( ) Not Needed
( ) Steel-Toe ( ) Steel Shank
( ) Rubber ( ) Leather
( ) Overboots: _____

Prot. Clothing ( ) Not needed
( ) Encapsulated Suit: _____
( ) Splash Suit: _____
( ) Apron: _____
( ) Tyvek Coverall
( ) Saranex Coverall
( ) Cloth Coverall: _____
( ) Other: _____

Gloves: ( ) Not Needed
( ) Undergloves: _____
( ) Gloves: _____
( ) Overgloves: _____
Other: *Specify below*
( ) Tick Spray
( ) Flotation Device
( ) Hearing Protection
( ) Sun Screen
( ) Traffic Vests

HEALTH AND SAFETY PLAN FORM

CDM Health and Safety Program

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CAMP DRESSER & McKEE INC.

PROJECT DOCUMENT #: _____

MONITORING EQUIPMENT: Specify by task. Indicate type as necessary. Attach additional sheets if needed.

INSTRUMENT	*TASK*	*ACTION GUIDELINES*	*COMMENTS (When and how will you use the monitor?)*
Combustible Gas Indicator	(1 - 2) 3 - 4 - 5 - 6 - 7 - 8	0-10%LEL — No explosion hazard. 10-25%LEL — Potential explosion hazard; notify SHSC. >25%LEL — Explosion hazard; interupt task/evacuate. 21.0%O_2 — Oxygen normal. <21.0%O_2 — Oxygen Deficient; notify SHSC. <19.5%O_2 — Interrupt task/evacuate.	(x) Not Needed
Radiation Survey Meter	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	*Specify:*	(x) Not Needed
Photoionization Detector OVM eV Lamp Type: _____	(1 - 2) 3 - 4 - 5 - 6 - 7 - 8	*Specify:* 0-20 ppm — Level D >20 ppm — Leave Area. Call HSM.	( ) Not Needed
Flame Ionization Detector Type: OVA	(1 - 2) 3 - 4 - 5 - 6 - 7 - 8	*Specify:*	(x) Not Needed
Detector Tubes Type: _____ Type: _____	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	*Specify:*	(x) Not Needed
Respirable Dust Monitor Type: _____ Type: _____	(1) 2 - 3 - 4 - 5 - 6 - 7 - 8	*Specify:* If team sees visible concentration of dust in air, they will leave the area.	(x) Not Needed
Other *Specify:*	(1 - 2) 3 - 4 - 5 - 6 - 7 - 8	*Specify:* If team notices unusual odors, or irritation of the eye or throat, they will leave the area.	

DECONTAMINATION PROCEDURES

ATTACH SITE MAP INDICATING EXCLUSION, DECONTAMINATION, AND SUPPORT ZONES AS PAGE TWO

Personnel Decontamination *Summarize below or attach diagram;*	*Sampling Equipment Decontamination* *Summarize below or attach diagram;*	*Heavy Equipment Decontamination* *Summarize below or attach diagram;*
Team members will remove their protection clothing in the following order: - Equipment drop - Boot cover (if worn) removal - Outer glove removal - Hard hat removal - Coverall removal - Surgical glove removal - Hand and face wash ( ) Not needed	- Bag all disposable sampling and PPE equipment. - Wash/rinse the outside of sample containers in soapy/clean water. - Wash all non-disposable sampling equipment in low sudsing detergent (Alconox or equivalent). - Use laboratory brush or equivalent; dissemble equipment when necessary. - Follow with tap water rinse, and distilled water rinse. ( ) Not needed	A decontamination pad will be constructed for deconning all heavy equipment used at the site. The drill rig shall be deconned by high pressure steam rinses between each monitoring well and borehole. All rods, augers, etc., shall be deconned between each hole. ( ) Not needed
Containment and Disposal Method Waste generated during this investigation will be containerized and stored on-site in 55 gallon drums.	*Containment and Disposal Method* Waste generated during this investigation will be containerized and stored on-site in 55 gallon drums.	*Containment and Disposal Method* Waste generated during this investigation will be containerized and stored on-site in 55 gallon drums.

EMERGENCY CONTACTS

Water Supply:	_____
Site Telephone:	_____
EPA Release Report #:	1(800) 424-8802
CDM 24-Hour Emergency #:	1(800) SKY-PAGE 31821#
Facility Management:	_____
Other *(specify)*	_____
CHEMTREC Emergency #:	1(800) 424-9300

CONTINGENCY PLANS: Summarize below

All intrusive work to take place in modified Level D. Exceedance of action limits will not require the upgrade of personnel protective equipment. Exceedances will require work stoppage until acceptable conditions return.

HEALTH AND SAFETY PLAN APPROVALS

Prepared by: _____ **Date**_____

DHSC Signature _____ **Date**_____

HSM Signature _____ **Date**_____

EMERGENCY CONTACTS	*NAME*	*PHONE*
Health and Safety Manager	Lisa Granados	(908) 225-7000
Project Manager	Thomas Fox	(516) 496-8400
Site Safety Coordinator	Thomas Fox	(516) 496-8400
Client Contact	Yale Block	x
Other *(specify)*		
Environmental Agency	NYSDEC	.
State Spill Number		1 (800) 457-7362
Fire Department		911
Police Department		911
State Police		(518) 458-6305
Health Department		(518) 474-7354
Poison Control Center		(212) 447-8153
Occupational Physician	David Barnes	1 (800) 229-3674

MEDICAL EMERGENCY *PHONE*

Hospital Name: Western Queens Community Hospital

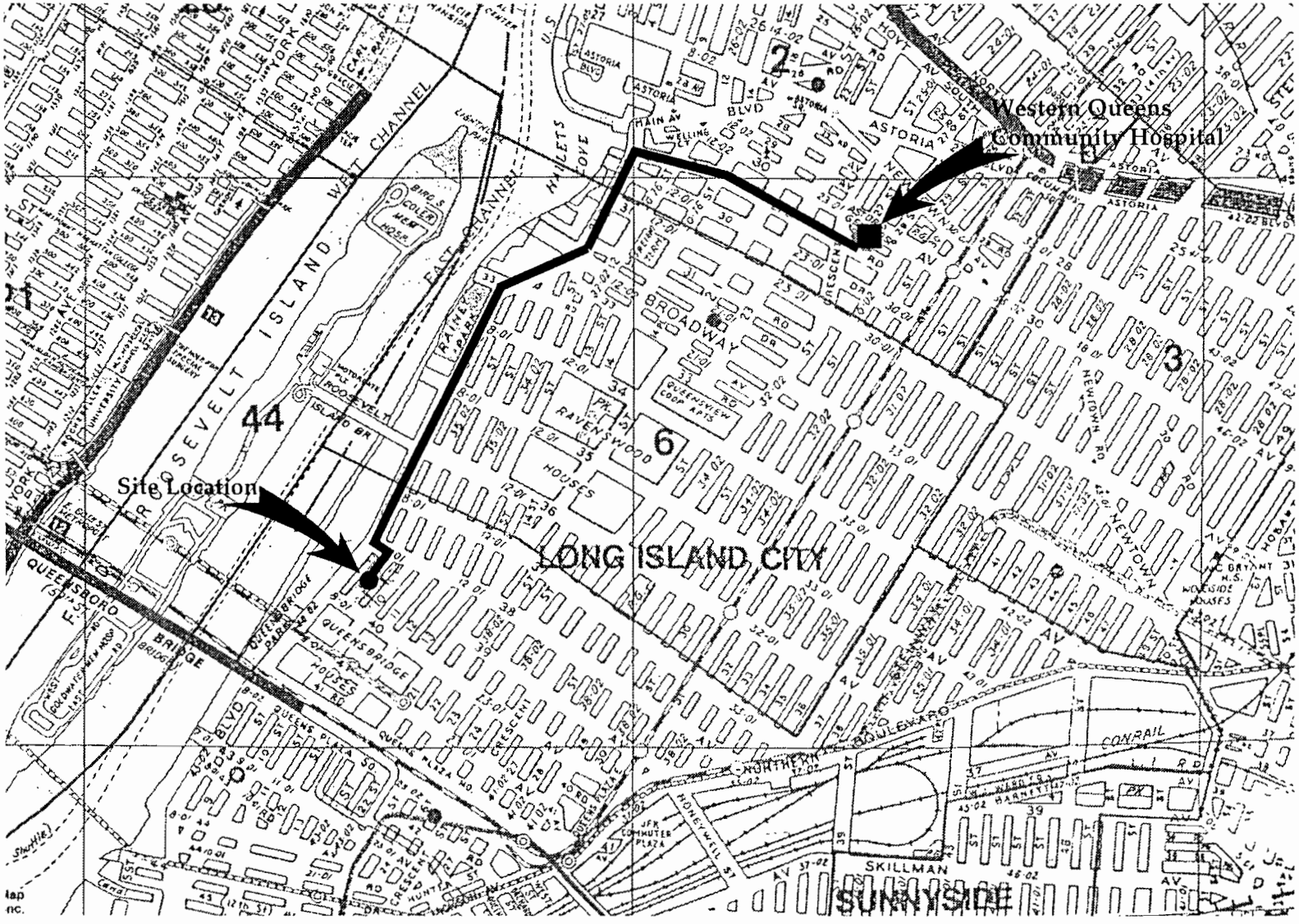
Hospital Address: 25-21 30th Avenue, Long Island City, New York

Name of 24-Hour Ambulance: 911

Route to Hospital: Attached

Distance to hospital: ~.3 miles

Attach map with route to hospital: Take 9th Street and make a right onto 40th Avenue. From 40th Avenue, make a right onto Vernon Boulevard. Take Vernon Boulevard to 30th Avenue and make a right. Hospital is five (5) blocks up on 30th Avenue.



Route To Hospital

Appendix C

Project QA/QC Officer Resume

DREW B. BENNETT
Senior Environmental Scientist
Camp Dresser & McKee

Summary

Mr. Bennett has 13 years of experience in hydrology, water resources management, contamination remediation, environmental management, and air toxics. He has conducted numerous studies relating to groundwater supply development, urban hydrology, remedial action designs for both groundwater and soil cleanups, natural systems for wastewater treatment, non-point source impacts on estuaries, and groundwater/surface water interactions. He has also provided environmental management support for large industrial facilities, and is experienced in industrial air pollution source sampling and analysis.

Experience

Mr. Bennett has 13 years of experience in environmental engineering and science. He has solved environmental and regulatory related problems by integrating engineering, technology, planning, research, and community participation as required. He has participated in numerous public and private sector projects involving water supply, water resource management, water quality improvement, land development, environmental management of industrial facilities, industrial site redevelopment, hazardous and industrial waste remediation, and resource restoration.

Mr. Bennett manages site contamination or other regulated materials that may be encountered during upgrade of the Spring Creek Auxiliary WPCP. The facility is a NYCDEP CSO storage facility and pump station located in Brooklyn, New York. Mr. Bennett's responsibilities include identifying regulated materials in areas of future excavation, influent barrels, and areas of the existing facility, and preparing design and contract documents for remediation. Regulated materials include landfill, lead-coated surfaces and electrical cables, asbestos, mercury, PCBs, USTs, and 6,000 cubic yards of debris and settlement in influent barrels.

As project manager and senior scientist for the Brookfield Avenue landfill remediation project on Staten Island, New York, Mr. Bennett is directing a team of engineers and scientists in the RI/FS, risk assessment and remedial design for this 200-acre inactive hazardous waste site owned by NYCDEP. The remedial investigation phase of the project involves intensive, state-of-the art investigations of air impacts, gas production, solid waste hot spots and groundwater/surface water impacts. He is working closely with NYSDEC, the community, and a Scientific Advisory Committee to address significant public concerns and maximize state EQBA funding for the project. The project is following a presumptive approach of remediating "hot spots" and containment via capping, landfill gas and leachate control. In addition, Mr. Bennett completed a 3D groundwater model of this complicated site. The model is guiding the RI and is being used to respond to the Community/Scientific Advisory Committee's questions on the potential exposure pathways in the complex hydrogeology.

Specific issues include private wells, a mass balance of leachate as it travels through the groundwater/surface water system, evaluation of the significance of buried river channels, and the potential for leachate leakage to deeper aquifers caused by extensive regional water supply pumping.

Mr. Bennett was assistant project manager for a critical path soil remediation plan and remedial action for a private client developing an industrial site on Long Island, New York. The site contained 18 underground storage tanks (USTs) and 45,000 cubic yards of soil mixed with refuse incinerator ash. He directed the preparation of a feasibility study, remediation plan, risk assessment, bid documents, and remediation contractor oversight during the reclamation of the site for future industrial use.

Mr. Bennett was the project hydrologist for the design of a groundwater remediation system for the Waldwick Aerospace site in Monmouth County, New Jersey. He assisted in the development of a three-dimensional groundwater model to aid field hydrogeologic investigations, defined required extraction rates to capture the solvent plume prior to discharge to a nearby stream, evaluated the impact of pumping on nearby riparian wetlands, and developed mitigation measures. He worked closely with CDM's wetland scientists and EPA's Biological Technical Assistance Group in resolving wetland impact issues.

Mr. Bennett is the quality assurance officer for the NYSDEC Standby Contract for Hazardous Waste Remediation Services. In this capacity, he is responsible for reinforcement of CDM's Quality Management Process. He reviews all project deliverables for technical accuracy and overall quality of work, performs project audits, assists in developing project specific quality assurance plans, resolves data problems, and directs the preparation of data usability reports.

Mr. Bennett is the senior scientist for the design and operation of remedial systems for contaminated soil and groundwater at the SMS Instruments Superfund site in Deer Park, New York. For the soil remediation system, Mr. Bennett prepared a treatability study that evaluated various forms of soil vapor extraction (SVE) technology to effectively remove volatile and semi-volatile soil contaminants. Based on this study, Mr. Bennett prepared performance-based specifications for bidding the construction and operation of an SVE system. The SVE system successfully achieved NYSDEC/EPA derived soil cleanup criteria. For the design of the groundwater pump and treat system, Mr. Bennett was responsible for the groundwater pump tests and the groundwater extraction and recharge well system. He currently monitors and evaluates the performance of the 100-gpm system and recommends operational changes as necessary.

For an industrial client's site on Long Island, Mr. Bennett directed an air sparging/soil venting pilot study involving groundwater highly contaminated with gasoline and a residual saturation zone below the water table. The objective of the pilot study was to cost-effectively remediate hot spots as a source control.

In addition to optimizing extraction and injection rates, Mr. Bennett evaluated the soil stripping and biodegradation treatment mechanisms associated with sparging. The process was selected for full-scale design and implementation over a 30-acre site.

For the John F. Kennedy Space Center in Florida, Mr. Bennett participated in the preparation of a RCRA facility investigation and the closure of two 150,000-gallon holding lagoons in compliance with RCRA regulations. He was responsible for the delineation of contaminants and for preparation of detailed closure plans and groundwater monitoring plans. He also assisted in preparing the RCRA Part B application.

Mr. Bennett provided consulting, construction, and operation services for a 75-gpm groundwater pump and treat project to remediate an off-site plume and control a DNAPL source. In addition to the groundwater extraction-recharge design, he provided construction management and system startup services.

As part of a remedial investigation of gasoline-contaminated groundwater at a large petrochemical distributor on Long Island, Mr. Bennett was the task manager for a soils vapor contamination monitoring program designed to monitor and evaluate the potential of trace gasoline vapors in residential home basements. Working closely with regulatory agencies and the local health department, Mr. Bennett developed a standardized monitoring program. He was also responsible for air emission stack testing of a number of sources associated with remedial activities.

For EPA, Mr. Bennett provided technical review of a RCRA Part B permit application for a petrochemical complex undergoing decommissioning in Puerto Rico. The application included four SWMU groups totaling 32 individual units. Active units included two aeration basins receiving wastewater produced by corrective actions and an industrial landfill which continues to receive hazardous wastes from the decommissioning process.

Mr. Bennett developed and calibrated three-dimensional groundwater flow and contaminant transport models for the Brookhaven National Laboratory's remediation program for Operable Units 1, 4, 5 and 6. Multiple source areas were addressed, including two landfills, waste pits, hazardous waste storage facilities, STP effluent recharge areas, and experimental agricultural fields. Model applications were used to identify source areas, guide field investigations, remedial alternative evaluations, and remedial designs. Mr. Bennett completed the engineering evaluation/cost analysis phase, and was responsible for pump testing, integrating operable units, and design of the groundwater extraction and recharge basin systems.

Education

M.S. - Environmental Engineering Sciences, University of Florida, 1989
B.S. - Hydrology, University of New Hampshire, 1982

Registrations	Professional Groundwater Hydrologist
Honors	NASA Graduate Assistantship
	1991 Kenneth Allen Memorial Award from NYWPCA for the paper "Retrofitting for Watershed Drainage."
Memberships	Water Environment Federation Long Island Water Conference American Institute of Hydrology