Report

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Site Investigation and Interim Remedial Action Plan

Smith Corona Corporation
Cortlandville, New York

November 1988

O'BRIEN & GERE

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SITE INVESTIGATION - INITIAL REMEDIATION

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SMITH CORONA CORPORATION

CORTLANDVILLE, NEW YORK

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NOVEMBER, 1988

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APPENDIX A - SITE INVESTIGATION

A1. Introduction

As part of the investigation into whether the Smith Corona Facility in Cortlandville, New York might be a source of any of the TCE (or other volatile organic) contamination found in the Dry Creek/Otter Creek Aquifer in Cortlandville, a review of the relevant physical and operational history of the Cortlandville Facility was undertaken. Table A1 summarizes the relevant physical and operational changes.

A1.01 Identification of Areas of Possible Concern

Table A1 shows that of the original 670 acres of farmland purchased by Smith Corona, only the area indicated on Figure A1 and A2 has ever been involved in Smith Corona operations. Since no manufacturing, chemical handling, or storage ever occurred in what is referred to as "Plant #6", that area was not considered to be a potential source.

Figure A3 indicates areas external to the manufacturing building where virgin chemicals, waste chemicals and/or empty drums which had formerly held chemicals had been handled or stored during the approximately 30 year operational life of the plant. With the exception of these areas, based upon Facility records and interviews with long term facility employees, no other areas have been identified where chemicals have been stored.

All liquid discharges from the plant's electroplating operations have always been piped directly to the Cortlandville sewer district since its outset in 1960. Sludges and other residuals from plating operations were periodically removed from the plating equipment, placed in drums and stored either inside the plant or in the external chemical storage areas (Figure A3) until they were shipped offsite for proper disposal. There is no indication that this material was ever disposed of onsite.

The stormwater lagoon (Figure A2) is the discharge point for stormwater collected from the roof drains of the manufacturing building and from the west side of the parking lot along Lime Hollow Road. The discharge to the lagoon infiltrates into the ground and recharges the ground water. Beginning in October 1967, non-contact cooling water from plastics machinery was also discharged to the lagoon. During this period, all cooling water from other operations at the site was discharged to the Cortlandville Sewer District. Between June 1985 and December 1986, non-contact cooling water from the vapor degreaser distillation system was also discharged to the lagoon. Since December 1986 the only discharge to the lagoon has been site stormwater.

The only volatile halogenated organic chemicals used since the plant operations began in 1958 were: trichloroethylene (TCE) and 1,1,1-trichloroethane (TCA). The TCE was used in a vapor degreaser distillation system. Appendix D includes a description of the vapor degreaser utilized at the plant, including the integral solvent distillation process. As Appendix D indicates, because the non-contact cooling water system used in conjunction with the degreaser/distillation operation was under positive pressure, it would be physically impossible for TCE to enter the non-contact cooling water in significant quantities in the event of a line rupture (or other leak). Thus, although the degreaser/distillation unit utilized non-contact cooling water which was discharged to the lagoon from June 1985 until September 1986, from a technical standpoint there is no indication that TCE from the degreaser/distillation unit was discharged with the non-contact cooling water.

From November 1971 until December 1979, waste oils were stored in an underground tank, referred to as the tramp oil tank (Figure A3), prior to being sent off-site for disposal. The waste oils were water soluble cutting and cooling oils from the milling, drilling and tapping, and screw machinery departments. Subsequent to December 1979 waste oil was collected in barrels and shipped off-site for disposal.

A2 - SOIL INVESTIGATION

A2.01 REGIONAL SOIL TYPE:

The surface soils in the Cortlandville area generally consist of Howard cobbley to gravely loam (Soil Survey, 1961, Attachment A1). This soil type is characterized by rapid permeability (5 to 10 inches per hour) with an available moisture capacity of 5.2 to 6.5 inches per foot of depth. The soil on the Smith Corona Corporation (SCC) site is the Howard cobbley to gravely loam. In unpaved areas on the site where vehicular traffic is common, some coarse gravel fill occurs and the soils are highly compacted.

A2.02 SOILS INVESTIGATION CHRONOLOGY:

A: (9/30/86) Surface soil samples collected by SCC representatives and NYSDEC.

B: (10/30/86) Surface soil samples collected by O'Brien & Gere.

C: (11/5/86- 11/6/87) Surface soil sampling survey performed by O'Brien & Gere; NYSDEC split samples on first day.

D: (11/4/86- 12/8/86) Subsurface soil samples collected by O'Brien & Gere.

E: (12/15/86) Subsurface soil samples collected during removal of underground tramp oil tank.

A2.03 SOIL INVESTIGATION METHODS

The first two soil sampling events consisted of the collection of selected grab samples of surface soil from the material handling area of the SCC facility (Figure A4). These sampling events were designed to provide a preliminary indication of the nature and degree of any contaminants in the surface soils. Both sets of samples were collected from the top 6-inches of the soil column and placed in a plastic bag or glass vial. The results of these sampling events are included and discussed in this report. The results of the first two preliminary soil sampling events were considered in the design of this sampling survey.

The more comprehensive surface soil sampling survey was performed on November 5, 1986 and November 6, 1986. The purpose of the soil sampling survey was to define the nature and the horizontal limits of any contaminants in the surface soils. Eleven sampling traverses across visually stained areas were performed in the materials handling area (Figure A4). Surface soil samples were collected along the traverses in areas that appeared to be stained and in areas that were unstained in order to assure that the nature and horizontal extent of any contamination was defined. Representative surface soil samples were collected between 0 and 6 inches in depth. Sample locations were surveyed.

A decontaminated chisel was used to collect the surface soil samples. Decontamination was accomplished by cleaning the chisel with methyl alcohol followed by a clean water rinse. New disposable gloves were used for each sample. Soil collected at each sampling location was placed in one 40ml glass vial; which was 1/3 filled with soil and then filled to the top with laboratory distilled water. The distilled water was added to the vial to minimize the volatilization of any volatile organics in the soil sample. A teflon coated septum cap was immediately screwed on the vial. The 40 ml vial was immediately placed on ice and transported to OBG Laboratories. Chain of custody procedures were adhered to (Attachment A2).

A portion of the soil sample from each location was also placed in a half pint glass jar for the purpose of field screening. Tin foil and a screw on cap was placed over the jar. The 1/2 pint jars were allowed to reach room temperature following which the head space was monitored with a drager tube sensitive to trichloroethylene (2-200 ppm), and a photoionization detector (HNU Model P101-1) calibrated to benzene. The results of this field screening are presented in Table A2.

The field screening results were used to select the soil samples to be submitted to the laboratory for analyses. Samples were selected from samples that had both high and non-detectable field screening results. High screening results were analyzed to quantify the degree of soil contamination. Non-detectable screening results were analyzed to verify that no contamination was detected. The laboratory results generally confirmed the field screening results. Non-detectable field screening results showed no detectable levels of volatile organics (Table A2). The aqueous portion of the laboratory samples was analyzed for volatile organics via EPA methods 601 and 602. Three selected samples, representing contaminated soil, were analyzed for full priority pollutants and metals via EPA methods SW-846 8080,9010, 7000 Series, 8240 and 8270 (Table A3).

The vertical delineation of the extent of soil contamination was determined by test borings conducted between November 10 and December 5, 1986. Subsurface soil samples were collected from five test borings that were located in areas of visible surface soil staining (Figure A3). The borings were located in the stained areas to delineate the vertical extent of contaminants in the soil. Some borings locations were restricted by subsurface utilities and tanks and were situated immediately adjacent to the target area.

The test borings were advanced using the Odex drilling method (down the hole air hammer), which allows for more rapid drilling while avoiding the introduction of water or drilling mud into the borehole. The introduction of water or drilling mud into the borehole could interfere with the collection of representative soil samples for analysis. Continuous samples were collected ahead of the drill bit to a depth of 10 ft. in accordance with ASTM Method D1586-67 split barrel sampling. From 10 ft to the top of ground water soil samples were collected at 10 ft intervals. If soil contamination was identified between 10 ft and the ground water then the boring and sampling was advanced to a depth of 100 ft. The split-spoons were decontaminated between each sample using a clean water wash followed by a methyl alcohol rinse and a final clean water rinse. The samples were placed in sample vials and jars as described above for the surface soil samples. Similar field screening procedures were used to facilitate the selection of samples to be analyzed by OBG Laboratories. Samples showing high screening results were submitted to the laboratory to quantify the degree of soil contamination. Samples with non-detectable screening results were selected to verify that no contamination was detectable. The laboratory results generally confirmed the field screening results. Concentrations of volatile organics in the non-detectable field screening samples were all below the level of detection for the field screening methods (Table A2).

A2.04 Soil Investigation Results

The surface soil sampling identified chlorinated solvents in the soils, and, to a lesser extent, petroleum hydrocarbons (Table A2 and Figure A5). Contaminants in surface soils were found to be restricted to areas of visible surface staining of the soil. Four areas intercepting the locations of stained soil are delineated on Figure A4. The same areas with the results of the sampling survey are shown on Figure A5. No chlorinated solvents or petroleum products were detected outside of the stained areas, indicating that surface soil contamination was isolated to the different visible stained locations. The only exception to the correlation between soil contamination and visual staining is in the area adjacent to the former aboveground TCE storage tank. In that area no surficial staining was observed although detectable levels of chlorinated solvents were measured in the surface soils. While total concentrations of solvents in the surface soils ranged as high as 660 mg/kg (ppm), most stained areas showed concentrations of 30-70 mg/kg.

except

Priority Pollutant analysis (Table A3) detected no other organics except for Bis (2-ethylhexyl) phthalate - a common plasticizer (Table A3). Soil sample 8 + 146 had levels of cadmium (5.9 ppm), chromium (36 ppm), copper (930 ppm), lead (240 ppm), nickel (490 ppm), zinc (1030 ppm), cyanide (3.6 ppm) and phenol (4.8 ppm). These concentrations were above the levels in the other soil samples. Sample 8 + 146 was located beneath the compressor vents (Figure A4).

The soil survey confirmed the results of the two preliminary sampling events. Both chlorinated solvents and petroleum products were identified in areas of visible stained soil. Except for the soil in the vicinity of the former TCE storage tank, contaminants were not identified in surface soil areas where no visible stained soil was present.

The vertical soil assessment of visible stained areas indicated that in the vicinity of borings 6 and 8 (Table A4 and Figure A4) the vertical extent of chlorinated solvents ranges from less than 2 ft to about 6 ft. No evidence of contaminants in deeper soil was detected in these areas. The concentrations of less than 0.5 ppm detected in the upper 10 ft. of borings 6 and 8 most likely reflect material dissolved in water due to leaching from shallow depths rather than actual contaminants adsorbed to the soil. In borings 7 and 9 (Table A4 and Figure A4) solvent concentrations in excess of 0.5 ppm extend to about 6 ft below the ground surface. Concentrations, less than 0.5 ppm total, were detected between 6 and 10 ft in these borings; however as with borings 6 and 8 it is likely that these concentrations represent material dissolved in water that has leached from shallower depths. Borings 7 and 9 also detected concentrations, up to about 4.7 ppm, of chlorinated solvents between a depth of 40 to 50 ft. Petroleum products were detected (total of about 0.1 ppm), at this depth in boring 9. This depth generally corresponds to the ground water table.

Solvents were formerly handled in the loading dock area of the facility. Runoff from this area is directed to a dry well located just north of the former TCE tank (Figures A3 and A4). Boring 10 was located adjacent to this dry well and a sediment sample was collected from the dry well to determine whether this could be a source of the deeper soil contamination detected in borings 7 and 9. While chlorinated solvents were detected at a concentration of 1.8 ppm in the dry well sediment (Table A2), no contaminants were detected in boring 10 between the ground surface and the water table (Table A4). About 0.4 ppm of chlorinated solvents were detected below the ground water table at a depth of 47-49 ft. The low concentrations suggest that this deeper contamination reflects the surrounding ground water quality rather than contamination adsorbed to the soil in this area (see Section A-3.04.02).

A2.05 Discussion

The surface soil sampling determined that, except for the location of the former TCE storage tank, soil contamination was restricted to areas of visible soil staining. This pattern of contaminants in the surface soil suggests that the four material handling areas represent separate and variable distribution of source materials.

The vertical extent of contaminants in soil was delineated by the test boring program. At boring locations 7 and 9 both shallow soil contamination and deep soil contamination was identified. Since no evidence of soil contamination was observed between 10 ft. and 40 ft. in these borings, this deeper contamination most likely represents horizontal migration of materials along the ground water interface. During the subsequent removal of the former tramp oil tank, visibly stained soil was observed and sampled along the side of the tank (Appendix D). Petroleum products and chlorinated solvents were detected in the soil samples. The results were similar to the analytical results identified at the ground water table in boring 9. Although the tank was inspected and no leaks were found, the surface soils around the tramp oil tank were visibly stained. The results of the soil sampling indicate that material may have been lost due to past overflows or handling practices during filling or withdrawal of the tank. This suggests that the former tramp oil tank area may be the source of the deep soil contamination identified at borings 7 and 9.

A3 - HYDROGEOLOGIC INVESTIGATION

I doubt that this section was written by a geologist.

A3.01 Regional Hydrogeology

The geology and ground water of the Cortland area, specifically the Otter Creek - Dry Creek Basin, has been documented in a variety of reports. (Attachment A1). The bulk of the information presented below is based on these reports.

The Smith Corona Corporation (SCC) site is situated in a glaciated bedrock valley. The bedrock consists of upper Devonian siltstones and shales. Till composed of unsorted silt, clay, sand and gravel, mantles the bedrock both in the valley and on the valley sides. The valley is partially filled with glacial and fluvial deposits up to 300 ft deep (USGS 78-3, 1978) (Attachment A1). Glacial moraine deposits occur to the southwest of the site. Glacial outwash deposits occur beneath the site and thicken to the north of the SCC site (Exhibit A2). The moraine and outwash deposits interfinger in the vicinity of the site (Figures A6 and Exhibit A2). The outwash deposits consist of well sorted sand and gravel with a few lenses of silt and clay. Beneath the SCC site about 100 ft of outwash deposits overlie till (Figure A6 and Exhibit A2).

The outwash deposits form the principal aquifer in the area, the Otter Creek - Dry Creek Aquifer. This aquifer is bounded by the till mantled valley walls and bottom, the moraine deposits to the southwest and the Tioughnioga River to the north. The saturated thickness of the aquifer is up to 280 ft in the center of the valley and thins toward the valley sides. The moraine deposits produce only marginal yields of ground water (USGS 78-3, 1978, Attachment A1).

Ground water recharge to the aquifer occurs via precipitation on the aquifer and from streams flowing into the valley. The surface soils throughout the valley are permeable with a high infiltration potential. The streams flowing from the valley sides become losing streams when they reach the valley floor (USGS 78-3, 1978, Attachment A1). Ground water flow in the aquifer is generally from southwest to northeast parallel to the center of the valley (Exhibit A2 and USGS 78-3, 1978, Attachment A1). During periods of high ground water recharge there is some convergence of flow toward the valley axis. Due to the ground surface topography, ground water occurs between 5 ft and 50 ft below the ground surface.

The Otter Creek - Dry Creek Aquifer supports numerous supply wells; however, the majority of these wells are residential wells. Industrial and municipal wells include the Town of Cortlandville, Cortland Water Works, Smith Corona, Pall Trinity Micro and Monarch Tool Company (Exhibit A2). Two process wells exist on the SCC site to provide cooling water for plant processes. During normal plant operations one well is pumped at a time for approximately forty minutes per hour at a rate ranging from 800-1000 gallons/minute (0.75 mgd - 0.96 mgd).

Aquifer tests were conducted on three public supply wells and based on these tests the transmissivity (T) of the aquifer is 280,000 to 600,000 gpd/ft and the hydraulic conductivity (K) is 7100 to 8600 gpd/ft^2 (USGS 78-3, 1978, Attachment A1). The average hydraulic gradient (i) in the aquifer, based on the figures in Appendix C, is 0.004 ft/ft. Ground water flow velocity is estimated to be 10 to 20 ft/day $(V = Ki/n)$ where the aquifer porosity (n) is assumed to be 0.25 to 0.35.

Due to the permeable nature of the valley soils, the shallow depth to ground water, the transmissive aquifer, and the highly developed valley, this aquifer is considered to be vulnerable to ground water contamination. Publicly available information presents documented cases of aquifer contamination having occurred at service stations adjacent to the SCC site and to the northeast of the site. In addition, the Rosen site, Pall Trinity Micro, and the Murray Center located in Cortland have impacted the aquifer ground water quality. A variety of other potential sources exist, some of which have been discussed in the referenced reports. These potential sources include landfills, industrial and commercial facilities, underground storage tanks, septic systems, road salting, fertilizers, pesticides, and leaking sewers.

A3.02 Field Investigation Techniques

A3.02.01 Drilling Methods

Twelve monitoring wells were installed at the SCC facility between October 2, 1986 and December 5, 1986 (Figure A2).

Three monitoring wells (MW-1, MW-2, MW-3) were installed at the request of NYSDEC and the Cortland County Health Department (Figure A2). Empire Soils Investigations of Groton, New York was subcontracted for the purpose of installing these monitoring wells. The wells were installed from October 2, 1986 to October 13, 1986 at locations specified by the NYSDEC to provide a single upgradient well and two downgradient wells. The location of monitoring well MW-1 was selected to evaluate the impact of the non-contact cooling water lagoon on the ground water.

The borings in which the monitoring wells were placed were advanced using an Acker 45 drill rig equipped to spin 4 in. temporary casing. Water from the SCC potable water supply was introduced into the borehole to displace cuttings and to cool drilling tools. Split spoon samples were collected at the discretion of the supervising hydrogeologist according to ASTM Method D-1586-67 for the purpose of soil classification only. The monitoring well design was agreed to by the NYSDEC prior to installation.

Five additional monitoring wells (MW-2D, MW-4S, MW-4D, MW-5S, MW-5D) were installed along the northern property boundary based on a verbal agreement with the Cortland County Health Department (Figure A2). A.W. Kincaid, Inc. of Canastota was subcontracted for the purpose of installing the additional wells. The location of the wells was selected to further evaluate the horizontal and vertical extent of ground water contamination initially identified in wells MW-1 and MW-2, and to evaluate ground water flow. The borings for the monitoring wells were advanced using a Ingersol Rand Titan 3 drill rig equipped with an Odex down the hole hammer. Samples of the drill cuttings were collected at five foot intervals. The Odex drilling method was selected to allow for more rapid effective drilling while avoiding the introduction of clean water into the aquifer. Such clean water could affect, by dilution, the collection of representative ground water samples.

From November 10, 1986 to December 5, 1986 four additional monitoring wells were installed in the backyard of the facility as part of the soil investigation. CATOH Environmental Co. of Weedsport, New York was subcontracted for the purpose of completing this work. Monitoring wells were installed in the soil sampling test boring for the purpose of evaluating the impact of the soil contamination on the ground water beneath the site.

All drilling equipment that came in contact with soil was decontaminated between each boring using a high pressure steam cleaner. The rinse water was allowed to drain onto the surface.

A3.02.02 Monitor Well Installation:

All of the monitoring wells that were installed on the SCC property were constructed using 2 inch I.D., 0.020 inch slot, schedule 40 PVC flush jointed screen threaded to 2 inch I.D., Schedule 40 PVC riser pipe. The screen was visually inspected by the supervising hydrogeologist and cleansed using a methyl alcohol wipe if necessary. The natural formation was allowed to collapse around the screen and 5-10 feet above the well screen. A minimum of 2 feet of bentonite seal was then placed down the borehole. The remaining annular space was then grouted using a cement-bentonite mix or volclay and/or formation collapse. A locking steel protective casing was cemented in place above each well. See Table A5 and Attachment A3 for individual well details.

All monitoring wells were subsequently surveyed by a licensed professional surveyor. Elevations were surveyed to the nearest 0.01 ft with respect to an elevation of 1190 feet msl at U.S.G.S well CT-22 (Figure A2).

A3.02.03 Well Development

All newly installed wells were developed following installation to clear the well screen of fine grained sediments and insure representative ground water samples. The first three monitor wells (MW-1, MW-2, MW-3) were developed by pumping. This involved the use a centrifugal pump attached to one inch diameter PVC tubing. A foot valve was placed at the bottom of the tubing and the tube was moved up and down along the well screen. All other monitor wells were developed using an oil free air compressor and one inch diameter PVC tubing. The PVC tube used for well development was decontaminated using a methyl alcohol wipe and clean water rinse. The tubing was attached to the compressor at one end and then extended to the bottom of the well. The tubing was then worked along the entire screen interval to insure its efficient development. All monitor wells were developed until sediment free water was obtained. Water that was removed during the development process was allowed to drain onto the ground surface.

A3.02.04 Ground Water Sampling Methods:

Sampling dates and laboratory results are summarized in Table A6. Ground water samples were collected by O'Brien & Gere Engineers on three occasions (Table A6). Samples were split with the NYSDEC representatives on two occasions as indicated on Table A6. All samples were collected in accordance with the protocols presented in Attachment A4. Subsequent to the O'Brien & Gere sampling efforts, regular sampling and analysis of these wells has been performed by Upstate Laboratories; their sampling protocols are also presented in Attachment A4. Chain of custody procedures were adhered to for all sampling. Samples have been collected at two week intervals since April 16,1987 on all property boundary wells. The interior wells located in the backyard are being sampled on a monthly basis. Chain of custody forms, well sampling logs and individual laboratory results are presented in Attachment A2.

A3.02.05 Gamma Ray Logging Methods

The subsurface stratigraphy of the SCC facility was further evaluated using a Johnson-Keck gr-81 natural gamma ray logging unit. Wells MW3, MW2D, MW4D and MW5D were logged. Natural gamma ray levels were recorded at two foot intervals from the bottom of the well. The gamma ray logs were correlated with the soil samples collected from each well. The gamma logs were then used to interpolate the lithology between soil samples. Specific information regarding the procedures used and gamma logs are presented in Attachment A5.

A3.02.06 Ground Water Elevation Monitoring

Ground water elevations were measured periodically throughout the field program and during all ground water sampling events. Table A5 summarizes ground water elevation data collected at the site.

A3.02.07 Aquifer Performance Test

A modified aquifer performance test was conducted at the site on December 19-20,1986. The purpose of the test was to determine aquifer coefficients and to evaluate the effects of the existing process wells on ground water flow on the SCC site.

Process well #1, which is located in the backyard of the site (Figure A2) was pumped at an average of 963 gallons/minute for a period of approximately 24 hours. Due to the large amounts of water being pumped it was not possible to discharge the water at a rate necessary to allow for continuous pumping, therefore the pumps cycled on and off.

Ground water measurements were collected throughout the test from existing observation wells immediately adjacent to process wells #1 and #2 and monitoring wells MW-2, MW-2D, MW-6, MW-7, MW-8, and MW-9 (Figure A2). Prior to the test, the process wells were not in use for approximately 12 hours to allow the ground water wells to reach equilibrium. An Enviro-Labs pressure transducer system (dl 120 mcp) was set up on the observation well adjacent to process well #1, the observation well located adjacent to process well #2 and monitor well MW-6. Data were collected at 1 minute intervals by the Enviro-Labs system for the majority of the test. The data collected were analyzed using conventional Theis, Jacob and distance drawdown methods for both recovery and pumping. All data collected from the pump test are presented in Attachment A6.

A previous pump test was conducted by Stewart Bros, Inc. Schenectady, New York at the site following the installation of the process wells in 1959 (Exhibit A3). The results of this test were made available to O'Brien & Gere subsequent to the above test. This previous test data were also evaluated as part of this aquifer analysis.

A3.03 Site Ground Water Hydrology

A3.03.01 Site Conditions

The on-site geologic conditions are typified by outwash sand and gravel deposits from the ground surface to a depth of approximately 100 feet (Figures A6 and A7). The bottom of the aquifer in the immediate vicinity of the backyard is comprised of a silt, clay, sand and gravel glacial till layer. This unit was encountered at an approximate depth of 102 ft (about 1115 ft MSL elevation) during the installation of process well #2. This same layer was encountered at a depth of about 86 ft, immediately south of the main building, in a test well installed by Steward Bros. in the late 1950's (Figure A6 and Exhibit A3). A fine silty sand was found at an elevation of about 1102 at monitoring well MW-5 which is located closer the center of the valley. In general the site hydrogeology is consistent with the regional hydrogeology (USGS 78-3, 1978, Attachment A1).

Ground water elevations have been collected over a period of 10 months (Table A5). The depths to ground water range from about 60 feet at MW-3 to 15 feet below the the ground surface at MW-1, and MW-5S. Much of this variation is due to the site topography. The ground water elevation data (Table A5 and Figure A7) shows ground water elevations have varied by as much as 10 feet during the period of monitoring. The principal direction of ground water flow is from the southwest to the northeast, similar to the regional ground water flow direction identified by the USGS (Figures A8, A9, A10 and A11). This direction of flow remained consistent during periods of high and low ground water conditions.

Based on the ground water elevation data, an average hydraulic gradient of approximately 0.004 ft/ft exists across the site for both the shallow monitoring wells and deep monitoring wells (Figure A8, A9, A10 and A11). The hydraulic gradient during high ground water elevations was 0.005 ft/ft while the low ground water gradient was 0.0026 ft/ft. The hydraulic impact of the process wells is evident in a steepening of the hydraulic gradient to the southwest of the wells and a flattening of the gradient to the northeast of the process wells. During the majority of the time of record a downward vertical flow potential of approximately 0.25 ft, was found at all nested pairs on site (Table A5). However, prior to the aquifer test when hydrogeologic conditions were approaching static conditions, no vertical flow potential existed between the shallow and deep wells at MW-2S, MW-2D. The downward vertical flow potential at the site is apparently due to the impacts of the process wells which are screened in the deeper portion of the aquifer. Water levels recorded from MW-2S, MW-2D, MW-6, MW-7 and MW-9 during the aquifer test (Attachment A6) indicate that wells screened in the deeper portion of the aquifer showed significantly more drawdown as compared to wells screened in the shallow aquifer. This discrepancy suggests that the vertical hydraulic conductivity of the aquifer is lower than the horizontal hydraulic conductivity. Due to the stratified nature of the outwash deposits, this difference in vertical and horizontal hydraulic conductivity is considered typical.

The results of the aquifer tests conducted on site indicate the following ranges of aquifer coefficients:

Transmissivity (T) is 280,000 - 400,000 gpd/ft

Hydraulic Conductivity (K) is 6,200 - 8,900 gpd/ft^2 (800 - 1,200 ft/day)

These values are consistent with the regional values of transmissivity and hydraulic conductivity (USGS 78-3, 1978, Attachment A1).

The above data can be used in conjunction with the average Hydraulic Gradient (i) of 0.004 ft/ft to calculate a range of velocity for the ground water using the following equation: $V=K\ i/n$. For the calculations, the porosity (n) is assumed to be 0.35. The calculated velocity of the ground water averages from approximately 9 to 14 feet/day.

The stagnation point of the process wells can be calculated using Todd's equation (Todd, 1980 Attachment A1). The stagnation point is defined as a point downgradient of a pumping well in which the direction of ground water flow is reversed as a result of the pumping well. The stagnation point is calculated using the following equation : x = Q/2 (3.1415) T i

where Q=925,000 gallons/day

T=280,000 - 400,000 gpd/ft

i= 0.003 ft/ft

Based on this range of transmissivity, the calculated stagnation point due to the process wells is between 120 feet and 175 feet. Based on the interpolation of ground water elevations and drawdowns documented during the recent aquifer test, the stagnation point is between 100 ft and 200 ft which corresponds with the above calculation. The process well affects ground water elevations over 1,000 ft. away as evidenced by the drawdown observed at wells MW-2S and MW-2D. Drawdown occurred between the stagnation point and well MW-2S and MW-2D and resulted in a reduced hydraulic gradient, however the drawdown at those wells was insufficient to reverse the direction of ground water flow.

A3.04 Ground Water Quality

Ground water quality samples have been collected from the site on 14 separate occasions between 10/15/86 and 7/25/87. Due to the order in which the wells were installed and the regular monitoring schedule that was established, as discussed in Section A3.02.04, not all wells have been sampled 14 times. Table A6 summarizes the results of the analytical data. Laboratory results are included in Attachment A2. Throughout the sampling program EPA analytical methods 601 & 602 have been used for analyses. Standard laboratory QA/QC procedures were followed. Cyanide was analyzed for all the perimeter wells during the December 3, 1986 sampling effort and a value of less than 0.05 ppm was measured at all well locations.

A3.04.01 Perimeter Wells

The perimeter wells include MW-1, MW-2S, MW-2D, MW-3, MW-4S, MW-4D, MW-5S, and MW-5D. MW-3 is located hydraulically upgradient of the SCC facility while the remaining perimeter wells are located hydraulically downgradient along the Lime Hollow Road property boundary (Figure A2). No detectable levels of volatile organics have been found at MW-3 throughout the sampling program except on April 30, 1987 when 3 ppb of chloroform was detected (Table A6). This is most likely due to laboratory contamination as all other wells sampled on April 30, 1987 were found to have detectable concentrations of chloroform. MW-2 and MW-2D have shown concentrations of trichloroethene (TCE) ranging from 9 ppb to 53 ppb. Well MW-2 has typically shown between 10-15 ppb while MW-2D has typically shown between 20-30 ppb (Table A6, Figures A12 and A13).

Monitoring well MW-1, which is located near the old lagoon, has shown a range of TCE from less than 1 to 71 ppb (Table A6 and Figure A2 and A14). During the period from 10/15/86 to 12/11/86 the well showed concentrations of TCE ranging from less than 1 ppb to 3 ppb. This period corresponded to the time when the lagoon was used for the discharge of non-contact cooling water. Low concentrations of chlorinated solvents were detected in the discharge to the Lagoon (Table A7). The levels of TCE measured in the discharge to the lagoon during this period were generally at or below the levels measured in the process wells therefore the TCE detected in the discharge to the lagoon are attributed to the TCE existing in the ground water being drawn into the process wells. During this period lagoon water was percolating into the ground and entering well MW-1 (Attachment A2). This was evidenced by elevated ground water temperature of the well MW-1 samples during this time period. This information indicates the MW-1 samples collected prior to January 1987 reflected some degree of mixing of lagoon water and the ground water flowing beneath the lagoon. In January, 1987 the lagoon was discontinued as a non-contact cooling water outlet and subsequent samples from MW-1 showed concentrations of TCE as high as 71 ppb and averaging around 50-70 ppb (Table A6). During the collection of these samples no elevated ground water temperatures were detected. This information indicates that since the cessation of the discharge of non-contact cooling water to the lagoon, the ground water quality data reflects the ambient ground water in the vicinity of the lagoon. Monitoring well MW-1 is susceptible to large variations in TCE concentrations (Table A6). A concentration of 2 ppb was detected on April 16, 1987 and 13 ppb was detected on June 25, 1987. These dates immediately followed periods of precipitation (Figure A-15). The runoff from the SCC building roof still drains to the lagoon. Periods of precipitation correlate with lower levels of TCE, suggesting that surface runoff to the lagoon is entering well MW-1. As a result, the samples reflect some degree of mixing of surface runoff with ground water flowing beneath the lagoon.

The monitoring well nests MW-4 and 4D and MW-5 and 5D were installed to better define the horizontal extent of contamination. (Figure A2). The concentrations of trichloroethene in monitoring wells MW-4 and 4D have ranged from less than 1 ppb to 2 ppb (Table A6). Monitoring wells MW-5 and 5D are located furthest west along Lime Hollow Road. Concentrations of TCE ranged from 2-13 ppb.

Throughout the sampling program only TCE was detected in the ground water samples except on April 30,1987 when chloroform, suspected to be a laboratory contaminant, was detected in all wells.

A3.04.02 Interior Wells

Four monitoring wells were installed in the backyard of the SCC facility in areas where visually stained soil existed at the ground surface (Figure A2). Three wells were screened in the upper portion of the aquifer (MW-6, MW-7, and MW-8), while MW-9 was set in the deeper portion of the aquifer.

The analytical results (Table A6 and Attachment A2) indicate that elevated levels of chlorinated solvents and benzene, toluene, xylene (BTX) exist in the shallow ground water. Monitoring well MW-7, which is located near the former underground tramp oil storage tank, showed concentrations ranging from 36 to 700 ppb of TCE. Monitoring wells MW-6 and MW-8, which were installed in the vicinity of the external storage areas, had concentrations of TCE ranging from 91 ppb to 410 ppb (Table A6). The concentrations of TCE at monitoring well MW-9, located adjacent to the location of the former tramp oil tank ranged from 4 to 8 ppb.

Concentrations of volatile halogenated organics in the backyard have declined during the summer of 1987. This decline has occurred at generally the same time ground water elevations have declined (Figures A16, A17 and A18).

Other organic constituents such as t-1,2 dichloroethylene, 1,1,1-trichloroethane, chloroform, tetrachloroethane, toluene, and xylene were detected in the shallow monitoring wells on several occasions (Table A6). T-1,2,dichloroethylene, 1,1,1,-trichloroethane, chloroform, and tetrachloroethane are considered impurities and/or biodegradation products of industrial quality trichloroethylene.

A3.04.03 Discussion

The hydrogeologic and ground water quality results suggest that the horizontal extent of the ground water contamination has been defined along the northern SCC property boundry. The low levels of TCE detected at MW-4 and MW-4D represent the eastern margin of the contamination. To the west the TCE concentrations at wells MW-5 and MW-5D are significantly lower than the TCE concentrations identified at wells MW-1, MW-2 and MW-2D. This suggests that the western margin of the contamination is in the vicinity of MW-5 and MW-5D. A general trend is present at the property boundary wells of slightly greater TCE concentrations in the deeper portion of the aquifer than in the shallow aquifer. This indicates that the contaminated ground water is not restricted to a thin zone in the shallow aquifer, but rather has dispersed vertically throughout the aquifer. This downward dispersion and the lower concentrations in the shallow aquifer may be the result of the downward flow potential due to the process wells as well as dilution effects in the shallow aquifer from precipitation.

In the material handling area the interior wells MW-6, MW-7, MW-8 and MW-9 and the process wells demonstrate that the ground water contamination is primarily in the shallow aquifer (Tables A6 and A7, Figures A16, A17 and A18). The low concentrations of contaminants in Well MW-9 and the process wells #1 and #2 (Table A6 and A7) located at the bottom of the aquifer (Figures A6 and A7) demonstrate that the source of the ground water contamination is in the shallow portion of the aquifer. This conclusion is supported by the vertical soil sampling which identified contaminated soil only in the shallow aquifer. Since the use of the process wells, which are only screened in the deep aquifer, induces a downward component of flow in the aquifer, contamination would be expected to migrate from the shallow to deep aquifer. The generally low contaminant levels in well MW-9 and the process wells probably reflect this downward migration of contaminants to the screened portion of the process wells.

Well MW-7 has generally shown the highest contaminant concentration of the interior wells. This ground water contamination at well MW-7 is probably correlated with the deep, 40-50 ft, soil contamination identified at the MW-7 and MW-9 locations. This conclusion is supported by the corresponding declines of ground water elevations and volatile organic concentrations during the summer of 1987 (Tables A5 and A6, Figures A16, A17 and A18). During periods of low ground water the contact between the deep soil contamination and the ground water is minimized. This would likely result in lower concentrations of volatile organics in the ground water. The chlorinated solvents detected at wells MW-6 and MW-8 may reflect ground water migration from the area of MW-7 toward the process wells.

Tables

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TABLE 1

History of Relevant Physical and Operational Charges at Smith Corona South Cortland Facility

Date	Event
5/58	Smith Corona receives title to 670 acres of farmland in Cortlandville.
9/58	Water main from Cortlandville Water District is extended to Smith Corona site.
10/58	Ground breaking takes place for Smith Corona's South Cortland Facility (the "Plant").
70/59 to 12/59	The Plant (170,000 sq. ft.) is completed. Operations at this time included: machining, blanking, secondary punch press, milling, etc. The only area paved was north of original building. No plating and cleaning operations were carried out.
10/59	First process well installed.
4/60	Plant is connected to Cortlandville Sewer District. Prior to this time liquid effluent was discharged to a temporary septic tank to east of original building at present sewer discharge line.
5/60	Plating and part cleaning operations begun. First use of chlorinated chemicals. TCE only chlorinated solvent used until 1986. These operations were connected to sewer.
7/60	Sub-assembly operations begun.
4/67	Major addition to the Plant completed. Addition is 170,000 sq. ft. and extends Plant to the east and south. There was no new use of chemicals between 4/60 and 4/67.
9/67	Expanded parking lot and all traffic areas are paved.
10/67	Plastic molding operations begun. Non-contact water from plastics machinery begins flowing to lagoon. Prior to this time the lagoon had been used only for stormwater.
5/70	Finished Product Warehouse (Plant #6) is completed, 500 feet to the South of main plant. No manufacturing or storage of chemicals was done in the warehouse.

11/71	Installed underground waste oil tank. Prior to this time waste oil was placed in barrels and sent off-site for disposal.
3/75	Major addition (75,000 sq. ft.) to main Plant is completed for the expansion of plastic operations. No new or increased use of chemicals accompanies this expansion.
7/75	Second process well completed.
12/79	Underground waste oil tank retired from use. Tank used for just over 8 years. Use of this tank was discontinued when the Plant began to switch to the use of water soluble oil with a resultant significant decrease in the volume of petroleum-based oils used. The tank was emptied by pumping at the time it was retired. Subsequent to this waste oil was collected in barrels and shipped off-site for disposal.
6/83	Typewriter distribution system is moved to Plant #6 from off-site location.
10/83	All product assembly is moved to Plant #6 from an off-site location.
1983 to 1985	All product manufacturing is "electronic" with a resulting significant decrease in the use of chemicals. As a part of this process change, metal fabrication processes at the Plant were reducted with a resulting significant reduction in the sue of chemicals.
6/85	All product assembly is moved from Plant #6 to main Plant. Plant #6 vacated with its only use being storage of some component parts.
7/85	Product distribution system is moved from off-site to south end of main plant. No chemicals were used in this system.
4/86	Product distribution system is moved from main plant to Plant #6.
9/86	Cortland County Health (CCHD) meets with representatives of the Smith Corona staff informing them of a TCE pollution problem in the South Cortland area. During this month there were a series of meetings relevant to the areas TCE ground water problem. 1) Original meeting SCC, CCH - 9/15 2) Meeting CCHD, DEC, SCC - 9/25 3) Site soil samples collected and split between DEC, SCC - 9/30
10/86	First set of monitoring wells installed, MW-1, MW-2, and MW-3.

10/20/86	All use of TCE stops at the Plant
10/24/86	Bulk storage tank for TCE is cleaned and dismantled.
11/86	Second set of monitoring wells (deep) and borings installed.
12/16-17/86	Waste oil and one #2 fuel oil tank removed.
12/21/86	Back yard area covered with 6 mil plastic
3/16-24/87	Soil removal done in back yard. Removed soil, which was not a hazardous waste, was sent to CECOS for disposal. Removal of a second (of two) underground #2 fuel oil tank also took place.
12/25/86	Cessation of discharge of non-contact cooling water to lagoon.

TABLE A2
SURFACE SOIL SAMPLES
11/04/86-11/05/86
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

	FIELD RESULTS (PPM)		LABORATORY RESULTS (UG/KG) WET WEIGHT					
SAMPLE NUMBER	HNU	DRAEGER TUBE (TCE)	TCE	T,1,2,DCE	1,1,1,TCA	CHLOROFORM	VINYL CHLORIDE	
1+00	<1	0	<10	<10	<10	<10	<10	
1+50	150	150	23,000	18,000	<1,000	<1,000	<1,000	fuel oil matrix
1+79	<1	0	-	-	-	-	-	
1+124	<1	0	<10	<10	<10	<10	<10	
1+151	<1	0	<10	<10	<10	<10	<10	
1+228	<1	0	-	-	-	-	-	
1+286	<1	0	-	-	-	-	-	
2+00	<1	0	<10	<10	<10	<10	<10	
2+41	300	60	19,000	3,800	<100	<100	<100	
2+82	<1	0	-	-	-	-	-	
2+124	<1	0	-	-	-	-	-	
2+201	<1	0	-	-	-	-	-	
2+266	<1	0	-	-	-	-	-	
3+00	<1	0	<10	<10	<10	<10	<10	
3+42	<1	0	-	-	-	-	-	
3+102	3	0	<1,000	<1000	<1000	<1000	<1,000	
3+146	<1	0	-	-	-	-	-	
4+00	<1	0	-	-	-	-	-	
4+27	300	250+	100,000	36,000	<1000	<1000	<1,000	
4+78	<1	0	-	-	-	-	-	
4+125	<1	0	-	-	-	-	-	
5+30	<1	0	-	-	-	-	-	
5+108	<1	0	<10	<10	<10	<10	<10	
6+17	<1	0	-	-	-	-	-	
6+50	1.6	2+	-	-	-	-	-	
6+78	1.4	2	-	-	-	-	-	
6+88	1.8	0	-	-	-	-	-	
6+108	<1	0	-	-	-	-	-	
6+115	<1	0	-	-	-	-	-	
6+163	<1	0	<10	<10	<10	<10	<10	
6+188	<1	0	<10	<10	<10	<10	<10	
7+00	<1	0	-	-	-	-	-	
7+53	50	100	-	-	-	-	-	
7+116	<1	0	-	-	-	-	-	
8+00	<1	0	<10	<10	<10	<10	<10	
8+46		0	66,000	<1,000	<1,000	<1,000	<1,000	
8+66	<1	0	-	-	-	-	-	
8+108	<1	0	-	-	-	-	-	
8+146	200	100	33,000	<1000	<1,000	<1,000	<1,000	
9+00	<1	0	-	-	-	-	-	
9+26	<1	0	-	-	-	-	-	
9+46	<1	0	<10	<10	<10	<10	<10	
10+00			-	-	-	-	-	
10+25	12	10	<1000	1,700	<1,000	<1,000	<1,000	fuel oil matrix
10+54	<1	0	-	-	-	-	-	
11+00	<1	0	-	-	-	-	-	
11+20	<1	1-2	11	<10	<10	<10	<10	
11+35	4	20	-	-	-	-	-	
11+75	<1	0	-	-	-	-	-	
11+100	<1	1	-	-	-	-	-	

ALL OTHERS BELOW DETECTION LIMITS

TABLE A2 (continued)
MISCELLANOUS SURFACE SOIL SAMPLES
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

SAMPLE NUMBER	TCE	T,1,2,,DCE	1,1,1,TCA	CHLOROFORM	VINYL CHLORIDE	XYLENE	ETHYLBENZENE
COLLECTED 9/30/86							
#1	280	<100	<100	<100	<100	<100	<100
#2	65,000	8,500	<100	<100	<100	1,700	750
#3	<100	<100	<100	<100	<100	10,000	<100
#4	2,900	27,000	<100	<1000	2,100	3,500	1,200
#5	160	2,900	1,600	<1000	<1000	8,400	**
#6	<100	<100	<100	<100	<100	210	170
#7	<100	<100	<100	<100	<100	330	350
COLLECTED 10/30/86							
OPP COMPRESSOR RM. A	<100	<100	<100	<100	<100	<1000	<1000
OPP COMPRESSOR RM. B	<100	<100	<100	<100	<100	<1000	<1000
NEAR WASTE BIN C	<100	<100	<100	<100	<100	<1000	<1000
NEAR BELOW GROUND TANK D	<100	<100	<100	<100	<100	<1000	<1000
TCE TANK E	1,300	2,600	<100	<100	<100	4,600	<1000
DRY WELL SED F	<100	<100	<100	<100	<100	<1000	<1000
TRIP BLANK	<1	<1	<1	<1	<1	<1	<1
COLLECTED 11/19/86							
DRY WELL	18,000	10,000	<100	<100	<100	<100	<100

NOTE: ANALYTICAL RESULTS ARE PPB
** UNABLE TO QUANTIFY DUE TO PRESENCE OF FUEL OIL
ALL OTHERS BELOW DETECTION LIMITS

TABLE A3
SURFACE SOILS: PRIORITY POLLUTANTS
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

METALS 7000 series		Sample Location		
		10+25	8+146	1+50
ANTIMONY	(ppm)	30	30	30
ARSENIC		7.4	4.6	5.3
BERYLLIUM		<1	<1	<1
CADMIUM		<1	5.9	<1
CHROMIUM		11	35	15
COPPER		29	930	46
LEAD		62	240	55
MERCURY		<09	0.2	0.04
NICKLE		50	490	74
SELENIUM		<.1	<.1	<.1
SILVER		2	2	2
THALLIUM		21	14	23
ZINC		84	1030	130

EPA Method 9010

CYANIDE	(ppm)	<2	3.6	<2
PHENOL		1.6	4.8	<.05
PERCENT TOTAL SOLIDS		95.3	93	95.4

EPA Method 8010 & 8020 (modified)

t-1,2-dichloroethene	(ppb)	18,000	<1,000	1,700
trichloroethene		23,000	660,000	<1,000
tetrachloroethene		1,400	<1,000	<1,000

EPA Method 8250

Bis(2-ethylhexyl)pthalate	(ppb)	9,010	23,400	<10,000

Note: All other parameters were less then detection limits.

TABLE A4
SUBSURFACE SOIL SAMPLES
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

Subsurface Soil Samples: Field Screening Results

Boring Number	Depth (ft)	Hnu (ppm)	Tce Draeger Tube (ppm)
B-6	0-2'	<1	0
	2-4'	<1	0
	4-6'	<1	0
	6-8'	<1	0
B-7	0-2'	5	2
	2-4'	4	10
	4-6'	1.2	2
	6-8'	-	0
	8-10'	-	0
	17-19'	600	0
	47-49'	1200	2
	61-63'	<1	0
	63-65'	<1	0
B-8	0-2'	20	100
	2-4'	28	60
	4-6'	<1	3
	6-8'	<1	0
	9-11'	<1	0
	17-19'	<1	0
	27-29'	<1	0
	37-39'	<1	0
B-9	0-2'	5	5
	2-4'	1.6	2
	4-6'	1	3
	8-10'	<1	+
	17-19'	<1	0
B-9 con't	27-29'	<1	5
	40.5'	22	2
	47-49'	22	3
	57-59'	<1	+
	67-69'	<1	0
	77-79'	<1	0
	87-89'	<1	0
	97-99'	<1	0
B-10	0-2'	<1	0
	4-6'	<1	0
	6-8'	<1	0
	8-10'	<1	0
	17-19'	<1	0
	27-29'	<1	0
	40.5'	<1	0
	47-49'	<1	0

Subsurface Soil Samples: Analytical Results

	B-6 4'-6'	B-6 8'-10'	B-7 2'-4'	B-7 8'-10'	B-7 47'-49'	B-7 61'-63'	B-8 0'-2'	B-8 6'-8'	B-8 37'-39'	B-9 0'-2'	B-9 8'-10'	B-9 40.5'	B-9 47'-49'	B-10 0-2'	B-10 4-6'	B-10 47-49'
FIELD SCREENING																
Draeger tube (tce)	0	0	2	0	1200	0	100	0	0	5	+	40	20	0	0	0
Hnu	<1	<1	5	-	2	<1	20	<1	<1	5	<1	22	22	<1	<1	<1
ANALYTICAL DATA																
t-1,2-Dichloroethene	<10	<10	35	<10	1000	66	810	<10	<10	800	160	70	1700	<10	<10	87
Trichloroethene	6	8	1000	150	<100	28	7900	20	140	430	98	4600	600	<10	<10	330
Tetrachloroethene	<10	<10	<10	<10	<100	<100	420	<10	<10	<10	<10	16	<100	<10	<10	<10
Toluene	<10	<10	<10	<10	<100	<100	<100	<10	<10	<10	<10	50	<100	<10	<10	<10
Ethylbenzene	<10	<10	<10	<10	<100	<100	<100	<10	<10	<10	<10	19	<100	<10	<10	<10
Xylenes	<10	<10	<10	<10	<100	<100	<100	<10	<10	<10	<10	71	<100	<10	<10	<10

Note: Analytical results in ug/kg wet weight ppb

TABLE A5
WELL SUMMARY AND GROUND WATER ELEVATION TABLE
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

WELL NUMBER	TOP OF CASING ELEVATION (FT)	TOP OF PVC ELEVATION (FT)	GROUND ELEVATION (FT)	SCREENED ELEVATION (FT)	AQUIFER MATERIAL SCREENED (FT)	GROUNDWATER ELEVATIONS (FT) 10/15/86	11/7/86	11/12/86	11/14/86	12/3/86	12/5/86
MW-1	1189.70	1189.36	1187.0	1143.4 - 1173.4	SAND & GRAVEL	1165.05	1164.35	1164.97	1165.05	1167.58	1167.8
MW-2S	1214.97	1214.59	1213.1	1144.0 - 1144.0	SAND & GRAVEL	1164.62	1164.15	1164.84	1164.91	1167.58	1167.9
MW-2D	1215.61	1215.17	1213.1	1111.6 - 1131.6	SAND & GRAVEL	---	---	---	---	1167.31	1167.65
MW-3	1231.73	1231.58	1229.1	1148.3 - 1178.3	SAND & GRAVEL	1169.78	1169.37	1169.61	1169.67	1171.99	1172.43
MW-4S	1214.04	1213.39	1212.0	1139.6 - 1159.6	SAND & GRAVEL	---	---	---	---	1167.97	1168.31
MW-4D	1214.63	1214.23	1212.1	1110.2 - 1130.2	SAND & GRAVEL	---	---	---	---	1167.72	1168.11
MW-5S	1182.38	1182.07	1180.0	1142.7 - 1162.7	SAND & GRAVEL	---	---	---	---	1166.53	1167.78
MW-5D	1182.68	1182.49	1180.0	1110.8 - 1130.8	SAND & GRAVEL	---	---	---	---	1166.28	1167.49
MW-6	1216.76	1215.87	1215.0	1158.6 - 1168.6	SAND & GRAVEL	---	---	---	---	---	---
MW-7	1217.67	1217.15	1215.5	1158.4 - 1168.4	SAND & GRAVEL	---	---	---	---	---	---
MW-8	1216.97	1216.42	1215.3	1155.0 - 1165.0	SAND & GRAVEL	---	---	---	---	---	---
MW-9	1217.21	1217.56	1215.1	1117.1 - 1137.1	SAND & GRAVEL	---	---	---	---	---	---

Note: All elevations from assumed datum of 1190 ft at U.S.G.S. well ct-22

TABLE A5 (continued)
WELL SUMMARY AND GROUND WATER ELEVATION TABLE
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

WELL NUMBER	12/9/86	12/10/86	12/11/86	12/19/86	static 12/22/86	12/23/86	3/12/87	4/2/87	4/16/87	4/30/87	5/14/87	5/28/87	6/11/87	6/25/87	7/9/87	7/23/87	8/6/87	8/20/87
MW-1	1168.08	---	1168.15	(1173.60)	---	1167.72	1168.26	1169.26	1172.36	1171.07	1169.56	1168.37	1166.81	1166.11	1165.07	1164.14	1163.18	
MW-2S	1168.17	---	1168.24	1168.40	1167.67	1167.72	1168.54	1168.28	1171.54	1171.41	1170.06	1168.49	1167.23	1165.96	1170.05	1164.31	1163.13	1161.77
MW-2D	1167.91	---	1168.02	1168.21	1167.67	1167.46	1173.17	1170.02	1170.87	1170.8	1169.63	1168.26	1167.02	1166.12	1165.04	1163.96	1163.04	1161.25
MW-3	1173.34	---	1173.71	1173.76	---	1173.83	1174.48	1177.58	1182.28	1181.56	1179.19	1176.73	1174.47	1172.38	1171.18	1169.53	1168.58	1167.28
MW-4S	1168.52	---	1168.61	1168.75	---	1168.04	1167.74	1169.69	1172.89	1171.85	1170.27	1168.59	1167.48	1166.44	1165.21	1164.47	1163.38	1162.26
MW-4D	1168.25	---	1168.33	1168.42	---	1167.72	1168.53	1169.33	1172.18	1171.33	1169.51	1169.38	1167.05	1165.86	1165.22	1164.06	1163.07	1162.09
MW-5S	1168.08	---	1168.18	1168.46	---	1167.83	1168.07	1163.02	1171.67	1171.37	1170.16	1168.72	1167.49	1166.27	1165.41	1164.65	1163.36	1162.17
MW-5D	1167.92	---	1167.82	1167.98	---	1167.44	1167.89	1168.44	1171.29	1170.84	1169.49	1168.09	1167.12	1166.06	1165.35	1165.06	1163.16	1162.01
MW-6	---	1168.97	1168.87	1168.81	1169.46	1168.7	1168.62	---	1173.77	1173.07	1172.15	1170.29	1169.02	1167.37	1166.42	1165.87	1164.25	1163.51
MW-7	---	1168.94	1169	1168.90	1169.08	1168.6	1169.15	---	1173.3	1173.05	1171.5	1169.78	1168.4	1157.34	1166.13	1165.56	1164.11	
MW-8	---	1168.83	1168.9	1168.84	1169.54	1168.75	1169.22	---	1168.92	1173.42	1172.36	1170.2	1169.28	1167.42	1166.62	1161.42	1164.51	1161.89
MW-9	---	1168.59	1168.85	1168.51	1168.90	1168	1170.16	---	1173.96	1173.31	1172.51	1170.65	1169.61	1167.14	1162.56	1166.19	1165.01	1163.36

Note: All elevations from assumed datum of 1190 ft at U.S.G.S. well ct-22

TABLE A6
WATER QUALITY TABLE: MONITORING WELLS
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

	4^	5	5	5	5	4^	4	5	5	5	5	5	5	5	5	5	5
	10/15	10/31	11/7	11/20	11/26	12/3	12/11	3/12	4/16	4/30	5/14	5/28	6/11	6/25	7/9	7/23	8/6
MW-1																	
Trichloroethene	2	3	3	2	1	<1	1	64	2	71	54	71	64	13	45	65	62
T-1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<5	<5
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	TRACE	<5	<5	<1	3	<1	<5	<5
Chloroform	<1	15	<1	<1	<5	<1	<1	<1	<1	2	<5	<5	<10	<10	<5	<10	<25
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1	9	<5	<5	<1	<1	<1	<5	<5
MW-2S																	
Trichloroethene	17	37	—	53	43	14	14	14	9	24	15	9	16	12	12	21	20
T-1,2-Dichloroethene	3	<1	—	<1	<1	3	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	—	<1	<1	<1	<1	<1	<1	TRACE	<1	<1	<1	<1	3	<1	<1
Chloroform	<1	<1	—	<1	<5	1	<1	<1	<1	1	<1	<5	<10	<10	<5	<5	<5
1,1-Dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1	8	<1	<1	<1	<1	<1	<1	<1
MW-2D																	
Trichloroethene	—	—	—	—	—	20	24	24	16	20	24	23	28	28	28	31	38
T-1,2-Dichloroethene	—	—	—	—	—	7	9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	—	—	—	—	<1	<1	<1	<1	1	<1	<1	<1	<1	1	<1	<1
Chloroform	—	—	—	—	—	<1	<1	<1	<1	3	<1	<5	<10	<10	<5	<5	<5
1,1-Dichloroethene	—	—	—	—	—	<1	<1	<1	<1	TRACE	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	—	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2
MW-3																	
Trichloroethene	<1	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	TRACE	<1	<1	<1	<1
T-1,2-Dichloroethene	<1	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	—	—	—	—	<1	<1	<1	<1	3	<1	<5	<10	<10	<5	<5	<5
MW-4S																	
Trichloroethene	—	—	—	—	—	<1 <1	<.7	2	TRACE	1	<1	TRACE	1	TRACE	2	<1	<1
T-1,2-Dichloroethene	—	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	—	—	—	—	—	<1	<1	<1	<1	2	<1	<5	<10	<10	<5	<5	<5
MW-4D																	
Trichloroethene	—	—	—	—	—	<1 <1	<.9	1	TRACE	TRACE	<1	1	1	2	2	1	TRACE
T-1,2-Dichloroethene	—	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	—	—	—	—	<1	<1	<1	TRACE	1	<1	<1	<1	<1	<1	<1	<1
Chloroform	—	—	—	—	—	<1	<1	<1	4	2	<1	<5	<10	<10	<5	<5	<5

4 - Analysis by OBG Laboratories Inc.
5 - Analysis by Upstate Laboratories, Inc
^ Sample split with NYSDEC
Analytical Results in PPB
Analyzed using EPA methods 601 & 602
All other parameters below detection limits

TABLE A6 (continued)
WATER QUALITY TABLE: MONITORING WELLS
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

	4^ 10/15	5 10/31	5 11/7	5 11/20	5 11/26	4^ 12/3	4 12/11	5 3/12	5 4/16	5 4/30	5 5/14	5 5/28	5 6/11	5 6/25	5 7/9	5 7/23	5 8/6
MW-5S																	
Trichloroethene	—	—	—	—	—	8	9	4	3	10	4	2	2	2	4	4	6
T-1,2-Dichloroethene	—	—	—	—	—	2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	—	—	—	—	<1	<1	<1	TRACE	2	<1	<1	<1	<1	<1	<1	<1
Chloroform	—	—	—	—	—	<1	<1	<1	<1	4	<5	<5	<10	<10	<5	<5	<5
MW-5D																	
Trichloroethene	—	—	—	—	—	2	9	8	6	11	7	13	6	6	6	4	5
T-1,2-Dichloroethene	—	—	—	—	—	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	—	—	—	—	<1	<1	<1	<1	TRACE	<1	<1	<1	<1	<1	<1	<1
Chloroform	—	—	—	—	—	<1	<1	<1	<1	2	<1	<5	<10	<1	<5	<5	<5
MW-6																	
Trichloroethene	—	—	—	—	—	—	240	270	190	—	120	—	200	—	64	—	28
T-1,2-Dichloroethene	—	—	—	—	—	—	6	<1	<10	—	<5	—	<5	—	<1	—	<10
1,1,1-Trichloroethane	—	—	—	—	—	—	8	2	<10	—	<5	—	<5	—	<1	—	<10
Chloroform	—	—	—	—	—	—	3	2	<10	—	<5	—	<50	—	<5	—	<10
Tetrachloroethene	—	—	—	—	—	—	1	<1	<10	—	<5	—	<5	—	<1	—	TRACE
Toluene	—	—	—	—	—	—	1	<1	<10	—	<5	—	<5	—	<1	—	<10
Xylene	—	—	—	—	—	—	1	—	<10	—	<5	—	<5	—	<1	—	<10
MW-7																	
Trichloroethene	—	—	—	—	—	—	36	290	610/600	—	700	—	3*	—	100	—	65
T-1,2-Dichloroethene	—	—	—	—	—	—	1200	<1	23/20	—	<100	—	<1	—	<10	—	<10
1,1,1-Trichloroethane	—	—	—	—	—	—	<10	28	22/28	—	<100	—	<1	—	<10	—	<10
Chloroform	—	—	—	—	—	—	<100	16	<10	—	<100	—	<10	—	<20	—	<10
Xylene	—	—	—	—	—	—	21	<1	<10	—	<100	—	<1	—	<10	—	<10
MW-8																	
Trichloroethene	—	—	—	—	—	—	410	220	93	—	91	—	210	—	65	—	26
T-1,2-Dichloroethene	—	—	—	—	—	—	30	<1	<10	—	<20	—	<5	—	<10	—	<10
1,1,1-Trichloroethane	—	—	—	—	—	—	34	8	TRACE	—	<20	—	<5	—	<10	—	<10
Chloroform	—	—	—	—	—	—	29	10	<10	—	<20	—	<50	—	<5	—	<10
MW-9																	
Trichloroethene	—	—	—	—	—	—	6	4	8	—	5	—	150*	—	6	—	5
T-1,2-Dichloroethene	—	—	—	—	—	—	<1	<1	<1	—	<1	—	<5	—	<1	—	<1
1,1,1-Trichloroethane	—	—	—	—	—	—	<1	<1	<1	—	<1	—	<5	—	<1	—	<1
Chloroform	—	—	—	—	—	—	<1	<1	<1	—	<1	—	<50	—	<5	—	<1

4 - Analysis by OBG Laboratories Inc.
5 - Analysis by Upstate Laboratories, Inc
^ Sample split with NYSDEC
* Wells probably switched
Analytical Results in PPB
Analyzed using EPA methods 601 & 602
All other parameters below detection limits

TABLE A7
WATER QUALITY TABLE: PROCESS WELLS & FACILITY DISCHARGE
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

	5 2/5	5 2/12	5 3/13	5 4/16	5 4/23	5 4/30	5 5/7	5 5/14	5 6/4	5 6/11	5 6/18	5 6/25	5 7/2	5 8/6	5 8/13
Process Well #1															
Trichloroethene	2	5	4	4	2	1	2	5	3	5	4	4	2	2	2
T-1,2-Dichloroethene	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1
1,1,1-Trichloroethane	(1	(1	(1	(1	(1	(1	1	(1	(1	(1	1	(1	(1	TRACE	(1
Chloroform	(1	(10	(1	(1	(5	(1	(5	(10	(5	(10	(5	(10	(1	(5	(1
Process Well #2															
Trichloroethene	(1	TRACE	(1	(1	(1	(1	2	TRACE	(1	(1	(1	TRACE	TRACE	(1	(1
T-1,2-Dichloroethene	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1
1,1,1-Trichloroethane	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	1	(1	(1	(1	(1
Chloroform	(1	(10	(1	(1	(5	3	(5	(10	(5	(10	(5	(10	(1	(5	(1
Sewer Discharge															
Trichloroethene	4	6	4	2	—	2	2	2	TRACE	1	1	3	2	2	2
T-1,2-Dichloroethene	(1	(1	(1	(1	—	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1
1,1,1-Trichloroethane	(1	(1	(1	(1	—	1	1	(1	(1	(1	(1	(1	(1	(1	(1
Chloroform	(1	(10	(1	(1	—	(1	(5	(10	(5	(10	(5	(10	(1	(5	(1
Manhole to Lagoon															
Trichloroethene	1	1	(1	1	TRACE	(1	(1	TRACE	TRACE	—	—	—	—	—	—
T-1,2-Dichloroethene	(1	(1	(1	(1	(1	(1	(1	(1	(1	—	—	—	—	—	—
1,1,1-Trichloroethane	(1	(1	(1	(1	2	2	(1	(1	(1	—	—	—	—	—	—
Chloroform	(1	(10	(1	(1	(5	(1	(5	(10	(5	—	—	—	—	—	—
Bromodichloromethane	(1	(1	(1	(1	(1	(1	(1	(1	8	—	—	—	—	—	—
Lagoon Water															
Trichloroethene	(1	TRACE	—	(1	(1	(1	(1	—	—	—	—	—	—	—	—
T-1,2-Dichloroethene	(1	(1	—	(1	(1	(1	(1	—	—	—	—	—	—	—	—
1,1,1-Trichloroethane	(1	(1	—	(1	(1	(1	(1	—	—	—	—	—	—	—	—
Chloroform	(1	(1	—	(1	(5	(1	(5	—	—	—	—	—	—	—	—
Outfall from Lagoon															
Trichloroethene	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
T-1,2-Dichloroethene	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,1,1-Trichloroethane	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chloroform	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

1 - Analysis by New York State Department of Health
2 - Analysis by New York State Department of Environmental Conservation
3 - Analysis by Cortland County Health Department
4 - Analysis by OBG Laboratories, Inc.
5 - Analysis by Upstate Laboratories, Inc.
Analytical results in ppb
All others below detection limits
Analyzed using EPA method 601 & 602

TABLE A7 (continued)
WATER QUALITY TABLE: PROCESS WELLS & FACILITY DISCHARGE
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

	1	2	3	3	4	5	5	5	5	5	5	5	5	5	5	5	5	5
	9/15	9/19	9/23	9/24	10/15	10/23	10/30	10/31	11/7	11/20	11/26	12/4	12/11	12/24	1/2	1/15	1/22	1/29
Process Well #1																		
Trichloroethene	—	—	7	4	—	13	19	—	5	11	4	3	5	6	4	5	5	6
T-1,2-Dichloroethene	—	—	<1	<1	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	—	<1	<1	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	—	—	<1	<1	—	<1	<1	—	<1	<1	<5	<5	<1	<1	<1	<5	<1	<1
Process Well #2																		
Trichloroethene	2	—	—	—	—	6	8	—	5	7	3	3	4	<1	<1	TRACE	TRACE	TRACE
T-1,2-Dichloroethene	<1	—	—	—	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	—	—	—	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	TRACE	<1	<1
Chloroform	<1	—	—	—	—	<1	<1	—	<1	<1	<5	<5	<1	<1	<1	<5	<1	<1
Sewer Discharge																		
Trichloroethene	—	—	—	—	—	18	28	—	25	8	2	3	4	6	TRACE	4	6	7
T-1,2-Dichloroethene	—	—	—	—	—	<1	8	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	—	—	—	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	TRACE	<1	<1
Chloroform	—	—	—	—	—	<1	8	—	<1	<1	<5	<5	<1	<1	<1	<5	<1	<1
Manhole to Lagoon																		
Trichloroethene	45	—	—	—	—	13	5	—	4	3	2	2	3	2	TRACE	4	6	1
T-1,2-Dichloroethene	<1	—	—	—	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	—	—	—	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	—	—	—	—	<1	<1	—	<1	<1	<5	<5	<1	<1	<1	<5	<1	<1
Bromodichloromethane	<1	—	—	—	—	<1	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lagoon Water																		
Trichloroethene	—	5	—	—	—	—	3	1	<1	1	<1	<1	TRACE	TRACE	<1	1	1	1
T-1,2-Dichloroethene	—	<1	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	<1	—	—	—	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	—	<1	—	—	—	—	<1	<1	<1	<1	<5	<5	<1	<1	<1	<5	<1	<1
Outfall from Lagoon																		
Trichloroethene	—	22	—	—	—	—	4	—	3	4	<1	<1	TRACE	<1	<1	TRACE	TRACE	<1
T-1,2-Dichloroethene	—	<1	—	—	—	—	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	—	<1	—	—	—	—	<1	—	<1	<1	<1	<1	<1	<1	<1	<1	TRACE	<1
Chloroform	—	<1	—	—	—	—	<1	—	<1	<1	<5	<5	<1	<1	<1	<5	<1	<1

1 - Analysis by New York State Department of Health
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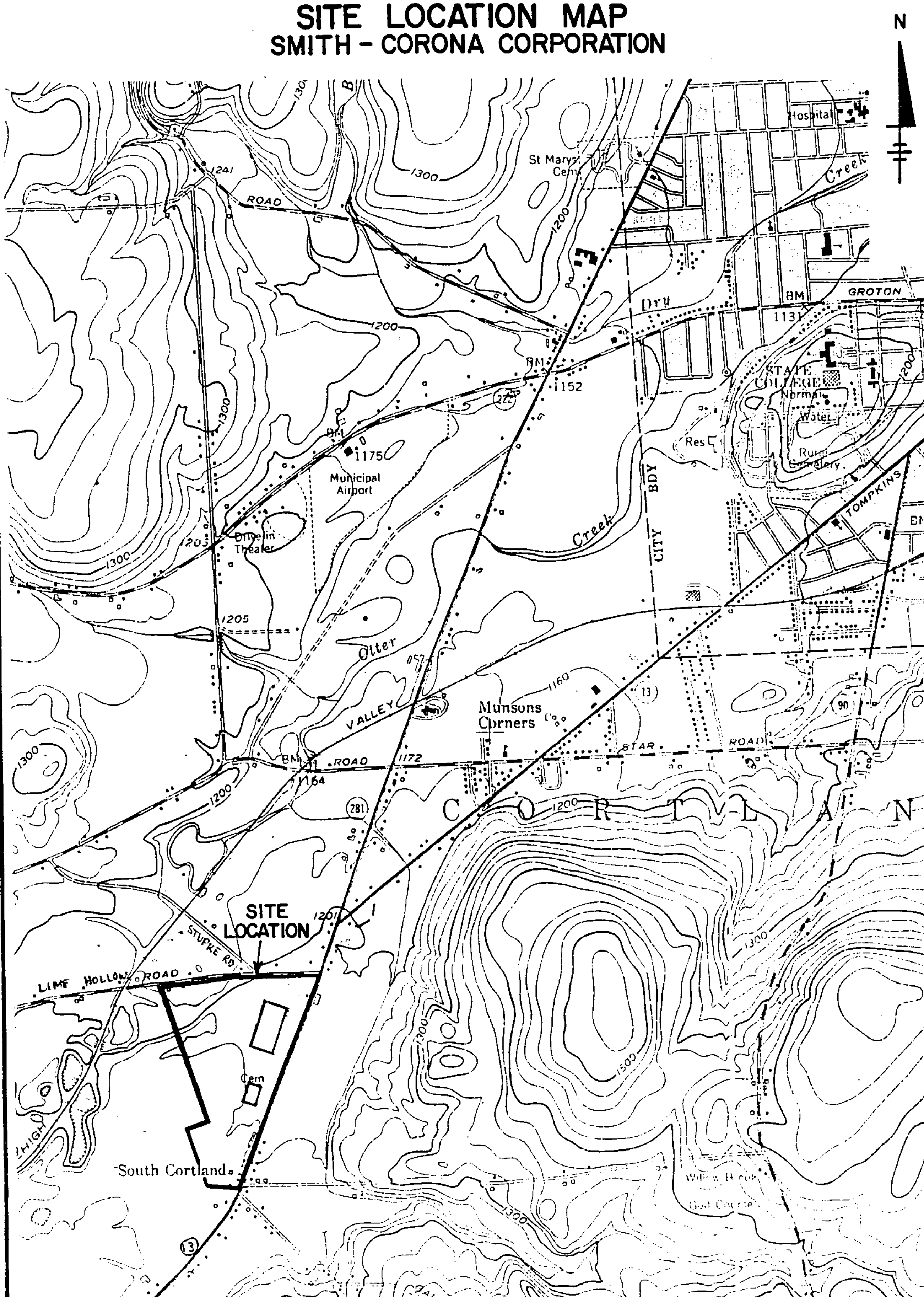
5 - Analysis by Upstate Laboratories, Inc.
Analytical results in ppb
All others below detection limits
Analyzed using EPA method 601 & 602

Figures

O'BRIEN & GERE

SITE LOCATION MAP
SMITH - CORONA CORPORATION



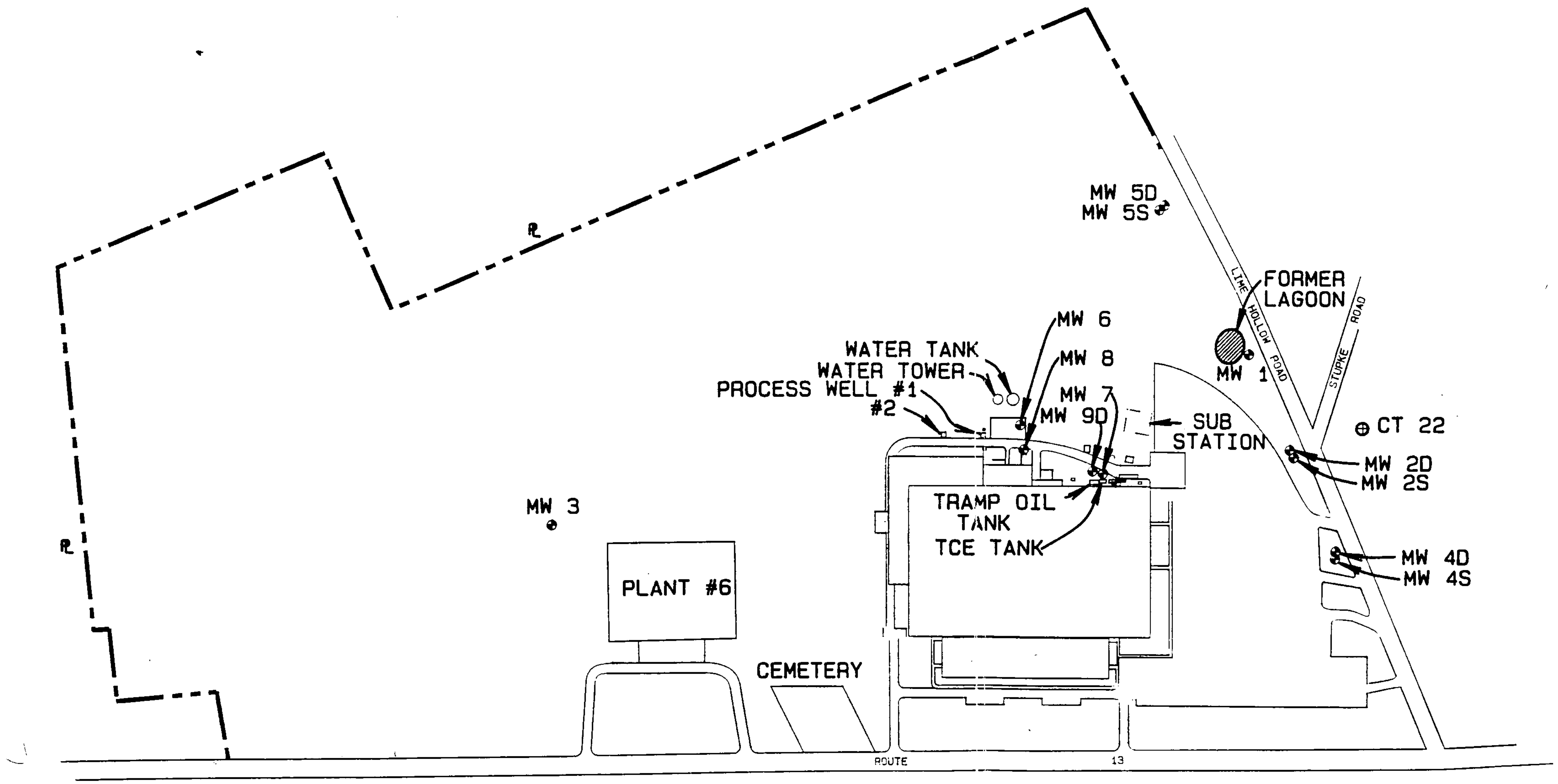
Adapted from U.S.G.S. Map, Cortland Quadrangle

O'BRIEN & GERE
ENGINEERS, INC.

FIGURE A2

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

SITE PLAN



LEGEND

⊕ USGS OBSERVATION WELL

MONITORING WELLS

PROPERTY LINE

0 400 800

SCALE IN FEET

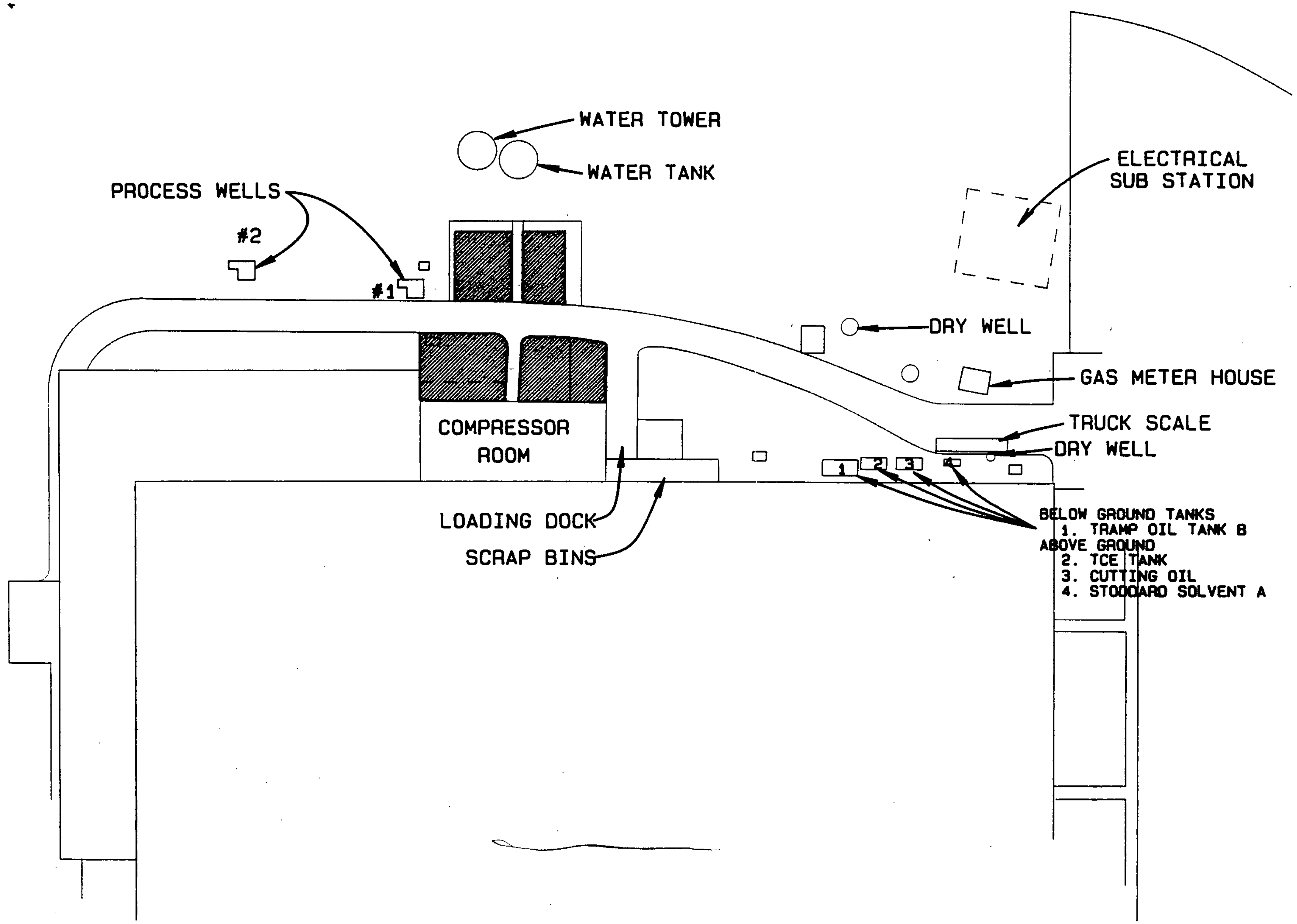
O'BRIEN & GERE ENGINEERS, INC.

S-C0016 R42 L1

FIGURE A3

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

SITE USE MAP



LEGEND

MATERIAL HANDLING AREAS

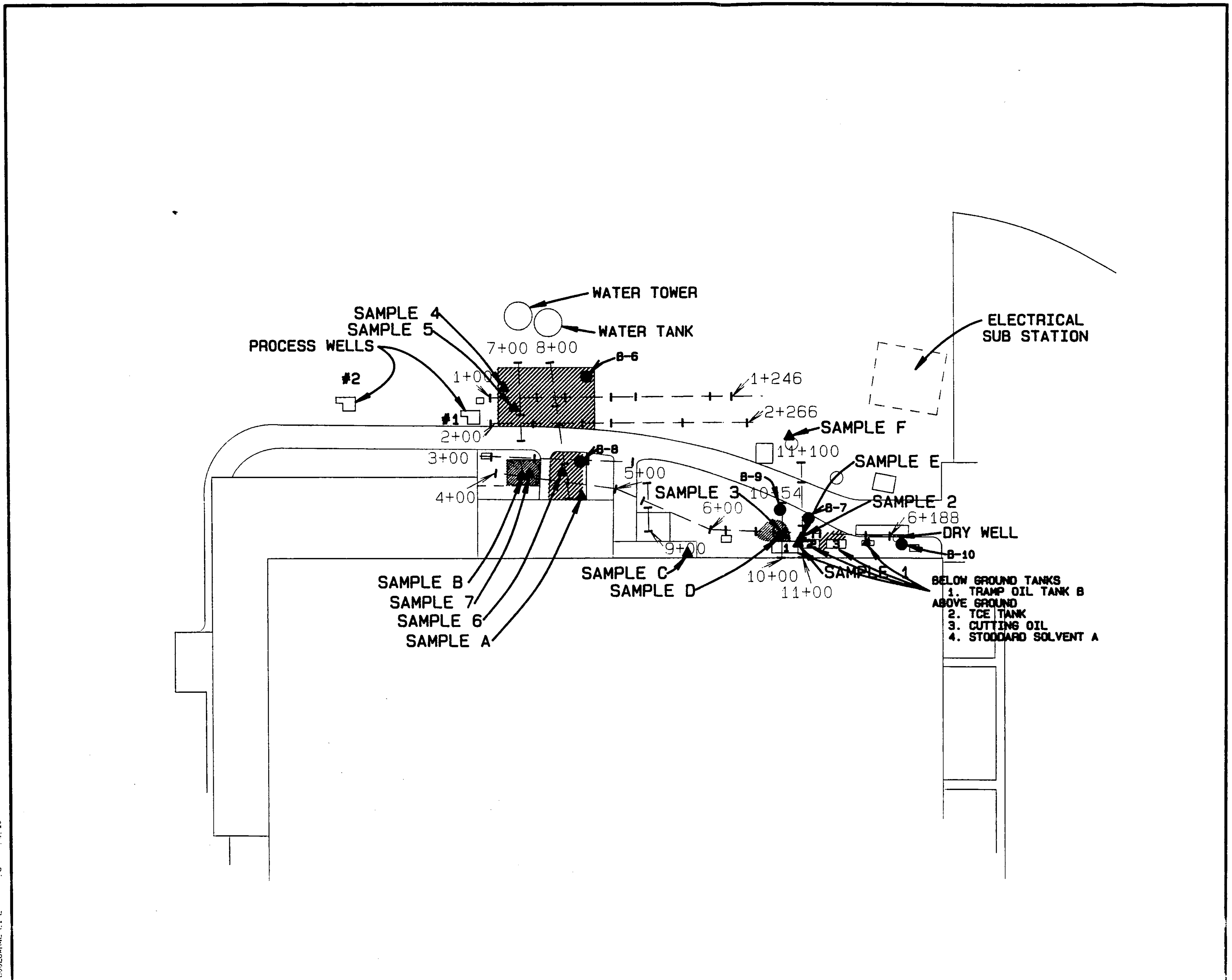
0 100 200
SCALE IN FEET

O'BRIEN & GERE ENGINEERS, INC.

FIGURE A4

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

SOIL SAMPLING LOCATION MAP



AREAS OF VISUAL SOIL STAINING

SOIL SAMPLE TRAVERSE AND SAMPLE LOCATION

MISCELLANEOUS SOIL SAMPLES

0 100 200
SCALE IN FEET

O'BRIEN & GERE ENGINEERS, INC.

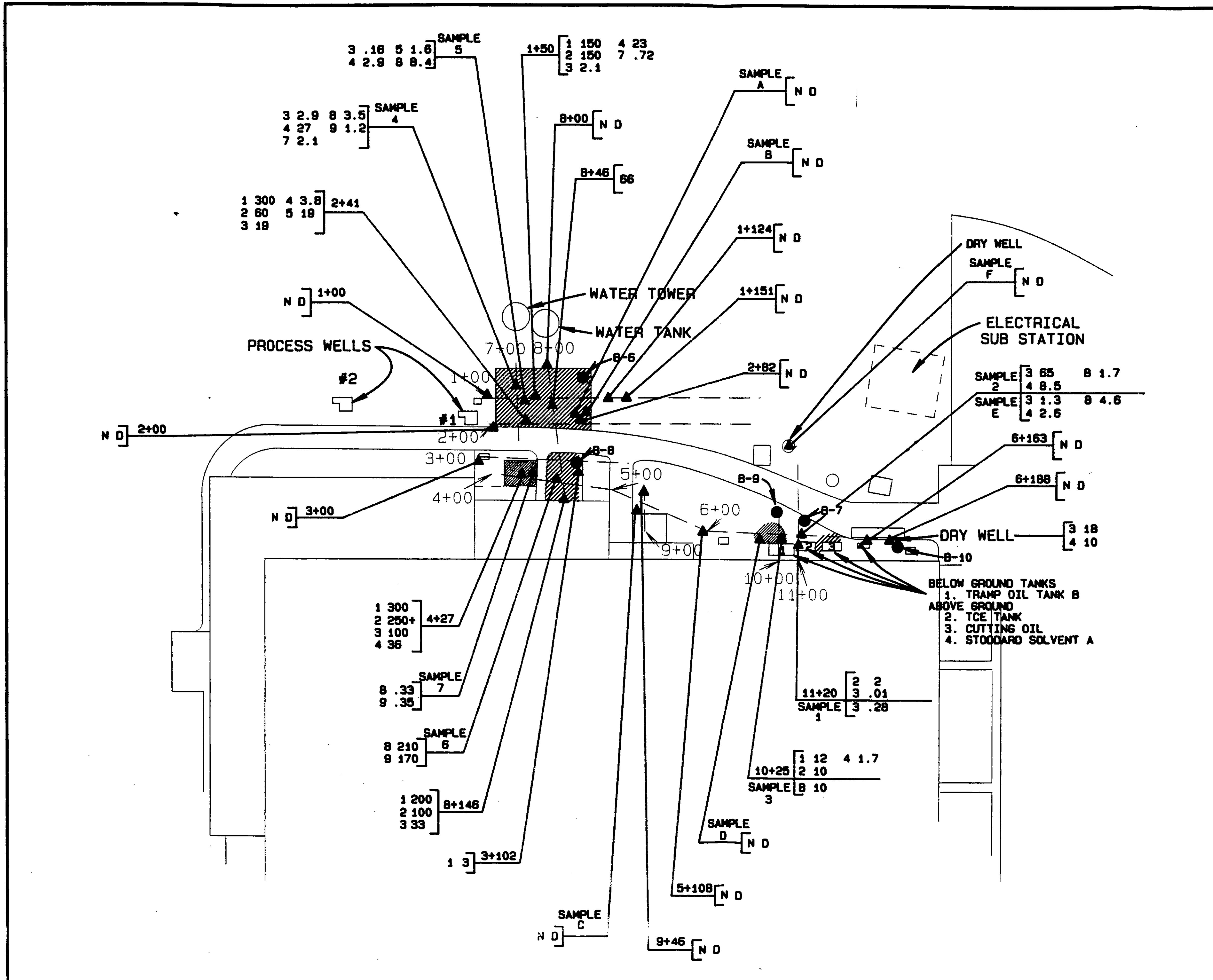


FIGURE A5

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

SURFACE SOIL SURVEY ANALYTICAL RESULTS

LEGEND

- ▲ LABORATORY SAMPLE
- 1 HNU (PPM)
- 2 DRAGER TUBE TCE (PPM)
- 3 TCE (MG/KG)
- 4 T, 1, 2, DCE (MG/KG)
- 5 1, 1, 1, TCA (MG/KG)
- 6 CHLOROFORM (MG/KG)
- 7 VINYL CHLORIDE (MG/KG)
- 8 XYLENE (MG/KG)
- 9 ETHYLBENZENE (MG/KG)
- AREAS OF VISUAL SOIL STAINING
- ● TEST BORING

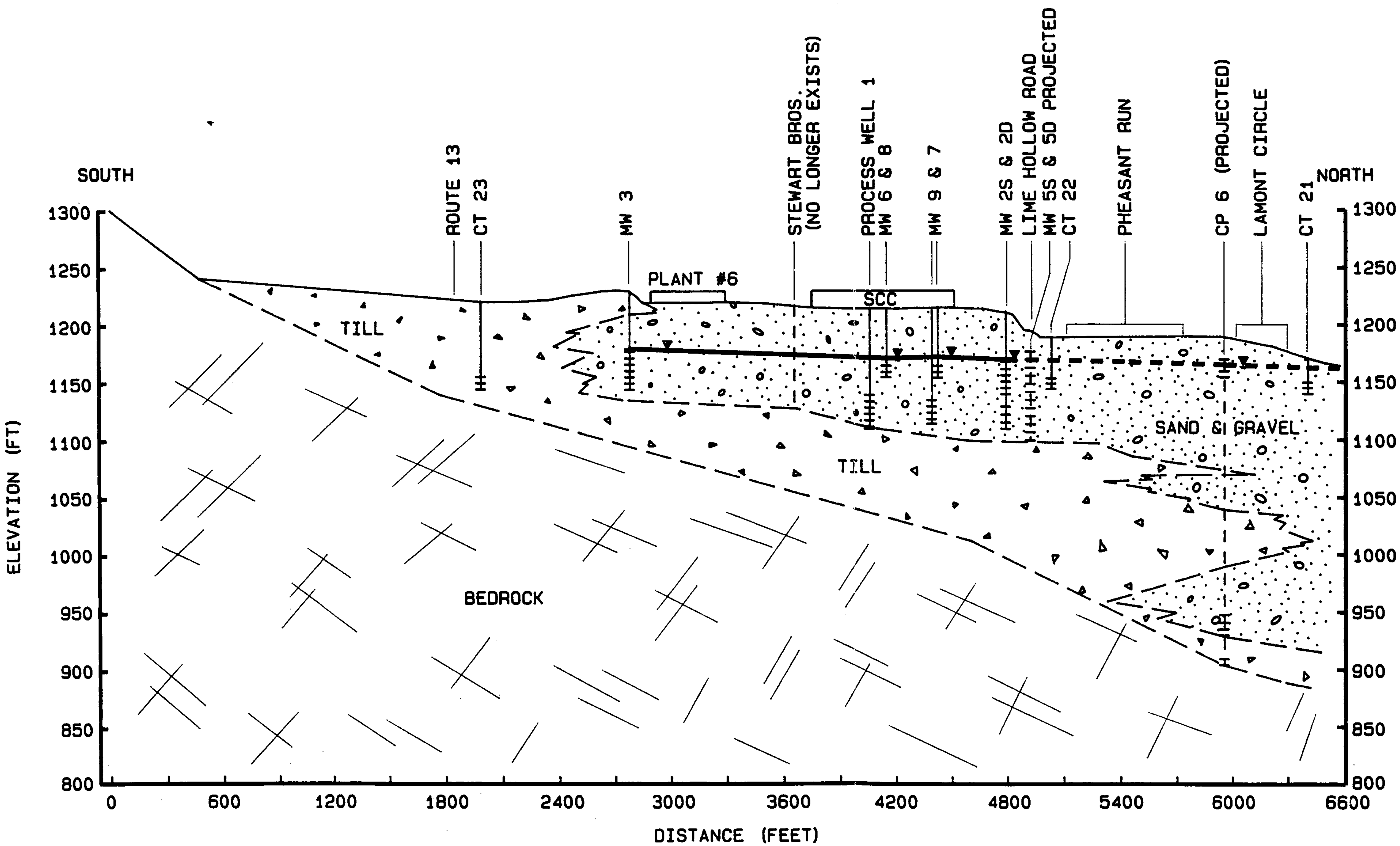
0 100 200
SCALE IN FEET

O'BRIEN & GERE ENGINEERS, INC.

FIGURE A6

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

HYDROGEOLOGIC
CROSS SECTION



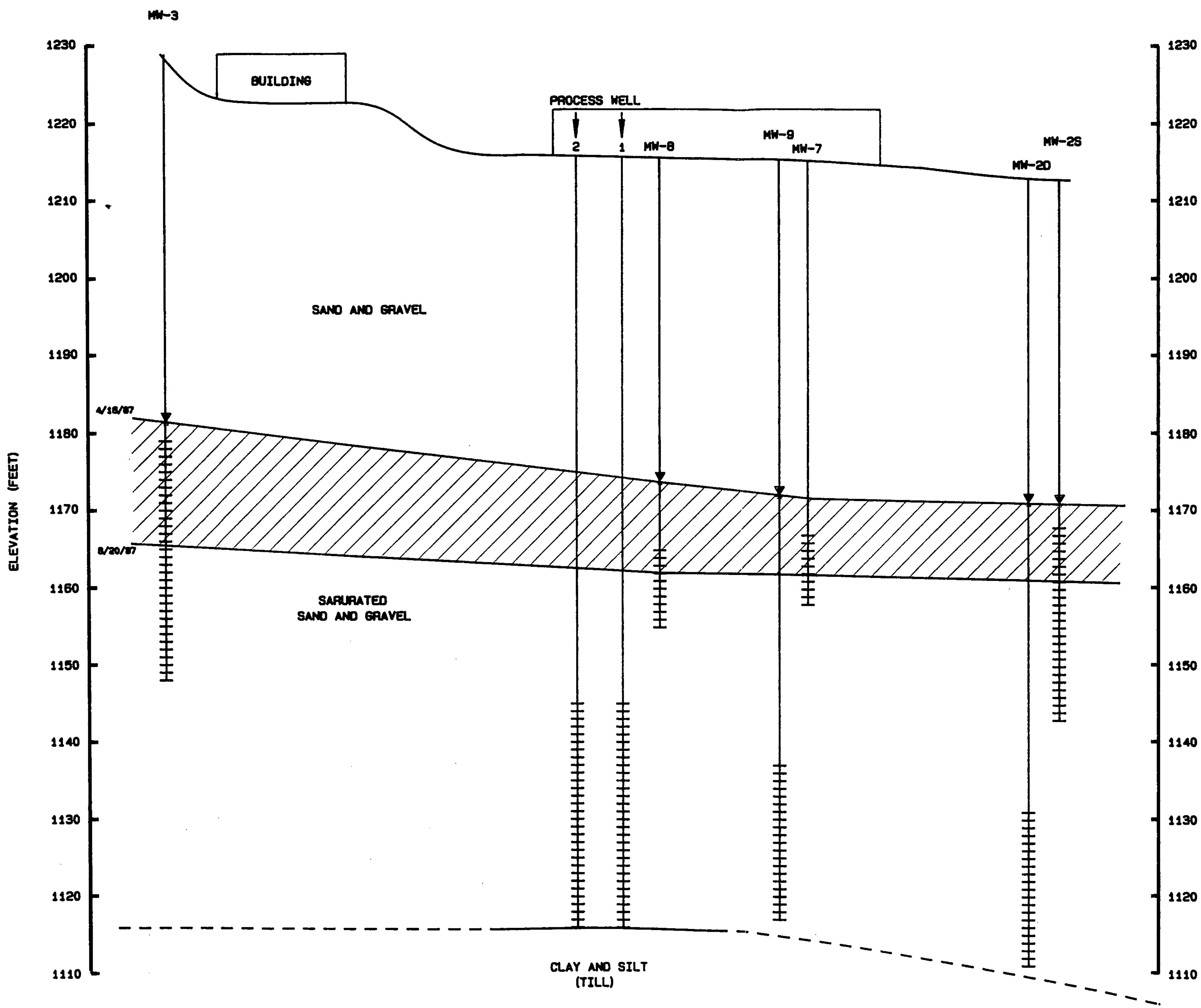
O'BRIEN & GERE ENGINEERS, INC.

S-C011G# R42

FIGURE A7

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

ON SITE HYDROGEOLOGIC CROSS SECTION



LEGEND

WELL SCREEN INTERVAL

GROUND WATER ELEVATION (4/16/87)

4/16/87 8/20/87 RECORDED GROUND WATER FLUCTUATION

0 200 400
HORIZONTAL SCALE IN FEET

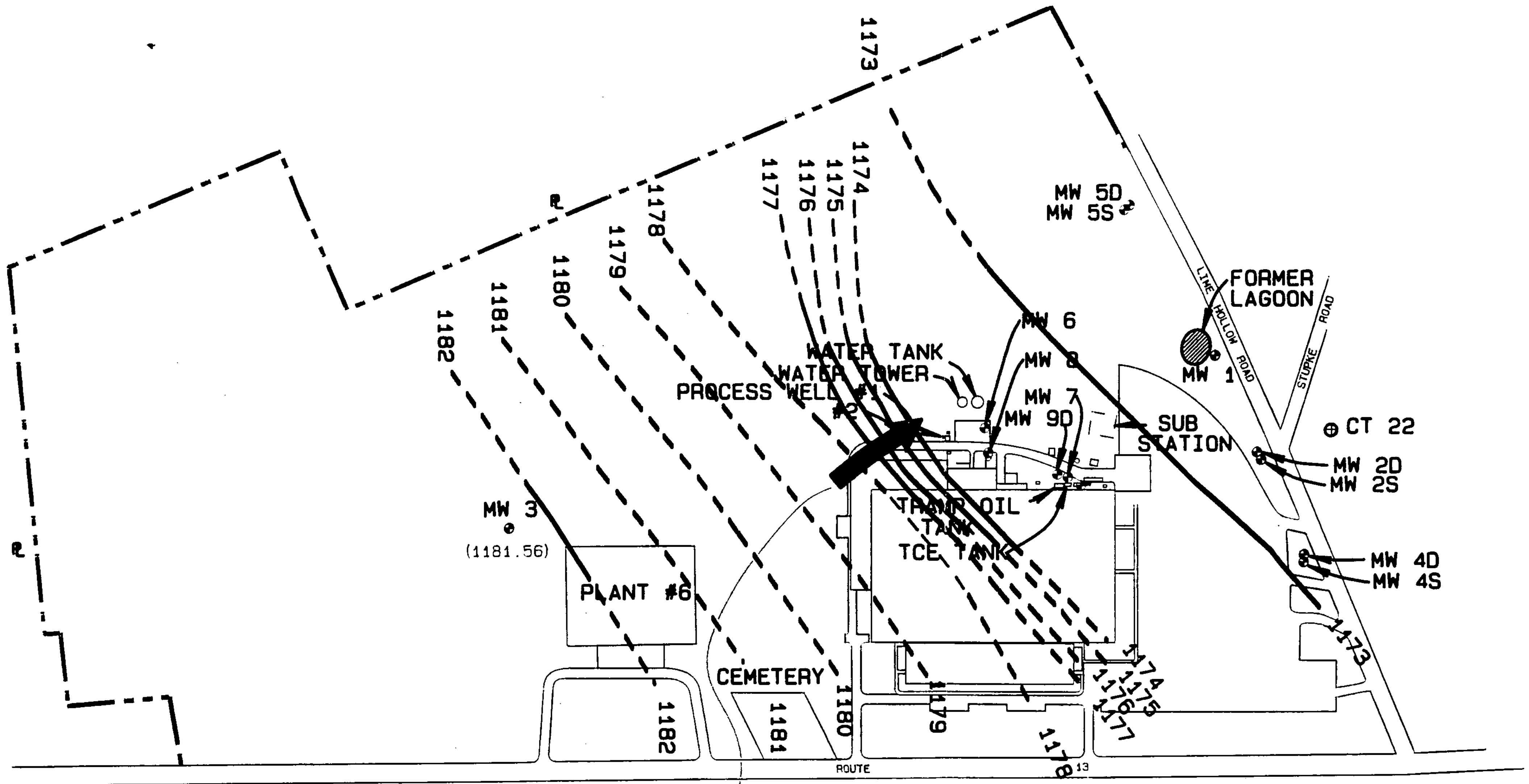
O'BRIEN & GERE ENGINEERS, INC.

S-C0066 R42 L1 .4 .6

FIGURE A8

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

SHALLOW GROUND WATER FLOW DIRECTION (4/16/87)



This arrow does not point NE!

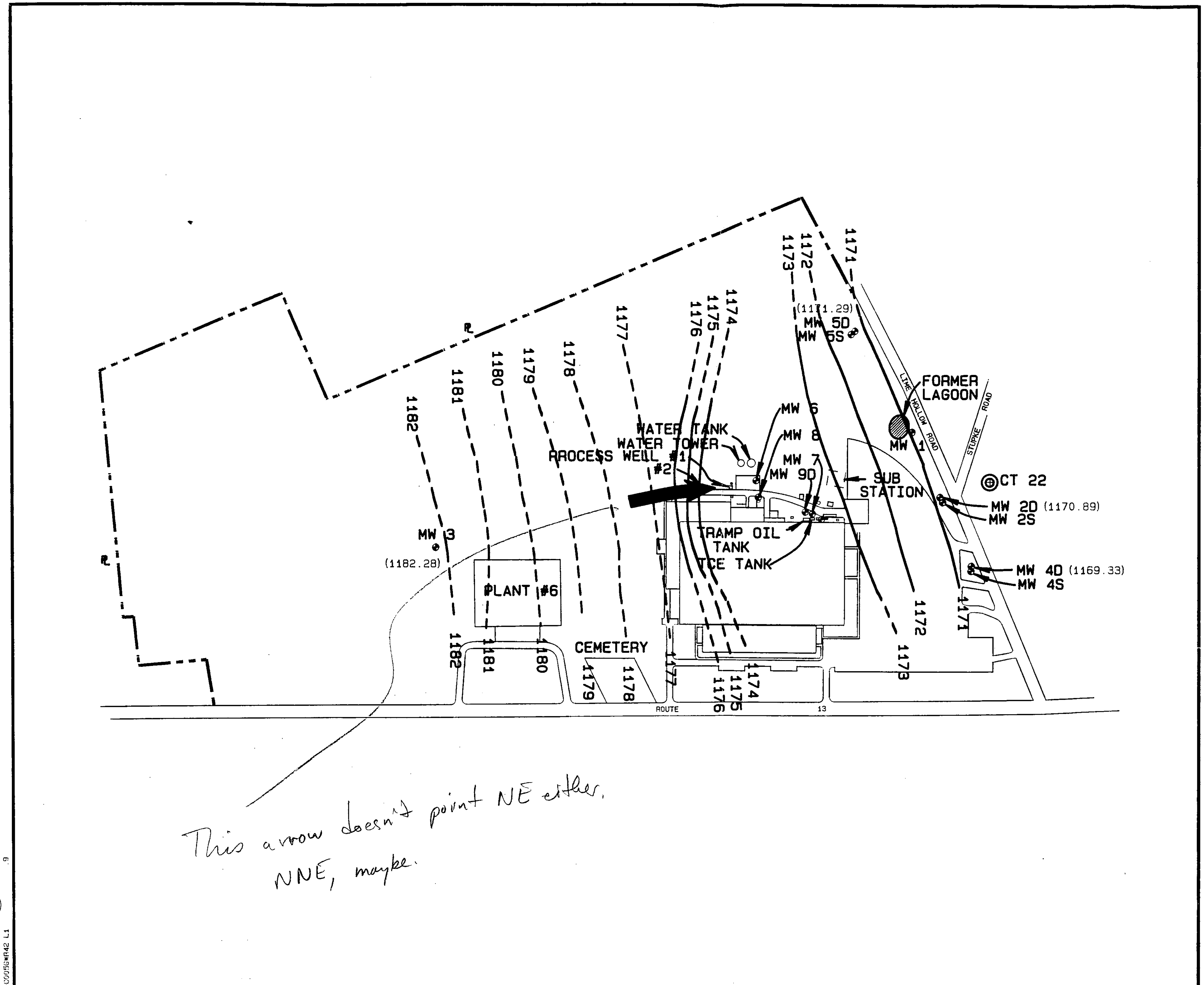
NORTH

LEGEND
- USGS OBSERVATION WELL
- MONITORING WELLS
- PROPERTY LINE
- EQUIPOTENTIAL LINE
- GROUND WATER FLOW DIRECTION

0 400 800

SCALE IN FEET

O'BRIEN & GERE ENGINEERS, INC.



This arrow doesn't point NE either. NNE, maybe.

FIGURE A9

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

DEEP GROUND WATER FLOW DIRECTION (4/16/87)

LEGEND

- USGS OBSERVATION WELL
- MONITORING WELLS
- PROPERTY LINE
- U.S.G.S. OBSERVATION WELL
- EQUIPOTENTIAL LINE
- GROUND WATER FLOW DIRECTION

0 400 800

SCALE IN FEET

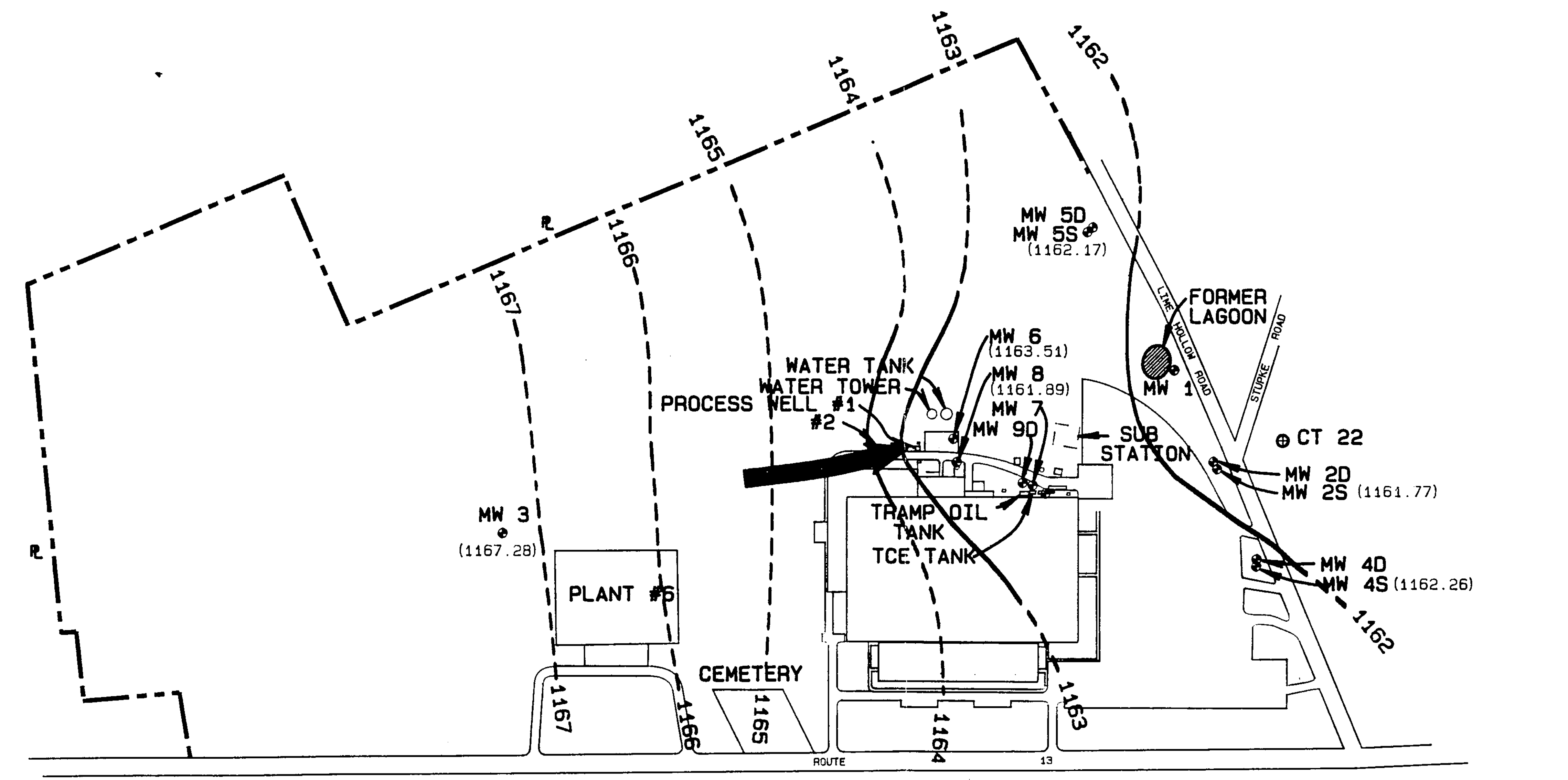
O'BRIEN & GERE ENGINEERS, INC.

S-C005GMR42 L1

FIGURE A10

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

SHALLOW GROUND WATER FLOW DIRECTION 8/20/87



LEGEND

⊕ USGS OBSERVATION WELL
⊗ MONITORING WELLS
℞ PROPERTY LINE
EQUIPOTENTIAL LINE
GROUND WATER FLOW DIRECTION

0 400 800
SCALE IN FEET

O'BRIEN & GERE ENGINEERS, INC.

S-C0056WR42 L1

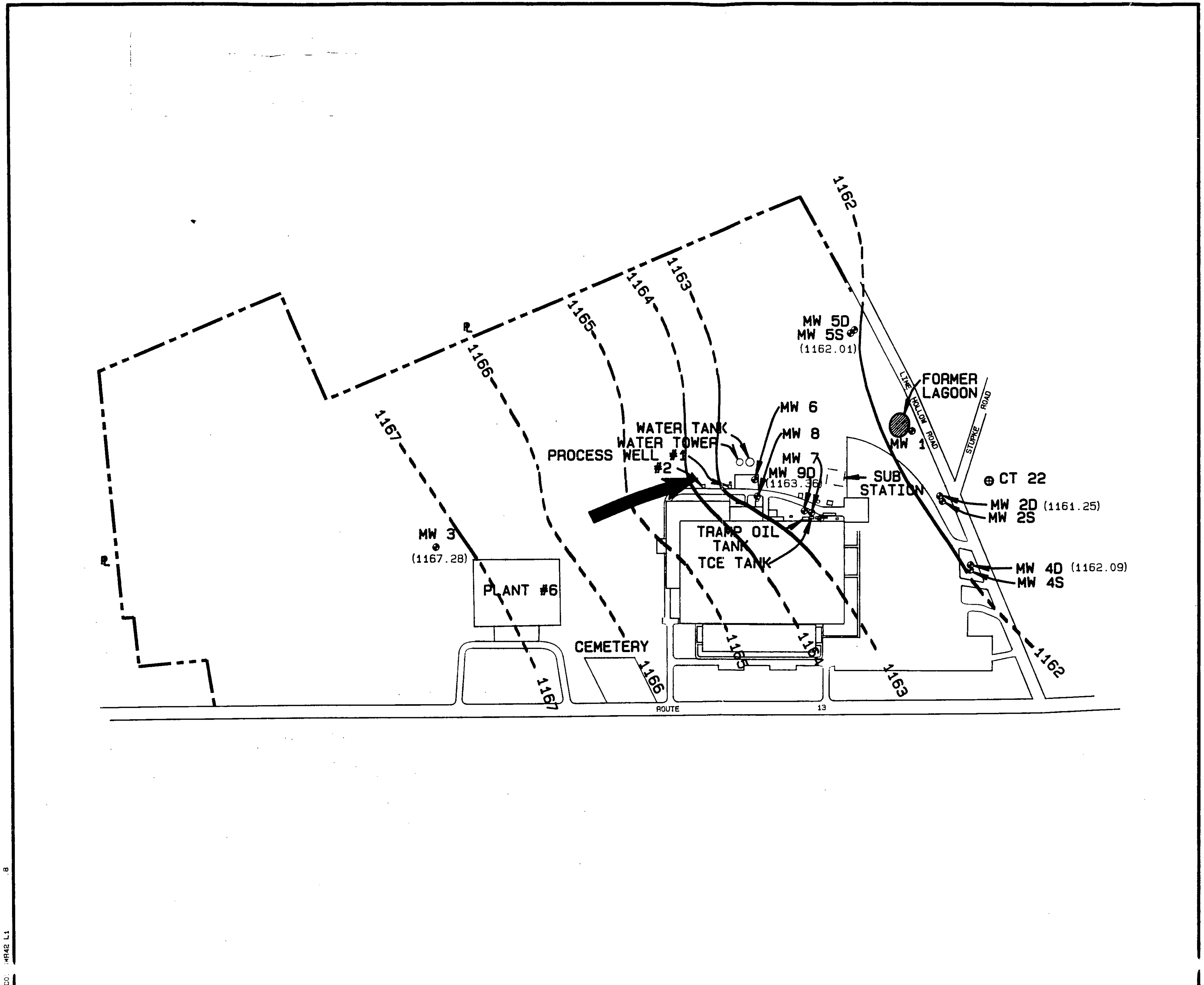


FIGURE A11

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

DEEP GROUND WATER FLOW DIRECTION 8/20/87

NORTH

LEGEND
- USGS OBSERVATION WELL
- MONITORING WELLS
- PROPERTY LINE
- EQUIPOTENTIAL LINE

0 400 800
SCALE IN FEET

O'BRIEN & GERE ENGINEERS, INC.

Figure A12

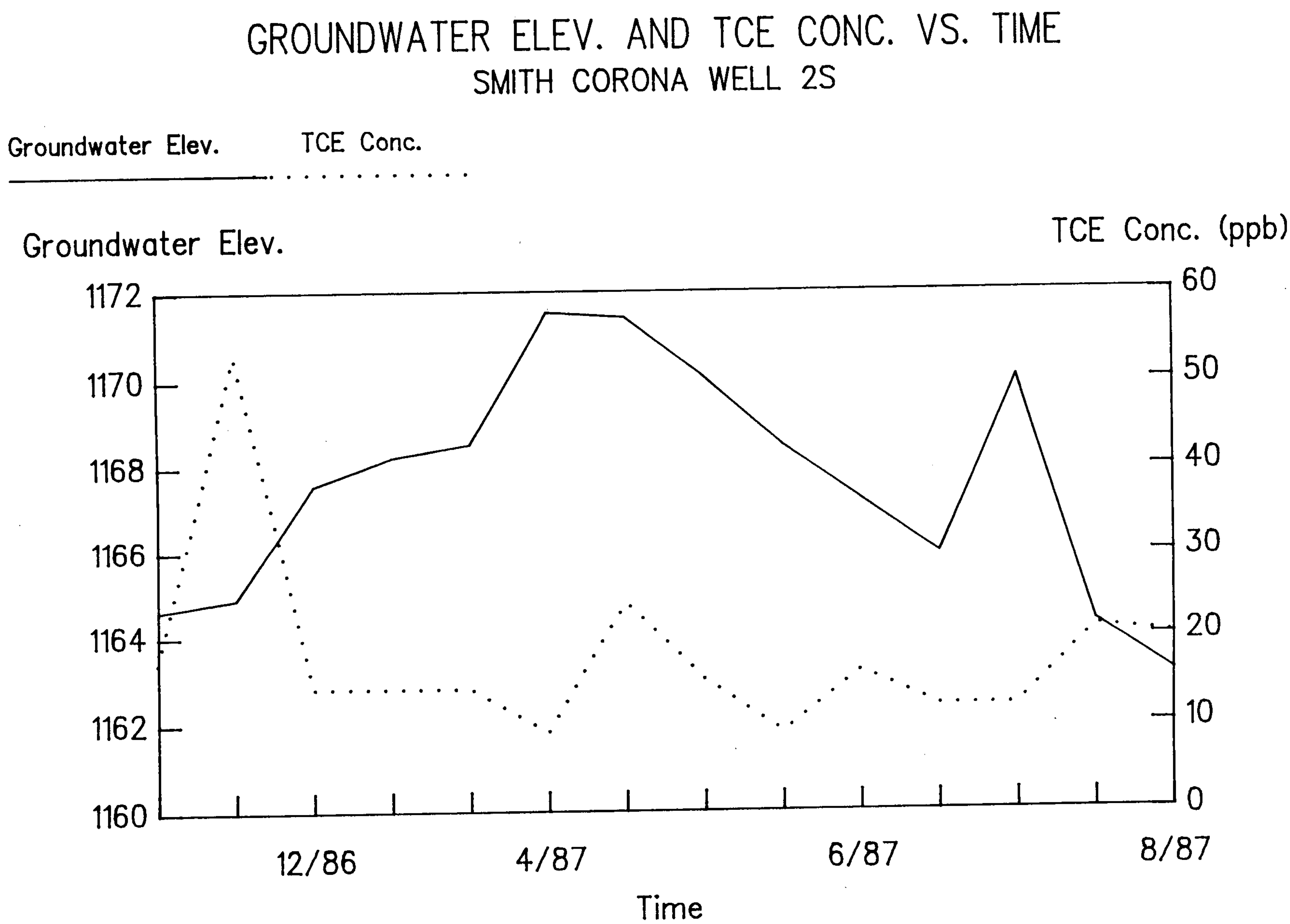

GROUNDWATER ELEV. AND TCE CONC. VS. TIME
SMITH CORONA WELL 2S
Groundwater Elev.
TCE Conc.
Groundwater Elev.
TCE Conc. (ppb)
1172
1170
1168
1166
1164
1162
1160
60
50
40
30
20
10
0
12/86
4/87
6/87
8/87
Time

Figure A13

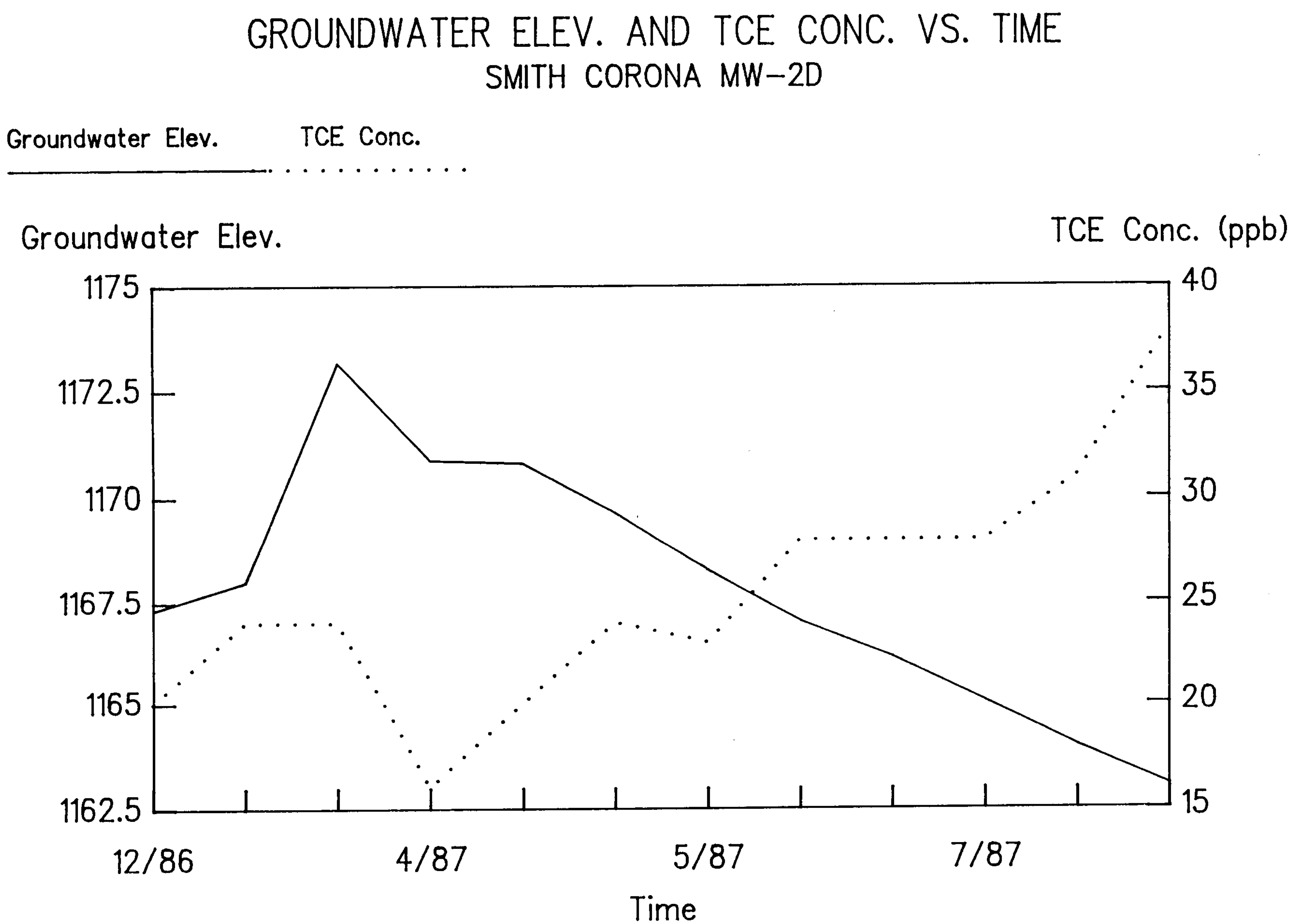

GROUNDWATER ELEV. AND TCE CONC. VS. TIME
SMITH CORONA MW-2D
Groundwater Elev.
TCE Conc.
Groundwater Elev.
TCE Conc. (ppb)
1175
1172.5
1170
1167.5
1165
1162.5
40
35
30
25
20
15
12/86
4/87
5/87
7/87
Time

Figure A14

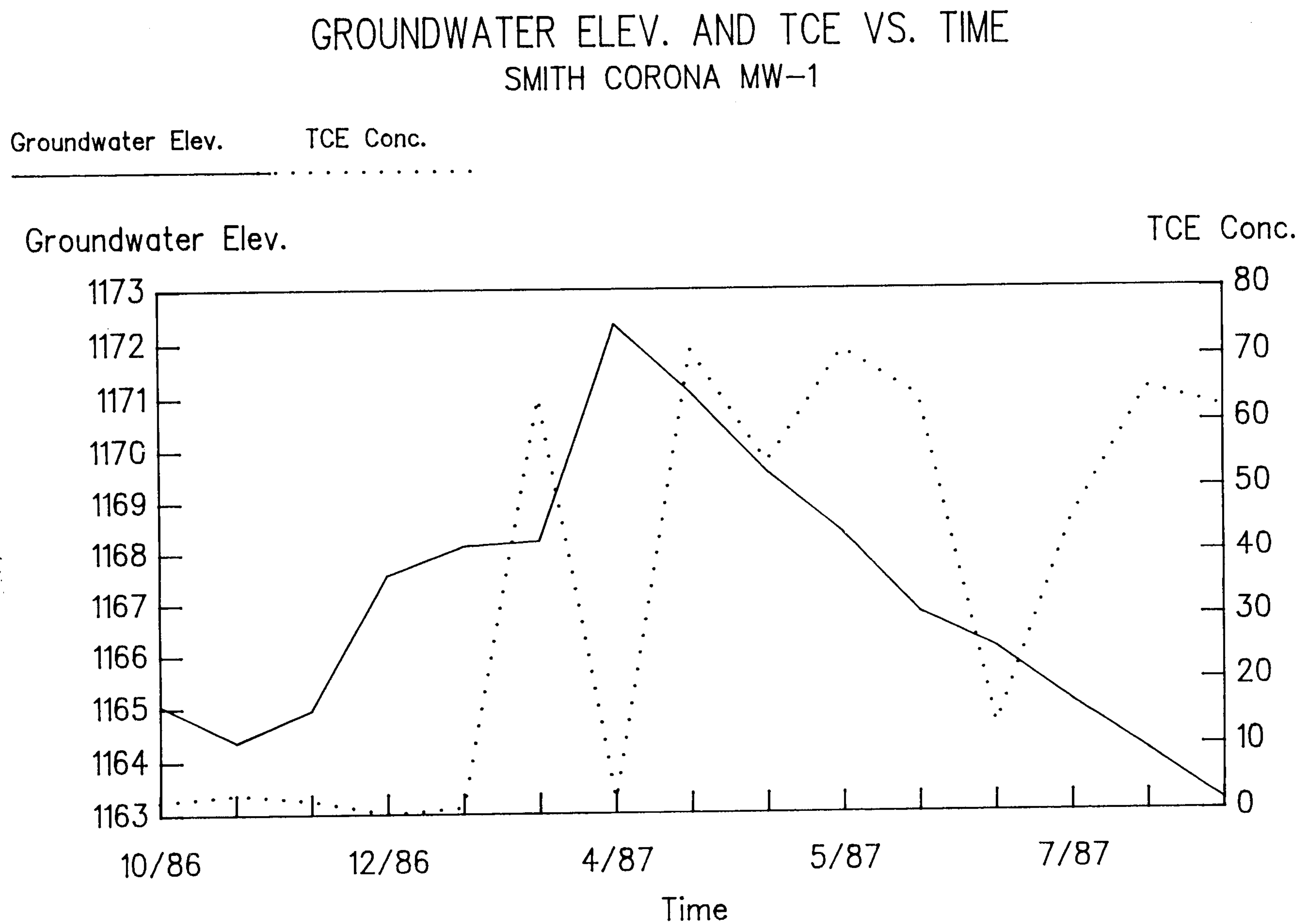

GROUNDWATER ELEV. AND TCE VS. TIME
SMITH CORONA MW-1
Groundwater Elev.
TCE Conc.
Groundwater Elev.
TCE Conc.
1173
1172
1171
1170
1169
1168
1167
1166
1165
1164
1163
80
70
60
50
40
30
20
10
0
10/86
12/86
4/87
5/87
7/87
Time

Figure A15

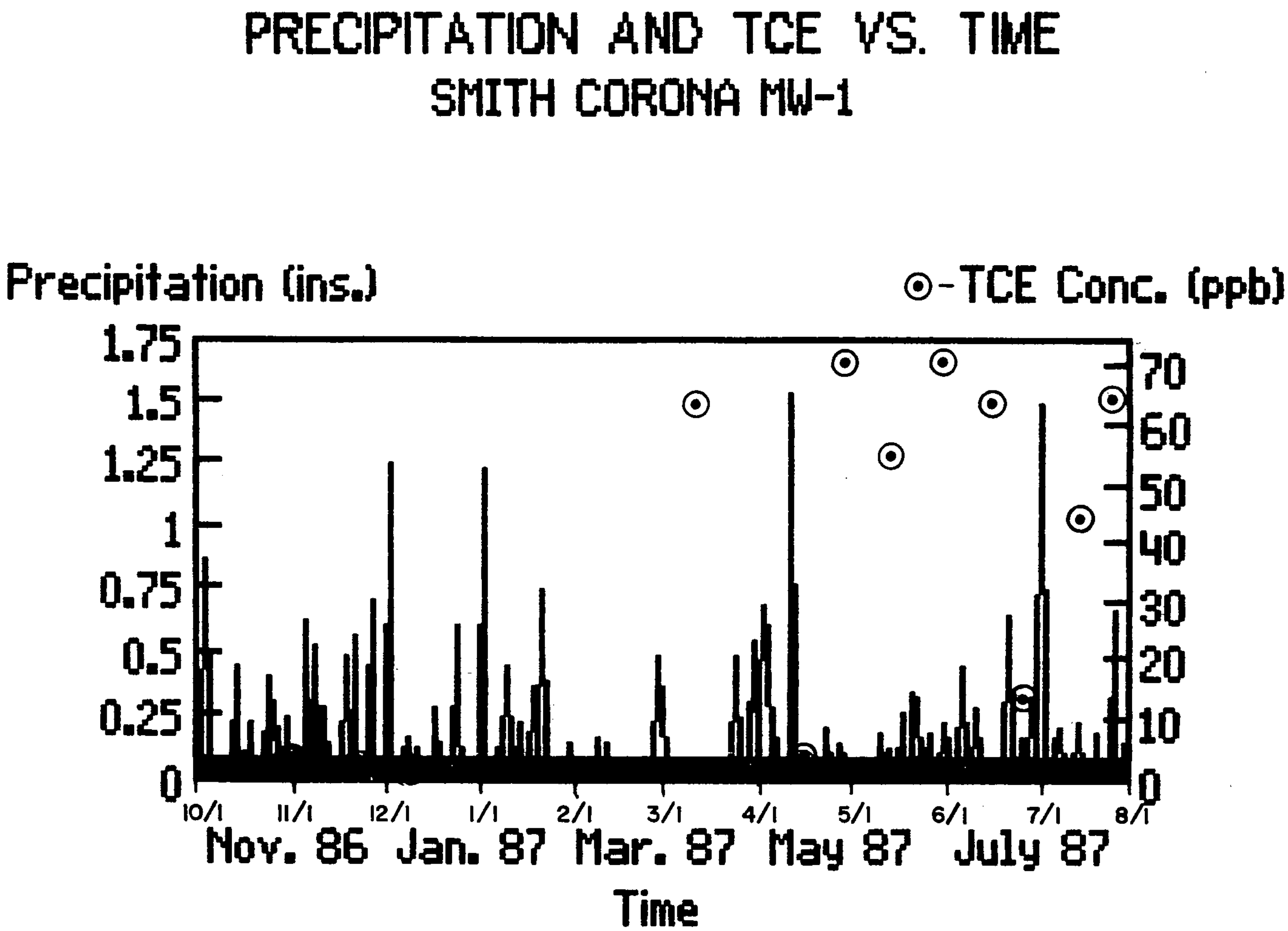

PRECIPITATION AND TCE VS. TIME
SMITH CORONA MW-1
Precipitation (ins.)
⊙-TCE Conc. (ppb)
1.75
1.5
1.25
1
0.75
0.5
0.25
0
70
60
50
40
30
20
10
0
10/1
11/1
12/1
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
Nov. 86 Jan. 87 Mar. 87 May 87 July 87
Time

Figure A16

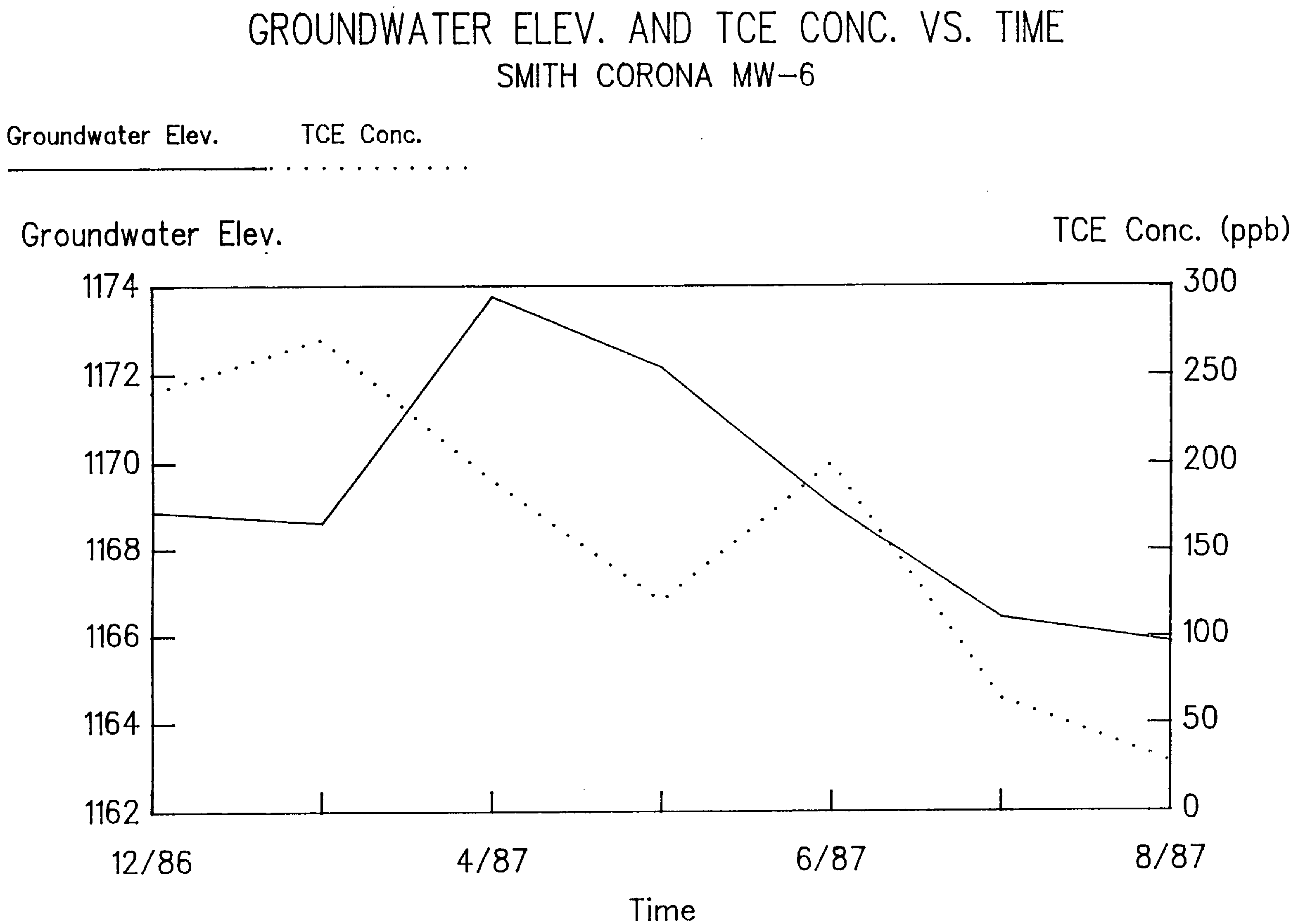

GROUNDWATER ELEV. AND TCE CONC. VS. TIME
SMITH CORONA MW-6
Groundwater Elev.
TCE Conc.
Groundwater Elev.
TCE Conc. (ppb)
1174
1172
1170
1168
1166
1164
1162
300
250
200
150
100
50
0
12/86
4/87
6/87
8/87
Time

Figure A17

GROUNDWATER ELEV. AND TCE CONC. VS. TIME
SMITH CORONA MW-7

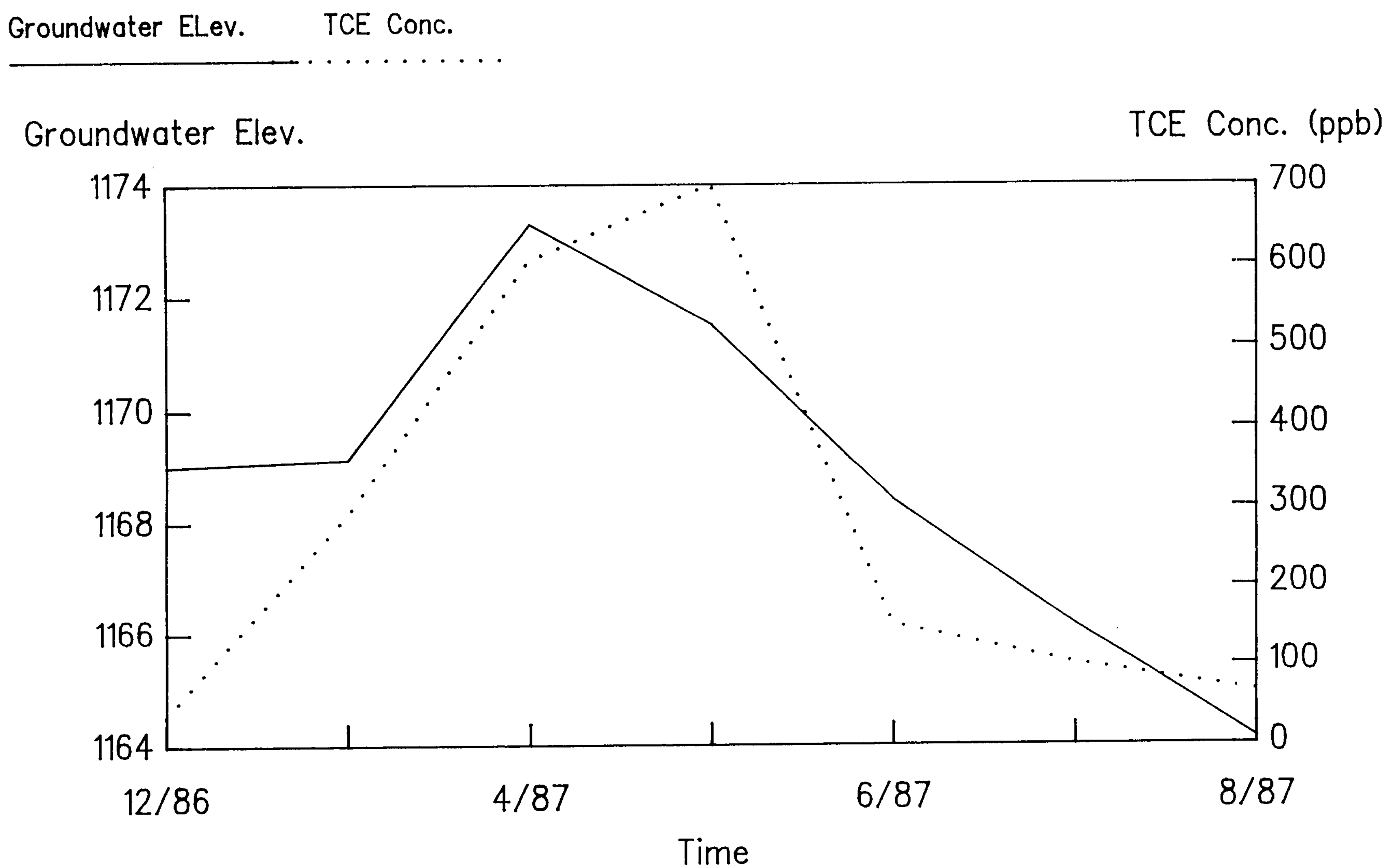
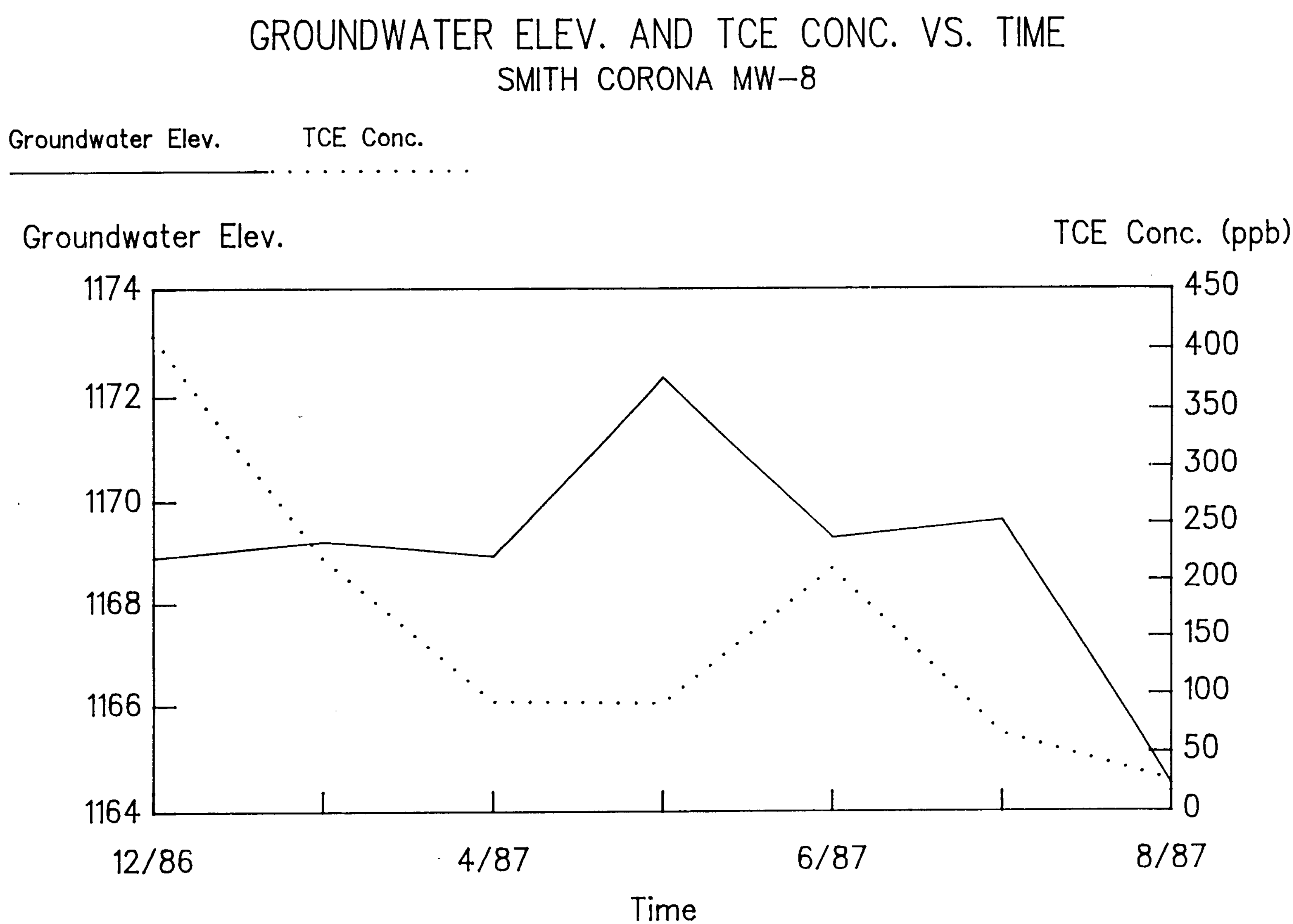


Figure A18


GROUNDWATER ELEV. AND TCE CONC. VS. TIME
SMITH CORONA MW-8
Groundwater Elev.
TCE Conc.
Groundwater Elev.
TCE Conc. (ppb)
1174
1172
1170
1168
1166
1164
450
400
350
300
250
200
150
100
50
0
12/86
4/87
6/87
8/87
Time

APPENDIX D

INITIAL REMEDIATION

APPENDIX D INITIAL REMEDIATION

SCC has completed a number of initial remediation efforts to assure that areas containing or handling chlorinated solvents are adequately controlled. These efforts are discussed below.

D1 DEGREASER/DISTILLATION EQUIPMENT

TCE was previously used for degreasing of mechanical equipment and parts in a Detrex vapor degreaser, operated by Department 104. The use of TCE was discontinued in this equipment on October 20, 1986. SCC made this conversion even though uncontrolled losses of degreasing solvents are not possible from this equipment. The memorandum presented as Exhibit D1 describes the details and operation of the vapor degreaser.

D2 TRAMP OIL TANK INSPECTION AND REMOVAL

Waste cutting oils were formerly stored in an underground tramp oil tank located immediately west of the manufacturing building (Figure D1). This tank was reportedly installed in 1971 and used until 1980. The waste oils were periodically removed by disposal contractors.

In November 1986 residual liquids and solids were removed from the tank by Environmental Oil, Inc of Syracuse, NY and it was steam cleaned. Analyses of these residual liquids are contained in Attachment D2.

An internal tank inspection of the tramp oil tank was conducted by O'Brien & Gere on November 19, 1986. The size of the tank was determined to be 126 ft. by 31.2 in. (20,000 gallons). An access hole and nippled fitting were noted. The tank was installed in 1971 by SCC and used until 1980 to store waste cutting oil. In general, the condition of the tank was good with no visible signs of holes or stress cracks. The only signs of rust or corrosion were at the top of the tank.

This is in error, since 3'Ø × 126' long ≅ 6,700 gal
126'Ø × $\frac{31.2}{12}$ ft ≅ 250,000 gal

The tramp oil tank was removed on December 19, 1986 under the supervision of O'Brien & Gere in accordance with the protocols presented as Attachment D1. The soil around the tank was excavated using a power shovel.

Upon excavation of the tramp oil tank, visual inspection of the tank exterior showed staining by oil on both sides of the tank around and below the fill port. This staining was likely a result of overfilling or spillage during filling and/or removal operations.

Visually stained soil around the tank area was excavated. Visual and odor observations were made of each bucket of excavated soil as a screening tool. Buckets of soil containing staining or solvent odor were deposited in a dump truck while unaffected soil was placed in a pile adjacent to the excavation. Soil samples were also field screened using a HNU photoionization detector. Five dump truck loads of soil excavated as part of the tank removal were placed in a temporary storage area established some 200 feet north and west of the excavation. The temporary storage area was approximately 100 feet by 100 feet and consisted of three layers of 6 mil polyethylene sheeting spread out on the ground to form a liner underlying the removed soil. The tank was removed with the power shovel and transported to an area 200 feet west of the excavation. Three additional truck loads of soil were removed from the bottom of the excavation following tank removal and placed in the temporary storage area.

The tank was placed on one layer of 6 mil polyethylene sheeting on the ground. The exterior surface was largely free of rust but did have an area of adhered soil bound with a viscous oily substance. Upon removal the soil stuck to the outside of the tank was removed with a shovel and wire brush. The cleaning was continued until no oily substance was present. Following the cleaning of the tank walls the tank was cut into pieces with a blow torch and disposed by SCC. The power shovel used for the excavation was decontaminated with a steam cleaner prior to leaving the site. The small amount of decontamination water was not contained.

The excavated soil was then covered with plastic polyethylene sheeting to ensure that precipitation would not percolate through the waste piles. The soil was transported by CECOS Cecos to a secure landfill for disposal in March 1987. Eight soil samples were collected during the course of the tramp oil tank removal. The results of the analytical data are summarized in Table D1. The major chemical constituents found were t-1,2-dichloroethylene, trichloroethene, tetrachloroethene, xylene, and benzene. The Chain of Custody forms and analytical data are presented in Attachment D2.

D3 ADDITIONAL TANK REMOVALS

SCC removed two underground fuel oil storage tanks, using the specifications outlined for the tramp oil tank removal (Attachment D1.)

On December 17, 1986 the first fuel oil tank which was located near process well #2 was removed. The tank appeared to be intact as reported by SCC representatives and no signs of visually stained soil were apparent. The excavation was then backfilled and the tank cut up for proper disposal.

A second #2 fuel oil tank with a capacity of 10,000 gallons was removed on March 16 - 17, 1987. This was conducted in conjunction with the surface soil removal. O'Brien & Gere representatives supervised the removal. The tank appeared to be in good condition and no holes in the wall were observed. A portion of the soils beneath the southern end of the tank were stained apparently resulting from overflows during the filling of the tank. Screening these soils with an HNU meter (Model p101-1) calibrated to benzene showed readings of 11 ppm. The stained soils were removed and disposed of with the surface soil. The remaining soils in the excavation visually appeared to be uncontaminated. This was confirmed with HNU readings of less than 1 ppm in the excavation. The excavation was backfilled to grade with clean fill from Economy Paving, Inc.

SCC also removed two above ground tanks. In March 1987, a 2,000 gallon fiberglass tank which previously contained muriatic acid was removed. In October 1986, a 3,000 gallon tank which previously contained TCE was removed. Inspection of the soils adjacent to these tanks did not show evidence of spillage or leakage except near the TCE tank spigot (see Section D4). The muriatic acid was triple rinsed, cut neat trick!

into pieces and disposed to the local landfill. The TCE tank was washed and steam cleaned by Environmental Oil Co. of Syracuse, cut into pieces and removed by a scrap dealer.

D4 SURFACE SOIL REMOVAL

Four areas of stained soils were identified as a result of the soil sampling survey (Appendix A, Section A2). The locations and the depth of removal are presented on Figure A1. Cecos International, Inc of Buffalo, New York was subcontracted for the purpose of removing the soil. The work performed by Cecos was supervised by O'Brien & Gere.

Area A, which is located across the road from the boiler room area of the plant, was excavated to a depth of 1.5 feet in the dark visually stained area (see Figure A1). The surface soil at the the area was found to contain chlorinated solvents and a fuel oil matrix. Visual observations and HNU readings conducted following the excavation indicate that contaminants were effectively removed. There was a definite boundary between stained and unstained soil at approximately 1.5 feet. The northern part of the area was visually stained to a lesser degree than the southern portion. Hence the soil was removed to only one foot in the northern portion.

Areas B and C, which are immediately outside of the boiler room area, were excavated to a depth between two and three feet, respectively. The soil was found to contain elevated levels of chlorinated solvents and petroleum products during the soil investigation program. All remaining soil registered less than 1 ppm with the exception of the southeast corner of area C where 5 ppm was observed at a depth of approximately 3 feet.

Surface soils at Area D, located near the former tramp oil tank, and which included surface soils beneath above ground tanks were removed to a depth of 0.5 to 1 foot. The majority of area D was excavated during the removal of the tramp oil tank. The area was found to contain elevated levels of chlorinated solvents near the TCE tank spigot and fuel-oil near the tramp oil tank.

The soils remaining after excavation in all locations appeared visually clean. A HNU meter calibrated to benzene was used to survey the excavated areas. All excavated areas were backfilled with clean fill from Economy Paving's site in Cortland, along Route 13. Subsequent to backfilling areas A, B, C, and D were compacted with a self propelled roller. The backfill material was also tested with the HNU meter and verified to be uncontaminated, with only background readings recorded.

All excavated soils were placed on 3 mil plastic sheeting and covered each night until the soil was hauled off site. The backhoe used to excavate the soils was decontaminated using a steam cleaner. The decontamination water was collected for disposal.

Approximately 1040 cubic yards (47 truckloads) of contaminated soil were removed by ~~Cecos~~ CECOS International, Inc. Upon testing, ~~Cecos~~ CECOS found that the soil was suitable for disposal at their intermediate landfill designed for non-hazardous industrial wastes. This decision was reached upon concurrence with NYSDEC. The soils were not characterized as RCRA hazardous wastes and total concentrations of volatile halogenated organic compounds were significantly below 1 percent (Attachment D2). Nevertheless, SCC directed ~~Cecos~~ CECOS to dispose the soil at Cecos' secure landfill.

D5 TEMPORARY CONTAINMENT

Prior to undertaking the soil removal as described above, SCC installed a temporary cover of 6 mil polyethylene over the stained soil areas identified during the investigation program. The purpose of this temporary containment was to minimize migration by rainwater while specifications were being prepared for the soil removal.

D6 COOLING WATER DISCHARGE

Concern was expressed by NYSDEC and the City of Cortland that cooling water discharges to the recharge lagoon might be a source of TCE in ground water. Repeated testing by SCC has shown that the TCE concentrations in this discharge have been similar to the quality of their water supply. Investigations of cooling water uses have also indicated that TCE contributions to cooling water are not expected. See Section D1. Irrespective of these findings, SCC elected to re-route cooling water discharges to the sanitary sewer system which was completed in January 1987.

D7 SUPPLY WELL NO. 2

Investigations of ground water (Appendix A) indicated that ground water near the tramp oil tank was somewhat affected by material handling. This area is within the zone of influence of SCC's supply well No. 1, while supply well No. 2 is located further upgradient. In order to better contain the ground water in the vicinity of supply well No. 1, SCC therefore shut down the operation of supply well no. 2 in December 1986. This action will result in the temporary control of contaminant migration until a new ground water recovery well can be installed.

Tables

O'BRIEN & GERE

TABLE D1
SOIL SAMPLES: TRAMP OIL TANK REMOVAL
SMITH CORONA CO.
CORTLANDVILLE, NEW YORK

LOCATION	(PPM) O & G	(PPB) T-1,2-DCE	TCE	TeTCE	TOLUENE	XYLENE
3-4 FEET WEST OF TANK 3-4 FEET BELOW GRADE	32,500	1,700	<1,000	3,400	2,000	26,000
EXCAVATED SOIL FOR BACKFILLING	800	<1,000	<1,000	<1,000	<1,000	<1,000
TRUCK LOAD 1 (IMPACTED SOIL)	10,200	220	130	94	<1,000	2,600
SOIL STUCK ON TANK	7,470	330	<1,000	440	<1,000	4,400
EXCAVATED SOIL FOR BACKFILLING	1,400	<1,000	130	<1,000	<1,000	<1,000
LAST BUCKET OF IMPACTED SOIL (18 FT)	3,800	<1,000	<1000	1,000	<1,000	<1,000
CENTER OF WEST WINDROW	13,500	<1,000	1000	2,800	<1,000	<1,000
CENTER OF CENTER WINDROW	11,600	<1,000	290	560	<1,000	8,800

O & G = OIL AND GREASE
T-1,2-DCE: TRANS-1,2-DICHLORETHENE
TCE: TRICHLOROETHENE
TeTCE: TETRACHLOROETHENE
ALL OTHERS BELOW DETECTION LIMITS
ANALYZED USING EPA METHODS 8010 & 8020

Figures

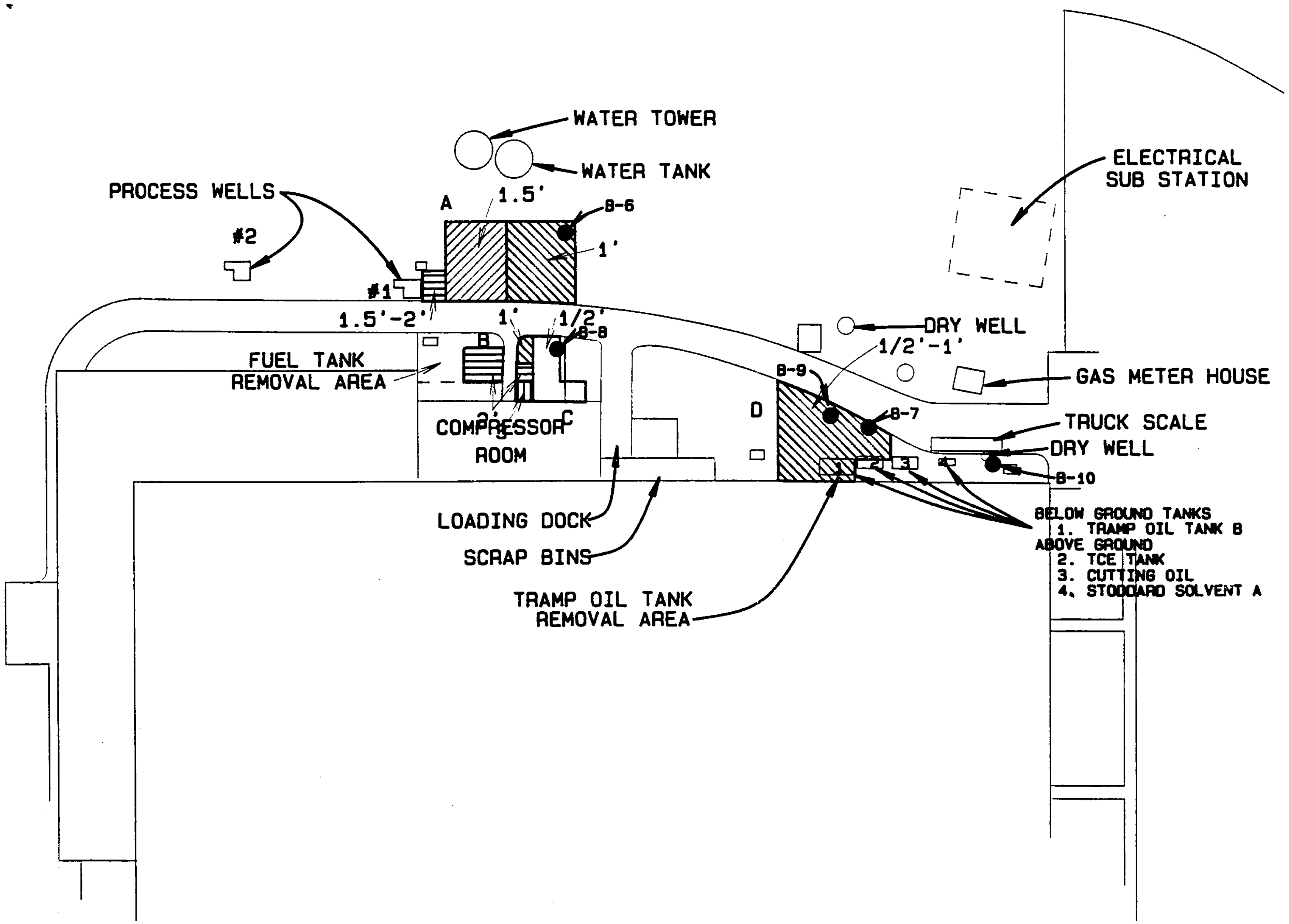
ATTACH. A-2

O'BRIEN & GERE

FIGURE D1

SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

LIMITS OF SOIL REMOVAL



LEGEND

● TEST BORING

AREA OF SOIL REMOVAL
(AVE. DEPTH OF EXCAVATION)

- 1/2 FEET
- 1 FEET
- 1 1/2 FEET
- 2 FEET
- 3 FEET

0 100 200
SCALE IN FEET

O'BRIEN & GERE
ENGINEERS, INC.

ATTACHMENT A1

References

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:emr/22.45

ATTACHMENT 2

Analytical Data

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT SMITH CORONA CORPORATION **JOB NO.** 2114.003.517

DESCRIPTION #1

Results reported as ug/kg wet weight

SAMPLE NO. A3697 **DATE COLLECTED** - **DATE REC'D.** 9-30-86 **DATE ANALYZED** 10-1-86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	780.
Vinyl chloride		Benzene	<100.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		Bromoform	<1000.
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	
		Freon 113	<100.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 94%

2-Bromo-1-chloropropane = 93%

Trifluorotoluene = 103%

Authorized: [signature]

Date: October 16, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT SMITH CORONA CORPORATION JOB NO. 2114.003.517

DESCRIPTION #3

Results reported as ug/kg wet weight

SAMPLE NO. A3699 DATE COLLECTED - DATE REC'D. 9-30-86 DATE ANALYZED 10-1-86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		[illegible]	
[illegible]		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	
[illegible]		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		[illegible]	10,000.
		Freon 113	<100.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 99%

2-Bromo-1-chloropropane = 94%

Trifluorotoluene = 112%

FUEL OIL PATTERN

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: October 16, 1986

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT SMITH CORONA CORPORATION JOB NO. 2114.003.517

DESCRIPTION #2

Results reported as ug/kg wet weight

SAMPLE NO. A3698 DATE COLLECTED - DATE REC'D. 9-30-86 DATE ANALYZED 10-1-86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<1000.
Bromomethane		Trichloroethene	66,000.
Vinyl chloride		Benzene	<100.
Chloroethane		Dibromochloromethane	<1000.
Methylene chloride		1,1,2-Trichloroethans	
1,1-Dichloroethene		[illegible]	
1,1-Dichloroethane		2-Chloroethylvinyl ether	
t-1,2-Dichloroethene	8500.	[illegible]	
Chloroform	<100.	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane	<100.	Ethylbenzene	750.
1,2-Dichloropropane	<1000.	Xylenes	1700.
		Freon 113	<100.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 69%

2-Bromo-1-chloropropane = 74%

Trifluorotoluene = 85%

Authorized: [signature]

Date: October 16, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT: SMITH CORONA CORPORATION JOB NO. 2114.003.517

DESCRIPTION: #4

Results reported as ug/kg wet weight

SAMPLE NO. A3700 DATE COLLECTED - DATE REC'D. 9-30-86 DATE ANALYZED 10-1-86

	ppb		ppb
[illegible]	[illegible]	t-1,3-Dichloropropene	<100.
Bromomethane	<100.	[illegible]	2900
[illegible]	[illegible]	Benzene	<100.
Chloroethane	<100.	[illegible]	
[illegible]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[illegible]	
[illegible]		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	27,000.	[illegible]	[illegible]
[illegible]	[illegible]	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane	<100.	[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		[illegible]	
[illegible]		Ethylbenzene	1200.
1,2-Dichloropropane		[illegible]	3500
		Freon 113	<100.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 79%

2-Bromo-1-chloropropane = 92%

Trifluorotoluene = 90%

FUEL OIL PATTERN

Authorized: [signature]

Date: October 16, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT SMITH CORONA CORPORATION JOB NO. 2114.003.517

DESCRIPTION #5

Results reported as ug/kg wet weight

SAMPLE NO. A3701 DATE COLLECTED - DATE REC'D. 9-30-86 DATE ANALYZED 10-1-86

	ppb		ppb
Chloromethane	<1000.	t-1,3-Dichloropropene	<1000.
Bromomethane		Trichloroethene (160)	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane (610)		2-Chloroethylvinyl ether	<10,000.
t-1,2-Dichloroethene	2900.	Bromoform	<10,000.
Chloroform	<1000.	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane	<1000.	Tetrachloroethene	<1000.
1,1,1-Trichloroethane	<1000.	Toluene	**
Carbon tetrachloride	<1000.	Chlorobenzene	<1000.
Bromodichloromethane		Ethylbenzene	**
1,2-Dichloropropane		Xylenes	8400.
		Freon 113	<1000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = DL%

2-Bromo-1-chloropropane = DL%

Trifluorotoluene = DL%

**Unable to quantitate due to presence of fuel oil.

Authorized: [signature]

Date: October 16, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT: SMITH CORONA CORPORATION   JOB NO. 2114.003.517

DESCRIPTION: #6

Results reported as ug/kg wet weight

SAMPLE NO. A3702   DATE COLLECTED -   DATE REC'D. 9-30-86   DATE ANALYZED 10-1-86

	ppb		ppb
[illegible]	[illegible]	t-1,3-Dichloropropene	<100.
Bromomethane		[illegible]	110
[illegible]		Benzene	<100.
Chloroethane		[illegible]	
[illegible]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[illegible]	
[illegible]		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		[illegible]	[illegible]
[illegible]		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		[illegible]	
[illegible]		Ethylbenzene	170.
1,2-Dichloropropane		[illegible]	210
		Freon 113	<100.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 69%

2-Bromo-1-chloropropane = 71%

Trifluorotoluene = 68%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: October 16, 1986

OBG
LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT SMITH CORONA CORPORATION JOB NO. 2114.003.517

DESCRIPTION #7

Results reported as ug/kg wet weight

SAMPLE NO. A3703 DATE COLLECTED - DATE REC'D. 9-30-86 DATE ANALYZED 10-1-86

	ppb		ppb
[illegible]	[illegible]	t-1,3-Dichloropropene	<100.
Bromomethane		[illegible]	
[illegible]		Benzene	
Chloroethane		[illegible]	
[illegible]	[illegible]	1,1,2-Trichloroethans	
1,1-Dichloroethene	<100.	[illegible]	
[illegible]		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		[illegible]	[illegible]
[illegible]		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		[illegible]	
[illegible]		Ethylbenzene	350.
1,2-Dichloropropane		[illegible]	[illegible]
		Freon 113	<100.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 73%

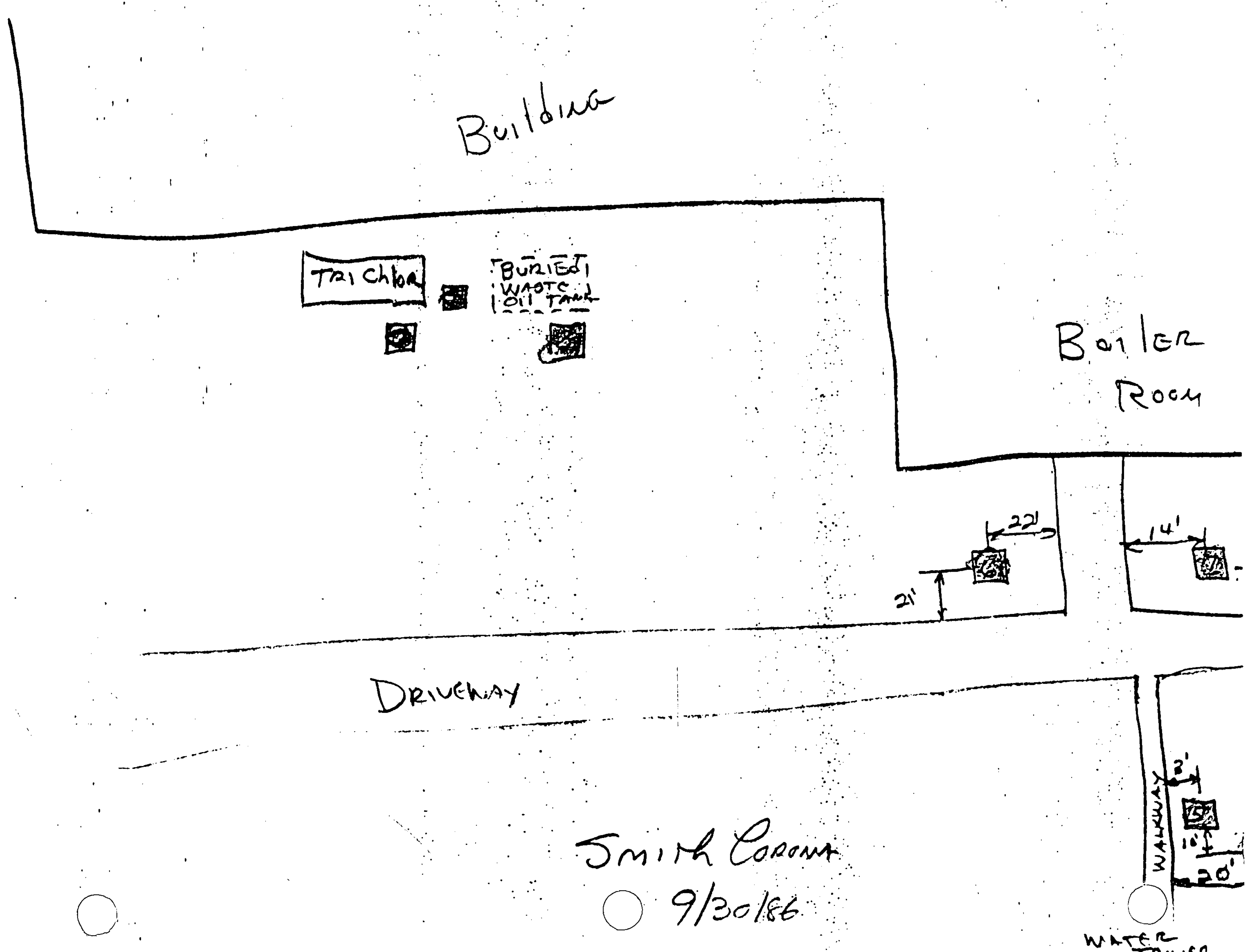
2-Bromo-1-chloropropane = 87%

Trifluorotoluene = 89%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: ORtNA

Date: October 16, 1986


Building
TRI Chlor
BURIED WASTE OIL TANK
Boiler Room
22'
14'
21'
Driveway
Walkway
3'
10'
20'
Smith Corona
9/30/86
WATER

LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
Smith Corona - Cortlandville	Guy Swenson

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
A	Opposite compressor room	10/30/86				✓	1	2	VHO + BTX
B	" " "	"				✓	2	2	See B. Martin or
C	Near Waste bins	"				✓	3	2	G. Swenson
D	near belowground tank	"				✓	4	2	
E	TCE Tank	"				✓	5	2	
F	Manhole Sediment	"				✓	6	2	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Guy Swenson		
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received ~~for Laboratory~~ by:	Date/Time
		Barbara Tawling	10-30-86 3:30 PM

Method of Shipment:

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Opposite Compressor Room A

SAMPLE NO. D1223 **DATE COLLECTED** 10-30-86 **DATE REC'D.** 10-31-86 **DATE ANALYZED** 11-3-86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		Bromoform	<1000.
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	<100.
1,1,1-Trichloroethane		Toluene	<1000.
Carbon tetrachloride		Chlorobenzene	<100.
Bromodichloromethane		Ethylbenzene	<1000.
1,2-Dichloropropane		Xylenes	<1000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 72%

2-Bromo-1-chloropropane = 81%

Trifluorotoluene = 94%

Authorized: [signature]

Date: December 3, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Opposite Compressor Room B

SAMPLE NO. D1224 **DATE COLLECTED** 10-30-86 **DATE REC'D.** 10-31-86 **DATE ANALYZED** 11-3-86

	ppb		ppb
Chloromethane	<100	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		Bromoform	<1000.
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	<100.
1,1,1-Trichloroethane		Toluene	<1000.
Carbon tetrachloride		Chlorobenzene	<100.
Bromodichloromethane		Ethylbenzene	<1000.
1,2-Dichloropropane		Xylenes	<1000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 85%

2-Bromo-1-chloropropane = 79%

Trifluorotoluene = 84%

Authorized: [signature]

Date: December 3, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Near Waste Bin C

SAMPLE NO. D1225 DATE COLLECTED 10-30-86 DATE REC'D. 10-31-86 DATE ANALYZED 11-3-86

	ppb		ppb
Chloromethane	<100	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		Bromoform	<1000
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	<100
1,1,1-Trichloroethane		Toluene	<1000.
Carbon tetrachloride		Chlorobenzene	<100
Bromodichloromethane		Ethylbenzene	<1000.
1,2-Dichloropropane		Xylenes	<1000

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 58%

2-Bromo-1-chloropropane = 64%

Trifluorotoluene = 90%

Authorized: [signature]

Date: December 3, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Near Below Ground Tank D

SAMPLE NO. D1226 DATE COLLECTED 10-30-86 DATE REC'D. 10-31-86 DATE ANALYZED 11-3-86

	ppb		ppb
Chloromethane	<100	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		Bromoform	<1000
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	<100
1,1,1-Trichloroethane		Toluene	<1000.
Carbon tetrachloride		Chlorobenzene	<100
Bromodichloromethane		Ethylbenzene	<1000.
1,2-Dichloropropane		Xylenes	<1000

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 75%

2-Bromo-1-chloropropane = 81%

Trifluorotoluene = 93%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized:

Date: December 3, 1986

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, TCE Tank E

SAMPLE NO. D1227 DATE COLLECTED 10-30-86 DATE REC'D. 10-31-86 DATE ANALYZED 11-3-86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	1300.
Vinyl chloride		Benzene	<100.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	2600.	Bromoform	<1000.
Chloroform	<100.	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	<100.
1,1,1-Trichloroethane		Toluene	<1000.
Carbon tetrachloride		Chlorobenzene	<100.
Bromodichloromethane		Ethylbenzene	<1000.
1,2-Dichloropropane		Xylenes	[illegible]

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 75%

2-Bromo-1-chloropropane = 85%

Trifluorotoluene = 94%

Authorized: [signature]

Date: December 3, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Manhole Sediment F

SAMPLE NO. D1228 DATE COLLECTED 10-30-86 DATE REC'D. 10-31-86 DATE ANALYZED 11-3-86

	ppb		ppb
Chloromethane	<100	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		Bromoform	<1000.
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	<100.
1,1,1-Trichloroethane		Toluene	11,000.
Carbon tetrachloride		Chlorobenzene	<100.
Bromodichloromethane		Ethylbenzene	<1000.
1,2-Dichloropropane		Xylenes	<1000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 67%

2-Bromo-1-chloropropane = 71%

Trifluorotoluene = 68%

Authorized: [signature]

Date: December 3, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Trip Blank

SAMPLE NO. D1229 DATE COLLECTED 10-30-86 DATE REC'D. 10-31-86 DATE ANALYZED 11-4-86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	<10.
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 87%

2-Bromo-1-chloropropane = 87%

Trifluorotoluene = 94%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized:

Date: December 3, 1986

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY: Nixon-Hurlgane: Cortlandville

SAMPLERS: (Signature) Peter Bogardus

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Water Grab.	Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
1+00	Transect 1	11/4/86	11:00			✓		4	See Bob
1+50			11:25						Martin
1+79			11:35						4 VHO's, E
1+124			11:45						~~[illegible]~~
1+151			11:55						
1+228			12:05						
1+286			13:30						
2+00	Transect 2		13:30						
2+41			13:45						
2+82			14:00						
2+124			14:16						
2+201			14:20						

Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
Peter G. Bogardus	11/4/86 5:45	Kelley A. Weaver	11/4/86 5:45

Method of Shipment: Hand delivered, to lab

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY

Nixer - Haselgrave ; Cortlandville

SAMPLERS: (Signature) Peter Bayardus

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Soil Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
2+266	Traverse #7	11/4/86	14:30						
3+00	Traverse #3							4	
3+42			14:50						
3+102			15:10						
3+146			16:10						
			15:25						

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by: (Signature)

Date/Time

Relinquished by: (Signature)

Received by Mobile Laboratory for field analysis: (Signature)

Date/Time

Dispatched by: (Signature)

Date/Time

Received for Laboratory by:

Date/Time

Method of Shipment:

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
Nixon - Hardgrave Coldwell [illegible]	Peter G. Bogardus / Mark [illegible]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Water Grab.	Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
4+00		11/5/86	9:00					4	See Bob Martin.
4+27			9:10						Hold until
4+78			9:20						notified by
4+125			9:30						Guy Swenson, or
7+00			9:35						Peter Bogardus
7+53			9:45						
[illegible]16			9:55						
[illegible]00			10:00						
8+46			10:10						
8+66			10:15						
8+108			10:25						
8[illegible]6			10:30					8	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Relinquished by: (Signature)	Received by: (Signature)	Date/Time

Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
Peter G. Bogardus		Kelley Weaver	11/5 15:45

M[illegible] of Shipment: Hand delivered to lab

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / [illegible]

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Water Grab.	Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
5+30		11/5/86	11:20					4	
5+60			11:25					4	
5+108			11:35					4	
9+00			11:45					4	
9+26			11:45					4	
9+46			11:55					4	
6+17			1:15					4	
6+50			1:25					5	
6+78			1:35					4	
6+88			1:50					7	
6+108			2:00					4	
6+115			2:05						

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time

Method of Shipment:

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	SAMPLE TYPE Water Grab.	SAMPLE TYPE Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
6+163		11/5/86	2:15					5	
6+188			2:20					4	
10+00			2:20					5	
10+25			2:35					8	
10+54			3:00					4	
11+00			3:10					4	
11+20			3:20					4	
11+35			3:25					4	
11+75			3:30					4	
11+100			3:35					4	
Field Blank	Methanol		3:45					1	
Field	Blank Water		3:45					1	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time

Method of Shipment:

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 1 + 50

SAMPLE NO. D1349 DATE COLLECTED 11-4-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-13-86

	ppb		ppb
Chloromethane	<100	t-1,3-Dichloropropene	<100.
Bromomethane	<100.	Trichloroethene	2100.
Vinyl chloride	720.	Benzene	<100.
Chloroethane	<100.	Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	23,000.	Bromoform	<1000
Chloroform	<1000	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane	<100.	Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 87%

2-Bromo-1-chloropropane = 84%

Trifluorotoluene = 93%

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Authorized: [signature]

Date: December 3, 1986

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 1 + 151

SAMPLE NO. D1347 DATE COLLECTED 11-4-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-13-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 95%

2-Bromo-1-chloropropane = 103%

Trifluorotoluene = 104%

Authorized: [signature]

December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 1 + 124

SAMPLE NO. D1350 DATE COLLECTED 11-4-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-13-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 83%

2-Bromo-1-chloropropane = 86%

Trifluorotoluene = 102%

Authorized:

Date: December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 2 + 00

SAMPLE NO. D1345 DATE COLLECTED 11-4-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-13-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 85%

2-Bromo-1-chloropropane = 92%

Trifluorotoluene = 100%

Authorized: [signature]

December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 2 + 41

SAMPLE NO. D1348 DATE COLLECTED 11-4-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-13-86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	19,000.
Vinyl chloride		Benzene	<100.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	3800.	Bromoform	<1000.
Chloroform	<100.	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 83%

2-Bromo-1-chloropropane = 97%

Trifluorotoluene = 84%

Authorized: a Mont

December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 3 + 00

SAMPLE NO. D1351 DATE COLLECTED 11-4-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 88%

2-Bromo-1-chloropropane = 92%

Trifluorotoluene = 104%

Authorized: [signature]

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CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 3 + 102

SAMPLE NO. D1354 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<1000.	t-1,3-Dichloropropene	<1000.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10,000.
t-1,2-Dichloroethene		Bromoform	<10,000
Chloroform		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 73%

2-Bromo-1-chloropropane = 69%

Trifluorotoluene = 85%

Authorized:

Date: December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 4 + 27

SAMPLE NO. D1352 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<1000.	t-1,3-Dichloropropene	<10,000.
Bromomethane		Trichloroethene	100,000.
Vinyl chloride		Benzene	<1000.
Chloroethane		Dibromochloromethane	<10,000.
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	
t-1,2-Dichloroethene	36,000.	Bromoform	
Chloroform	<1000.	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane	<10,000.	Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 98%

2-Bromo-1-chloropropane = 97%

Trifluorotoluene = 104%

Authorized: [signature]

Date: December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 5 + 108

SAMPLE NO. D1356 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 99%

2-Bromo-1-chloropropane = 98%

Trifluorotoluene = 103%

Authorized: [signature]

December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 6 + 163

SAMPLE NO. D1359 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	[illegible]00
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 81%

2-Bromo-1-chloropropane = 77%

Trifluorotoluene = 92%

Authorized: [signature]

Date: December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 6 + 188

SAMPLE NO. D1357 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 105%

2-Bromo-1-chloropropane = 101%

Trifluorotoluene = 107%

Authorized: [signature]

Date: December 3, 1986

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LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 8 + 00

SAMPLE NO. D1346 **DATE COLLECTED** 11-5-86 **DATE REC'D.** 11-10-86 **DATE ANALYZED** 11-13-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 92%

2-Bromo-1-chloropropane = 99%

Trifluorotoluene = 97%

Authorized: [signature]

Date: December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 8 + 146

SAMPLE NO. D1353 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<1000	t-1,3-Dichloropropene	<1000.
Bromomethane		Trichloroethene	33,000
Vinyl chloride		Benzene	<1000.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10,000.
t-1,2-Dichloroethene		Bromoform	<10,000.
Chloroform		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 101%

2-Bromo-1-chloropropane = 94%

Trifluorotoluene = 100%

Authorized: [signature]

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 9 + 46

SAMPLE NO. D1355 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<10	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 91%

2-Bromo-1-chloropropane = 99%

Trifluorotoluene = 109%

Authorized: [signature]

Date: December 3, 1986

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Site 11 + 20

SAMPLE NO. D1358 DATE COLLECTED 11-5-86 DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	[illegible]
Vinyl chloride		Benzene	<10.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 75%

2-Bromo-1-chloropropane = 73%

Trifluorotoluene = 83%

Authorized: [signature]

Date: December 3, 1986

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Table 3

OBG LABORATORIES, INC.

PRIVILEGED & CONFIDENTIAL
PREPARED AT ATTORNEY'S REQUEST

Laboratory Report

CLIENT: O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION: Nixon-Hargrave, SCM site, (2410.010)

DATE COLLECTED: - DATE REC'D. 11-17-86 DATE ANALYZED

Description	10 + 25	8 + 146	1 + 50 (Strong)		
Sample #	A5445	A5446	A5447		
ANTIMONY	<30	30.	30		
ARSENIC	7.4	4.6	5.3		
BERYLLIUM	<1	<1.	<1		
CADMIUM	<1.	5.9	<1.		
CHROMIUM	11.	35.	15.		
COPPER	29.	930.	46.		
LEAD	62.	240.	55.		
MERCURY	0.09	0.20	0.04		
NICKEL	50.	490.	74.		
SELENIUM	<0.1	<0.1	<0.1		
SILVER	2.	2.	2.		
THALLIUM	21.	14.	23.		
ZINC	84.	1030.	130.		
CYANIDE	<2.	3.6	<2.		
PHENOL	1.6	4.8	<0.05		
PERCENT TOTAL SOLIDS	95.3	93.0	95.4		

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Units: mg/l (ppm) unless otherwise noted

Comments:

Authorized: [signature]

Date: February 6, 1987

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OBG LABORATORIES, INC.

PRIVILEGED & CONFIDENTIAL
PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site, 1 + 50
(2410.010)

SAMPLE NO. A5447 DATE COLLECTED ______ DATE REC'D. 11-17-86 DATE ANALYZED 12-8-86

Chloromethane	<1000.	t-1,3-Dichloropropene	<1000.
Bromomethane	↓	Trichloroethene	23000.
Vinyl chloride	↓	Benzene	<1000.
Chloroethane	↓	Dibromochloromethane	↓
Methylene chloride	↓	1,1,2-Trichloroethane	↓
1,1-Dichloroethene	↓	c-1,3-Dichloropropene	↓
1,1-Dichloroethane	↓	2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene	18000.	Bromoform	<10000.
Chloroform	<1000.	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane	↓	Tetrachloroethene	1400.
1,1,1-Trichloroethane	↓	Toluene	<1000.
Carbon tetrachloride	↓	Chlorobenzene	<1000.
Bromodichloromethane	↓	Ethylbenzene	<10000.
1,2-Dichloropropane	↓	Xylenes	<10000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments: Fuel Oil Present

SURROGATE RECOVERIES:

Bromochloromethane = 85%

2-Bromo-1-chloropropane = 104%

Trifluorotoluene = 110%

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Authorized: [signature]

Date: February 6, 1987

OBG LABORATORIES, INC.

PRIVILEGED & CONFIDENTIAL
PREPARED AT ATTORNEY'S REQUEST

Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site; 1 + 50
(2410.010)

SAMPLE NO. A5447 **DATE COLLECTED** ______ **DATE REC'D.** 11-17-86 **DATE ANALYZED** 11-21-86

	ppb		ppb
α-BHC	<200	4,4'-DDT	<400.
γ-BHC		Endosulfan Sulfate	
β-BHC		Endrin Aldehyde	
Heptachlor		Methoxychlor	<1000
δ-BHC		Endrin Ketone	<400.
Aldrin		Chlordane	<1000
Heptachlor Epoxide		Toxaphene	<5000.
Endosulfan I		PCB-1221	<2000
4,4'-DDE	<400	PCB-1232	
Dieldrin		PCB-1016/1242	
Endrin		PCB-1248	
4,4'-DDD		PCB-1254	
Endosulfan II		PCB-1260	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURRGOATE RECOVERY

Dibutyl Chlorendate - 77%

Authorized: [signature]

Date: February 6, 1987

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Base/Neutral Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM site, #1 + 150

SAMPLE NO. A5447 **DATE COLLECTED** **DATE REC'D.** 11-17-86 **DATE ANALYZED** 12-23-86

	ppb		ppb
1,3-Dichlorobenzene	<500.	Diethylphthalate	<500.
1,4-Dichlorobenzene		N-nitrosodiphenylamine	
1,2-Dichlorobenzene		Hexachlorobenzene	
Hexachloroethane		4-Bromophenyl phenyl ether	
Bis (2-chloroethyl) ether		Phenanthrene	
Bis (2-chloroisopropyl) ether		Anthracene	
N-Nitrosodi-n-propylamine		Di-n-butyl phthalate	
Nitrobenzene		Fluoranthene	
Hexachlorobutadiene		Pyrene	
1,2,4-Trichlorobenzene		Benzidine	
Isophorone		Butyl benzyl phthalate	
Naphthalene		Bis(2-ethylhexyl)phthalate	9010.
Bis (2-chloroethoxy) methane		Chrysene	<500.
Hexachlorocyclopentadiene		Benzo(a)anthracene	<500.
2-Chloronaphthalene		3,3-Dichlorobenzidine	<1000.
Acenaphthylene		Di-n-octylphthalate	<500.
Acenaphthene		Benzo(b)fluoranthene	
Dimethyl phthalate		Benzo(k)fluoranthene	
2,6-Dinitrotoluene		Benzo(a)pyrene	
Fluorene		Indeno(1,2,3-cd)pyrene	
4-Chlorophenyl phenyl ether		Dibenzo(a,h)anthracene	
2,4-Dinitrotoluene		Benzo(g,h,i)perylene	
1,2-Diphenylhydrazine		N-Nitrosodimethyl Amine	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments: ug/kg wet weight

Authorized: [signature]

Date: March 6, 1987

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PRIVILEGED & CONFIDENTIAL
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Acid Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM site, #1 + 150

SAMPLE NO. A5447 DATE COLLECTED ______ DATE REC'D. 11-17-86 DATE ANALYZED 12-23-86

	ppb		ppb
2-Chlorophenol	<500.	2,4,6-Trichlorophenol	<500.
2-Nitrophenol		4-Chloro-3-methylphenol	<500
Phenol		2,4-Dinitrophenol	<2500.
2,4-Dimethylphenol		2-Methyl-4,6-dinitrophenol	
2,4-Dichlorophenol		Pentachlorophenol	
		4-Nitrophenol	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments: ug/kg wet weight

Authorized: [signature]

Date: March 6, 1987

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Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM, 8 + 146
(2410.010)

SAMPLE NO. A5446 DATE COLLECTED DATE REC'D. 11-17-86 DATE ANALYZED 12-8-86

	ppb		ppb
Chloromethane	<1000	t-1,3-Dichloropropene	<1000.
Bromomethane		Trichloroethene	560000
Vinyl chloride		Benzene	<1000.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene		Bromoform	<10000
Chloroform		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	<10000.
1,2-Dichloropropane		Xylenes	<10000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 67%
2-Bromo-1-chloropropane = 71%
Trifluorotoluene = 115%

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Authorized: [signature]

Date: February 6, 1987

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OBG
LABORATORIES, INC.

Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site; 8 + 146
(2410.010)

SAMPLE NO. A5446 DATE COLLECTED ______ DATE REC'D. 11-17-86 DATE ANALYZED 11-21-86

	ppb		ppb
α-BHC	<200.	4,4'-DDT	<400.
γ-BHC		Endosulfan Sulfate	
β-BHC		Endrin Aldehyde	
Heptachlor		Methoxychlor	<1000.
δ-BHC		Endrin Ketone	<400.
Aldrin		Chlordane	<1000.
Heptachlor Epoxide		Toxaphene	<5000.
Endosulfan I		PCB-1221	<2000.
4,4'-DDE	<400.	PCB-1232	
Dieldrin		PCB-1016/1242	
Endrin		PCB-1248	
4,4'-DDD		PCB-1254	
Endosulfan II		PCB-1260	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURRGOATE RECOVERY

Dibutyl Chlorendate - 79%

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Authorized: [signature]

Date: February 6, 1987

OBG LABORATORIES, INC.

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Base/Neutral Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM site, #8 + 146

SAMPLE NO. A5446 DATE COLLECTED ______ DATE REC'D. 11-17-86 DATE ANALYZED 12-23-86

	ppb
1,3-Dichlorobenzene	<20,000.
1,4-Dichlorobenzene	
1,2-Dichlorobenzene	
Hexachloroethane	
Bis (2-chloroethyl) ether	
Bis (2-chloroisopropyl) ether	
N-Nitrosodi-n-propylamine	
Nitrobenzene	
Hexachlorobutadiene	
1,2,4-Trichlorobenzene	
Isophorone	
Naphthalene	
Bis (2-chloroethoxy) methane	
Hexachlorocyclopentadiene	
2-Chloronaphthalene	
Acenaphthylene	
Acenaphthene	
Dimethyl phthalate	
2,6-Dinitrotoluene	
Fluorene	
4-Chlorophenyl phenyl ether	
2,4-Dinitrotoluene	
1,2-Diphenylhydrazine	

	ppb
Diethylphthalate	<20,000.
N-Nitrosodiphenylamine	
Hexachlorobenzene	
4-Bromophenyl phenyl ether	
Phenanthrene	
Anthracene	
Di-n-butyl phthalate	
Fluoranthene	
Pyrene	
Benzidine	
Butyl benzyl phthalate	
Bis(2-ethylhexyl)phthalate	[illegible]
Chrysene	<20,000.
Benzo(a)anthracene	<20,000
3,3-Dichlorobenzidine	<40,000.
Di-n-octylphthalate	<20,000
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Benzo(a)pyrene	
Indeno(1,2,3-cd)pyrene	
Dibenzo(a,h)anthracene	
Benzo(g,h,i)perylene	
N-Nitrosodimethyl Amine	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments: ug/kg wet weight

Authorized: [signature]

Date: March 6, 1987

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Acid Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM site, #8 + 146

SAMPLE NO. A5446 **DATE COLLECTED** **DATE REC'D.** 11-17-86 **DATE ANALYZED** 12-23-86

	ppb		ppb
2-Chlorophenol	<20,000.	2,4,6-Trichlorophenol	<20,000.
2-Nitrophenol		4-Chloro-3-methylphenol	<20,000.
Phenol		2,4-Dinitrophenol	<100,000.
2,4-Dimethylphenol		2-Methyl-4,6-dinitrophenol	
2,4-Dichlorophenol		Pentachlorophenol	
		4-Nitrophenol	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments: ug/kg wet weight

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Authorized: [signature]

Date: March 6, 1987

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OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site, 10 + 25 (2410.010)

SAMPLE NO. A 5445 DATE COLLECTED ____ DATE REC'D. 11-17-86 DATE ANALYZED 12-8-86

	ppb		ppb
Chloromethane	<1000.	t-1,3-Dichloropropene	<1000.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene	1700.	Bromoform	<10000.
Chloroform	<1000.	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	<10000.
1,2-Dichloropropane		Xylenes	<10000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments: Fuel Oil Present

SURROGATE RECOVERIES:

Bromochloromethane = 85%

2-Bromo-1-chloropropane = 83%

Trifluorotoluene = 100%

Authorized: [signature]

Date: February 6, 1987

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OBG LABORATORIES, INC.

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Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site, 10 + 25
(2410.010)

SAMPLE NO. A5445 DATE COLLECTED ______ DATE REC'D. 11-17-86 DATE ANALYZED 11-21-86

	ppb		ppb
α-BHC	<200	4,4'-DDT	<400.
γ-BHC		Endosulfan Sulfate	
β-BHC		Endrin Aldehyde	
Heptachlor		Methoxychlor	<1000
δ-BHC		Endrin Ketone	<400.
Aldrin		Chlordane	<1000
Heptachlor Epoxide		Toxaphene	<5000.
Endosulfan I		PCB-1221	<2000
4,4'-DDE	<400	PCB-1232	
Dieldrin		PCB-1016/1242	
Endrin		PCB-1248	
4,4'-DDD		PCB-1254	
Endosulfan II		PCB-1260	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERY

Dibutyl Chlorendate = 81%

Authorized: [signature]

Date: February 6, 1987

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

PRIVILEGED & CONFIDENTIAL
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Base/Neutral Priority Pollutants

CLIENT: O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION: Nixon Hargrave, SCM site, #10+ 25

SAMPLE NO. A5445 DATE COLLECTED ______ DATE REC'D. 11-17-86 DATE ANALYZED 12-23-86

	ppb		ppb
1,3-Dichlorobenzene	<10,000.	Diethylphthalate	<10,000.
1,4-Dichlorobenzene		N-Nitrosodiphenylamine	
1,2-Dichlorobenzene		Hexachlorobenzene	
Hexachloroethane		4-Bromophenyl phenyl ether	
Bis (2-chloroethyl) ether		Phenanthrene	
Bis (2-chloroisopropyl) ether		Anthracene	
N-Nitrosodi-n-propylamine		Di-n-butyl phthalate	
Nitrobenzene		Fluoranthene	
Hexachlorobutadiene		Pyrene	
1,2,4-Trichlorobenzene		Benzidine	
Isophorone		Butyl benzyl phthalate	
Naphthalene		Bis (2-ethylhexyl) phthalate	
Bis (2-chloroethoxy) methane		Chrysene	
Hexachlorocyclopentadiene		Benzo(a)anthracene	
2-Chloronaphthalene		3,3-Dichlorobenzidine	<20,000.
Acenaphthylene		Di-n-octylphthalate	<10,000.
Acenaphthene		Benzo(b)fluoranthene	
Dimethyl phthalate		Benzo(k)fluoranthene	
2,6-Dinitrotoluene		Benzo(a)pyrene	
Fluorene		Indeno(1,2,3-cd)pyrene	
4-Chlorophenyl phenyl ether		Dibenzo(a,h)anthracene	
2,4-Dinitrotoluene		Benzo(ghi)perylene	
1,2-Diphenylhydrazine		N-Nitrosodimethyl Amine	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments: ug/kg wet weight

Authorized: [signature]

Date: March 6, 1987

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 457-1494

OBG
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Acid Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3534.001.100

DESCRIPTION Nixon Hargrave, SCM site, #10+25

SAMPLE NO. A5445 DATE COLLECTED ______ DATE REC'D. 11-17-86 DATE ANALYZED 12-23-86

	ppb		ppb
2-Chlorophenol	<10,000.	2,4,6-Trichlorophenol	<10,000.
2-Nitrophenol		4-Chloro-3-methylphenol	<10,000.
Phenol		2,4-Dinitrophenol	<50,000.
2,4-Dimethylphenol		2-Methyl-4,6-dinitrophenol	
2,4-Dichlorophenol		Pentachlorophenol	
		4-Nitrophenol	

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Comments: ug/kg wet weight

Authorized: [signature]

Date: March 6, 1987

OBG Laboratories, Inc.
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PRIVILEGED & CONFIDENTIAL
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OBG
LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY: SCM - Cortlandville 2410 010

SAMPLERS: (Signature) [signature]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
1	Dry Well	11/18/86				✓	1	3	1 just soil
									1 soil - methanol
									1 soil + distilled water
									Analysis for VHO + BTX A...
									See R. Martin

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[signature]		
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
		Ann Eskitt	11/19/86 11:10

Method of Shipment:

LABORATORIES, INC.

PRIVILEGED & CONFIDENTIAL
PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Program, Dry Well

SAMPLE NO. D5548 DATE COLLECTED 11-19-86 DATE REC'D. 11-19-86 DATE ANALYZED 11-19-86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	18,000.
Vinyl chloride		Benzene	<100.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	10,000	Bromoform	<1000.
Chloroform	<100.	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 94%

2-Bromo-1-chloropropane = 9%

Trifluorotoluene = 88%

Authorized: [signature]

December 5,

ATTACHMENT 2.02

Subsurface Soil Sampling

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
Nixon - Hardgrave : Cortland site	Peter G. Bogarch

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Water Grab.	Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
B-6	0-2'	11/10						2 VHO's	
B-6	2-4'							1 VHO	
B-6	4-6'							4 VHO	
B-6	6-8							4 VHO	
B-6	8-10							4 VHO	
B-6	13-15	11/11/86						4 VHO	
B-6	23-25	11/11/86						4 VHO	
SP	Lagoon Water	11/12/86						2 V40	
SP	Lagoon Soil	11/12/86						4 V40	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
Peter G. Bogarch	11/21	[illegible]	11/21 6 pm

Method of Shipment: Hand delivered

OBG

LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: *(Signature)*

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab.	Soil Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
B-7	0-2	[illegible]	[illegible]			✓		4	[illegible]
	2-4		1:55						
	4-6		2:10						[illegible]
	6-8		2:15						[illegible]
B-4	0-2	1/18	9:30						[illegible] P.C.B.
	2-4		9:40						[illegible]
	4-6		8:50						
	6-8		9:30						
	6-8		9:45						
	2-29		12:15						
	37-39		3:[illegible]						
[illegible]	[illegible]		[illegible]			✓		✓	

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by Mobile Laboratory for field analysis: *(Signature)*	Date/Time

Dispatched by: *(Signature)*	Date/Time	Received for Laboratory by:	Date/Time
[illegible]	[illegible]	[illegible]	

Method of Shipment: [illegible]

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Road / Syracuse, New York 13221 / (315) 457-1494
Oakdale Medical Building / 700 Harry L. Drive / Johnson City, New York 13790

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
[illegible]	Peter G. [illegible]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab.	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
B-7	17-19	11/24/[illegible]	3:3[illegible]			✓		3	[illegible]
B-7	27-29	11/[illegible]	4:30			✓		3	directed by
B-7	37-39	11/24/86	[illegible]			✓		2	[illegible]
B-7	47-49	11/24/86	4:30			✓		2	[illegible]
B-7	61-63	11/25/86	[illegible]			✓		2	
B-7	63-65	11/25/86	[illegible]			✓		3	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
Peter G. [illegible]	11/25/86 5:[illegible]	[illegible]	[illegible]

Method of Shipment: [illegible]

O'Brien & Gere Engineers, Inc
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: *(Signature)*
Cortlandville	Peter G. Bozarth

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE: Water Comp.	SAMPLE TYPE: Water Grab.	SAMPLE TYPE: Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
B-9	40.5 Grab	12/1/84	4:45			3		3	Hold until
B-9	47-49	12/2/84	10:00					2	Notified
B-9	57-59		11:00					3	By DGB
B-9	67-69		12:30					3	on [illegible]

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time

Relinquished by: *(Signature)*	Received by Mobile Laboratory for field analysis: *(Signature)*	Date/Time

Dispatched by: *(Signature)*	Date/Time	Received for Laboratory by:	Date/Time
Peter G. Bozarth	12/2/84	[illegible]	12/2/84 3:50

Method of Shipment: Hand delivered P. [illegible]

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Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
N[illegible] [illegible] [illegible]	[illegible]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab.	[illegible]	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
[illegible]	7.7-7[illegible]	12/3/[illegible]	12:[illegible]			✓		3	[illegible]
[illegible]	37'-[illegible]	12/3/[illegible]	11:5[illegible]			✓		3	[illegible]
[illegible]	[illegible]	12/3/[illegible]	[illegible]			✓		3	[illegible]
[illegible]	[illegible]	12/[illegible]	[illegible]			✓		3	[illegible]
[illegible]	[illegible]	12/[illegible]	[illegible]			✓		3	
[illegible]	[illegible]	[illegible]	[illegible]			✓		2	
[illegible]	[illegible]	[illegible]	[illegible]					3	
[illegible]	17-19	12/4/[illegible]	[illegible]					3	
[illegible]	27-2[illegible]	12/4/[illegible]	[illegible]					2	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
Peter G. Bog[illegible]	12/4/[illegible] 5:40	[illegible]	12/4/[illegible] 5:4[illegible]

Method of Shipment:

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O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
Nixon - [illegible] : Cortlandville	Peter G. B[illegible]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Water Grab.	Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
B-10	37-39	12/5/86	9:00			✓		3	Hold until
B-10	47-49	12/5/86	10:20			✓		3	directed by
									P.G.B or
									G.A.S
									Analyze for
									VHO-BTX

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
[illegible]	12/5/86 3:45	Gordon B Talbot	12-5-86 / 15:45

Method of Shipment: Hand delivered to lab.

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BORATORIES, INC.

Purgeable Priority Pollutants

..ENT Div 10 JOB NO. 8435.001.100

DESCRIPTION SCM Cortlandville : Nixon-Hanyan B-6 4-6'

SAMPLE NO. A 5452 DATE COLLECTED 11-10-86 DATE REC'D. 11-17-86 DATE ANALYZED 12-5-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	(60)
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
arbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 116 %

2-Bromo-1-chloropropane = 102 %

Trifluorotoluene = 101 %

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Authorized: ______

Date: ______

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT: DW 10 JOB NO. 3435.001.100

DESCRIPTION: SCM Cortlandville : Rifon-Hardgrove B-6, 8-10'

SAMPLE NO. A5453 DATE COLLECTED 11-10-86 DATE REC'D. 11-17-86 DATE ANALYZED 12-5-86

	ppb
Chloromethane	<10.
Bromomethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
1,1-Dichloroethene	
1,1-Dichloroethane	
t-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

	ppb
t-1,3-Dichloropropene	<10.
Trichloroethene	8.
Benzene	
Dibromochloromethane	
1,1,2-Trichloroethane	
c-1,3-Dichloropropene	
2-Chloroethylvinyl ether	<100.
Bromoform	<100.
1,1,2,2-Tetrachloroethane	<10.
Tetrachloroethene	
Toluene	
Chlorobenzene	
Ethylbenzene	
Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 100 %

2-Bromo-1-chloropropane = 102 %

Trifluorotoluene = 101 %

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Purgeable Priority Pollutants

PRELIMINARY

CLIENT Div 10, O'Brien and Gere Engineers
JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardware-Cortlandville B-7, 2-4'

SAMPLE NO. D2242 DATE COLLECTED 11/17/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/10/86

	ppb		ppb
Chloromethane	< 10.	t-1,3-Dichloropropene	< 100.
Bromomethane		Trichloroethene	1000.
Vinyl chloride		Benzene	< 10.
Chloroethane		Dibromochloromethane	< 100.
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	< 100.
t-1,2-Dichloroethene	85.	Bromoform	< 100.
Chloroform	< 10.	1,1,2,2-Tetrachloroethane	< 10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane	< 100.	Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 107 %
2-Bromo-1-chloropropane = 98 %
Trifluorotoluene = 105 %

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PRELIMINARY

CLIENT Div 10, O'Brien and Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardgrave, Cortlandville B7 8-10'

SAMPLE NO. D2243 DATE COLLECTED 11/17/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/11/86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	150.
Vinyl chloride		Benzene	<10.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR. Part 136. October 26. 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 100 %

2-Bromo-1-chloropropane = 102 %

Trifluorotoluene = 100 %

Authorized:

Date:

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Purgeable Priority Pollutants

PRELIMINARY

CLIENT: Div 10, O'Brien and Gere Engineers, Inc JOB NO. 3485.001.112

DESCRIPTION: Nixon-Hardgrove, Cortlandville

SAMPLE NO. D2244 DATE COLLECTED 11/24/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/12/86

	ppb		ppb
Chloromethane	< 100.	t-1,3-Dichloropropene	< 100.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	< 1000.
t-1,2-Dichloroethene	[redacted]	Bromoform	< 1000.
Chloroform	< 100.	1,1,2,2-Tetrachloroethane	< 100.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments: Fuel Oil Pattern

SURROGATE RECOVERIES:

Bromochloromethane = 99 %
2-Bromo-1-chloropropane = 88 %
Trifluorotoluene = 100 %

Authorized: ____________

Date: ____________

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Purgeable Priority Pollutants

PRELIMINARY

CLIENT Div 10, O'Brien and Gere Engineers, Inc JOB NO. 3435.001.100

DESCRIPTION Nixon - Hardgrave, Cortlandville 61-63'

SAMPLE NO. D2245 DATE COLLECTED 11/25/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/12/86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	[redacted]
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	[redacted]	Bromoform	<1000.
Chloroform		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR. Part 136. October 26. 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	98 %
2-Bromo-1-chloropropane	=	94 %
Trifluorotoluene	=	102 %

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Date:

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PRELIMINARY

CLIENT Div 10, O'Brien and Gere Engineers, Inc. JOB NO. 3435.001.102

DESCRIPTION Nixon - Hardgrove, Cortlandville 3-8-2'

SAMPLE NO. D2246 DATE COLLECTED 11/18/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/16/86

	ppb		ppb
Chloromethane	<100.	t-1,3-Dichloropropene	<100.
Bromomethane		Trichloroethene	7900.
Vinyl chloride		Benzene	<100.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	810.	Bromoform	<1000.
Chloroform	<100.	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		Tetrachloroethene	920.
1,1,1-Trichloroethane		Toluene	<100
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 109 %

2-Bromo-1-chloropropane = 107 %

Trifluorotoluene = 103 %

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Authorized: ____________________

Date: ____________________

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PRELIMINARY

CLIENT Div 10, O'Brien and Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardgrave, Cortland B8 6-8'

SAMPLE NO. D2247 DATE COLLECTED 11/18/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/10/86

	ppb
Chloromethane	<10.
Bromomethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
1,1-Dichloroethene	
1,1-Dichloroethane	
t-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

	ppb
t-1,3-Dichloropropene	<10.
Trichloroethene	20.
Benzene	<10.
Dibromochloromethane	
1,1,2-Trichloroethane	
c-1,3-Dichloropropene	
2-Chloroethylvinyl ether	<100.
Bromoform	<100.
1,1,2,2-Tetrachloroethane	<10.
Tetrachloroethene	
Toluene	
Chlorobenzene	
Ethylbenzene	
Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	94 %
2-Bromo-1-chloropropane	=	86 %
Trifluorotoluene	=	100 %

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Authorized: ____________________

Date: ____________________

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PRELIMINARY

CLIENT Div 10, O'Brien and Gere Engineers, Inc. **JOB NO.** 3435 001.100

DESCRIPTION Nixon-Hardgrave, Catlin..., 37-39'

SAMPLE NO. D2248 **DATE COLLECTED** 11/18/86 **DATE REC'D.** 12/4/86 **DATE ANALYZED** 12/10/86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene 140.	
Vinyl chloride		Benzene	<10.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane 10.		Toluene	
Carbon tetrachloride	<10.	Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 101 %

2-Bromo-1-chloropropane = 100 %

Trifluorotoluene = 98 %

Authorized: ____________________

Date: ____________________

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PRELIMINARY

CLIENT Div 10, O'Brien and Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, Cortlandville B-9 0-2'

SAMPLE NO. D2249 DATE COLLECTED 12/1/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/11/86

	ppb		ppb
Chloromethane	< 10.	t-1,3-Dichloropropene	< 10.
Bromomethane		Trichloroethene	430.
Vinyl chloride		Benzene	< 10.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	< 100.
t-1,2-Dichloroethene	800.	Bromoform	< 100.
Chloroform	< 10.	1,1,2,2-Tetrachloroethane	< 10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR. Part 136. October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 100 %

2-Bromo-1-chloropropane = 99 %

Trifluorotoluene = 105 %

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: ____________

Date: ____________

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PRELIMINARY

Purgeable Priority Pollutants

CLIENT Div 10, O'Brien and Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardgrave, Cortlandville B-9, 8-10'

SAMPLE NO. D2251 DATE COLLECTED 12/1/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/11/86

	ppb
Chloromethane	<10.
Bromomethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
1,1-Dichloroethene	
1,1-Dichloroethane	
t-1,2-Dichloroethene	[redacted]
Chloroform	<10.
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	
t-1,3-Dichloropropene	<10.
Trichloroethene	98.
Benzene	<10.
Dibromochloromethane	
1,1,2-Trichloroethane	
c-1,3-Dichloropropene	
2-Chloroethylvinyl ether	<100.
Bromoform	<100.
1,1,2,2-Tetrachloroethane	<10.
Tetrachloroethene	
Toluene	
Chlorobenzene	
Ethylbenzene	
Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 100%

2-Bromo-1-chloropropane = 100%

Trifluorotoluene = 96%

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Authorized:

Date:

OBG LABORATORIES, INC.

PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

CLIENT Div 10, O'Brien and Gere Engineers, Inc JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardgraves, Cortlandville B-9, 40.5'

SAMPLE NO. D2260 DATE COLLECTED 12/1/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/11/86

	ppb
Chloromethane	<10.
Bromomethane	
Vinyl chloride	
Chloroethane	
Methylene chloride	
1,1-Dichloroethene	
1,1-Dichloroethane	
t-1,2-Dichloroethene	70.
Chloroform	<10.
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

	ppb
t-1,3-Dichloropropene	<10.
Trichloroethene	4600.
Benzene	<10.
Dibromochloromethane	
1,1,2-Trichloroethane	
c-1,3-Dichloropropene	
2-Chloroethylvinyl ether	<100.
Bromoform	<100.
1,1,2,2-Tetrachloroethane	<10.
Tetrachloroethene	16.
Toluene	50.
Chlorobenzene	<10.
Ethylbenzene	19.
Xylenes	71.
M-Xylene	28.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments: Fuel Oil Pattern

SURROGATE RECOVERIES:

Bromochloromethane	= 101 %
2-Bromo-1-chloropropane	= 100 %
Trifluorotoluene	= 100 %

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Authorized: ______

Date: ______

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST

CLIENT Div 10, O'Brien and Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardgrave, Cortlandville, PB 47-49'

SAMPLE NO. D2250 DATE COLLECTED 12/2/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/11/86

	ppb		ppb
Chloromethane	< 100.	t-1,3-Dichloropropene	< 100.
Bromomethane		Trichloroethene	600.
Vinyl chloride		Benzene	< 100.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	< 1000.
t-1,2-Dichloroethene	1700.	Bromoform	< 1000.
Chloroform	< 100.	1,1,2,2-Tetrachloroethane	< 100.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments: Fuel Oil Pattern

SURROGATE RECOVERIES:

Bromochloromethane = 108%
2-Bromo-1-chloropropane = 103%
Trifluorotoluene = 104%

Authorized: ____________

Date: ____________

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien and Gere Engineers, Div 10

DESCRIPTION Nixon - Hardgraves; B 10, 0-2' JOB NO. 3435.001.100

SAMPLE NO. A6892 DATE COLLECTED ? DATE REC'D. 12/24/86 DATE ANALYZED 1/6/87

	ppb
Chloromethane	
Bromomethane	<10.
Vinyl chloride	
Chloroethane	
Methylene chloride	
1,1-Dichloroethene	
1,1-Dichloroethane	
t-1,2-Dichloroethene	
Chloroform	
1,2-Dichloroethane	
1,1,1-Trichloroethane	
Carbon tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	

	ppb
t-1,3-Dichloropropene	
Trichloroethene	<10.
Benzene	
Dibromochloromethane	
1,1,2-Trichloroethane	
c-1,3-Dichloropropene	
2-Chloroethylvinyl ether	
Bromoform	<100.
1,1,2,2-Tetrachloroethane	<100.
Tetrachloroethene	<10.
Toluene	
Chlorobenzene	
Ethylbenzene	
Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments: Acetone 340 ppb

SURROGATE RECOVERIES:

Bromochloromethane = 91 %

2-Bromo-1-chloropropane = 101 %

Trifluorotoluene = 91 %

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Authorized:

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien and Gere Engineers, Div 10 JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardgrave; B10, 4-6'

SAMPLE NO. A6893 DATE COLLECTED ? DATE REC'D. 12/24/86 DATE ANALYZED 1/6/87

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromoform	<100.
Chloroform		1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 79 %
2-Bromo-1-chloropropane = 86 %
Trifluorotoluene = 84%

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Authorized:

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Purgeable Priority Pollutants

CLIENT O'Brien and Gere Engineers, Div 10 JOB NO. 3435.001.100

DESCRIPTION Nixon-Hardgraves; B10, 47-49'

SAMPLE NO. A6894 DATE COLLECTED 7 DATE REC'D. 12/24/86 DATE ANALYZED 1/6/87

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	330.
Vinyl chloride		Benzene	<10.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene	87.	Bromoform	<100.
Chloroform	<10.	1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 91 %

2-Bromo-1-chloropropane = 91 %

Trifluorotoluene = 91 %

Authorized:

Date:

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

ATTACHMENT 2.02

Ground Water and Facilities Discharge

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
Smith Corona Cortlandville	Peter G. Boyarski

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab.	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
MW-3	Upgradient	10/15/86	2:10 p		✓			2	VHO. BTX
MW-2	Downgradient	10/15/86	4:30		✓			2	601, 602.
MW-1	Down gradient	10/15/86	6:1[illegible]		✓			2	All questions
									to Guy Swenson,
									or Bob Martin.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Peter G. Boyarski		
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
Peter G. Boyarski	10/16 8:00 AM	Barbara P. Pawling	10-16-86 8:00AM
Method of Shipment: Hand ~~[illegible]~~ delivery			

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith Corona Cortlandville Well No. MW-1

Sampled By Peter Bojanowski Date 10/15/86 Time 6:10 pm

Weather 50°F Overcast Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth: (below top of casing) ~~[illegible]~~ 45 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 23.65 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 11 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = ____ gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Cloudy Odor No Turbidity Slight

Was an oil film or layer apparent? ~~yes~~ no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 11 gallons.

Did well go dry? No

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor No Turbidity Very little

Was an oil film or layer apparent? No

E. CONDUCTIVITY 10 umhos

F. pH –

G. TEMPERATURE 16°C

H. WELL SAMPLING NOTES:

Sample split with Jim Kraft

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith - Corona Well No. mw-2
Sampled By Peter G. Bezyrdus Date 10/15/86 Time
Weather ~50 Cloudy Sampled with Bailer ✓ Pump

A. WATER TABLE:

Well depth:
(below top of casing) 70.00 ft.

Well elevation:
(top of casing) ft.

Depth to water table:
(below top of casing) 50.35 ft.

Water table elevation: ft.

Length of water column (LWC) 19.65 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 3.3 gallons
4" diameter wells = 0.653 X (LWC) = gallons
6" diameter wells = 1.469 X (LWC) = gallons

B. PHYSICAL APPEARANCE AT START:

Color Cloudy Odor No Turbidity yes
Was an oil film or layer apparent?

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 10 gallons.
Did well go dry? No

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Cloudy Odor no Turbidity yes
Was an oil film or layer apparent? no

E. CONDUCTIVITY 0 ? if machine is working

F. pH not working

G. TEMPERATURE 12°C

H. WELL SAMPLING NOTES:

Split Sample with Jim Kraft D.E.C.
Well developed 10/14/86 11 - 12 noon

62.4
-.45

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith Corners   Well No. MW-3
Sampled By Peter Bogardus   Date 10/15   Time 2:15
Weather ~ 55 cloudy   Sampled with Bailer ✓   Pump ____

A. WATER TABLE:

Well depth:
(below top of casing) 81 ft.

Well elevation:
(top of casing) ____ ft.

Depth to water table:
(below top of casing) 61.95 ft.

Water table elevation: ____ ft.

Length of water column (LWC) ~ 20 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 3.26 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Light Brown   Odor no   Turbidity yes
Was an oil film or layer apparent? no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 10 gallons.
Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Light Brown   Odor None   Turbidity yes
Was an oil film or layer apparent? no

E. CONDUCTIVITY O ? if machine is working

F. pH not working

G. TEMPERATURE 11°C

H. WELL SAMPLING NOTES:

163
3.260

Well developed 10/14/86 at 1:00 p.m by pumping.

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LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION MW #1, Smith Corona

SAMPLE NO. A4316 DATE COLLECTED 10-15-86 DATE REC'D. 10-16-86 DATE ANALYZED 10-16-86

	ppb		ppb
[redacted]		t-1,3-Dichloropropene	<1.
Bromomethane		[redacted]	
[redacted]		Benzene	<1.
Chloroethane		[redacted]	
[redacted]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[redacted]	
[redacted]		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		[redacted]	
[redacted]		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		[redacted]	
[redacted]		Toluene	
Carbon tetrachloride		[redacted]	
[redacted]		Ethylbenzene	
1,2-Dichloropropane	↓	[redacted]	
		Freon 113	<1.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 81%

2-Bromo-1-chloropropane = 101%

Trifluorotoluene = 93%

Authorized: [signature]

Date: October 23, 1986

OBG Laboratories, Inc.
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LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION MW #2, Smith Corona

SAMPLE NO. A4317 **DATE COLLECTED** 10-15-86 **DATE REC'D.** 10-16-86 **DATE ANALYZED** 10-16-86

	ppb		ppb
[illegible]		t-1,3-Dichloropropene	<1.
Bromomethane		[illegible]	
[illegible]		Benzene	<1.
Chloroethane		[illegible]	
[illegible]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[illegible]	
[illegible]		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	3.	[illegible]	
[illegible]		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		[illegible]	
[illegible]		Ethylbenzene	
1,2-Dichloropropane		[illegible]	
		Freon 113	<1.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 76%

2-Bromo-1-chloropropane = 95%

Trifluorotoluene = 95%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: aRUnt

Date: October 23, 1986

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION MW #3, Smith Corona

SAMPLE NO. A4318 DATE COLLECTED 10-15-86 DATE REC'D. 10-16-86 DATE ANALYZED 10-16-86

	ppb		ppb
[illegible]		t-1,3-Dichloropropene	<1.
Bromomethane		[illegible]	
[illegible]		Benzene	
Chloroethane		[illegible]	
[illegible]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[illegible]	
[illegible]		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		[illegible]	
[illegible]		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		[illegible]	
[illegible]		Ethylbenzene	
1,2-Dichloropropane		[illegible]	
		Freon 113	<1.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 68%

2-Bromo-1-chloropropane = 91%

Trifluorotoluene = 89%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: October 23, 1986

29586013-018

PSTATE L[illegible]ORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME SCM CORTLAND					NO. OF CON-TAINERS	601/602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
1		1000		X	#2 PROCESS WELL	X							
2		1015		X	MH TO LAGOON	X							
3		1030		X	OUTFALL LAGOON	X							
4		1045		X	FLUME DISCHARGE	X							
5		1100		X	#1 PROCESS WELL	X							
					BLANK ORG FREE	X							

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	1023 1100	[signature]			
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	1023 1500				
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
		G. Lambert	10/23/86 3:00	Billing + Results to Lawyers Results ASAP	

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 102486032
Date: October 24, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Field Blank	#2 Process Well	MH to Lagoon	Outfall to Lagoon
ULI I.D.	29586013	29586014	29586015	29586016
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1	6	13	10
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: A Scala cs

Date: 10/24/86

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 102486032
Date: October 24, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Flume Discharge	#1 Process Well		
ULI I.D.	29586017	29586018		
EPA 601:				
Chloromethane	<1	<1		
Bromomethane	<1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	<1		
Chloroethane	<1	<1		
Methylene Chloride	<1	<1		
Trichlorofluoromethane	<1	<1		
1,1-Dichloroethylene	<1	<1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	<1		
Chloroform	<1	<1		
1,2-Dichloroethane	<1	<1		
1,1,1-Trichloroethane	<1	<1		
Carbon Tetrachloride	<1	<1		
Bromodichloromethane	<1	<1		
1,2-Dichloropropane	<1	<1		
t-1,3-Dichloropropylene	<1	<1		
Trichloroethylene	18	13		
Dibromochloromethane	<1	<1		
1,1,2-Trichloroethane	<1	<1		
c-1,3-Dichloropropylene	<1	<1		
1,1,2,2-Tetrachloroethane	<1	<1		
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	<1	<1		
EPA 602 (including Xylenes):				
Benzene	<1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1		
Xylenes	<1	<1		
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1		
1,2-Dichlorobenzene	<1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ppb.

Approved: A. Scala
CS

Date: 10/24/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services

Due 11-6-86
306860002015

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.

PROJECT NAME (SCM) Nixon, Hargrave

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	EPA 601/602						REMARKS
1		1000		✓	MW 1 - 45' well	2							
2		1230		✓	MW 2 - 71' well	2							
3		1400		✓	MW 3 - 85' well	2							
4		1030		✓	LAGOON SURFACE WATER	2							
5		1040		✓	LAGOON BOTTOM WATER	2							
6		1045		✓	LAGOON BOTTOM WATER DUPE*	2							
7		1200		✓	CONTAINER IN LAGOON	2							
					ORG FREE BLANK	1							
													*DO NOT REPORT

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	10/31 1400				
Relinquished by: (Signature) [signature]	Date/Time 10/31 1530	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) C. Scala	Date/Time 10-31-86 1530	Remarks: Sample Time SOG GDS	

1 Suit
7 PR. Gloves @ $2.00

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 110786002
Date: November 7, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	MW-1 45' Well 10/31/86	MW-2 71' Well 10/31/86	MW-3 85' Well 10/31/86	Lagoon Surface Water 10/31/86
ULI I.D.	30686007	30686008	30686009	30686010
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	15	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	3	37	<1	1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 11/7/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 110786002
Date: November 7, 1986

EPA 601/602:

CLIENT I.D. -Nixon, Hargrave, Devans & Doyle	Lagoon Bottom Water 10/31/86	Container in Lagoon 10/31/86	Organic Free Blank 10/31/86
ULI I.D.	30686011	30686013	30686013A
EPA 601:			
Chloromethane	<1	<1	<1
Bromomethane	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1
Vinyl Chloride	<1	<1	<1
Chloroethane	<1	<1	<1
Methylene Chloride	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1
Chloroform	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1
Bromodichloromethane	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1
Trichloroethylene	[illegible]1	[illegible]1	<1
Dibromochloromethane	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1
[illegible]1,2,2-Tetrachloroethane	<1	<1	<1
[illegible]trachloroethylene	<1	<1	<1
[illegible]moform	<1	<1	<1
[illegible]Chloroethylvinyl ether	<1	<1	<1
[illegible]A 602 (including Xylenes):			
[illegible]nzene	<1	<1	<1
Toluene	<1	<1	<1
[illegible]lbenzene	<1	<1	<1
[illegible]	<1	<1	<1
[illegible]ogenated Aromatics (601/602):			
[illegible]obenzene	<1	<1	<1
[illegible]Dichlorobenzene	<1	<1	<1
[illegible]Dichlorobenzene	<1	<1	<1
[illegible]Dichlorobenzene	<1	<1	<1

[illegible] results are expressed as ppb.

[illegible]

11/1/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services

UPSTATE LABORATORIES, INC.

Due 11-4-86

30386004-

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME SCM (LAWERS) NIXON, HARGRAVE, DEVANS + DOYLE

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	EPA 601/602						REMARKS
1	10/30/86	0900			#2 PROCESS WELL	2	✓						
2		0915			M.H. TO LAGOON	2	✓						
3		0930			OUTFALL TO LAGOON	2	✓						
4		1000			OUT FLOW FROM LAGOON	2	✓						
5		1015			LAGOON WATER	2	✓						
6		1030			SEWER DISCHARGE FLUME	2	✓						
7		1100			#1 PROCESS WELL	2	✓						
				*	ORG FREE BLANK	1	✓						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	10/30 1100				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[signature]	10/30 1500	C. Scala	10-30-86 1500	SAMPLE TIME 3 hrs \$30 = \$90.00

3 pans glass x ~~2.00~~ 6.00

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 110786001
Date: November 7, 1986

EPA 601/602:

CLIENT I.D.- Nixon, Hargrave, Devans & Doyle	#2 Process Well 10/30/86	#1 Process Well 10/30/86	Sewer Discharge Flume 10/30/86	Lagoon Water 10/30/86
ULI I.D.	30386004	30386005	30386006	30386007
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	8	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	8	19	28	3
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 11/7/86

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 110786001
Date: November 7, 1986

EPA 601/602:

CLIENT I.D.- Nixon, Hargrave, Devans & Doyle	Outflow from Lagoon 10/30/86	Outfall to Lagoon 10/30/86	M.H. to Lagoon 10/30/86	Organic Free Blank 10/30/86
ULI I.D.	30386008	30386009	30386010	30386011
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	1	4	5	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 11/7/86

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

3108 0027 - 0344

PROJECT NO.	PROJECT NAME (SCM) NIXON, HARGRAVE					NO. OF CON-TAINERS	EPA 601/602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
1	11-7-86	11:45		X	Surface Lagoon water	2	✓						
2		11:55		X	outflow from Lagoon	2	✓						
3		12:05		X	SEWER Discharge Flume	2	✓						
4		1:35		X	mw # 1	2	✓						well bailed for 18 gallons
5		1:45		X	Process well # 2	2	✓						
6		2:00		X	M.H. to Lagoon	2	✓						
7		2:10		X	outfall to Lagoon	2	✓						
8		2:20		X	Process well #1	2	✓						
					ORG FREE BLANK	1	✓						

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Sampled John [signature]	11/7/86 3:15				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
John [signature]	11/7/86 4:00	J. Lambert	11/7/86 4:00	Sampling charge 1 man @ $30.00 hr X 5 hrs. = $150.00

3 pair gloves $2.00 ea — $6.00

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 111186011
Date: November 11, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Lagoon Water 11/7/86	Outflow from Lagoon 11/7/86	Sewer Discharge Flume 11/7/86	MW1 11/7/86
ULI I.D.	31086027	31086028	31086029	31086030
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1	<1	25	2
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 11/11/86

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

Analysis Results
Report Number 111186011
Date: November 11, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Process Well #2 11/7/86	Manhole to Lagoon 11/7/86	Outfall to Lagoon 11/7/86	Process Well #1 11/7/86
ULI I.D.	31086031	31086032	31086033	31086034
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	5	6	3	5
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes				
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 11/11/86

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

Analysis Results
Report Number 111186011
Date: November 11, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Organic Free Blank 11/7/86			
ULI I.D.				
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride	<5			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<1			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform	<1			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
t-1,3-Dichloropropylene	<1			
Trichloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ppb.

Approved: [signature]

Date: 11/11/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services

3248602-C

UPS TE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME					NO. OF CONTAINERS	EPA 601/602						REMARKS
	NIYON, HARGRAVE												
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
1	11-20-86	11:00		X	Process well #2	2							
2	↓	11:15		X	M.H. to Lagoon	2							
3		11:30		X	outfall to Lagoon	2							
4		11:35		X	Sewer Discharge flume	2							
5		11:40		X	Process well #1	2							
6		11:50		X	Lagoon water	2							
7		12:00		X	outfall from Lagoon	2							
8		1:00		X	MW #1	2							
	↓	1:45		X	MW #2	2							
					ORG. BLANK	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
John Gaddis	11/20 4:00				
Relinquished by: (Signature) John Gaddis	11/20 4:10	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) C. Scala	Date/Time 11-20-86 1610	Remarks: 2 suits • $20.00; 4 gloves - $8.00; 2 men @ $30/hours X 3 hours each !	

TEL NO:17165468000 347 #040 P52

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 112686001
Date: November 26, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Outfall from Lagoon 11/20/86	Process Well #2 11/20/86	MH to Lagoon 11/20/86	Outfall to Lagoon 11/20/86
ULI I.D.	32486002	32486003	32486004	32486005
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	4	7	3	1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 11/25/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 112686001
Date: November 26, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Sewer Discharge Flume 11/20/86	Process Well #1 11/20/86	Lagoon Water 11/20/86	MW #1 11/20/86
ULI I.D.	32486006	32486007	32486008	32486009
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	8	11	1	3
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: Daniel [signature]

Date: 11/25/86

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 112686001
Date: November 26, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	MW #1 11/20/86	Organic Free Blank 11/20/86		
ULI I.D.	32486010	32486011		
EPA 601:				
Chloromethane	<1	<1		
Bromomethane	<1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	<1		
Chloroethane	<1	<1		
Methylene Chloride	<5	<5		
Trichlorofluoromethane	<1	<1		
1,1-Dichloroethylene	<1	<1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	<1		
Chloroform	<1	<1		
1,2-Dichloroethane	<1	<1		
1,1,1-Trichloroethane	<1	<1		
Carbon Tetrachloride	<1	<1		
Bromodichloromethane	<1	<1		
1,2-Dichloropropane	<1	<1		
t-1,3-Dichloropropylene	<1	<1		
Trichloroethylene	53	<1		
Dibromochloromethane	<1	<1		
1,1,2-Trichloroethane	<1	<1		
c-1,3-Dichloropropylene	<1	<1		
1,1,2,2-Tetrachloroethane	<1	<1		
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	<1	<1		
EPA 602 (including Xylenes):				
Benzene	<1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1		
Xylenes	<1	<1		
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1		
1,2-Dichlorobenzene	<1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ppb.

Approved: [signature]

Date: 11/25/86

Due 12-3-86

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.

PROJECT NAME Nixon Hargrave (SCM)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	EPA 601/602						REMARKS
	11-26-86	11:00		✓	PROCESS well #2	2	✓						
		11:15		✓	M.H. TO LAGOON	2	✓						
		11:20		✓	OUTFALL TO LAGOON	2	✓						
		11:30		✓	SEWER DISCHARGE FLUME	2	✓						
		11:45		✓	PROCESS well #1	2	✓						
		11:50		✓	PARKING LOT DRAIN	2	✓						
		12:00		✓	LAGOON WATER	2	✓						
		12:15		✓	OUTFALL FROM LAGOON	2	✓						
		12:00		✓	MW #1	2	✓						
		11:50		✓	MW #2	2	✓						
					Org. Free Blank	1	✓						

sampler

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[illegible]	11-25-86 1215				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[illegible]	11-26-86 1330	C. Scala	11-26-86 1330	9 hrs MANTIKU ~~x30.00~~ $270.00 3 pr gloves x2.00 = 6.00 3 TYVEK suit x10.00 = 30.00

Analysis Results
Report Number 120986008
Date: December 9, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Process Well #1 11/26/86	Parking Lot Drain 11/26/86	Lagoon Water 11/26/86	Outfall from Lagoon 11/26/86
ULI I.D.	33186005	33186006	33186007	33186008
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	4	<1	<1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 12/09/86

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 120986008
Date: December 9, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Process Well #2 11/26/86	Manhole to Lagoon 11/26/86	Outfall to Lagoon 11/26/86	Sewer Discharge Flume 11/26/86
ULI I.D.	33186001	33186002	33186003	33186004
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	3	2	2	2
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: David Wartert

Date: 12/09/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 120986008
Date: December 9, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	MW #1 11/26/86	MW #2 11/26/86	Organic Free Blank 11/26/86
ULI I.D.	33186009	33186010	33186011
EPA 601:			
Chloromethane	<1	<1	<1
Bromomethane	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1
Vinyl Chloride	<1	<1	<1
Chloroethane	<1	<1	<1
Methylene Chloride	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1
Chloroform	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1
Bromodichloromethane	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1
Trichloroethylene	1	43	<1
Dibromochloromethane	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1
Tetrachloroethylene	<1	<1	<1
Bromoform	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1
EPA 602 (including Xylenes):			
Benzene	<1	<1	<1
Toluene	<1	<1	<1
Ethylbenzene	<1	<1	<1
Xylenes	<1	<1	<1
Halogenated Aromatics (601/602):			
Chlorobenzene	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1

All results are expressed as ppb.

Approved: Daniel [signature]

Date: 12/09/86

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: *(Signature)*
[illegible]	[illegible]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Water Grab.	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
MW-1	Down Gradient	12/[illegible]	[illegible]		✓				[illegible]
MW-3	Upgradient	12/5/[illegible]	[illegible]		✓				
	[illegible]								

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
[illegible]	[illegible]	12/3/[illegible] [illegible]
Relinquished by: *(Signature)* [illegible]	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by Mobile Laboratory for field analysis: *(Signature)*	Date/Time

Dispatched by: *(Signature)*	Date/Time	Received for Laboratory by:	Date/Time
		[illegible]	12/[illegible] 9:00 AM

Method of Shipment:

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
Nixon - Hardgrave : Cortlandville	D.T. Bussey R.J. Forest

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Water Grab.	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
mw-4S	Downgradient	12/3/86	0945		✓			1	Cyanide
mw-4D	Downgradient	12/3/86	0945		✓			1	
mw-2S	Downgradient	12/3/86	1200		✓			1	
mw-2D	Downgradient	12/3/86	1200		✓			1	
mw-5S	Downgradient	12/3/86	1500		✓			1	
mw-5D	Downgradient	12/3/86	1500		✓			1	

Samples are preserved for metals

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) — Date/Time	Received for Laboratory by: [signature]	Date/Time 12/4/86 9:20 AM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY	SAMPLERS: (Signature)
[illegible]	[illegible]

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab.	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
[illegible] 1	[illegible]	12/3/8[illegible]	[illegible]		✓			2	[illegible]
MW-2	[illegible]	12/3/[illegible]	2:5[illegible]					2	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
[illegible]	[illegible] 4:15 pm 12/3/8[illegible]	12/3[illegible] [illegible]
Relinquished by: (Signature) [illegible]	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
		[illegible]	12/4/8[illegible] 9:[illegible] AM

Method of Shipment:

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY: Nixon - Hardgrave : Cortlandville

SAMPLERS: (Signature) D.T. Bussey R.J. Foresti

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
MW-4S	Downgradient	12/3/86	0945		✓			2	VHO - BTX
MW-4D	Downgradient	12/3/86	0945		✓			2	
MW-2S	Down gradient	12/3/86	1200		✓			2	
MW-2D	Down gradient	12/3/86	1200		✓			2	
MW-5S	Downgradient	12/3/86	1500		✓			2	
MW-5D	Downgradient	12/3/86	1500		✓			2	

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) Date/Time	Received for Laboratory by:	Date/Time 12/4/86 9:00AM
Method of Shipment:		

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

GROUND WATER SAMPLING FIELD LOG

Sample Location S. E. M Well No. MW-1

Sampled By Peter Bogardus Date 12/3/06 Time 1:00 p

Weather Raining ~ 35°F Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 48.00 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 22.12 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 25.88 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.21 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor None Turbidity None

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~ 12 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor No Turbidity Slight

Was an oil film or layer apparent? no

E. CONDUCTIVITY NA

F. pH NA

G. TEMPERATURE NA

H. WELL SAMPLING NOTES:

Split with D.E.C

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith Corona Well No. 2-S

Sampled By D.T. Bussey Date 12/3/86 Time 1200 pm

Weather Cool, light rain, ≈ 40° Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth:
(below top of casing) 72.0 ft.

Well elevation:
(top of casing) ____ ft.

Depth to water table:
(below top of casing) 47.39 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 24.61 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.01 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color clear Odor no Turbidity low

Was an oil film or layer apparent? no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 15.0 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color cloudy Odor no Turbidity high

Was an oil film or layer apparent? no

E. CONDUCTIVITY NA

F. pH NA

G. TEMPERATURE NA

H. WELL SAMPLING NOTES:

Split with D.E.C

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith Corona Well No. 2-D

Sampled By D.T. Bussey Date 12/3/86 Time 1200pm

Weather Cool, light rain, ≈40°F Sampled with Bailer _____ Pump _____

A. WATER TABLE:

Well depth: (below top of casing) 104 ft.

Well elevation: (top of casing) _____ ft.

Depth to water table: (below top of casing) 48.24 ft.

Water table elevation: _____ ft.

Length of water column (LWC) 55.76 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 9.09 gallons
4" diameter wells = 0.653 X (LWC) = _____ gallons
6" diameter wells = 1.469 X (LWC) = _____ gallons

B. PHYSICAL APPEARANCE AT START:

Color clear Odor no Turbidity low

Was an oil film or layer apparent? no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 30.0 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color clear Odor no Turbidity low

Was an oil film or layer apparent? no

E. CONDUCTIVITY NA

F. pH NA

G. TEMPERATURE NA

H. WELL SAMPLING NOTES:

Split with D.E.C.

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-3

Sampled By P.G.B Date 12/3/86 Time 2:30

Weather Overcast, Cool Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 85.00 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 59.74 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 25.26 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.11 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor None Turbidity Slight.

Was an oil film or layer apparent? no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 12 gallons.

Did well go dry? no.

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor none Turbidity slight

Was an oil film or layer apparent? None

E. CONDUCTIVITY N.A

F. pH N.A

G. TEMPERATURE N.A

H. WELL SAMPLING NOTES:

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-4S

Sampled By Peter Bogardus Date 12/3/86 Time 0945

Weather Cool, light rain Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 72.00 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 46.07 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 25.93 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.22 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 12 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Cloudy (lt Brown) Odor No Turbidity Low

Was an oil film or layer apparent? No

E. CONDUCTIVITY N/A

F. pH N/A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

Well became slightly silty while bailing. Sample taken for D.E.C

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith Corona Well No. 4-D

Sampled By D.T. Bussey Date 12/3/86 Time 0945

Weather cool, light rain, ≈ 40°F Sampled with Bailer X Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 104 ft. Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 46.91 ft. Water table elevation: ____ ft.

Length of water column (LWC) 57.09 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 9.31 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color clear Odor no Turbidity low

Was an oil film or layer apparent? no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 30.0 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color clear Odor no Turbidity low

Was an oil film or layer apparent? no

E. CONDUCTIVITY NA

F. pH NA

G. TEMPERATURE NA

H. WELL SAMPLING NOTES:

Split with D.E.C

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith Corona Well No. 5-5

Sampled By Don Bussey Date 10/3/86 Time 315 pm

Weather Cloudy, Cool, ≈ 40°F Sampled with Bailer X Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 38.0 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 15.85 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 22.15 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 3.61 gallons

4" diameter wells = 0.653 X (LWC) = ____ gallons

6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color clear Odor no Turbidity low

Was an oil film or layer apparent? no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 10.0 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color cloudy Odor no Turbidity high

Was an oil film or layer apparent? no

E. CONDUCTIVITY NA

F. pH NA

G. TEMPERATURE NA

H. WELL SAMPLING NOTES:

Split with D.E.C

GROUND WATER SAMPLING FIELD LOG

Sample Location Smith Corona Well No. 5-D
Sampled By Don Bussey Date 12/3/86 Time 3:00 pm
Weather Cloudy, Cool, ~ 40°F Sampled with Bailer X Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 70.0 ft. Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 16.4 ft. Water table elevation: ____ ft.

Length of water column (LWC) 53.6 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 8.74 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color clear Odor no Turbidity low
Was an oil film or layer apparent? no

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 30.0 gallons.
Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color clear Odor no Turbidity low
Was an oil film or layer apparent? no

E. CONDUCTIVITY NA

F. pH NA

G. TEMPERATURE NA

H. WELL SAMPLING NOTES:

Split with D.E.C

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
MW#1

SAMPLE NO. A6012 **DATE COLLECTED** 12/3/86 **DATE REC'D.** 12/4/86 **DATE ANALYZED** 12/4/86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	[illegible]
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	80	%
2-Bromo-1-chloropropane	=	79	%
Trifluorotoluene	=	77	%

Authorized: a Uhr

Date: 2-2-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT: O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION: Nixon Hargrave, SCM Site
Well #2-S

SAMPLE NO. A6007 DATE COLLECTED 12/3/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/4/86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	[illegible]
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	3.	Bromoform	[illegible]
Chloroform	[illegible]	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane	<1.	Tetrachloroethene	[illegible]
1,1,1-Trichloroethane	[illegible]	Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 99 %

2-Bromo-1-chloropropane = 94 %

Trifluorotoluene = 99 %

Authorized: [signature]

Date: 2-2-87

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Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
Well #2-D

SAMPLE NO. A6006 **DATE COLLECTED** 12/3/86 **DATE REC'D.** 12/4/86 **DATE ANALYZED** 12/4/86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	20.
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	7.	Bromoform	10.
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylene	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 92 %

2-Bromo-1-chloropropane = 98 %

Trifluorotoluene = 101 %

Authorized: [signature]

Date: 2-2-87

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Purgeable Priority Pollutants

CLIENT: O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION: Nixon Hargrave, SCM Site
MW #3

SAMPLE NO. A6013 DATE COLLECTED 12/3/86 DATE REC'D 12/4/86 DATE ANALYZED 12/4/86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylene	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 90 %

2-Bromo-1-chloropropane = 86 %

Trifluorotoluene = 77 %

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Authorized: [signature]

Date: 2-2-87

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Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.110

DESCRIPTION Nixon Hargrave, SCM Site
Well 4-S

SAMPLE NO. A6009 DATE COLLECTED 12/3/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/4/86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	<10.
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylene	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 99 %

2-Bromo-1-chloropropane = 99 %

Trifluorotoluene = 98 %

Authorized: aMmt

Date: 2-2-87

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LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.110

DESCRIPTION Nixon Hargrave, SCM Site
Well 4-D

SAMPLE NO. A6008 DATE COLLECTED 12/3/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/4/86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride	[illegible]	1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	<10.
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 95 %

2-Bromo-1-chloropropane = 98 %

Trifluorotoluene = 103 %

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Authorized: [signature]

Date: 2-2-87

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site

Well 5-D

SAMPLE NO. A6010 DATE COLLECTED 12/3/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/4/86

	ppb		ppb
Chloromethane		t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	<1.
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 84 %

2-Bromo-1-chloropropane = 83 %

Trifluorotoluene = 80 %

Authorized: [signature]

Date: 2-2-87

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OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
Trip Blank

SAMPLE NO. A6014 DATE COLLECTED 12/3/86 DATE REC'D. 12/4/86 DATE ANALYZED 12/4/86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		[illegible]	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 70 %

2-Bromo-1-chloropropane = 72 %

Trifluorotoluene = 81 %

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Authorized: [signature]

Date: 2-2-87

OBG LABORATORIES, INC.

PRIVILEGED & CONFIDENTIAL
PREPARED AT ATTORNEY'S REQUEST

Laboratory Report

CLIENT: O'BRIEN & GERE ENGINEERS, INC. JOB NO. 2114.003.517

DESCRIPTION: Nixon-Hargrave, SCM site, Cortlandville

DATE COLLECTED: 12-3-86 DATE REC'D. 12-4-86 DATE ANALYZED:

	Sample #	CYANIDE			
Well 2-D	A6006	<0.05			
Well 2-S	A6007	<0.05			
Well 4-D	A6008	<0.05			
Well 4-S	A6009	<0.05			
Well 5-D	A6010	<0.05			
Well 5-S	A6011	<0.05			
MW#1	A6012	<0.05			
MW#3	A6013	<0.05			

Methodology: Federal Register — 40 CFR, Part 136, October 26, 1984

Units: mg/l (ppm) unless otherwise noted

Comments:

Authorized: a Allmat

Date: February 9, 1987

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Rd. / Syracuse, NY / 13221 / (315) 457-1494

UPST[illegible] LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

33886003-010

PROJECT NO.	PROJECT NAME NIXON HARGRAVE (SCM)					NO. OF CONTAINERS	EPA 601/602					REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION							
	12-4-86	1130		✓	PROCESS well #2	2	✓					
	12-4-86	1140		✓	M.H. TO LAGOON	2	✓					
	12-4-86	1150		✓	~~R~~ PROCESS well #1	2	✓					
	12-4-86	1155		✓	OUTFALL TO LAGOON	2	✓					
	12-4-86	1200		✓	SEWER DISCHARGE FLUME	2	✓					
	12-4-86	1215		✓	LAGOON WATER	2	✓					
	12-4-86	1230		✓	OUTFALL FROM LAGOON	2	✓					
				✓	ORG FREE BLANK	1	✓					

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	12-4 1230				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
[signature]	124 1530	C. Scala	12-4 86 1530	3 hrs SAMPLE x 30.00 – $90.00 2 PR. RUBBER gloves 2.00 – 4.00	

$94.00

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 120986009
Date: December 9, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Process Well #2 12/4/86	Manhole to Lagoon 12/4/86	Process Well #1 12/4/86	Outfall to Lagoon 12/4/86
ULI I.D.	33886003	33886004	33886005	33886006
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	3	2	3	2
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved:

Date: 12/09/86

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 120986009
Date: December 9, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Flume Sewer Discharge 12/4/86	Lagoon Water 12/4/86	Outfall from Lagoon 12/4/86	Organic Free Blank 12/4/86
ULI I.D.	33886007	33886008	33886009	33886010
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	3	<1	<1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 12/09/86

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY NIXON-HARGRAVE CORTLANDVILLE 2910.010

SAMPLERS: (Signature) Scott D Meyer, Peter G. Burgundus

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab.	Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
1	MW-6	12/11/86	10:50		X			2	601, 602
2	MW-8	↓	11:13		X			2	↓
3	MW-7	↓	12:05		X			2	↓
4	MW-1	↓	12:30		X			2	↓
5	MW-3	↓	2:30		X			2	↓

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
O'BRIEN & GERE ENGINEERS, INC Scott D Meyer		12/11/86 4:00 PM
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
		Ann Ebbets	12/11/86 4:00pm

Method of Shipment: COMPANY VAN

O'Brien & Gere Engineers, Inc.
Box 4873 / 1304 Buckley Road / Syracuse, NY 13221 / (315) 451-4700
Blue Bell, PA / Boston, MA / Landover, MD / New York, NY / St. Louis, MO / White Plains, NY

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-1

Sampled By P.G.B ; S.D.M Date 12/11/86 Time 12:30

Weather ~30°F, overcast Sampled with Bailer ✓ Pump ______

A. WATER TABLE:

Well depth: (below top of casing) 46.30 ft.

Well elevation: (top of casing) ______ ft.

Depth to water table: (below top of casing) 21.55 ft.

Water table elevation: ______ ft.

Length of water column (LWC) 24.75 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.03 gallons
4" diameter wells = 0.653 X (LWC) = ______ gallons
6" diameter wells = 1.469 X (LWC) = ______ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~12 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

E. CONDUCTIVITY N/A

F. pH N/A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

Sampled with dedicated bailer

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-2S
Sampled By P.G.B ; S.D.M Date 12/12 Time 12:20
Weather Flurries ; 25°F Sampled with Bailer √ Pump ______

A. WATER TABLE:

Well depth:
(below top of casing) 71 ft.

Well elevation:
(top of casing) ______ ft.

Depth to water table:
(below top of casing) 46.73 ft.

Water table elevation: ______ ft.

Length of water column (LWC) 24.27 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 3.9 gallons
4" diameter wells = 0.653 X (LWC) = ______ gallons
6" diameter wells = 1.469 X (LWC) = ______ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor None Turbidity None
Was an oil film or layer apparent? None

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~12 gallons.
Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Cloudy Odor no Turbidity slight
Was an oil film or layer apparent? No

E. CONDUCTIVITY N/A

F. pH N/A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

Sampled with dedicated bailer.

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-2D
Sampled By P.G.B; S.D.M Date 12/12/86 Time 12:30
Weather ~25° Flurries Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth:
(below top of casing) 104 ft.

Well elevation:
(top of casing) ____ ft.

Depth to water table:
(below top of casing) 47.96 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 56.04 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 9.13 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity None
Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~30 gallons.
Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor no Turbidity no
Was an oil film or layer apparent? no

E. CONDUCTIVITY N.A

F. pH N.A

G. TEMPERATURE N.A

H. WELL SAMPLING NOTES:

Evacuated with Pump

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M. Well No. MW-3

Sampled By P.G.B., S.D.M Date 12/11/86 Time 2:30 p.m

Weather ~30 overcast Sampled with Bailer ____ Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 83.4 ft.

Well elevation: (top of casing) ________ ft.

Depth to water table: (below top of casing) 58.02 ft.

Water table elevation: ________ ft.

Length of water column (LWC) 25.38 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.13 gallons
4" diameter wells = 0.653 X (LWC) = ________ gallons
6" diameter wells = 1.469 X (LWC) = ________ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~12 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Brown Odor No Turbidity No

Was an oil film or layer apparent? No

E. CONDUCTIVITY N/A

F. pH N/A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-45

Sampled By P.G.B. S.D.M Date 12/12 Time 10:30

Weather ~ Flume, 75 °F Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 74.40 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 45.43 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 28.97 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.7 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~15 gallons.

Did well go dry? No

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

E. CONDUCTIVITY N/A

F. pH N/A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

Evacuated with Bailer.

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-4D
Sampled By P.G.B Date 12/12/86 Time 10:45
Weather 25°F, Snowy Sampled with Bailer / Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 104 ft. Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 46.30 ft. Water table elevation: ____ ft.

Length of water column (LWC) 57.7 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 9.4 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~30 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

E. CONDUCTIVITY NA

F. pH N.A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

Evacuated with Keck Pump.

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-5D

Sampled By P.G.B., S.D.M Date 12/12/86 Time 1:40

Weather 25° F; Flurries Sampled with Bailer ✓ Pump ______

A. WATER TABLE:

Well depth:
(below top of casing) 71.9 ft.

Well elevation:
(top of casing) ______ ft.

Depth to water table:
(below top of casing) 14.86 ft.

Water table elevation: ______ ft.

Length of water column (LWC) 57.04 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 9.29 gallons
4" diameter wells = 0.653 X (LWC) = ______ gallons
6" diameter wells = 1.469 X (LWC) = ______ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~30 gallons.

Did well go dry? ______

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor no Turbidity no

Was an oil film or layer apparent? no

E. CONDUCTIVITY N/A

F. pH N/A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

Evacuated with Keck pump.

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-55
Sampled By P.G.B, S.D.M Date 12/12/86 Time 1:30
Weather ~25 Flurries Sampled with Bailer √ Pump ____

A. WATER TABLE:

Well depth:
(below top of casing) 39.7 ft.

Well elevation:
(top of casing) ________ ft.

Depth to water table:
(below top of casing) 14.20 ft.

Water table elevation: ________ ft.

Length of water column (LWC) 25.50 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 4.15 gallons
4" diameter wells = 0.653 X (LWC) = ________ gallons
6" diameter wells = 1.469 X (LWC) = ________ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~13 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor no Turbidity no

Was an oil film or layer apparent? No

E. CONDUCTIVITY N.A

F. pH N.A

G. TEMPERATURE N.A

H. WELL SAMPLING NOTES:

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-6
Sampled By P.G.B.; S.D.M. Date 12/11/86 Time 10:50A
Weather ~30 Cloudy Sampled with Bailer ✓ Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 62 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 47.89 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 14.11 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 6.89 gallons
4" diameter wells = 0.653 X (LWC) = ____ gallons
6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor ~None Turbidity Slight
Was an oil film or layer apparent? ~No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~8 gallons.
Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Brown Odor None Turbidity moderate
Was an oil film or layer apparent? No

E. CONDUCTIVITY ____

F. pH ____

G. TEMPERATURE ____

H. WELL SAMPLING NOTES:

GROUND WATER SAMPLING FIELD LOG

Sample Location SCM Well No. MW-7

Sampled By SDM / PGB Date 12/11/86 Time 12:05

Weather >30°F cloudy Sampled with Bailer X Pump ____

A. WATER TABLE:

Well depth: (below top of casing) 60.05 ft.

Well elevation: (top of casing) ____ ft.

Depth to water table: (below top of casing) 48.67 ft.

Water table elevation: ____ ft.

Length of water column (LWC) 11.38 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 1.85 gallons x 3 5.56

4" diameter wells = 0.653 X (LWC) = ____ gallons

6" diameter wells = 1.469 X (LWC) = ____ gallons

B. PHYSICAL APPEARANCE AT START:

Color clear Odor slight* Turbidity NONE

Was an oil film or layer apparent? YES

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~6 gallons.

Did well go dry? NO

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color greyish Odor slight* Turbidity slight

Was an oil film or layer apparent? YES

E. CONDUCTIVITY ____

F. pH ____

G. TEMPERATURE ____

H. WELL SAMPLING NOTES:

* it was difficult to smell other odors due to near by plant discharge to atmosphere & wind direction coming towards MW-7.

SAMPLED with BOttom VALVE BAILER

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-8

Sampled By P.G.B ; S.D.M Date 12/11/86 Time 11:13

Weather ~30°F overcast Sampled with Bailer ✓ Pump ______

A. WATER TABLE:

Well depth:
(below top of casing) 62 ft.

Well elevation:
(top of casing) ______ ft.

Depth to water table:
(below top of casing) 48.07 ft.

Water table elevation: ______ ft.

Length of water column (LWC) 13.93 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = ~~7.0~~ 2.27 gallons
4" diameter wells = 0.653 X (LWC) = ______ gallons
6" diameter wells = 1.469 X (LWC) = ______ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor No Turbidity No

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ~7.0 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Light Brown Odor No Turbidity No

Was an oil film or layer apparent? no

E. CONDUCTIVITY N/A

F. pH N/A

G. TEMPERATURE N/A

H. WELL SAMPLING NOTES:

Sampled with top loading bailer.

GROUND WATER SAMPLING FIELD LOG

Sample Location S.C.M Well No. MW-9

Sampled By P.G.B ; S.D.M Date 12/12/86 Time 7:40

Weather 25°F , Flurries Sampled with Bailer ✓ Pump ______

A. WATER TABLE:

Well depth:
(below top of casing) ~100 ft.

Well elevation:
(top of casing) ______ ft.

Depth to water table:
(below top of casing) 48.36 ft.

Water table elevation: ______ ft.

Length of water column (LWC) 51.64 ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = 8.4 gallons
4" diameter wells = 0.653 X (LWC) = ______ gallons
6" diameter wells = 1.469 X (LWC) = ______ gallons

B. PHYSICAL APPEARANCE AT START:

Color Clear Odor no Turbidity no

Was an oil film or layer apparent? No

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling 25 gallons.

Did well go dry? no

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color Clear Odor no Turbidity no

Was an oil film or layer apparent? No

E. CONDUCTIVITY N.A

F. pH N.A

G. TEMPERATURE N.A

H. WELL SAMPLING NOTES:

Evacuated with Keck-Pump

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT Div. 10 **JOB NO.** 3435.001.100

DESCRIPTION SCM Cortlandville, Nixon Hargrave, MW-1

SAMPLE NO. A6340 **DATE COLLECTED** 12-11-86 **DATE REC'D.** 12-11-86 **DATE ANALYZED** 12-12-86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane	<1.	Trichloroethene	[illegible]
Vinyl chloride	<1.	Benzene	<1.
Chloroethane	<1.	Dibromochloromethane	<1.
Methylene chloride	<1.	1,1,2-Trichloroethane	<1.
1,1-Dichloroethene	<1.	c-1,3-Dichloropropene	<1.
1,1-Dichloroethane	<1.	2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	<1.	Bromoform	<10.
Chloroform	<1.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane	<1.	Tetrachloroethene	<1.
1,1,1-Trichloroethane	<1.	Toluene	<1.
Carbon tetrachloride	<1.	Chlorobenzene	<1.
Bromodichloromethane	<1.	Ethylbenzene	<1.
1,2-Dichloropropane	<1.	Xylenes	<1.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES

Bromochloromethane =	99%
2-Bromo-1-chloropropane =	102%
Trifluorotoluene =	99%

Authorized: [signature]

Date: 1-12-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

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LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site

MW#2-S

SAMPLE NO. A6413 DATE COLLECTED 12/12/86 DATE REC'D. 12/12/86 DATE ANALYZED 12/15/86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	14.
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	2.	Bromoform	<10.
Chloroform	<1.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	97	%
2-Bromo-1-chloropropane	=	104	%
Trifluorotoluene	=	98	%

Authorized: [signature]

Date: 2-2-87

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Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
MW #2-D

SAMPLE NO. A6412 **DATE COLLECTED** 12/12/86 **DATE REC'D.** 12/12/86 **DATE ANALYZED** 12/15/86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	24.
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	9.	Bromoform	<10
Chloroform	<1.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	87	%
2-Bromo-1-chloropropane	=	97	%
Trifluorotoluene	=	96	%

Authorized: [signature]

Date: 2-2-87

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OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT Div. 10 JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, Cortlandville, MW-3

SAMPLE NO. A6341 DATE COLLECTED 12-11-86 DATE REC'D. 12-11-86 DATE ANALYZED 12-12-86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<1.
Bromomethane	<1.	Trichloroethene	<1.
Vinyl chloride	<1.	Benzene	<1.
Chloroethane	<1.	Dibromochloromethane	<1.
Methylene chloride	<1.	1,1,2-Trichloroethane	<1.
1,1-Dichloroethene	<1.	c-1,3-Dichloropropene	<1.
1,1-Dichloroethane	<1.	2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	<1.	Bromoform	<10.
Chloroform	<1.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane	<1.	Tetrachloroethene	<1.
1,1,1-Trichloroethane	<1.	Toluene	<1.
Carbon tetrachloride	<1.	Chlorobenzene	<1.
Bromodichloromethane	<1.	Ethylbenzene	<1.
1,2-Dichloropropane	<1.	Xylenes	<1.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 91%

2-Bromo-1-chloropropane = 98%

Trifluorotoluene = 88%

Authorized: [signature]

Date: 1-12-87

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Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
MW#4-S

SAMPLE NO. A6415 **DATE COLLECTED** 12/12/86 **DATE REC'D.** 12/12/86 **DATE ANALYZED** 12/15/86

	ppb		ppb
Chloromethane	<1	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	[illegible]
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	<10
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 103 %

2-Bromo-1-chloropropane = 111 %

Trifluorotoluene = 95 %

Authorized: [signature]

Date: 2-2-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
MW#4-D

SAMPLE NO. A6414 DATE COLLECTED 12/12/86 DATE REC'D. 12/12/86 DATE ANALYZED 12/15/86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	(.9)
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	<10.
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 97 %

2-Bromo-1-chloropropane = 109 %

Trifluorotoluene = 98 %

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: 2-2-87

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM site, MW#5S

SAMPLE NO. A6417 **DATE COLLECTED** 12-12-86 **DATE REC'D.** 12-12-86 **DATE ANALYZED** 12-15-86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	9.
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	[illegible]
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	2.	Bromoform	<10.
Chloroform	<1.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	[illegible]
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 96%

2-Bromo-1-chloropropane = 99%

Trifluorotoluene = 92%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: March 6, 1987

OBG

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site

MW#5-D

SAMPLE NO. A6416 **DATE COLLECTED** 12/12/86 **DATE REC'D.** 12/12/86 **DATE ANALYZED** 12/15/86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	9
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	3.	Bromoform	<10.
Chloroform	<1.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	91	%
2-Bromo-1-chloropropane	=	99	%
Trifluorotoluene	=	107	%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: a [signature]

Date: 2-2-87

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere **JOB NO.** 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM Site, MW-6

SAMPLE NO. A6337 **DATE COLLECTED** 12-11-86 **DATE REC'D.** 12-11-86 **DATE ANALYZED** 12-12-86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<10.
Bromomethane	<1.	Trichloroethene	240.
Vinyl chloride	<1.	Benzene	<1.
Chloroethane	<1.	Dibromochloromethane	<10.
Methylene chloride	<1.	1,1,2-Trichloroethane	<10.
1,1-Dichloroethene	<1.	c-1,3-Dichloropropene	<10.
1,1-Dichloroethane	<1.	2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	6.	Bromoform	<10.
Chloroform	3.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane	<1.	Tetrachloroethene	1.
1,1,1-Trichloroethane	8.	Toluene	1.
Carbon tetrachloride	<1.	Chlorobenzene	<1.
Bromodichloromethane	<1.	Ethylbenzene	<1.
1,2-Dichloropropane	<10.	Xylenes	1.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES

Bromochloromethane =	104%
2-Bromo-1-chloropropane =	106%
Trifluorotoluene =	98%

Authorized: aNlt

Date: 1-12-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT Div. 10 **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave Cortlandville, MW-7

SAMPLE NO. A6338 **DATE COLLECTED** 12-11-86 **DATE REC'D.** 12-11-86 **DATE ANALYZED** 12-12-86

	ppb		ppb
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane	<10.	Trichloroethene	36.
Vinyl chloride	<10.	Benzene	<10.
Chloroethane	<10.	Dibromochloromethane	<10.
Methylene chloride	<10.	1,1,2-Trichloroethane	<10.
1,1-Dichloroethene	<10.	c-1,3-Dichloropropene	<10.
1,1-Dichloroethane	<10.	2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene	1200.	Bromoform	<100.
Chloroform	<100.	1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane	<10.	Tetrachloroethene	<10.
1,1,1-Trichloroethane	<10.	Toluene	<10.
Carbon tetrachloride	<10.	Chlorobenzene	<10.
Bromodichloromethane	<10.	Ethylbenzene	<10.
1,2-Dichloropropane	<10.	Xylenes	21.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES

Bromochloromethane =	93%
2-Bromo-1-chloropropane =	94%
Trifluorotoluene =	93%

Petroleum Detected

Authorized: [illegible signature]

Date: 1/12-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT Div. 10 JOB NO. 3435.001.100

DESCRIPTION SCM Cortlandville: Nixon-Hargrave, MW-8

SAMPLE NO. A6339 DATE COLLECTED 12-11-86 DATE REC'D. 12-11-86 DATE ANALYZED 12-12-86

	ppb		ppb
Chloromethane	<1.	t-1,3-Dichloropropene	<10.
Bromomethane	<1.	Trichloroethene	10.
Vinyl chloride	<1.	Benzene	<1.
Chloroethane	<1.	Dibromochloromethane	<10.
Methylene chloride	<1.	1,1,2-Trichloroethane	<10.
1,1-Dichloroethene	<1.	c-1,3-Dichloropropene	<10.
1,1-Dichloroethane	2.	2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	30.	Bromoform	<10.
Chloroform	29.	1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane	<1.	Tetrachloroethene	<1.
1,1,1-Trichloroethane	<4.	Toluene	<1.
Carbon tetrachloride	<1.	Chlorobenzene	<1.
Bromodichloromethane	<1.	Ethylbenzene	<1.
1,2-Dichloropropane	<10.	Xylenes	<1.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 107%

2-Bromo-1-chloropropane = 114%

Trifluorotoluene = 100%

Authorized: [signature]

Date: 1-12-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG
LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM site, MW#9

SAMPLE NO. A6418 DATE COLLECTED 12-12-86 DATE REC'D. 12-12-86 DATE ANALYZED 12-15-86

	ppb		ppb
Chloromethane	[illegible]	t-1,3-Dichloropropene	<1.
Bromomethane		Trichloroethene	[illegible]
Vinyl chloride		Benzene	<1.
Chloroethane		Dibromochloromethane	<1.
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Bromoform	<10.
Chloroform		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		Xylenes	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 96%

2-Bromo-1-chloropropane = 102%

Trifluorotoluene = 104%

Authorized: [signature]

Date: March 6, 1987

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

34486015-0

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME					NO. OF CONTAINERS	EPA 601/602					REMARKS
	Nixon Har Grave											
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION							
1	12-11-86	10:30		X	Process well # 2	2						
2		10:40		X	Process well # 1							
3		10:45		X	M.H. To Lagoon							
4		10:50		X	outflow to Lagoon							
5		10:55		X	outflow from Lagoon							
6		10:55		X	Lagoon water							
7		11:00		X	San discharge flume							
					Organic Free Blank	1						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
John Sodaro	12/11 11:15				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
		Joyce Snogles	12/11/86 1300	Done ~~[illegible]~~ All by upstate 1 man @ 30.00/hour x 2 hrs = $60.00 1 glovcs	

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 121986001
Date: December 19, 1986

EPA 601/602:

CLIENT I.D.- Nixon, Hargrave, Devans and Doyle	Process Well #2 12/11/86 10:30 AM	Process Well #1 12/11/86 10:40 AM	Manhole to Lagoon 12/11/86 10:45 AM	Outfall to Lagoon 12/11/86 10:50 AM
ULI I.D.	34486015	34486016	34486017	34486018
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	4	5	3	3
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

Approved: [signature]

Date: 12/19/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 121986001
Date: December 19, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Outfall from Lagoon 12/11/86[1]	Lagoon Water 12/11/86 10:55 AM	Sewer Discharge Flume 12/11/86[2]	Organic Free Blank
ULI I.D.	34486019	34486020	34486021	34486022
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<1
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1 Trace	<1 Trace	4	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ppb.

[1] 10:55 AM [2] 11:00 AM

Approved: [signature] NP

Date: 12/19/86

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 121986001
Date: December 19, 1986

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans and Doyle	Process Well #2 Spike 12/11/86			
ULI I.D.	34486015			
EPA 601:				
Chloromethane	--			
Bromomethane	--			
Dichlorodifluoromethane	--			
Vinyl Chloride	--			
Chloroethane	--			
Methylene Chloride	--			
Trichlorofluoromethane	--			
1,1-Dichloroethylene	102%			
1,1-Dichloroethane	--			
t-1,2-Dichloroethylene	--			
Chloroform	--			
1,2-Dichloroethane	--			
1,1,1-Trichloroethane	--			
Carbon Tetrachloride	--			
Bromodichloromethane	--			
1,2-Dichloropropane	--			
t-1,3-Dichloropropylene	--			
Trichloroethylene	93%			
Dibromochloromethane	--			
1,1,2-Trichloroethane	--			
c-1,3-Dichloropropylene	--			
1,1,2,2-Tetrachloroethane	--			
Tetrachloroethylene	--			
Bromoform	--			
2-Chloroethylvinyl ether	--			
EPA 602 (including Xylenes):				
Benzene	91%			
Toluene	103%			
Ethylbenzene	--			
Xylenes	--			
Halogenated Aromatics (601/602):				
Chlorobenzene	105%			
1,2-Dichlorobenzene	--			
1,3-Dichlorobenzene	--			
1,4-Dichlorobenzene	--			

All results are expressed as ppb unless otherwise stated.

Approved: [signature]

Date: 12/19/86

TATE LABORATORIES, INC.

36286002 - 1

CHAIN OF CUSTODY RECORD

PROJECT NO.:

PROJECT NAME: SCM Nixon, Hargrave,

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	EPA 601/602						REMARKS
	12-24			✓	Process Well #1	2							PRES w/ HCL <
				✓	Process Well #2	2							
				✓	M.H. to Lagoon	2							
				✓	Outfall to Lagoon	2							
				✓	Lagoon Water	2							
				✓	Outfall from Lagoon	2							Very low flow
				✓	Sewer Discharge M.H.	2							
				✓	Org Free Blank	1							No work at plant
													Low flow at
													outfalls

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	12-24 / 1000				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[signature]	12-24 / 1200	C. Scala	12-24-86 / 1200	MAN TIME 2 hrs 30 min #6

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 011387007
Date: January 13, 1987

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Process Well #1 12/24/86	Process Well #2 12/24/86	Manhole to Lagoon 12/24/86	Outfall to Lagoon 12/24/86
ULI I.D.	36286002	36286003	36286004	36286005
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	6	<1	2	1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l unless otherwise stated.

Approved: A Jacobs MP

Date: 1/13/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 011387007
Date: January 13, 1987

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Lagoon Water 12/24/86	Outfall from Lagoon 12/24/86	Sewer Discharge Flume 12/24/86	Organic Free Blank 12/24/86
ULI I.D.	36286006	36286007	36286008	36286009
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1 Trace	<1	6	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l unless otherwise stated.

Approved: A. Scala ml

Date: 1/13/87

00387001-008

UPST[illegible]E LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.

PROJECT NAME SCM NIXON, HARGRAVE

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	EPA 601/602						REMARKS
	1-2-87			✓	PROCESS well #1	2							NOTED slight oily film on sample
				✓	PROCESS well #2	2							
				✓	M.H. TO LAGOON	2							
				✓	OUTFALL TO LAGOON	2							
				✓	LAGOON WATER	2							
				✓	OUTFALL FROM LAGOON	2							
				✓	SEWER DISCHARGE PLUME	2							
				✓	ORG FREE BLANK	1							
													~~HEAVY~~ SNOWFALL

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	1-2-87 1300				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
[signature]	1-2-87 1700	C. Scala	1-2-87 1700	2 hrs x 30.00/hr = $60.00 ule sampling	

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 011387008
Date: January 13, 1987

EPA 601/602:

CLIENT I.D.- Nixon, Hargrave, Devans & Doyle	Process Well #1 1/2/87	Process Well #2 1/2/87	Manhole to Lagoon 1/2/87	Ou to 1/
ULI I.D.	00387001	00387002	00387003	00
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<1
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<
1,1-Dichloroethane	<1	<1	<1	<
t-1,2-Dichloroethylene	<1	<1	<1	<
Chloroform	<1	<1	<1	<
1,2-Dichloroethane	<1	<1	<1	<
1,1,1-Trichloroethane	<1	<1	<1	<
Carbon Tetrachloride	<1	<1	<1	<
Bromodichloromethane	<1	<1	<1	<
1,2-Dichloropropane	<1	<1	<1	<
t-1,3-Dichloropropylene	<1	<1	<1	<
Trichloroethylene	4	<1	<1 Trace	1
Dibromochloromethane	<1	<1	<1	<
1,1,2-Trichloroethane	<1	<1	<1	<
c-1,3-Dichloropropylene	<1	<1	<1	<
1,1,2,2-Tetrachloroethane	<1	<1	<1	<
Tetrachloroethylene	<1	<1	<1	<
Bromoform	<1	<1	<1	<
2-Chloroethylvinyl ether	<1	<1	<1	
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	
Toluene	<1	<1	<1	<
Ethylbenzene	<1	<1	<1	
Xylenes	<1	<1	<1	
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	
1,2-Dichlorobenzene	<1	<1	<1	
1,3-Dichlorobenzene	<1	<1	<1	
1,4-Dichlorobenzene	<1	<1	<1	

All results are expressed as ug/l unless otherwise stated.

Approved: [signature]

Date: 1/13/87

Analysis Results
Report Number 011387008
Date: January 13, 1987

EPA 601/602:

CLIENT I.D. - Nixon, Hargrave, Devans & Doyle	Lagoon Water 1/2/87	Outfall from Lagoon 1/2/87	Sewer Flume Discharge 1/2/87	Organic Free Blank 1/2/87
ULI I.D.	00387005	00387006	00387007	00387008
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1	<1	<1 Trace	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed in ug/l unless otherwise stated.

Approved: ______________ mp

Date: 1/13/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 020987001
Date: February 9, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 1/15/87	Process Well #2 1/15/87	Manhole to Lagoon 1/15/87	Outfall to Lagoon 1/15/87
ULI I.D.	01687001	01687002	01687003	01687004
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1 Trace	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	5	<1 Trace	4	2
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.

Approved: [signature]

Date: 2/09/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 020987001
Date: February 9, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Outfall from Lagoon 1/15/87	Lagoon Water 1/15/87	Sewer Discharge Flume 1/15/87	Organic Free Blank 1/15/87
ULI I.D.	01687005	01687006	01687007	01687008
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1 Trace	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1 Trace	1	4	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.

Approved: ______________________

Date: 2/09/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Due 1-24

UPSTATE LABORATORIES, INC.

02387005

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME SCM NIXON, HARGRAVE					NO. OF CONTAINERS	8OA 601/602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	1-22-87	1430		✓	PROCESS WELL #1	2	✓						
		1440		✓	PROCESS WELL #2	2	✓						
		1450		✓	M.H. TO LAGOON	2	✓						
		1500		✓	OUTFALL TO LAGOON	2	✓						
		1510		✓	OUTFALL FROM LAGOON	2	✓						
		1520		✓	LAGOON WATER	2	✓						
		1530		✓	SEWER DISCHARGE FLUME	2	✓						
		N/A		✓	8OA FROG BLANK	1	✓						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	1-22-87 1530				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
[signature]	1-22-87 1700	C. Scala	1-22-87 1700	30$^{\circ 2}$ sampler TIME x 2 hr.	

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 020987018
Date: February 9, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 1/22/87	Process Well #2 1/22/87	Manhole to Lagoon 1/22/87	Outfa to La 1/22.
ULI I.D.	02387005	02387006	02387007	0238'
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	5	<1 Trace	6	3
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.

Approved: [signature]

Date: 2/09/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 020987018
Date: February 9, 1987

[illegible]A 601/6[illegible]

CLIENT I.[illegible] Nixon, Ha[illegible] Devans & [illegible]	Outfall from Lagoon 1/22/87	Lagoon Water 1/22/87	Sewer Discharge Flume 1/22/87	Organic Free Blank 1/22/87
ULI I.D.	02387009	02387010	02387011	02387012
EPA 601:				
Chlorometha[illegible]	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodif[illegible]thane	<1	<1	<1	<1
Vinyl Chlo[illegible]	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene [illegible]	<10	<10	<10	<10
Trichlorof[illegible]hane	<1	<1	<1	<1
1,1-Dichlo[illegible]ene	<1	<1	<1	<1
1,1-Dichlo[illegible]	<1	<1	<1	<1
t-1,2-Dich[illegible]ene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichlo[illegible]	<1	<1	<1	<1
1,1,1-Trich[illegible]ane	<1 Trace	<1	<1	<1
Carbon Tet[illegible]de	<1	<1	<1	<1
Bromodichlo[illegible]ne	<1	<1	<1	<1
1,2-Dichlo[illegible]	<1	<1	<1	<1
t[illegible]3-Dich[illegible]ylene	<1	<1	<1	<1
T[illegible]chloroe[illegible]	<1 Trace	1	6	<1
Dibromochl[illegible]ne	<1	<1	<1	<1
1,1,2-Tric[illegible]ane	<1	<1	<1	<1
c-1,3-Dic[illegible]ylene	<1	<1	<1	<1
1,1,2,2-Te[illegible]oethane	<1	<1	<1	<1
Tetrachlo[illegible]ne	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroe[illegible] ether	<1	<1	<1	<1
EPA 602 ([illegible]ng Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenz[illegible]	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogena[illegible]atics (601/602):				
Chlorob[illegible]	<1	<1	<1	<1
1,2-Dich[illegible]e	<1	<1	<1	<1
1,3-Dich[illegible]e	<1	<1	<1	<1
1,4-Dich[illegible]e	<1	<1	<1	<1

All resul[illegible] expressed as ug/l.

Approved: [signature]

Date: [illegible]

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

02987030-

PROJECT NO.	PROJECT NAME SCM NIXON HARGRAVE					NO. OF CON-TAINERS	601/602	REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION			
	1-29-87	1000		✓	PROCESS Well #1	2	✓	
	1-29-87	1015		✓	PROCESS Well #2	2	✓	VERY low Flow <5 gpm
	1-29-87	1020		✓	MH TO LAGOON	2	✓	VERY low Flow " "
	1-29-87	1030		✓	OUTFALL ~~FROM~~ LAGOON	2	✓	
	1-29-87	1040		✓	LAGOON WATER	2	✓	
					~~OUTFALL~~ FROM LAGOON	NO FLOW THIS LOCATION		
	1-29-87	1055		✓	SEWER DISCHARGE FLUME	2	✓	
	1-29-87			✓	ORG BLANK	1	✓	

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	1-29 1000				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
	1-29-87 1600	C. Scala	1-29-87 1600	$30 SAMPLE TIME > 2h.

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 021387008
Date: February 13, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 1/29/87	Process Well #2 1/29/87	Manhole to Lagoon 1/29/87	Outfall to Lagoon 1/29/87
ULI I.D.	02987030	02987031	02987032	02987033
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	6	<1 Trace	1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.

Approved: A Scala

Date: 2/13/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 021387008
Date: February 13, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Lagoon Water 1/29/87	Sewer Discharge Flume 1/29/87	Organic Free Blank 1/29/87
ULI I.D.	02987034	02987035	02987036
EPA 601:			
Chloromethane	<1	<1	<1
Bromomethane	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1
Vinyl Chloride	<1	<1	<1
Chloroethane	<1	<1	<1
Methylene Chloride	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1
Chloroform	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1
Bromodichloromethane	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1
Trichloroethylene	1	7	<1
Dibromochloromethane	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1
Tetrachloroethylene	<1	<1	<1
Bromoform	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1
EPA 602 (including Xylenes):			
Benzene	<1	<1	<1
Toluene	<1	<1	<1
Ethylbenzene	<1	<1	<1
Xylenes	<1	<1	<1
Halogenated Aromatics (601/602):			
Chlorobenzene	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1

All results are expressed as ug/l.

Approved: A. Scala

Date: 2/13/87

2-11 036 87035 — A9

JPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.: | PROJECT NAME: SCM NIXON HARGRAVE

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	EPA 601/602						REMARKS
	2-5-87	1000		✓	PROCESS WELL #1	2	✓						
		1013		✓	PROCESS WELL #2	2	✓						
		1030		✓	MH. TO LAGOON	2	✓						LOW FLOW
		1035		✓	OUTFALL TO LAGOON	2	✓						LOW FLOW
		1050		✓	LAGOON WATER	2	✓						
		1100		✓	SEWER DISCHARGE FLUME	2	✓						
					ORG FREE BLANK		✓						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	2-5-87 1000				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**
Relinquished by: (Signature)	**Date/Time**	**Received for Laboratory by: (Signature)**	**Date/Time**	**Remarks**	
[signature]	2-5-87 1400	Joyce Snogles	2/?/87 1430	$90.00 SAMPLE TIME	

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 022087002
Date: February 20, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 2/5/87	Process Well #2 2/5/87	Manhole to Lagoon 2/5/87	Outfall to Lagoon 2/5/87
ULI I.D.	03687035	03687036	03687037	03687038
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1	1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.

Approved: A. Scala

Date: 2/20/87

D: 2-11 036 87035 — 04

JPSTATE L[illegible]RATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.:

PROJECT NAME: SCM NIXON HARGRAVE

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	EPA 601/602						REMARKS
	2-5-87	1000		✓	Process Well #1	2	✓						
		1017		✓	Process Well #2	2	✓						
		1030		✓	MH. to Lagoon	2	✓						Low Flow
		1035		✓	Outfall to Lagoon	2	✓						Low Flow
		1050		✓	Lagoon Water	2	✓						
		1100		✓	Sewer Discharge Plume	2	✓						
					ORG Free Blank		✓						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[illegible]	2-5-87 1000				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[illegible]	2-5-87 1400	Joyce Snogles	2/7/87 1430	90^{00} Sample Time

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 022087002
Date: February 20, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 2/5/87	Process Well #2 2/5/87	Manhole to Lagoon 2/5/87	Outfall to Lagoon 2/5/87
ULI I.D.	03687035	03687036	03687037	03687038
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1	1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.

Approved: A Scala

Date: 2/20/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 022087002
Date: February 20, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Lagoon Water 2/5/87	Sewer Discharge Flume 2/5/87	Organic Free Blank 5/2/87	
ULI I.D.	03687039	03687040	03687041	
EPA 601:				
Chloromethane	<1	<1	<1	
Bromomethane	<1	<1	<1	
Dichlorodifluoromethane	<1	<1	<1	
Vinyl Chloride	<1	<1	<1	
Chloroethane	<1	<1	<1	
Methylene Chloride	<10	<10	<10	
Trichlorofluoromethane	<1	<1	<1	
1,1-Dichloroethylene	<1	<1	<1	
1,1-Dichloroethane	<1	<1	<1	
t-1,2-Dichloroethylene	<1	<1	<1	
Chloroform	<1	<1	<1	
1,2-Dichloroethane	<1	<1	<1	
1,1,1-Trichloroethane	<1	<1	<1	
Carbon Tetrachloride	<1	<1	<1	
Bromodichloromethane	<1	<1	<1	
1,2-Dichloropropane	<1	<1	<1	
t-1,3-Dichloropropylene	<1	<1	<1	
Trichloroethylene	<1	4	<1	
Dibromochloromethane	<1	<1	<1	
1,1,2-Trichloroethane	<1	<1	<1	
c-1,3-Dichloropropylene	<1	<1	<1	
1,1,2,2-Tetrachloroethane	<1	<1	<1	
Tetrachloroethylene	<1	<1	<1	
Bromoform	<1	<1	<1	
2-Chloroethylvinyl ether	<1	<1	<1	
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	
Toluene	<1	<1	<1	
Ethylbenzene	<1	<1	<1	
Xylenes	<1	<1	<1	
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	
1,2-Dichlorobenzene	<1	<1	<1	
1,3-Dichlorobenzene	<1	<1	<1	
1,4-Dichlorobenzene	<1	<1	<1	

All results are expressed as ug/l.

Approved: [signature]

Date: 2/20/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Due 2-18

043870 26 - 2

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME Nixon — Hargrave					NO. OF CON- TAINERS	601/602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	2/12/87	11:15		X	Process well #1	2	X						
	11	11:20		X	Process well #2	2	X						
	11	11:25		X	Sewer discharge flume	2	X						very low drain off Roof
	11	11:30		X	Outfall to Lagoon	2	X						
	11	11:35		X	Lagoon Water	2	X						
	11	11:40		X	Manhole to Lagoon	2	X						
	11			X	Blank	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert L Riley	2/12/87 11:00 AM 12:00 PM				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature) Robert L Riley	Date/Time 2/12/87 3:00 P.M.	Received for Laboratory by: (Signature) Joyce Snyder	Date/Time 2/12/87 1500	Remarks Resampled	

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 022087003
Date: February 20, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 2/12/87	Process Well #2 2/12/87	Sewer Discharge Flume 2/12/87	Outfall to Lagoon 2/12/87
ULI I.D.	04387026	04387027	04387028	04387029
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<10	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<10
Trichloroethylene	5	<1 Trace	6	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.

Approved: AAcala

Date: 2/20/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 022087003
Date: February 20, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Lagoon Water 2/12/87	Manhole to Lagoon 2/12/87	Organic Free Blank 2/12/87
ULI I.D.	04387030	04387031	04387032
EPA 601:			
Chloromethane	<1	<1	<1
Bromomethane	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1
Vinyl Chloride	<1	<1	<1
Chloroethane	<1	<1	<1
Methylene Chloride	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1
Chloroform	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1
Bromodichloromethane	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1
Trichloroethylene	<1 Trace	1	<1
Dibromochloromethane	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1
Tetrachloroethylene	<1	<1	<1
Bromoform	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1
EPA 602 (including Xylenes):			
Benzene	<1	<1	<1
Toluene	<1	<1	<1
Ethylbenzene	<1	<1	<1
Xylenes	<1	<1	<1
Halogenated Aromatics (601/602):			
Chlorobenzene	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1

All results are expressed as ug/1.

Approved: [signature]

Date: 2/20/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

0728 1(

PROJECT NO.	PROJECT NAME SCM NIXON HARGRAVE					NO. OF CONTAINERS	EPA 601/602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	3-12-87	1100		X	MW 1	2							NO PROS
		1130		X	MW 2S	2							
		1200		X	MW 2D	2							
		1230		X	MW 4S	2							
		1245		X	MW 4D	2							
		1330		X	MW 5S	2							
		1350		X	MW 5D	2							
		1430		X	MW 7	2							
		1500		X	MW 9	2							
					ORG FREE BLANK	1							

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Greg [signature]	3-12 0900				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks:	
Greg [signature]	3-12 1700	C. Scala	3-12-87 1700	800 ~~ROPE~~ .5¢ FT - 40.00 12 pair gloves ~~2~~ EA - 24.00 MANTIME - 18 hrs x 30.00 = 540.00	

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

0728...

PROJECT NO.	PROJECT NAME
	SCM Nixon Hargrave

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	# OF CONTAINERS	601/602						REMARKS
	3/13/81	10:00		X	M.W. #8	2	X						Other wells completed
		10:30		X	M.W. #6	2	X						on 3/12/81
		11:00AM		X	M.W. #3	2	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	3/13/81 1000 / 11:00AM				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Riley	3/13/81 12:30 P.M.	C. Scala	3-13-81 1230	2½ hrs sample time

UPSTATE LABORATORIES, INC.

CH OF CUSTODY RECORD

0728

PROJECT NO.	PROJECT NAME SCM NIXON HARGRAVE					NO. OF CON-TAINERS	EPA 601-602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	3-12-87	0900			PROCESS WELL 1	2	✓						NO PEGS
		0915			PROCESS WELL 2	2	✓						
		0930			M.H. TO LAGOON	2	✓						
		1000			SEWER DISCHARGE FLUME	2	✓						
		N/A			ORO FRAC BLANK	1	✓						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	3-12 0900				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[signature]	3-12 1700	C. Scala	3-12-87 1700	ulisampling 2 hrs.

VILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 032487005
Date: March 24, 1987

A 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 3/12/87	Process Well #2 3/12/87	Manhole to Lagoon 3/12/87	Sewer Discharge Flume 3/12/87
ULI I.D.	07287030	07287031	07287032	07287033
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
1,3-Dichloropropylene	<1	<1	<1	<1
ichloroethylene	4	<1	<1	4
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Corrected Blank.

Approved: AP

te: 3/24/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

LEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNCIL

Analysis Results
Report Number 032487006
Date: March 24, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Organic Free Blank 3/12/87			
ULI I.D.	07287029			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride *	<5			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<1			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform	<1			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
t-1,3-Dichloropropylene	<1			
Trichloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ug/1.
*Blank Corrected.

Approved: ______ mp

Date: 3/24/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 032487006
Date: March 24, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW 1 ** 3/12/87	MW 2S 3/12/87	MW 2D 3/12/87	MW 3 3/13/87
ULI I.D.	07287020	07287021	07287022	07287035
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	64	14	24	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
* Blank Corrected.
** Sample Dilution.

Approved: ____________

Date: 3/24/87

ILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNCIL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 032487006
Date: March 24, 1987

601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW4S 3/12/87	MW4D 3/12/87	MW5S 3/12/87	MW5D 3/12/87
ULI I.D.	07287023	07287024	07287025	07287026
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	1	4	8
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
* Blank Corrected.

Approved: ________ mf

Date: 3/24/87

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Analysis Results
Report Number 032487006
Date: March 24, 1987

E... 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW6 ** 3/13/87	MW7 ** 3/12/87	MW8 ** 3/13/87	MW9 3/12/87
ULI I.D.	07287036	07287027	07287037	07287028
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	2	16	10	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	2	28	8	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-...3-Dichloropropylene	<1	<1	<1	<1
...hloroethylene	270	290	220	4
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
* Blank Corrected.
** Sample Dilution.

Approved: ______ MP

...e: 3/24/87

?STATE LABORATORIES, INC.

1108704( )-05

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME							REMARKS
	Bill Hargrave SCM wells 24 month							

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	601/602	EXTRA PARAM				REMARKS
	4/16/81	12:00		X	M.W. 4S	1	X					
	"	12:15		X	M.W. 4D	2	X					
	"	1:00 PM		X	M.W. 2S	1	X	✓				
	"	1:15 PM		X	M.W. 2D	4	X	✓X				
	"	2:00 PM		X	M.W. 1	4	X					
	"	2:15 PM		X	M.W. 5S	1	X	✓				
	"	2:30 PM		X	M.W. 5D	4	X					
	"	3:30		X	M.W. 6	1	X					oily substance in water
	"	3:00 PM		X	M.W. 7	[illegible]	X	✓				
	"	3:25 PM		X	M.W. 8	4	X					
	"	3:15 PM		X	M.W. 9	2	X	✓				
	"	4:00 PM		X	M.W. 3	4	X					

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	4/16/81 4:30 PM				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**
Relinquished by: (Signature)	**Date/Time**	**Received for Laboratory by: (Signature)**	**Date/Time**	**Remarks**	
Robert J Riley	4/16/81 5 PM	C. Scala	4-16-81 1700	15 total hours MANTIME. 3 TRUCK AT $10.00 $30.00 6 PAIRS OF GLOVES AT $2.00 $12.00	

UPSTATE LABORATORIES, INC. 1108703[illegible]-03

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME
	Nixon Hargrave SCM

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	601/602	EXTRA PARAMETERS				REMARKS
	4/16/87	1:00 P.M.		X	Processwell #1	2	X					
	11	1:15 P.M		X	Processwell #2	2	X					
	11	10:30 A.M.		X	Outfall to Lagoon	2	X	X				7 .93 21°
	11	11:00 A.M		X	Lagoon Water	5	X					pH COND TEM
	11				≈							
	11	1:00 A.M		X	Sewer discharge Flume	2	X					
	11			X	BLANK							

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J. Riley	4/16/87 1:00 P.M. 1:38 P.M.				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J. Riley	4/16/87 5:00 P.M.	C. Scala	4-16-87 1700	uli sampling - 3 hrs. 2 prs. gloves

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587002
Date: May 5, 1987

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW 1 4/16/87	MW 2D 4/16/87	MW 3 4/16/87
ULI I.D.	11087040	11087042	11087043
Nitrate-Nitrogen	3.3	2.9	6.9
Sulfate	23	16	19
Total Chloride	18	33	27
Alkalinity *	190	160	270
Field pH **	7	7	7
Field Temperature	13.5°C	15°C	16.5°C
Field Conductivity ***	250	300	440
Total Calcium	530	200	310
Total Iron	21	0.52	13
Total Magnesium	110	15	25
Total Manganese	5.2	0.05	0.21
Total Potassium	2.8	1.4	2.2
Total Sodium	17	25	15

All results are expressed as mg/l unless otherwise stated.
*Results are expressed as mg/l $CaCO_3$.
**Results are expressed as Standard Units.
***Results are expressed as umhos/cm @ Field Temperature.

Approved: [signature]

Date: 5/5/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587002
Date: May 5, 1987

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW 5D 4/16/87	MW 8 4/16/87	
ULI I.D.	11087047	11087050	
Nitrate-Nitrogen	4.4	4.3	
Sulfate	16	28	
Total Chloride	22	54	
Alkalinity *	200	200	
Field pH **	7	7	
Field Temperature	15°C	13.5°C	
Field Conductivity ***	280	330	
Total Calcium	76	630	
Total Iron	0.69	50	
Total Magnesium	13	310	
Total Manganese	0.12	2.6	
Total Potassium	1.1	3.9	
Total Sodium	14	30	

All results are expressed as mg/l unless otherwise stated.
*Results are expressed as mg/l $CaCO_3$.
**Results are expressed as Standard Units.
***Results are expressed as unmos/cm @ Field Temperature.

Approved: [signature]

Date: 5/5/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587002
Date: May 5, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW 1 4/16/87	MW 2S 4/16/87	MW 2D 4/16/87	MW 3 4/16/87
ULI I.D.	11087040	11087041	11087042	11087043
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	9	16	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.

Approved: [signature] MP

Date: 5/5/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587002
Date: May 5, 1987

EPA 601/602:

CLIENT I.D.	MW 4S 4/16/87	MW 4D 4/16/87	MW 5S 4/16/87	MW 5D 4/16/87
Nixon, Hargrave, Devans & Doyle				
ULI I.D.	11087044	11087045	11087046	11087047
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	4	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1 (Trace)	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1 (Trace)	<1 (Trace)	3	6
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.

Approved: [signature] NP

Date: 5/5/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587002
Date: May 5, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW 6 ** 4/16/87	MW 7 ** 4/16/87	MW 7 ** Duplicate 4/16/87	MW 8 ** 4/16/87
ULI I.D.	11087048	11087049	11087049	11087050
EPA 601:				
Chloromethane	<10	<10	<10	<10
Bromomethane	<10	<10	<10	<10
Dichlorodifluoromethane	<10	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<10	<10	<10	<10
1,1-Dichloroethylene	<10	<10	<10	<10
1,1-Dichloroethane	<10	<10	<10	<10
t-1,2-Dichloroethylene	<10	23	20	<10
Chloroform *	<10	<10	<10	<10
1,2-Dichloroethane	<10	<10	<10	<10
1,1,1-Trichloroethane	<10	22	28	<10 (Trace)
Carbon Tetrachloride	<10	<10	<10	<10
Bromodichloromethane	<10	<10	<10	<10
1,2-Dichloropropane	<10	<10	<10	<10
t-1,3-Dichloropropylene	<10	<10	<10	<10
Trichloroethylene	190	610	600	93
Dibromochloromethane	<10	<10	<10	<10
1,1,2-Trichloroethane	<10	<10	<10	<10
c-1,3-Dichloropropylene	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	<10	<10	<10	<10
Tetrachloroethylene	<10	<10	<10	<10
Bromoform	<10	<10	<10	<10
2-Chloroethylvinyl ether	<10	<10	<10	<10
EPA 602 (including Xylenes):				
Benzene	<10	<10	<10	<10
Toluene	<10	<10	<10	<10
Ethylbenzene	<10	<10	<10	<10
Xylenes	<10	<10	<10	<10
Halogenated Aromatics (601/602):				
Chlorobenzene	<10	<10	<10	<10
1,2-Dichlorobenzene	<10	<10	<10	<10
1,3-Dichlorobenzene	<10	<10	<10	<10
1,4-Dichlorobenzene	<10	<10	<10	<10

All results are expressed as ug/l.
*Blank Corrected.
**Sample Dilution

Approved: [signature]

Date: 5/5/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 50587002
Date: May 5, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW 9 4/16/87	MW 9 Duplicate 4/16/87		
ULI I.D.	11087051	11087051		
EPA 601:				
Chloromethane	<1	<1		
Bromomethane	<1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	<1		
Chloroethane	<1	<1		
Methylene Chloride	<5	<5		
Trichlorofluoromethane	<1	<1		
1,1-Dichloroethylene	<1	<1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	<1		
Chloroform	<1	<1		
1,2-Dichloroethane	<1	<1		
1,1,1-Trichloroethane	<1	<1		
Carbon Tetrachloride	<1	<1		
Bromodichloromethane	<1	<1		
1,2-Dichloropropane	<1	<1		
t-1,3-Dichloropropylene	<1	<1		
Trichloroethylene	8	8		
Dibromochloromethane	<1	<1		
1,1,2-Trichloroethane	<1	<1		
c-1,3-Dichloropropylene	<1	<1		
1,1,2,2-Tetrachloroethane	<1	<1		
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	<1	<1		
EPA 602 (including Xylenes):				
Benzene	<1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1		
Xylenes	<1	<1		
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1		
1,2-Dichlorobenzene	<1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ug/1.

Approved: [signature]

Date: 5/5/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587001
Date: May 5, 1987

Client I.D.: Nixon, Hargrave, Devans & Doyle - Lagoon Water 4/16/87

ULI I.D.: 11087037

Parameters	Results
Nitrate-Nitrogen	<0.05
Sulfate	8
Total Chloride	2
Alkalinity *	62
Field pH **	7
Field Temperature	21°C
Field Conductivity ***	0.93
Total Calcium	90
Total Iron	0.54
Total Magnesium	1.1
Total Manganese	0.03
Total Potassium	5.0
Total Sodium	7.7

All results are expressed as mg/l unless otherwise stated.
*Results are expressed as mg/l $CaCO_3$.
**Results are expressed as Standard Units.
***Results are expressed as umhos/cm @ Field Temperature.

Approved: [signature]
Date: 5/5/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587001
Date: May 5, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 4/16/87	Process Well #2 4/16/87	Outfall to Lagoon 4/16/87	Lagoon Water 4/16/87
ULI I.D.	11087034	11087035	11087036	11087037
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	[illegible]	<1	[illegible]	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
*Blank Corrected.

Approved: [signature]

Date: 5/5/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050587001
Date: May 5, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Sewer Discharge Flume 4/16/87	Organic Free Blank 4/16/87		
ULI I.D.	11087038	11087039		
EPA 601:				
Chloromethane	<1	<1		
Bromomethane	<1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	<1		
Chloroethane	<1	<1		
Methylene Chloride *	<5	<5		
Trichlorofluoromethane	<1	<1		
1,1-Dichloroethylene	<1	<1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	<1		
Chloroform	<1	<1		
1,2-Dichloroethane	<1	<1		
1,1,1-Trichloroethane	<1	<1		
Carbon Tetrachloride	<1	<1		
Bromodichloromethane	<1	<1		
1,2-Dichloropropane	<1	<1		
t-1,3-Dichloropropylene	<1	<1		
Trichloroethylene	2	<1		
Dibromochloromethane	<1	<1		
1,1,2-Trichloroethane	<1	<1		
c-1,3-Dichloropropylene	<1	<1		
1,1,2,2-Tetrachloroethane	<1	<1		
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	<1	<1		
EPA 602 (including Xylenes):				
Benzene	<1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1		
Xylenes	<1	<1		
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1		
1,2-Dichlorobenzene	<1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature] NP

Date: 5/5/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

'87 14:33 ID:NIXON HARGRAVE ROCH TEL NO:17165468000 347

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 050687002
Date: May 6, 1987

Collected April 16, 1987

EPA 601/602: Staple Pond 7

CLIENT I.D. Smith Corona *	Creek Along R.R. Bed North of Smith Corona	Creek at Crossing Under McLean Road	Creek at Crossing Under Rt.281 Cortland Waterworks	
ULI I.D.	11087030	11087031	11087032	
EPA 601:				
Chloromethane	<1	<1	<1	
Bromomethane	<1	<1	<1	
Dichlorodifluoromethane	<1	<1	<1	
Vinyl Chloride	<1	<1	<1	
Chloroethane	<1	<1	<1	
Methylene Chloride **	<5	<5	<5	
Trichlorofluoromethane	<1	<1	<1	
1,1-Dichloroethylene	9	6	6	
1,1-Dichloroethane	<1	<1	<1	
t-1,2-Dichloroethylene	1	<1	<1	
Chloroform	1	[illegible]	1	
1,2-Dichloroethane	<1	<1	<1	
1,1,1-Trichloroethane	<1	<1	<1	
Carbon Tetrachloride	<1	<1	<1	
Bromodichloromethane	<1	<1	<1	
1,2-Dichloropropane	<1	<1	<1	
t-1,3-Dichloropropylene	<1	<1	<1	
Trichloroethylene	15	7	3	
Dibromochloromethane	<1	<1	<1	
1,1,2-Trichloroethane	<1	<1	<1	
c-1,3-Dichloropropylene	<1	<1	<1	
1,1,2,2-Tetrachloroethane	<1	<1	<1	
Tetrachloroethylene	<1	<1	<1	
Bromoform	<1	<1	<1	
2-Chloroethylvinyl ether	<1	<1	<1	
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	
Toluene	2	2	1	
Ethylbenzene	<1	<1	<1	
Xylenes	<1	<1	<1	
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	
1,2-Dichlorobenzene	<1	<1	<1	
1,3-Dichlorobenzene	<1	<1	<1	
1,4-Dichlorobenzene	<1	<1	<1	

*Sample Dates are all 4/16/87.
**Blank Corrected.
All results are expressed as ug/l.

Approved: Daniel Hartig MP

Date: 5/6/87

UPSTATE LABORATORIES, INC.

1168701o-0a

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME: NiXON - Hargrave ~~[illegible]~~ SCM					NO. OF CON-TAINERS	601/602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	4/23/87	11:00		X	Lagoon water	2							
		11:05		X	Outfall TO lagoon	2							
		11:10		X	Process well #1	2							
		11:12		X	Process well #2	2							
	↓	11:15		X	Sewer Discharge flow	2							
					organic free blank	1							

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[illegible signature]	4/23/87 11:00				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[illegible signature]	4/23/87 3:05	C. Scala	4-23-87 1505	ULI sampling

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 051187005
Date: May 11, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 4/23/87	Process Well #2 4/23/87	Outfall to Lagoon 4/23/87	Lagoon Water 4/23/87
ULI I.D.	11687018	11687019	11687020	11687021
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	2	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1	<1 (Trace)	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
*Blank Corrected.

Approved: [signature]

Date: 5/11/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 051187005
Date: May 11, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Sewer Discharge Flume 4/23/87	Organic Free Blank 4/23/87		
ULI I.D.	11687022	11687023		
EPA 601:				
Chloromethane	<1	<1		
Bromomethane	<1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	<1		
Chloroethane	<1	<1		
Methylene Chloride *	<5	<5		
Trichlorofluoromethane	<1	<1		
1,1-Dichloroethylene	<1	<1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	<1		
Chloroform *	<5	<5		
1,2-Dichloroethane	<1	<1		
1,1,1-Trichloroethane	<1	<1		
Carbon Tetrachloride	<1	<1		
Bromodichloromethane	<1	<1		
1,2-Dichloropropane	<1	<1		
t-1,3-Dichloropropylene	<1	<1		
Trichloroethylene	<1 (Trace)	<1		
Dibromochloromethane	<1	<1		
1,1,2-Trichloroethane	<1	<1		
c-1,3-Dichloropropylene	<1	<1		
1,1,2,2-Tetrachloroethane	<1	<1		
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	<1	<1		
EPA 602 (including Xylenes):				
Benzene	<1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1		
Xylenes	<1	<1		
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1		
1,2-Dichlorobenzene	<1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ug/l.
*Blank Corrected.

Approved: ____________

Date: 5/11/87

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UPSTATE LABORATORIES, INC.

12187021

CHAIN OF CUSTODY RECORD

PROJECT NO. | PROJECT NAME: Niagara Mohawk SEM wells B: [illegible]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	601/602						REMARKS
	4/30/81	11:15 A.M.		X	4S	2	X						
		11:15 A.M.			4D	2	X						
		2:00 P.M.			2S	2	X						
		2:00 P.M.			2D	2	X						
		12:40 P.M.			1	2	X						
		1:00 P.M.			5S	2	X						
		1:00 P.M.			5D	2	X						
		2:00 P.M.			3	2	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	4/30/81 11:30-3:00 P.M.				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Riley	4/30/81 4:00 P.M.	C. Scala	4-30-81 1600	8 hrs total Mantime at 30. hrs \$240 2 Tyvek at 10.00 apiece \$20 2 Pairs Gloves 2.00 pr \$4 264

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UPSTATE LABORATORIES, INC.

121870

CHAIN OF CUSTODY RECORD

PROJECT NO.:

PROJECT NAME: Niagara Hargrave SCM (weekly Grabs)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	601/602	REMARKS
	4/30/87	10:00 A.M.		X	Sewer discharge flume	2	X	
	"	10:10 A.M.		X	Process Well # 1	2	X	
	"	10:20 A.M.		X	Process Well # 2	2	X	
	"	10:30 A.M.		X	Outfall to Lagoon	2	X	
	"	10:40 A.M.		X	Lagoon Water	2	X	
					Blank ORG free	1	X	

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	4/30/87 10-10:45 A.M.				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Riley	4/30/87 4:00 P.M.	C. Scala	4-30-87 1600	3hrs Mantime $90.00 1 Pr Gloves 2.00 $92.00

LEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 051987005
Date: May 19, 1987

601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 4/30/87	Process Well #2 4/30/87	Outfall to Lagoon 4/30/87	Lagoon Water 4/30/87
ULI I.D.	12187015	12187016	12187017	12187018
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	3	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	2	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	1	<1	<1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature] MC

Date: 5/19/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 051987007
Date: May 19, 1987

[E]PA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Sewer Discharge Flume 4/30/87	Organic Free Blank 4/30/87		
ULI I.D.	12187019	12187020		
EPA 601:				
Chloromethane	<1	<1		
Bromomethane	<1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	<1		
Chloroethane	<1	<1		
Methylene Chloride *	<5	<5		
Trichlorofluoromethane	<1	<1		
1,1-Dichloroethylene	<1	<1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	<1		
Chloroform	<1	<1		
1,2-Dichloroethane	<1	<1		
1,1,1-Trichloroethane	1	<1		
Carbon Tetrachloride	<1	<1		
Bromodichloromethane	<1	<1		
1,2-Dichloropropane	<1	<1		
t-1,3-Dichloropropylene	<1	<1		
Trichloroethylene	2	<1		
Dibromochloromethane	<1	<1		
1,1,2-Trichloroethane	<1	<1		
c-1,3-Dichloropropylene	<1	<1		
1,1,2,2-Tetrachloroethane	<1	<1		
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	<1	<1		
EPA 602 (including Xylenes):				
Benzene	<1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1		
Xylenes	<1	<1		
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1		
1,2-Dichlorobenzene	<1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ug/l.
*Blank Corrected.

Approved: A Scala mc

Date: 5/19/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 051987008
Date: May 19, 1987

A 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-1 4/30/87	MW-2S 4/30/87	MW-2D 4/30/87	MW-3 4/30/87
ULI I.D.	12187021	12187022	12187023	12187024
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	9	8	<1 Trace	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	2	1	3	3
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1 Trace	<1 Trace	1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
2-Dichloropropane	<1	<1	<1	<1
-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	71	24	20	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
*Blank Corrected

Approved: ______________

Date: 5/19/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 051987008
Date: May 19, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans, & Doyle	MW-4S 4/30/87	MW-4D 4/30/87	MW-5S 4/30/87	MW-5D 4/30/87
ULI I.D.	12187025	12187026	12187027	12187028
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	2	2	4	2
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	1	2	<1 Trace
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	1	<1 Trace	10	11
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: AJScala

Date: 5/19/87

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UPSTATE LABORATORIES, INC.

Due 5-13

CHAIN OF CUSTODY RECORD

12887062-061

PROJECT NO.	PROJECT NAME					NO. OF CON-TAINERS	601/602						REMARKS
	Nixon Hargrave SCM												
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	5/7/87	1:05		X	Sewer flume	5 2	X						
	↓	1:10		X	Lagoon water	4 2	X						
		1:15		X	Outfall to Lagoon	3 2	X						
		1:20		X	Process well #1	1 2	X						
		1:25		X	Process well #2	2 2	X						
	5/7/87			X	Org Free Blank	6 1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert Dafoe	5/7/87 1:05				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**
Relinquished by: (Signature)	**Date/Time**	**Received for Laboratory by: (Signature)**	**Date/Time**	**Remarks**	
Robert Dafoe	5/7/87 4:20	C Scala	5-7-87 1620	3hr. man time = 90.00 1 pr gloves = 2.00	

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 052887005
Date: May 28, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 5/7/87	Process Well #2 5/7/87	Outfall to Lagoon 5/7/87	Lagoon Water 5/7/87
ULI I.D.	12887062	12887063	12887064	12887065
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	2	<1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature]

Date: 5/28/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 052887005
Date: May 28, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Sewer Discharge Flume 5/7/87	Organic Free Blank 5/7/87		
ULI I.D.	12887066	12887067		
EPA 601:				
Chloromethane	<1	<1		
Bromomethane	<1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	<1		
Chloroethane	<1	<1		
Methylene Chloride *	<5	<5		
Trichlorofluoromethane	<1	<1		
1,1-Dichloroethylene	<1	<1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	<1		
Chloroform *	<5	<5		
1,2-Dichloroethane	<1	<1		
1,1,1-Trichloroethane	1	<1		
Carbon Tetrachloride	<1	<1		
Bromodichloromethane	<1	<1		
1,2-Dichloropropane	<1	<1		
t-1,3-Dichloropropylene	<1	<1		
Trichloroethylene	2	<1		
Dibromochloromethane	<1	<1		
1,1,2-Trichloroethane	<1	<1		
c-1,3-Dichloropropylene	<1	<1		
1,1,2,2-Tetrachloroethane	<1	<1		
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	<1	<1		
EPA 602 (including Xylenes):				
Benzene	<1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1		
Xylenes	<1	<1		
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1		
1,2-Dichlorobenzene	<1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature] MV

Date: 5/28/87

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UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME
	Nixon Hazardous Sim (Wells)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	601/602						REMARKS
	5/28/87	10:00		X	4S	2	X						
	"	10:15		X	4D	2	X						
	"	10:40		X	2D	2	X						
	"	11:40		X	2S	2	X						
	"	11:45		X	1	2	X						
	"	12:25		X	5S	2	X						
	"	12:25		X	5D	2	X						
	"	1:09P.M.		X	3	2	X						
					Org. Free Blank	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J. Riley	5/28/87 10-1				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**
Relinquished by: (Signature)	**Date/Time**	**Received for Laboratory by: (Signature)**	**Date/Time**	**Remarks**	
Robert J. Riley	5/28/87 4:04	Susan M. Thornton	5-28-87 4:00 pm	ULI 10 hrs [illegible] $300.00 6 Pis Gloves 12.00	

1498/051-C-12

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME Wm Harpace Sem (Grabs)					NO. OF CON-TAINERS	Volatiles						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	5/28/87	1:30P.M.		X	Process well #1	2	X						
	"	2:00P.M.		X	" " #2	2	X						
	"	2:30P.M.		X	Sewer discharge Flume	2	X						
	"			✓	Blank ORG. Free	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert Y. Riley	5/28/87 1:30 - 2:30				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
Robert Y. Riley	5/28/87	Susan M. Thornton	5-28-87 4:00 pm	3 hrs [illegible] time 1 hr [illegible] ULI	

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 061187004
Date: June 11, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 5/28/87	Process Well #2 5/28/87	Sewer Discharge Flume 5/28/87	Organic Free Blank 5/28/87
ULI I.D.	14987039	14987040	14987041	14987042
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	6	<1	2	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature]

Date: 6/11/87

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PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 061187005
Date: June 11, 1987

A 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Well #1 5/28/87	Well #2D 5/28/87	Well #2S 5/28/87	Well #3 5/28/87
ULI I.D.	14987043 *	14987044	14987045	14987046
EPA 601:				
Chloromethane	<5	<1	<1	<1
Bromomethane	<5	<1	<1	<1
Dichlorodifluoromethane	<5	<1	<1	<1
Vinyl Chloride	<5	<1	<1	<1
Chloroethane	<5	<1	<1	<1
Methylene Chloride **	<10	<5	<5	<5
Trichlorofluoromethane	<5	<1	<1	<1
1,1-Dichloroethylene	<5	<1	<1	<1
1,1-Dichloroethane	<5	<1	<1	<1
t-1,2-Dichloroethylene	<5	<1	<1	<1
Chloroform **	<5	<5	<5	<5
1,2-Dichloroethane	<5	<1	<1	<1
1,1,1-Trichloroethane	<5	<1	<1	<1
Carbon Tetrachloride	<5	<1	<1	<1
Bromodichloromethane	<5	<1	<1	<1
1,2-Dichloropropane	<5	<1	<1	<1
-1,3-Dichloropropylene	<5	<1	<1	<1
Trichloroethylene	71	23	9	<1
Dibromochloromethane	<5	<1	<1	<1
1,1,2-Trichloroethane	<5	<1	<1	<1
c-1,3-Dichloropropylene	<5	<1	<1	<1
1,1,2,2-Tetrachloroethane	<5	<1	<1	<1
Tetrachloroethylene	<5	<1	<1	<1
Bromoform	<5	<1	<1	<1
2-Chloroethylvinyl ether	<5	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<5	<1	<1	<1
Toluene	<5	<1	<1	<1
Ethylbenzene	<5	<1	<1	<1
Xylenes	<5	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<5	<1	<1	<1
1,2-Dichlorobenzene	<5	<1	<1	<1
1,3-Dichlorobenzene	<5	<1	<1	<1
1,4-Dichlorobenzene	<5	<1	<1	<1

All results are expressed as ug/l.
*Sample Dilution.
**Blank Corrected.

Approved: [signature]

Date: 6/11/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 061187005
Date: June 11, 1987

A 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Well #4D 5/28/87	Well #4S 5/28/87	Well #5D 5/28/87	Well #5S 5/28/87
ULI I.D.	14987047	14987048	14987049	14987050
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	1	<1 Trace	13	2
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature] ML

Date: 6/11/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 061187005
Date: June 11, 1987

A 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Organic Free Blank			
ULI I.D.	14987051			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride *	<5			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<1			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform *	<5			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
-1,3-Dichloropropylene	<1			
richloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature] MV

Date: 6/11/87

15587044-0048

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME (Smith Corona) Nixon, Hargrave etc	NO. OF CON-TAINERS	601/602						REMARKS

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	601/602						REMARKS
	6/4/87	1:00 P.M.		X	Sewer discharge Flume	2	X						
		1:15 P.M.		X	Process well #1	2	X						
		1:30 P.M.		X	Process well #2	2	X						
		1:45 P.M.		X	Outfall To Lagoon	2	X						
				X	Org. Free Blank	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	6/4/87 1230-2:30				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
Robert J Riley	6/4/87 3:15 P.M	C. Scala	6-4-87 1515	3 hours Maxtime 1 Pr Gloves	

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 061687003
Date: June 16, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 6/4/87	Process Well #2 6/4/87	Outfall to Lagoon 6/4/87	Sewer Discharge Flume 6/4/87
ULI I.D.	15587044	15587045	15587046	15587047
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	8	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	3	<1	<1 Trace	<1 Trace
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected

Approved: [signature]

Date: 6/16/87

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PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 061687003
Date: June 16, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Organic Free Blank 6/4/87			
ULI I.D.	15587048			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride *	<10			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<1			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform *	<5			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
t-1,3-Dichloropropylene	<1			
Trichloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ug/l.
*Blank Corrected.

Approved: Alcala

Date: 6/16/87

UPSTATE LABORATORIES, INC. Monthly wells CHAIN OF CUSTODY RECORD

1638

PROJECT NO.	PROJECT NAME	NO. OF CON-TAINERS	601/602	REMARKS
	Nixon Hargrave / SCM			

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	601/602	REMARKS
	6/1/87	10:20		X	4S	2	X	
		11:20		X	1	2	X	
		11:00		X	4D	2	X	
		11:25		X	2S	2	X	
		11:25		X	2D	2	X	
		11:50		X	5S	2	X	
		11:55		X	5D	2	X	
		12:20		X	3	2	X	
		1:40		X	6	2	X	
		1:25		X	7	2	X	
		1:45		X	8	2	X	
		1:20		X	9	2	X	
					ORG. free BLK	1	X	

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J. Riley	6/1/87				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J. Riley	6/1/87 4:00 p.m.	Susan M. Thornton	6-1-87 4:00 pm	ULI 15 hrs Man time 1 truck 6 pr Gloves

16387039-01

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME					NO. OF CON-TAINERS	G01 / GC						REMARKS
	Niton Hawaiac SCM												
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	6/1/87	10:00 AM		X	Sewer discharge Flume	2	X						
		10:50 AM		X	Process well #1	2	X						
		10:30		X	" " #2	2	X						
				X	Hand Clr. Free	1	X						Outfall to Lagoon Dry

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	6/1/87				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Riley	6/1/87 4:00 PM	Susan M. Thornton	6-1-87 4:00 pm	ULI 3 hrs Maritime 1 pr Gloves

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 062587010
Date: June 25, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 6/11/87	Process Well #2 6/11/87	Sewer Discharge Flume 6/11/87	Organic Free Blank 6/11/87
ULI I.D.	16387039	16387040	16387041	16387042
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<10	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	5	<1	1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
NYS DOH I.D.: 10170
*Blank Corrected.

Approved: A. Scala [signature]

Date: 6/25/87

Disclaimer: The [illegible] results and procedures utilized, and [illegible] interpretations of data obtained by ULI [illegible] contained in this report are believed by ULI [illegible] accurate and reliable for sample(s) tested. [illegible] accepting this report, the customer agrees [illegible] the full extent of any and all liability [illegible] and consequential damages of ULI for the [illegible] performed shall be equal to the fee charged [illegible] the customer for the services as liquidated [illegible]

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 062687001
Date: June 26, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Well 1 6/11/87	Well 2D 6/11/87	Well 2S 6/11/87	Well 3 6/11/87
ULI I.D.	16387043	16387044	16387045	16387046
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<10	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	64	28	16	<1 Trace
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature]

Date: 6/26/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 062687001
Date: June 26, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Well 4D 6/11/87	Well 4S 6/11/87	Well 5D 6/11/87	Well 5S 6/11/87
ULI I.D.	16387047	16387048	16387049	16387050
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<10	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	1	1	6	2
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
*Blank Corrected.

Approved: [signature] MC

Date: 6/26/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 062687001
Date: June 26, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Well 6 6/11/87	Well 7 6/11/87	Well 8 6/11/87	Well 9 6/11/87
ULI I.D.	16387051 *	16387052 *	16387053 *	16387054 *
EPA 601:				
Chloromethane	<5	<1	<5	<5
Bromomethane	<5	<1	<5	<5
Dichlorodifluoromethane	<5	<1	<5	<5
Vinyl Chloride	<5	<1	<5	<5
Chloroethane	<5	<1	<5	<5
Methylene Chloride **	<50	<10	<50	<50
Trichlorofluoromethane	<5	<1	<5	<5
1,1-Dichloroethylene	<5	<1	<5	<5
1,1-Dichloroethane	<5	<1	<5	<5
t-1,2-Dichloroethylene	<5	<1	<5	<5
Chloroform **	<50	<10	<50	<50
1,2-Dichloroethane	<5	<1	<5	<5
1,1,1-Trichloroethane	<5	<1	<5	<5
Carbon Tetrachloride	<5	<1	<5	<5
Bromodichloromethane	<5	<1	<5	<5
1,2-Dichloropropane	<5	<1	<5	<5
t-1,3-Dichloropropylene	<5	<1	<5	<5
Trichloroethylene	200	3	210	150
Dibromochloromethane	<5	<1	<5	<5
1,1,2-Trichloroethane	<5	<1	<5	<5
c-1,3-Dichloropropylene	<5	<1	<5	<5
1,1,2,2-Tetrachloroethane	<5	<1	<5	<5
Tetrachloroethylene	<5	<1	<5	<5
Bromoform	<5	<1	<5	<5
2-Chloroethylvinyl ether	<5	<1	<5	<5
EPA 602 (including Xylenes):				
Benzene	<5	<1	<5	<5
Toluene	<5	<1	<5	<5
Ethylbenzene	<5	<1	<5	<5
Xylenes	<5	<1	<5	<5
Halogenated Aromatics (601/602):				
Chlorobenzene	<5	<1	<5	<5
1,2-Dichlorobenzene	<5	<1	<5	<5
1,3-Dichlorobenzene	<5	<1	<5	<5
1,4-Dichlorobenzene	<5	<1	<5	<5

All results are expressed as ug/l.
*Sample Dilution.
**Blank Corrected.

Approved: [signature]

Date: 6/26/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 062687001
Date: June 26, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Organic Free Blank 6/11/87			
ULI I.D.	16387055			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride *	<10			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<1			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform *	<10			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
t-1,3-Dichloropropylene	<1			
Trichloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ug/1.
*Blank Corrected.
NYS DOH I.D.: 10170

Approved: ML

Date: 6/26/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

1708700Ç-005

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME
	Nilfor Hargrave (SCM)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	601/602						REMARKS
	6/18/87	10:30		X	Process Well #1	2	X						
		10:45		X	" " #2	2	X						
		11:00			Sewer discharge Flume	2	X						
					Org. free Wash.	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	6/18				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Riley	6/18/87 2:00 P.M.	C. Scala	6-18-87 1400	3 hrs MAN TIME 1 Pr. Gloves

UPS TE LABORATORIES, INC.

Analysis Results
Report Number 070187006
Date: July 1, 1987

(X)

A 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 6/18/87	Process Well #2 6/18/87	Sewer Discharge Flume 6/18/87	Organic Free Blank 6/18/87
ULI I.D.	17087004	17087005	17087006	17087007
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	1	1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	4	<1	1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.
NYS DOH I.D.: 10170

Approved: [signature]

Date: 7/01/87

11787051-059

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME Niton Hargrave SCM Grabs					NO. OF CONTAINERS	601/602						REMARKS
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	6/25/87	1:00		X	Sewer Discharge Plume	2	X						
		1:15		X	Process well #1	2	X						
		1:30		X	Process well #2	2	X						
					Org. free Blank	1							

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert Dailey	6/25/87				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert Dailey	6/25/87 5:06 P.M.	C. Scala	6/25/87 1500	3 hrs maxtime

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME
	Nixon Hargrave SCM

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	601/602						REMARKS
1 [1]	6/25/87	12:00		/		2	X						
2S [3]	↓	10:30		/		1	X						
2D [2]		10:35		/		1	X						
4S [6]		10:00		/		2	X						
4D [5]		11:00		/		2	X						
5S [8]		11:52		/		2	X						
5D [7]		11:57		/		2	X						
3 [4]		11:00		/		2	X						
[9]					ORG Free Blank	0	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Martin Giacobbe	6/25/87				X

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Martin Giacobbe	6/25/87 3:00 PM	C. Scala	6-25-87 1500	6 pr vines 12 hrs maximum 1 week

PRIVILEGED AND CONFIDENTIAL, ...

UPS TE LABORATORIES, INC.

Analysis Results
Report Number 070987009
Date: July 9, 1987

(X)

A 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 6/25/87	Process Well #2 6/25/87	Sewer Discharge Flume 6/25/87	Organic Free Blank 6/25/87
ULI I.D.	17787031	17787032	17787033	17787034
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<10	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	4	<1 Trace	3	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
NYS DOH I.D.: 10170
*Blank Corrected.

Approved: MC

Date: 7/09/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for the sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

PRIVILEGED AND CONFIDENTIA' PREAPARED AT THE REQUEST OF CO NY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 070987010
Date: July 9, 1987

(X)

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-1 6/25/87	MW-2D 6/25/87	MW-2S 6/25/87	MW-3 6/25/87
ULI I.D.	17787035	17787036	17787037	17787038
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<5	<5	<5	<5
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<10	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	3	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1	<1	<1	<1
Dibromochloromethane	13	28	12	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
*Blank Corrected.

Approved: ML

Date: 7/09/87

PRIVILEGED AND CONFIDENTIAL PREPARED AT THE REQUEST OF COUN...

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 070987010
Date: July 9, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-4D 6/25/87	MW-4S 6/25/87	MW-5D 6/25/87	MW-5S 6/25/87
ULI I.D.	17787039	17787040	17787041	17787042
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<5	<5	<5	<5
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<10	<10	<10	<10
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1 Trace	6	2
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	1	1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: ______________ ML

Date: 7/09/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services

U[illegible] TATE LABORATORIES, INC.

Analysis Results
Report Number 070987010
Date: July 9, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Organic Free Blank 6/25/87			
ULI I.D.	17787043			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride *	<10			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<5			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform	<10			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
t-1,3-Dichloropropylene	<1			
Trichloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ug/l.
*Blank Corrected.
NYS DOH I.D.: 10170

Approved: MC

Date: 7/09/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services [illegible] damages.

?STATE LABORATORIES, INC.

18387109-112.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME					NO. OF CON-TAINERS	601/602						REMARKS
	Nikon Hargrave SCM												

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	601/602						REMARKS
	7/2/87	10:00			Process well #1	2	X						
		10:15			" " #2	2	X						
		10:20			Sewer discharge flume	2	X						
					ORC. Free Blk	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert L Riley	7/2/87 10:00 A.M.				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert L Riley	7/3/87 3:11 P.M.	Susan M. Thurston	7.2.87 3:11 p.	ULI 3 man-hrs. 2 pr. Gloves

.PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

U[illegible]STATE LABORATORIES, INC.

Analysis Results
Report Number 072387009
Date: July 23, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 7/2/87	Process Well #2 7/2/87	Sewer Discharge Flume 7/2/87	Organic Free Blank 7/2/87
ULI I.D.	18387109	18387110	18387111	18387112
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1 Trace	2	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	1	<1 Trace	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.
NYS DOH I.D.: 10170

Approved: [signature]

Date: 7/23/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI f[illegible] the services performed shall be equal to the [illegible] customer for the services as liquidated damages.

19187007-619

U STATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME					NO. OF CON-TAINERS	601/602						REMARKS
	Nixon Haigne (SCM) monthly wells												
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	7/9/87	10:20		X	M.W. 1	2	X						
		11:00		X	M.W. 2D	2	X						
		11:30		X	M.W. 3	2	X						
		12:30		X	M.W. 5S	2	X						
		12:35		X	M.W. 5D	2	X						
		1:00		X	M.W. 2S	2	X						
		1:00		X	M.W. 4D	2	X						
		1:05		X	M.W. 4S	2	X						
		2:00		X	M.W. 6	2	X						
		2:10		X	M.W. 7	2	X						
		2:15		X	M.W. 8	2	X						
		2:40		X	M.W. 9	2	X						
				X	BLANK ORG Free	1							

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Kelley	7/9/87				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Kelley	7/9/87 4:33 PM	[illegible]	7/7? 4:33 pm	18 maxtime hrs = 530.02 (ALI) 10 P. Glass = 20.02

19187020-024

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UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Metals, TDS, Chloride	Sulfate, Nitrate, Specific Conductivity	Ca, Mg, K, Fe, Mn			REMARKS
PROJECT NO.	PROJECT NAME: Nixon Hargrave (SCM)											
	7/9/87	10:20		X	M.W. 1	3	X	X	X			
		11:30		X	M.W. 3	3	X	X	X			Metals were Filtered in The Field
		11:00		X	M.W. 2D	3	X	X	X			
		12:35		X	M.W. 5D	3	X	X	X			Half Gallon unFiltered
		2:15		X	M.W. 8	3	X	X	X			
												Alkalinity results on Back

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	7/9/87				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Riley	7/9/87 4:41 P.M.	Susan M. Thornton	7-9-87 4:41 pm	ULI — 6 Mantime Hrs = 180.00; $180 — Mobile Lab Trailer for 1 Day

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 080587002
Date: August 5, 1987

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-1 7/9/87	MW-2D 7/9/87	MW-3 7/9/87
ULI I.D.	19187020	19187021	19187022
Nitrate-Nitrogen	3.9	3.1	5.0
Total Chloride	18	31	20
Sulfate	20	16	19
Total Hardness *	340	360	430
Specific Conductivity **	530	510	570
Total Dissolved Solids	320	280	360
Field Alkalinity *	190	180	230
Dissolved Calcium	72	56	70
Dissolved Iron	<0.03	<0.03	<0.03
Dissolved Magnesium	13	11	12
Dissolved Manganese	<0.02	<0.02	<0.02
Dissolved Potassium	1.7	1.5	1.8
Dissolved Sodium	16	21	15

All results are expressed as mg/l unless otherwise stated.
*Results are expressed as mg/l $CaCO_3$.
**Results are expressed as umhos/cm @ 25°C.

Approved: ______________

Date: 8/05/87

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PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 080587002
Date: August 5, 1987

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-5D 7/9/87	MW-8 7/9/87	
ULI I.D.	19187023	19187024	
Nitrate-Nitrogen	3.4	5.8	
Total Chloride	20	35	
Sulfate	18	16	
Total Hardness *	380	430	
Specific Conductivity **	510	670	
Total Dissolved Solids	310	420	
Field Alkalinity *	190	230	
Dissolved Calcium	60	73	
Dissolved Iron	<0.03	0.09	
Dissolved Magnesium	13	14	
Dissolved Manganese	<0.02	<0.02	
Dissolved Potassium	1.1	1.9	
Dissolved Sodium	11	28	

All results are expressed as mg/l unless otherwise stated.
*Results are expressed as mg/l $CaCO_3$.
**Results are expressed as umhos/cm @ 25°C.

Approved: [signature] mc

Date: 8/05/87

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

Analysis Results
Report Number 080587002
Date: August 5, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-1 7/9/87	MW-2D 7/9/87	MW-2S 7/9/87	MW-3 7/9/87
ULI I.D.	19187007 *	19187008	19187009	19187010
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride **	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform **	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	3	1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	45	28	12	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	1	1	1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Sample Dilution.
**Blank Corrected.

Approved: ______________

Date: 8/05/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 080587002
Date: August 5, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-4D 7/9/87	MW-4S 7/9/87	MW-5D 7/9/87	MW-5S 7/9/87
ULI I.D.	19187011	19187012	19187013	19187014
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	2	6	4
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	3	2	2
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: ______________

Date: 8/05/87

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20487099 -007

UP[illegible]ATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PR[illegible]ECT NO.	PROJECT NAME
	Nixon Hargrave SCM

ST[illegible] NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	EPA 601/602						REMARKS
	7/23/87	11:50		X	MW 1	2	X						
		10:15			MW-2S	2	X						
		11:00			MW-2D	2	X						
		12:10			MW-3	2	X						
		10:00			MW-4S	2	X						
		10:55			MW-4D	2	X						
		11:35			MW-5S	2	X						
		11:45			MW-5D	2	X						
					Org. free Blank	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	7/23/87 10:00				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[signature]	7/23/87 3:30	Susan M. Thornton	7/23/87 1530	ULI

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 081287002
Date: August 12, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-1 7/23/87	MW-2D 7/23/87	MW-2S 7/23/87	MW-3 7/23/87
ULI I.D.	20487099 *	20487100	20487101	20487102
EPA 601:				
Chloromethane	<5	<1	<1	<1
Bromomethane	<5	<1	<1	<1
Dichlorodifluoromethane	<5	<1	<1	<1
Vinyl Chloride	<5	<1	<1	<1
Chloroethane	<5	<1	<1	<1
Methylene Chloride **	<10	<5	<5	<5
Trichlorofluoromethane	<5	<1	<1	<1
1,1-Dichloroethylene	<5	<1	<1	<1
1,1-Dichloroethane	<5	<1	<1	<1
t-1,2-Dichloroethylene	<5	<1	<1	<1
Chloroform **	<10	<5	<5	<5
1,2-Dichloroethane	<5	<1	<1	<1
1,1,1-Trichloroethane	<5	<1	<1	<1
Carbon Tetrachloride	<5	<1	<1	<1
Bromodichloromethane	<5	<1	<1	<1
1,2-Dichloropropane	<5	<1	<1	<1
t-1,3-Dichloropropylene	<5	<1	<1	<1
Trichloroethylene	65	31	21	<1
Dibromochloromethane	<5	<1	<1	<1
1,1,2-Trichloroethane	<5	<1	<1	<1
c-1,3-Dichloropropylene	<5	<1	<1	<1
1,1,2,2-Tetrachloroethane	<5	<1	<1	<1
Tetrachloroethylene	<5	<1	<1	<1
Bromoform	<5	<1	<1	<1
2-Chloroethylvinyl ether	<5	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<5	<1	<1	<1
Toluene	<5	<1	<1	<1
Ethylbenzene	<5	<1	<1	<1
Xylenes	<5	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<5	<1	<1	<1
1,2-Dichlorobenzene	<5	<1	<1	<1
1,3-Dichlorobenzene	<5	<1	<1	<1
1,4-Dichlorobenzene	<5	<1	<1	<1

All results are expressed as ug/l.
*Sample Dilution.
**Blank Corrected.

Approved: ajf mc

Date: 8/12/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 081287002
Date: August 12, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-4D 7/23/87	MW-4S 7/23/87	MW-5D 7/23/87	MW-5S 7/23/87
ULI I.D.	20487103	20487104	20487105	20487106
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	1	<1	4	4
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: ajj ML

Date: 8/12/87

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UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 081287002
Date: August 12, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Organic Free Blank 7/23/87			
ULI I.D.	20487107			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride	<5			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<1			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform	<5			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
t-1,3-Dichloropropylene	<1			
Trichloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ug/l.
NYS DOH I.D.: 10170

Approved: ajf mc

Date: 8/12/87

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UPSTATE LABORATORIES, INC.

1838710.112.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	NO. OF CONTAINERS	Col/Aer						REMARKS
	Nikon Hayoke SCM								

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Col/Aer						REMARKS
	7/2/87	10:00			Process well #1	2	X						
		10:15			" " #2	2	X						
		10:30			Sewer discharge flume	2	X						
					ORG. Free BLK	1							

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert L Riley	7/2/87 10:00 A.M.				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert L Riley	7/3/87 3:11 P.M.	Susan M. Thurston	7-2-87 3:11 p	ULI 3 man-hrs. 2 pr. Gloves

21887021-024

U[illegible]TATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

[illegible]OJECT NO.	PROJECT NAME Nixon, Hargrave S.C.M. weekly Grabs					NO. OF CON-TAINERS	601/602						REMARKS
[illegible]. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	8/6/81	10:00		X	Process Well #1	2	X						clear H_2O
		10:15		X	Process Well #2	2	X						
		10:30		X	Sewer discharge Flume	2	X						
					ORG. Free Blank	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[illegible]	8/6/81				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[illegible]	8/6/81 [illegible]	[illegible]	[illegible] 30 pm	[illegible] 1 Pr Gloves

21887025-036

UP[illegible]ATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME: S.C.M. Nixon, Hargrave Monthly wells					NO. OF CON-TAINERS	601/602						REMARKS
S[illegible] NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	8/6/87	10:45		X	M.W. 1	2	✓						
		10:20		✓	M.W. 2S	2	✓						
		10:40		✓	M.W. 2D	2	✓						
		12:00		✓	M.W. 3	2	✓						
		10:00		✓	M.W. 4S	2	✓						
		10:30		✓	M.W. 4D	2	✓						
		11:15		✓	M.W. 5S	2	✓						
		11:25		✓	M.W. 5D	2	✓						
		11:30		✓	M.W. 6	2	✓						
				✓	M.W. 7								no sampler bailer in well
		1:55		✓	M.W. 8	2	✓						
		1:25		✓	M.W. 9	2	✓						
					org. free blank	1	✓						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Kelley	8/6/87				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	
Robert J Kelley	8/6/87 3:30 P.M.	Susan M. Dierston	8-6-87 3:30 P	18 [illegible] 10 [illegible] ULI	

UPS'ATE LABORATORIES, INC.

22287005

CHAIN OF CUSTODY RECORD

PROJECT NO.:

PROJECT NAME: NIXON HARGRAVE SCM

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS	601/602						REMARKS
	8-7-87	1100		X	WEll #7	2	✓						- HAD TO ReSAmple (clear H_2O w/ floating silt)

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8-7-87 / 1100				

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
[signature]	8-7-87 / 1300	[signature]	8-7-87 / 1300	[illegible]

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 082087003
Date: August 20, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 8/6/87	Process Well #2 8/6/87	Sewer Discharge Flume 8/6/87	Organic Free Blank 8/6/87
ULI I.D.	21887021	21887022	21887023	21887024
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<5	<5
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1 Trace	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1	2	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.
NYS DOH I.D.: 10170

Approved: [signature] MU

Date: 8/20/87

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'STATE LABORATORIES, INC.

Analysis Results
Report Number 082487004
Date: Auugst 24, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-1 8/6/87	MW-2D 8/6/87	MW-2S 8/6/87	MW-3 8/6/87
ULI I.D.	21887025 *	21887026	21887027	21887028
EPA 601:				
Chloromethane	<5	<1	<1	<1
Bromomethane	<5	<1	<1	<1
Dichlorodifluoromethane	<5	<1	<1	<1
Vinyl Chloride	<5	<1	<1	<1
Chloroethane	<5	<1	<1	<1
Methylene Chloride **	<25	<5	<5	<5
Trichlorofluoromethane	<5	<1	<1	<1
1,1-Dichloroethylene	<5	<1	<1	<1
1,1-Dichloroethane	<5	<1	<1	<1
t-1,2-Dichloroethylene	<5	<1	<1	<1
Chloroform **	<25	<5	<5	<5
1,2-Dichloroethane	<5	<1	<1	<1
1,1,1-Trichloroethane	<5	<1	<1	<1
Carbon Tetrachloride	<5	<1	<1	<1
Bromodichloromethane	<5	<1	<1	<1
1,2-Dichloropropane	<5	<1	<1	<1
t-1,3-Dichloropropylene	<5	<1	<1	<1
Trichloroethylene	62	38	20	<1
Dibromochloromethane	<5	<1	<1	<1
1,1,2-Trichloroethane	<5	<1	<1	<1
c-1,3-Dichloropropylene	<5	<1	<1	<1
1,1,2,2-Tetrachloroethane	<5	<1	<1	<1
Tetrachloroethylene	<5	2	<1	<1
Bromoform	<5	<1	<1	<1
2-Chloroethylvinyl ether	<5	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<5	<1	<1	<1
Toluene	<5	<1	<1	<1
Ethylbenzene	<5	<1	<1	<1
Xylenes	<5	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<5	<1	<1	<1
1,2-Dichlorobenzene	<5	<1	<1	<1
1,3-Dichlorobenzene	<5	<1	<1	<1
1,4-Dichlorobenzene	<5	<1	<1	<1

All results are expressed as ug/l.
*Sample Dilution.
**Blank Corrected.

Approved: [signature] mc

Date: 8/24/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages

to the fee charged to the customer for the services as liquidated damages.

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

Analysis Results
Report Number 082487004
Date: August 24, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-4D 8/6/87	MW-4S 8/6/87	MW-5D 8/6/87	MW-5S 8/6/87
ULI I.D.	21887029	21887030	21887031	21887032
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<5	<5	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	<1 Trace	<1	5	6
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
*Blank Corrected.

Approved: [signature] MC

Date: 8/24/87

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PSTATE LABORATORIES, INC.

Analysis Results
Report Number 082487004
Date: August 24, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	MW-6 8/6/87	MW-7 8/7/87	MW-8 8/6/87	MW-9 8/6/87
ULI I.D.	21887033*	22287005*	21887034*	21887035
EPA 601:				
Chloromethane	<10	<10	<10	<1
Bromomethane	<10	<10	<10	<1
Dichlorodifluoromethane	<10	<10	<10	<1
Vinyl Chloride	<10	<10	<10	<1
Chloroethane	<10	<10	<10	<1
Methylene Chloride **	<50	<50	<50	<5
Trichlorofluoromethane	<10	<10	<10	<1
1,1-Dichloroethylene	<10	<10	<10	<1
1,1-Dichloroethane	<10	<10	<10	<1
t-1,2-Dichloroethylene	<10	<10	<10	<1
Chloroform	<10	<10	<10	<1
1,2-Dichloroethane	<10	<10	<10	<1
1,1,1-Trichloroethane	<10	<10	<10	<1
Carbon Tetrachloride	<10	<10	<10	<1
Bromodichloromethane	<10	<10	<10	<1
1,2-Dichloropropane	<10	<10	<10	<1
t-1,3-Dichloropropylene	<10	<10	<10	<1
Trichloroethylene	28	65	26	5
Dibromochloromethane	<10	<10	<10	<1
1,1,2-Trichloroethane	<10	<10	<10	<1
c-1,3-Dichloropropylene	<10	<10	<10	<1
1,1,2,2-Tetrachloroethane	<10	<10	<10	<1
Tetrachloroethylene	<10 Trace	<10	<10	<1
Bromoform	<10	<10	<10	<1
2-Chloroethylvinyl ether	<10	<10	<10	<1
EPA 602 (including Xylenes):				
Benzene	<10	<10	<10	<1
Toluene	<10	<10	<10	<1
Ethylbenzene	<10	<10	<10	<1
Xylenes	<10	<10	<10	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<10	<10	<10	<1
1,2-Dichlorobenzene	<10	<10	<10	<1
1,3-Dichlorobenzene	<10	<10	<10	<1
1,4-Dichlorobenzene	<10	<10	<10	<1

All results are expressed as ug/l.
*Sample Dilution.
**Blank Corrected.

Approved: [signature] WW

Date: 8/24/87

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'STATE LABORATORIES, INC.

Analysis Results
Report Number 082487004
Date: August 24, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Organic Free Blank 8/6/87			
ULI I.D.	21887036			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1			
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride *	<5			
Trichlorofluoromethane	<1			
1,1-Dichloroethylene	<1			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	<1			
Chloroform	3			
1,2-Dichloroethane	<1			
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1			
1,2-Dichloropropane	<1			
t-1,3-Dichloropropylene	<1			
Trichloroethylene	<1			
Dibromochloromethane	<1			
1,1,2-Trichloroethane	<1			
c-1,3-Dichloropropylene	<1			
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1			
Bromoform	<1			
2-Chloroethylvinyl ether	<1			
EPA 602 (including Xylenes):				
Benzene	<1			
Toluene	<1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (601/602):				
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1			

All results are expressed as ug/1.
*Blank Corrected.
NYS DOH I.D.: 10170

Approved: [signature]

Date: 8/24/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages [illegible] for the [illegible]vices performed [illegible] to the fee charged to the customer for the services as liquidated damages.

2258706 3 -066

UP[illegible]TATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PR[illegible]ECT NO.	PROJECT NAME S.C.M. - Nixon, Hargrave					NO. OF CON-TAINERS	601	602					REMARKS
ST[illegible]. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION								
	8/13/87	1:00		X	Processwell #1	2	X						clear H_2O
		1:15		X	" " #2	2	X						
		1:30		X	Sewer discharge Flume	2	X						
				X	Off. Free Grab	1	X						

[illegible]pled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert J Riley	8/13/87 1:00				
[illegible]inquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Re[illegible]nquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks
Robert J Riley	8/13/87 4:00 P.M.	Susan M. Thornton	8-13-87 4:00 pm	ULI 3 hrs Max time

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

PSTATE LABORATORIES, INC.

Analysis Results
Report Number 082487003
Date: August 24, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 8/13/87	Process Well #2 8/13/87	Sewer Discharge Flume 8/13/87	Organic Free Blank 8/13/87
ULI I.D.	22587063	22587064	22587065	22587066
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1	2	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	2	2	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/l.
NYS DOH I.D.: 10170

Approved: Daniel [illegible] MC

Date: 8/24/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages [illegible] services performed shall be [illegible] to the fee charged to the customer for the services as liquidated damages.

PST[illegible]E LABORATORIES, INC.

23387037 - C40

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	[illegible] Hangtime Scm

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	(Col. 10?)						REMARKS
	8/20/87	12:00		X	Process Well # 1	2	X						(clean H2O)
		12:10		X	Process Well # 2	2	X						
		12:20		X	Sewer discharge Flume	2	X						
					Org Free Blank	1	X						

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Robert L Riley	8/20/87				
Relinquished by: (Signature)	**Date/Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date/Time**	**Received by: (Signature)**
Relinquished by: (Signature)	**Date/Time**	**Received for Laboratory by: (Signature)**	**Date/Time**	**Remarks**	
Robert L Riley	8/20/87 3:20 P.M.	C. Scala	8/20/87 1530	Uli Dampl MANTIME - 75^{00} - 2 1/2 hrs	

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

'STATE LABORATORIES, INC.

Analysis Results
Report Number 082887007
Date: August 28, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Process Well #1 8/20/87	Process Well #2 8/20/87	Sewer Discharge Flume 8/20/87	Organic Free Blank 8/20/87
ULI I.D.	23387037	23387038	23387039	23387040
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1
Methylene Chloride *	<10	<10	<10	<10
Trichlorofluoromethane	<1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	<1	<1	<1
Chloroform *	<5	<5	<5	<5
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	2	<1	1	<1
Dibromochloromethane	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1
c-1,3-Dichloropropylene	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	<1	<1	<1	<1
EPA 602 (including Xylenes):				
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1
Halogenated Aromatics (601/602):				
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are expressed as ug/1.
*Blank Corrected.
NYS DOH I.D.: 10170

Approved: AScala mc

Date: 8/28/87

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and [illegible] liability for actual and consequential damages of ULI for the services [illegible] shall be [illegible] to the fee charged to the customer for the services [illegible] damages.

·12·87

WELL #	TOTAL DEPTH	INITIAL DEPTH	°C TEMP	Ph	COND
1	37'	21.10	7°		
2S	63'	46.05	7°		
2D	105'	42.0	7°		
3	84'	57.1	7°		
4S	72'	45.65	8°		
4D	105'	45.7	8°		
5S	40'	14.0	8°		
5D	72'	14.6	8°		
6	58'	47.25	8°		
7	61'	48.0	8°		
8	61'	47.2	8°		
9	101'	47.4	7°		

4-16-87

WELL #	TOTAL DEPTH	INITIAL DEPTH	TEMP	Ph	COND
1	37	17.0	8°	6	182
2S	63	43.05	9°	6	421
2D	105	44.30	9°	6	313
3	84	49.3	9°	6	450
4S	72	40.5	9.5°	6	388
4D	105	42.05	8°	6	286
5S	40	10.4	8°	6	320
5D	72	11.2	9°	6	324
6	58	42.1	8°	6	408
7	61	43.85	9°	6.5	512
8	61	47.5	9°	7	385
9	101	43.6	8°	6.5	293

5-14

WELL #	TOTAL DEPTH	DEPTH	Ph	COND	TEMP
1	37	19.8	6	280	11
2S	63	44.53	6.5	297	12.5
2D	105	45.54	6.5	245	11
3	84	52.39	7	287	11
4S	72	43.12	6.5	375	11.5
4D	105	44.72	6.5	246	12.5
5S	40	11.91	7	236	10
5D	72	13.0	7	237	11
6	58	43.72	6.5	288	14.5
7	61	45.65	6.5	277	15
8	61	44.06	7	298	14
9	101	45.05	7	222	14

-87

WELL #	TOTAL DEPTH	INITIAL DEPTH	TEMP	Ph	COND
1	37'	20.1			
2S	63'	46.31			
2D	105'	45.15			
3	84'	54.0			
4S	72'	43.7			
4D	105'	44.9			
5S	40'	19.05			
5D	72'	19.05			

4-30-87

WELL #	TOTAL DEPTH	INITIAL DEPTH	TEMP	Ph	COND
1	37	18.29	9°	7	325
2S	63	43.18	10.5°	7	336
2D	105	44.37	10.5°	7	263
3	84	50.02	9.5°	7	359
4S	72	41.54	10°	7	433
4D	105	42.9	9.5°	7	280
5S	40	10.7	8.5°	7	287
5D	72	11.65	8.5°	7	285
6	58	42.8			
7	61	44.1			
8	61	43			
9	101	44.25			

WELL MEAS

Upstate Laboratories inc.

ATE	Well	Total Depth	Initial Depth	°C	Ph	Cond	Date	Well	Total Depth	Initial Depth	°C	ph	Cond	Date	Well	Total Depth	Initial Depth	°C	ph	Cond
-28	1	37'	20.99	12.5	7	298	6-25	1		23.25	16	7	280	7-23	1		25.22	15	6.9	420
	2S	63'	46.1	13	7	300		2S		48.63	15	7	392		2S		50.28	13	7.5	484
	2D	105'	46.91	15	7	255		2D		49.05	12	7	320		2D		51.21	14	7.4	373
	3	84'	54.85	12	7	315		3		59.2	11	7	437		3		62.05	13	7.	367
	4S	72'	44.8	12.5	7	388		4S		46.95	12°	7	434		4S		48.92	12	7.6	501
	4D	105'	44.85	13	7	266		4D		48.37	13	7	395		4D		50.17	13	7.3	382
	5S	40'	13.35	12	7	340		5S		15.80	15	7	293		5S		17.42	12	6.6	376
	5D	72'	14.40	11	7	337		5D		16.43	13	7	271		5D		17.43	13	6.9	358
	6	58'	45.58					6		48.50					6		50.			
	7	61'	47.37					7		59.81					7		51.59			
	8	61'	46.22					8		49.0					8		55			
	9	101'	96.91					9		50.42					9		51.37			
11	1		22.55	11.5	7	315	7-9	1		24.29	13	7	N/A							
	2S		47.36	11	7	385		2S		44.54	13	7								
	2D		46.15	11	7	307		2D		50.13	14	7								
	3		57.11	10.5	7	392		3		60.4	12	7								
	4S		45.91	11	7	388		4S		48.18	12	7								
	4D		47.18	11	7	313		4D		49.01	11	7								
	5S		14.58	9.5	7	312		5S		16.66	12	7								
	5D		15.37	10	7	304		5D		17.14	15	7								
	6		46.85	12	7	422		6		49.45	12	7								
	7		48.75	12	7	440		7		51.02	15	7								
	8		47.14	11.5	7	458		8		49.80	13	7								
	9		47.95	12	7	412		9		55.	11	7								

SCM

Upstate Laboratories inc.

	WELL I.D.	WELL DEPTH	WATER * ELEVATION-	pH-	TEMPERATURE- °C	CONDUCTIVITY-
		FT				
8-6-87	1	37	26.18	7.21	12	262
	2S	63	51.46	7.66	13	267
	2D	105	52.13	7.58	13	248
	3	83	63.0	7.72	15	236
	4S	72	50.01	7.56	14	289
	4D	105	51.16	7.18	13	250
	5S	40	18.71	7.69	15	208
	5D	72	19.33	7.74	15	205
	6	58	51.62	7.31	16	257
	7	61	53.04	7.07	14	300
	8	61	51.91	7.48	16	290
	9	101	52.55	7.16	16	271
8-20	1	37	22.76	, well caved in		
	2S	63	52.82	7.76	13.5	271
	2D	105	53.92	7.15	14	203
	3	83	64.30	7.45	14	227
	4S	72	51.13	7.71	14	271
	4D	105	52.14	7.81	13	240
	5S	40	19.90	7.55	13	214
	5D	72	20.98	7.71	13	206
	6	58	52.36			
	7	61	, new lock on well could not get ele.			
	8	61	54.53			
	9	101	54.20			

* TOP OF WELL PIPE TO WATER SURFACE.

WELL LOGS

ATTACHMENT A3

Boring Logs and Grain Size Analysis

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG [redacted]

REPORT OF BORING NO. MW-1 SHEET 1 OF 2

PROJECT LOCATION: CORTLANDVILLE
ENT: NIXON-HARGRAVE-DEVANS-DOYLE

SAMPLER
TYPE: SPLIT SPOON
HAMMER: 140 LBS.
FALL: 30"

GROUND WATER
DEPTH DATE 12/9 ELEV. 1168.08
DEPTH DATE 12/11 ELEV. 1168.15

FILE NO.: 2410.010.130

BORING CO.: EMPIRE SOILS INVESTIGATION
FOREMAN: ANDRE BUATRE
OBG GEOLOGIST: GUY SWENSON

BORING LOCATION: NEAR LAGOON
GROUND ELEVATION: 1187.00
DATES: STARTED: 10/01/86 ENDED: 10/03/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
0	1	0-1.5				Sand and fine gravel, trace to little silt (no samples)						
5	2	5-6.5										
							8'					
						Broken rock from gravel and cobbles. Cuttings show fine to coarse sand and fine to coarse gravel						
10	3	9.5-11	18-41	12	85							
			44									
15	4	14.5-16	30-34	6	68	Same as above						
			34									
							17'					
20	5	19.5-21	22-42	12	77	Same as above 20.8-21 dry silt, sand and gravel. Smooth drilling						
			35									
							24'					
25	6	24.5-26	25-20	4	42	Grey mixture of silt, fine to coarse sand and gravel. V. moist to saturated Drilling easier rig jumping Water Table ~ 27						
			22									
30	7	29.5-31	9-13-25	6	38	Same as above, saturated						

* 44' - 13.5' .020 slot. 2" I.D. PVC flush Jointed casing
44 - 10 Natural sand pack
10 - 8 Bentonite pellets
8 - 5 Formation collapse
5 - 0 Cement/Bentonite grout
0 - 2.35 Locking protective cover

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NO. MW-1 SHEET 2 OF 2

PROJECT LOCATION: CORTLANDVILLE

CLIENT: NIXON-HARGRAVE-DEVANS-DOYLE

SAMPLER
TYPE: SPLIT SPOON
HAMMER: 140 LBS.
FALL: 30"

GROUND WATER
DEPTH DATE 12/9 ELEV. 1168.08
DEPTH DATE 12/11 ELEV. 1168.15

FILE NO.: 2410.010.130

BORING CO.: EMPIRE SOILS INVESTIGATION
FOREMAN: ANDRE BUATRE
OBG GEOLOGIST: GUY SWENSON

BORING LOCATION: NEAR LAGOON
GROUND ELEVATION: 1187.00
DATES: STARTED: 10/01/86 ENDED: 10/03/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
						Same as above						
							34'					
35	8	34.5-36	21-33	4	56							
			23									
						Stiff cobbles and gravel, rig not jumping						
40	9	39.5-41	14-18	4	38							
			20			Same as above						
45	10	45-46.5	22-22	4	40							
			18			B.O.B						
50												

*

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

[redacted]

REPORT OF BORING NO. MW-2S SHEET 1 OF 3

GROUND WATER
DEPTH DATE 12/9 ELEV.
DEPTH DATE 12/11 ELEV.

FILE NO.: 2410.010.130

PROJECT LOCATION: CORTLANDVILLE
CLIENT: NIXON-HARGRAVE-DEVANS-DOYLE

SAMPLER
TYPE: SPLIT SPOON
HAMMER: 140 LBS.
FALL: 30"

BORING CO.: EMPIRE SOILS INVESTIGATION
FOREMAN: JIM HAMMOND
OBG GEOLOGIST: PETER BOGARDUS

BORING LOCATION: MW-2
GROUND ELEVATION: 1213.1
DATES: STARTED: 10/06/87 ENDED: 10/08/87

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
0						Brown sand and gravel little to trace of silt (no samples)						
5												
10												
							14'					
15	1	15-17	28-52	12	97	Dry brown sand and gravel crushed stone, little silt						
			45-51				16'					
						* 17 boulder rig not jumping						
							19'					
20	2	20-22	25-25	12	47	Moist brown sand and gravel, crushed stone, little silt						
			22-16									
25	3	25-27	37-37	12	74	Dry stiff sand and gravel, little silt						
			37-68									
						Rig not jumping						
			30-50	12	104	Same as above						
30	4	30-32	54-52									

* 68 - 38 .020" slot 2" I.D. PVC Flush Jointed
68 - 43 Natural formation collapse
43 - 30 Washed Quartz sand
30 - 28 1 bucket of pellets
28 - 15 Formation collapse
15 - 0 Bentoite/Cement grout
0 - 1.49 Locking protective cover

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG [redacted]	REPORT OF BORING NO. MW-2S SHEET 2 OF 3
PROJECT LOCATION: CORTLANDVILLE CLIENT: NIXON-HARGRAVE-DEVANS-DOYLE	SAMPLER TYPE: SPLIT SPOON HAMMER: 140 LBS. FALL: 30"	GROUND WATER DEPTH DATE 12/9 ELEV. DEPTH DATE 12/11 ELEV. FILE NO.: 2410.010.130

BORING CO.: EMPIRE SOILS INVESTIGATION FOREMAN: JIM HAMMOND OBG GEOLOGIST: PETER BOGARDUS	BORING LOCATION: MW-2 GROUND ELEVATION: 1213.1 DATES: STARTED: 10/06/87 ENDED: 10/08/87

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
35	5	35-38	112-100/.3		100+	Same as above						
40	6	40-42	54-57	16	87	41'6" Red silty sand seam, little clay	40'					
			50-61				41'					
45	7	45-47	35-38	16	73	F/C sand and gravel, little silt						
			35-33									
						Water table ~ 49ft.	49'					
50	8	50-52	21-41	18	78							
			37-35									
55	9	55-57	16-24		53	Brown sand and gravel, broken rock fragments, cobbles						
			29-19									
60	10	60-62	18-10	12	34							
			24-27									

*

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NO. MW-2S SHEET 3 OF 3

PROJECT LOCATION: CORTLANDVILLE
CLIENT: NIXON-HARGRAVE-DEVANS-DOYLE

SAMPLER
TYPE: SPLIT SPOON
HAMMER: 140 LBS.
FALL: 30"

GROUND WATER
DEPTH DATE 12/9 ELEV.
DEPTH DATE 12/11 ELEV.

FILE NO.: 2410.010.130

BORING CO.: EMPIRE SOILS INVESTIGATION
FOREMAN: JIM HAMMOND
OBG GEOLOGIST: PETER BOGARDUS

BORING LOCATION: MW-2
GROUND ELEVATION: 1213.1
DATES: STARTED: 10/06/87 ENDED: 10/08/87

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
65	11	65-67	31-32	17	116							
			84-44									
70	12	70-72	31-39	18	73							
			34-40									
						B.O.B.	72'					

*

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG
[redacted]

REPORT OF BORING NO. MW-20 SHEET 1 OF 2

PROJECT LOCATION: Cortlandville

...: Nixon-Hardgrove-Devans-Doyle

SAMPLER
TYPE: Grab
HAMMER:
FALL:

GROUND WATER
DEPTH 47.26 DATE 12/9/86 ELEV. 1167.91
DEPTH 47.15 DATE 12/11/86 ELEV. 1168.02

FILE NO.: 2410-010-130

BORING CO.: A.W. Kincaid
FOREMAN: Bruce Yorden
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION: MW-20
GROUND ELEVATION: 1213.10 ft.
DATES: STARTED: 11/04/86 ENDED: 11/07/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	SP. COND.	HNU	R M V.
0						Dry brown coarse sand to fine gravel. Some medium 1 coarse gravel. Little fine/medium sand, little to trace of silt. (well recovered)						
10						Dry brown coarse sand to fine gravel. Some fine to medium sand, little silt.	12'					
						Dry brown fine to coarse gravel, and fine to coarse sand. Few small cobble. (well recovered)	17'					
						Same as above						
30												
						Dry brown fine to medium gravel and, medium to coarse sand. Occasional coarse gravel to small cobbles. Trace of fine sand and silt.	38'					
40						WATER TABLE 48 ft.-49 ft.						
50						Wet brown medium to coarse gravel sand. Some fine gravel to medium gravel. Trace of fine sand and silt						
						Wet brown medium to coarse gravel. Some fine gravel.	55'					
60												

* All samples were from drilling cuttings.
102-82 .020 slot, 2" I.D. PVC flush jointed casing
102-78 Natural sand pack 55-0 Cement/Bentonite grout

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG
[redacted]

REPORT OF BORING NO. MW-2D SHEET 2 OF 2

PROJECT LOCATION: Cortlandville

...T: Nixon-Hardgrove-Devans-Doyle

SAMPLER
TYPE: Grab
HAMMER:
FALL:

GROUND WATER
DEPTH 47.26 DATE 12/9/86 ELEV. 1167.91
DEPTH 47.15 DATE 12/11/86 ELEV. 1168.02

FILE NO.: 2410-010-130

BORING CO.: A.W. Kincaid
FOREMAN: Bruce Yorden
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION: MW-2D
GROUND ELEVATION: 1213.10 ft.
DATES: STARTED: 11/04/86 ENDED: 11/07/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	R
						Same as above with little fine to coarse sand						
						69'						
70						Wet brown medium to coarse sand. Occasional fine to medium gravel. Little fine sand and silt.						
						78'						
80						Wet brown medium to coarse gravel. Some fine gravel. Little medium/coarse sand.						
						88'						
90						Wet brown medium to coarse sand. Occassional fine to medium gravel. Little fine sand, Trace of silt.						
						Same as above						
100												
						Bottom of Hole @ 102 ft.						

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG [redacted]	REPORT OF BORING NO. MW-3 SHEET 1 OF 2
PROJECT LOCATION: CORTLANDVILLE CLIENT: NIXON-HARGRAVE-DEVANS-DOYLE	SAMPLER TYPE: SPLIT SPOON HAMMER: 140 LBS. FALL: 30"	GROUND WATER DEPTH DATE 12/9 ELEV. 1173.34 DEPTH DATE 12/11 ELEV. 1173.71 FILE NO.: 2410.010.130

BORING CO.: EMPIRE SOILS INVESTIGATION
FOREMAN: ANDRE BUATRE/JIM HAMMOND
OBG GEOLOGIST: PETER BOGARDUS

BORING LOCATION: MW-3 UPGRADIENT
GROUND ELEVATION: 1229.10
DATES: STARTED: 10/09/87 ENDED: 10/13/87

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
0						0' - 15' Easy drilling, rig jumping (no samples)						
10												
						15' - 20' - Slow drilling, rig not jumping						
20	1	20-22	21-22	15	73		20'					
			51-52			Brown fine to coarse sand and fine to medium sand						
		25-27	38-70	12	136							
			66-78									
30		30-32	39-28	12	55	Same as above, rig jumping						
			27-24									
							32'					
		35-37	37-37	12	63	Brown fine to coarse sand, little silt						
			26-35									
40		40-41.5	21-48	12	148+							
			100/4									
		45-47	42-34	15	130							
			96				47'					
50		50-52	45-67	15	88	Brown sand and gravel, little silt						
			21-16									
							54'					
		55-57	39-37	75	71	Same as above with occasional silt lense Water Table ~ 57						
			34-44									
60		6										

* 81 - 51 .020" slot 2" I.D. PVC Flush Jointed casing
81 - 41 Natural Sand Pack
41 - 39 Bentonite pellets
39 - 23 Formation collapse
23 - 0 Cement/Bentonite grout
0 - 2.36 Locking protective cover

O'BRIEN & GERE
ENGINEERS, INC.

TEST BORING LOG
[redacted]

REPORT OF BORING NO. MW-3 SHEET 2 OF 2

GROUND WATER
DEPTH DATE 12/9 ELEV. 1168.08
DEPTH DATE 12/11 ELEV. 1168.15

FILE NO.: 2410.010.130

PROJECT LOCATION: CORTLANDVILLE
CLIENT: NIXON-HARGRAVE-DEVANS-DOYLE

SAMPLER
TYPE: SPLIT SPOON
HAMMER: 140 LBS.
FALL: 30"

BORING CO.: EMPIRE SOILS INVESTIGATION
FOREMAN:
OBG GEOLOGIST: PETER BOGARDUS

BORING LOCATION: MW-3 UPGRADIENT
GROUND ELEVATION:
DATES: STARTED: 10/09/87 ENDED: 10/13/87

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
		60-62	26-34	12	94	Brown sand, gravel and cobbles, little silt, very hard drilling, (broken rock fragments)						
			60-67									
		65-67	76-119	12	148							
			29-79									
70		70-72	36-35	12	74	Same as above						
			39-43									
		75-77	40-26	12	51	Same as above						
			25-37									
80		80-81.5	39-50	12	115	Same as above						
			65									
						B.O.B.	83'					

*

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG [redacted]	REPORT OF BORING NO. MW-4D,4S SHEET 1 OF 2
...T LOCATION: Cotlandville ...T: Nixon-Hardgrave-Devans-Doyle	SAMPLER TYPE: Grab HAMMER: FALL:	GROUND WATER MW-4D DEPTH DATE 12/9/86 ELEV. 1168.25 DEPTH DATE 12/11/86 ELEV. 1168.33 FILE NO.: 2410-010-130

BORING CO.: A.W. Kincaid FOREMAN: Bruce Yorden OBG GEOLOGIST: Peter Bogardus	BORING LOCATION: MW-4D, GROUND ELEVATION: 1210.10 ft. DATES: STARTED: 11/10/86 ENDED: 11/21/86

DEPTH	SAMPLE					SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING			R M ...
	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE				SAL. 0/00	SP. COND.	HNU	
0						Dry brown fine to medium gravel. Some medium/coarse sand. Little coarse gravel trace fine sand and silt.						
10						12'						
						Dry brown fine to medium gravel little medium/coarse sand. Trace fine sand and silt.						
						22'						
						Dry brown medium/coarse sand. Some fine to medium gravel. Trace of silt and fine sand.						
30												
						38'						
40						Dry medium to coarse gravel. Some medium sand to fine gravel. Trace of fine sand.						
						WATER TABLE 48ft.-49ft.						
50						Wet brown medium to coarse gravel. Some medium sand to fine gravel. Trace of fine sand and silt.						
						55'						
						Wet brown medium to coarse gravel. Some fine gravel.						
60												

* MW-4D All samples from drilling cuttings.
102-82 .020 set 2" I.D. flush jointed PVC well screen.

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING NO. MW-4D,4S SHEET 2 OF 2
PROJECT LOCATION: Cortlandville [CLIE]NT: Nixon-Hardgrave-Devans-Doyle	SAMPLER TYPE: Grab HAMMER: FALL:	GROUND WATER DEPTH 44.87 DATE 12/9/86 ELEV. 1168.52 DEPTH 44.78 DATE 12/11/86 ELEV. 1168.61 FILE NO.: 2410-010-130

BORING CO.: A.W. Kincaid FOREMAN: Bruce Yorden OBG GEOLOGIST: Peter Bogardus	BORING LOCATION: MW-4S GROUND ELEVATION: 1212.00 ft. DATES: STARTED: 11/10/86 ENDED: 11/21/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	R M ... S*
						Wet brown medium to coarse gravel. Some medium sand to fine gravel. Trace of fine sand and silt.						
						Same as above, with a few small cobbles.						
							68'					
70						Wet brown medium to coarse sand, and fine to medium gravel. Little to trace of silt and fine sand.						
							73'					
						Wet brown fine to medium gravel. Some medium to coarse sand. Trace of fine sand						
80												
							88'					
						Wet brown medium to coarse sand. Little fine gravel. Trace of silt and fine sand.						
90												
						Same as above, with occasional medium to coarse gravel.						
100												
						Bottom of Hole @ 102 ft.						

* MW-4S

72-52 .020 slot 2" I.D. flush jointed PVC well screen

72-50 Natural formation collapse 0-2.04 4" protective locking casing

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG [redacted]	REPORT OF BORING NO. MW-5D,5S SHEET 1 OF 2
PROJECT LOCATION: Cortlandville CLIENT: Nixon-Hardgrave-Devans-Doyle	SAMPLER TYPE: Grab HAMMER: FALL:	GROUND WATER MW - 5D DEPTH 14.57 DATE 12/9/86 ELEV. 1167.92 DEPTH 14.67 DATE 12/11/86 ELEV. 1167.82 FILE NO.: 2410-010-130

BORING CO.: A.W. Kincaid FOREMAN: Bruce Yorden OBG GEOLOGIST: Peter Bogardus	BORING LOCATION: MW-5D GROUND ELEVATION: 1180.00 ft. DATES: STARTED: 11/20/86 ENDED: 11/22/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	R M *
0						Dry brown medium sand to fine gravel. Trace of fine sand and silt.						
						8'						
10						Dry brown fine to medium gravel, and medium to coarse sand. Trace of fine sand and silt.						
						WATER TABLE ~16 ft.						
20						Same as above, with occasional coarse gravel (wet)						
						28'						
30						Wet brown medium to coasre sand, and fine to medium gravel. Little fine sand and silt.						
40						Same as above						
						44'						
						Wet brown medium to coarse sand. Little fine gravel. Trace of silt and fine sand.						
50												
60												

* MW-5D

69-49 .020 slot 2" I.D. flush jointed PVC well screen

69-42 Natural formation collapse 0-2.68 4" protective locking cover

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG
[redacted]

REPORT OF BORING NO. MW-5D,5S SHEET 2 OF 2

P[illegible]T LOCATION: Cortlandville
[illegible]T: Nixon-Hardgrave-Devans-Doyle

SAMPLER
TYPE: Grab
HAMMER:
FALL:

GROUND WATER MW-5S
DEPTH DATE 12/9/86 ELEV. 1168.08
DEPTH DATE 12/11/86 ELEV. 1166.16

FILE NO.: 2410-010-130

BORING CO.: A.W. Kincaid
FOREMAN: Bruce Yorden
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION: MW-5S
GROUND ELEVATION: 1180
DATES: STARTED: 11/20/86 ENDED: 11/22/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	SP. COND.	HNU	R M [illegible]
						Same as above						
70						Same as above, with occasional fine/medium gravel.						
						78'						
						Brown fine sand, little silt (heaving in casing)						
						Bottom of Hole @ 80 ft.						

* MW-5S
38-18 .020 slot 2" I.D. flush jointed PVC well screen
78-16 Natural formation collapse [illegible]

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

[redacted]

REPORT OF BORING NO. MW-6 — SHEET 1 OF 1

PROJECT LOCATION: Cortlandville

CLIENT: Nixon-Hardgrave-Devans-Doyle

SAMPLER
TYPE: Split-Spoon
HAMMER: 140 lbs.
FALL: 30"

GROUND WATER
DEPTH 49.6 DATE 12/10/86 ELEV. 1168.97
DEPTH 47.0 DATE 12/11/86 ELEV. 1168.87

FILE NO.: 2410-010-130

BORING CO.: Catoh Environmental
FOREMAN: Denny Burrows
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION: Backyard
GROUND ELEVATION: 1215.00 ft.
DATES: STARTED: 11/10/86 ENDED: 11/14/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	R
0	1	0-2	22-16	8	32	Dry brown fine sand. Some silt occasional broken rock fragments.						
			16-14									
	2	2-4	12-9	2	18							
			9-11									
5	3	4-6	25-36	8	52	Broken rock fragments, medium sand to fine gravel, with little silt.						
			16-17									
	4	6-8	16-18	12	41							
			23-32									
	5	8-10	18-27	8	49	Same as above						
10			22-40									
	6	13-15	20-22	4	48	Same as above						
	7	23-25	40-56	4	100+	Broken rock fragments.						
30												
	8	33-35	38-52	6	83							
			31-22									
40												
	9	43-45	21-39	4	80	Dry broken medium to coarse sand. Some fine gravel, little silt.						
						WATER TABLE ~ 47 FT.						
50						Wet brown medium to coarse sand. Some fine gravel, little silt.						
						Same as above						
		57-59	45-100/5	5	100+							
						Bottom of Hole @ 60 ft.						

* 57-47 .020 slot 2" I.D. flush jointed PVC well screen
57-53 Formation collapse

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG [redacted]	REPORT OF BORING NO. MW-7 SHEET 1 OF 2
...ECT LOCATION: Cortlandville ...ENT: Nixon-Hardgrave-Devans-Doyle	SAMPLER TYPE: Split-Spoon HAMMER: 140 lbs. FALL: 30"	GROUND WATER DEPTH 48.21 DATE 12/10/86 ELEV. 1168.94 DEPTH 48.15 DATE 12/11/86 ELEV. 1169.00 FILE NO.: 2410-010-130

BORING CO.: Catoh Environmental FOREMAN: Denny Burrows OBG GEOLOGIST: Peter Bogardus	BORING LOCATION: Backyard GROUND ELEVATION: 1215.50 DATES: STARTED: 11/17/86 ENDED: 11/25/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	R M K
0	1	0-2	4-6	12	14	Moist brown silt. Some fine sand, little medium/coarse sand, Trace of clay (fill)						
			8-8									
	2	2-4	11-12	12	24							
			12-12			Moist brown medium sand to fine gravel. Little silt and fine sand.						
	3	4-6	5-6	NR	17							
5			11-17									
	4	6-8	6-7	5	14	Same as above, with broken rock fragments						
			7-9									
	5	8-10	9-11	5	22	Same as above						
			11-15									
	6	17-19	17-13	8	25	Moist brown medium to coarse gravel. Some medium sand to fine gravel. Trace of silt and fine sand.						
20			12-15									
	7	27-29	15-18	8	37	Dry brown medium sand to fine gravel. Some broken rock fragments little silt.						
30			19-23									
	8	37-39	17-20	6	41	Same as above						
40			21-23									
	9	47-49	21-23	10	51	WATER TABLE ~ 48 ft.						
50			28-50/4									

* 57.1-47.1 .020 slot 2" I.D. PVC well screen
57.1-50 Formation collapse

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG
[redacted]

REPORT OF BORING NO. MW-7 SHEET 2 OF 2

PROJECT LOCATION: Cortlandville
CLIENT: Nixon-Hardgrave-Devans-Doyle

SAMPLER
TYPE: Grab
HAMMER:
FALL:

GROUND WATER
DEPTH DATE ELEV.
DEPTH DATE ELEV.

FILE NO.: 2410-010-130

BORING CO.: Catoh Environmental
FOREMAN: Denny Burrows
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION:
GROUND ELEVATION:
DATES: STARTED: 11/17/86 ENDED: 11/25/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMK.*
						Wet brown medium sand to fine gravel. Broken rock fragments, little silt to fine sand.						
60												
	10	61-63	41-42	12	35							
			13-16									
	11	63-65	22-19	8	41							
			22-8									
						Bottom of Hole @ 60 ft.						

*

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

[redacted]

REPORT OF BORING NO. MW-8 — SHEET 1 OF 2

PROJECT LOCATION: Cortlandville
Nixon-Hardgrave-Davars-Doyle

SAMPLER
TYPE: Split-Spoon
HAMMER: 140 lbs.
FALL: 30"

GROUND WATER
DEPTH 47.59 DATE 12/10/86 ELEV. 1158.83
DEPTH 47.52 DATE 12/11/86 ELEV. 1168.90

FILE NO.: 2410-010-130

BORING CO.:
FOREMAN:
OBG GEOLOGIST:

BORING LOCATION: Backyard
GROUND ELEVATION: 1215.30 ft.
DATES: STARTED: 11/18/86 ENDED: 11/19/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS.
0		0-2	7-16	3	24	Dry brown broken rock fragments. Some medium/ coarse little fine sand to silt.						
			8-8									
		2-4	15-20	4	50							
			30-33									
		4-6	44-55	6	100+							
5			100/4									
		6-8	25-30	6	54	Dry brown broken rock fragments. Some silt and fine sand.						
			24-26									
		9-11	50-56	6	57							
10			20-17			Same as above.						
		17-19	6-10	12	19	Dry brown medium sand to fine gravel. Some broken rock fragments, little silt.						
20			9-9									
		27-29	21-27	8	57	Sam as above						
30			31-26									
		37-39	33-41	7	66	Same as above. with fine to medium gravel.						
40			25-29									
		47-39	25-100/4	NR	100+	Rock in shoe						
						WATER TABLE ~49 ft.						
50						Wet brown medium sand to fine gravel.						

* 60.3-50.3 .020 slot 2" I.D. flush jointed PVC well screen
60.3-49 Formation collapse — 0-1.67 Protective locking cover
49-45 Q rock 4x

O'BRIEN & GERE
ENGINEERS, INC.

PROJECT LOCATION: Cortlandville
: Nixon-Hardgrave-Devans-Doyle

TEST BORING LOG
[redacted]

SAMPLER
TYPE: Split-Spoon
HAMMER: 140 lbs.
FALL: 30"

REPORT OF BORING NO. MW-8 SHEET 2 OF 2

GROUND WATER
DEPTH DATE ELEV.
DEPTH DATE ELEV.

FILE NO.: 2410-010-130

BORING CO.: Catoh Environmental
FOREMAN: Denny Burrows
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION:
GROUND ELEVATION:
DATES: STARTED: 11/18/86 ENDED: 11/19/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMKS*
						Wet brown medium sand to fine gravel, little silt.						
60												
						Bottom of Hole @ 61 ft.						

*

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG [redacted]	REPORT OF BORING NO. MW-9 SHEET 1 OF 2
P[illegible]CT LOCATION: Cortlandville [illegible]T: Nixon-Hardgrave-Devans-Doyle	SAMPLER TYPE: Split-Spoon HAMMER: 140 lbs. FALL: 30"	GROUND WATER DEPTH 48.97 DATE 12/10/86 ELEV. 1168.59 DEPTH 48.71 DATE 12/11/86 ELEV. 1108.85 FILE NO.: 2410-010-130

BORING CO.: Catoh Environmental FOREMAN: Denny Burrows OBG GEOLOGIST: Peter Bogardus	BORING LOCATION: Backyard GROUND ELEVATION: 1215.10 DATES: STARTED: 12/01/86 ENDED: 12/04/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	R...
0		0-2	14-23	12	40	Dry brown silt. Some fine sand occasional rock fragments, iron oxide stain (fill)						
			17-16									
		2-4	9-10	12	18							
			8-9									
		4-6	13-14	6	33							
5			19-23									
		6-8	25-16	0	30	Rock in shoe						
			14-14									
		8-10	9-8	4	14	Broken rock fragments and fine to coarse sand with silt.						
			6-8									
		17-19	44-23	8	39	Dry brown broken rock fragments with medium/ coarse sand. Trace of fine sand.						
20												
		27-29	26-21	8	37	Dry brown broken rocks fragments, with rounded fine to medium gravel. Some fine to coarse sand, little silt.						
30			16-22									
		37-39	34-23	0	67							
40			40-30				40'					
		40.5	Grab			moist fine to medium sand with silt lines, trace of clay.						
							41'					
		47-49	29-42	10	80	Broken rock formation, wet.						
50		38-22				fine/coarse gravel and fine/coarse sand.						

* 98-78 .020 slot PVC 2: I.D.
98-70 Sand, @ rock 4x 0-2.11 Protective locking cover

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NO. MW-9 SHEET 2 OF 2

PROJECT LOCATION: Cortlandville

CLIENT: Nixon-Hardgrave-Devans-Doyle

SAMPLER
TYPE: Split-Spoon
HAMMER: 140 lbs.
FALL: 30"

GROUND WATER
DEPTH DATE ELEV.
DEPTH DATE ELEV.

FILE NO.: 2410-010-130

BORING CO.: Catoh Environmental
FOREMAN: Denny Burrows
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION:
GROUND ELEVATION:
DATES: STARTED: 12/01/86 ENDED: 12/04/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	SAMPLE BLOWS /6"	SAMPLE PENETRN/ RECOVERY	SAMPLE "N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMK
		57-59	32-30	9	87	Wet broken rock fragments, fine/coarse sand. Fine/coarse gravel, little silt.						
60			57-25									
		67-69	22-34	8	57	Same as above						
70			23-51									
		77-79	22-16	8	40	Same as above						
80			24-28									
		87-89	23-44	5	60	Same as above						
90			16-22									
100		100-100	28-50	5	77	Same as above						
			22-19			Bottom of Hole @ 100 ft.						

*

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING NO. B-10 SHEET 1 OF 1

PROJECT LOCATION: Cortlandville

...T: Nixon-Hardgrave-Devans-Doyle

SAMPLER
TYPE: Split-Spoon
HAMMER: 140 lbs.
FALL: 30"

GROUND WATER
DEPTH DATE ELEV.
DEPTH DATE ELEV.

FILE NO.: 2410-010-130

...ING CO.: Catoh Environmental
FOREMAN: Denny Burrows
OBG GEOLOGIST: Peter Bogardus

BORING LOCATION: Backyard B-10
GROUND ELEVATION:
DATES: STARTED: 12/04/86 ENDED: 12/05/86

DEPTH	SAMPLE No.	SAMPLE DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRATUM CHANGE DEPTH	EQUIPMENT INSTALLED	FIELD TESTING SAL. 0/00	FIELD TESTING SP. COND.	FIELD TESTING HNU	RMK
0	1	0-2	7-8	8	16	Moist brown silt. some fine sand, broken rock little medium sand.						
			8-13			2'						
	2	2-4	10-9	5	19	Dry brown silt, and fine sand to coarse sand Trace of clay.						
			11-15									
	3	4-6	7-9	3	18							
5			9-12			7'						
	4	6-8	7-8	NR	15	Dry brown clay. Some silt to fine sand. (broken rock fragments)						
			7-10									
	5	8-10	6-8	6	16							
			8-15									
10												
	6	17-19	12-16	6	38	Dry brown medium sand to fine gravel. Little fine sand and silt. Trace of clay.						
20			22-23									
	7	27-29	22-50	4	100+	Medium to coarse gravel, little silt. Boulder 33-36 slow drilling.						
30			100/4									
	8	37-39	30-50	8	72							
40			22-26									
						WATER TABLE 46.5'						
						Wet fine sand to fine gravel, little silt.						
	9	47-49	43-50	12	72							
50			22-29			Bottom of Hole @ 49 ft.						

Div 10 2410-010-130
Nixon - Hardgrave: Cortlandville

L-870
Nixon - Ha[illegible]rave
File #2410.010

010291

Sieve Analysis

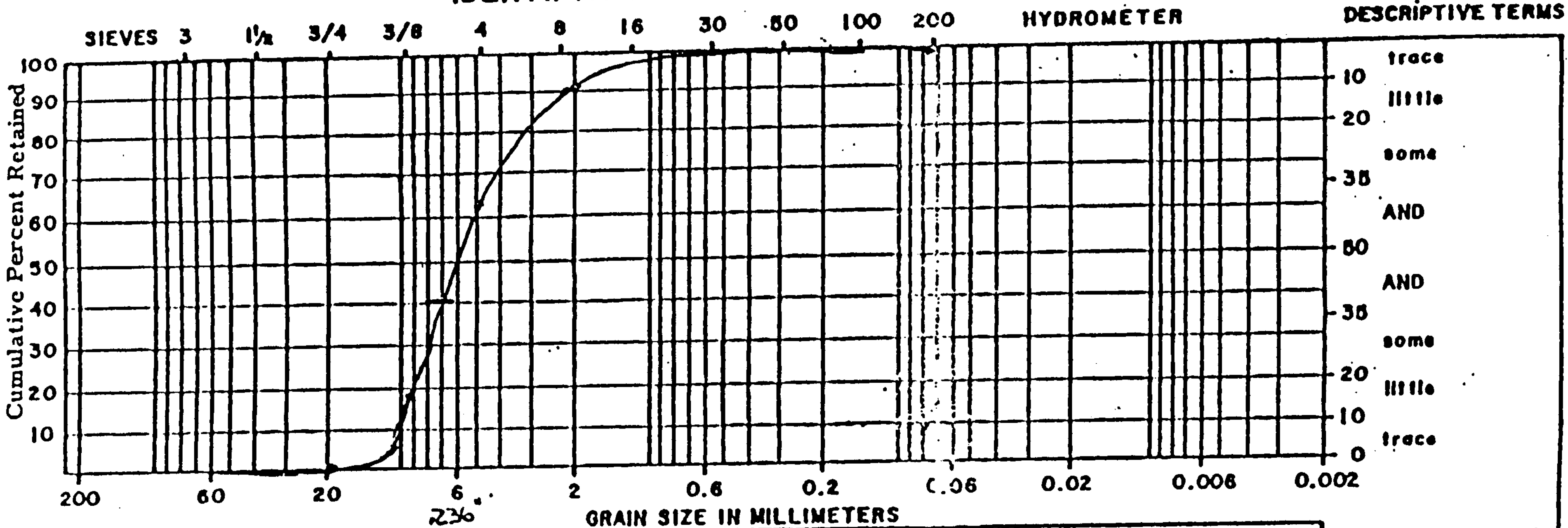
Well #	Depth	Sieve Size - Percent Passing Sieve 1"	3/4"	1/2"	3/8"	#4	#10	#30	#60	#100	#200
MW-2D	45'	--	100	95.6	80.7	36.2	9.4	1.1	1.0	1.0	.9
MW-2D	55'	--	100	87.8	53.0	11.6	3.1	2.1	1.9	1.7	1.5
MW-2D	60'	--	100	98.6	78.3	27.3	15.5	8.4	2.6	1.8	1.3
MW-2D	70'	--	100	82.3	63.8	45.2	32.6	9.5	5.5	4.5	3.9
MW-2D	75'	--	100	93.0	76.3	53.8	43.0	12.9	2.4	2.0	1.8
MW-2D	80'	100	97.6	89.5	67.7	38.1	19.6	9.0	5.7	4.7	4.0
MW-2D	90'	100	99.1	91.9	80.4	62.0	46.0	8.3	2.4	2.0	1.8
MW-2D	100'	--	100	94.3	82.4	55.0	35.4	13.2	3.7	2.2	1.7
MW-5	20'	--	100	80.4	44.5	9.5	1.8	1.0	1.0	1.0	1.0
MW-5	80'	--	100	95.7	94.1	90.6	88.6	83.0	75.4	48.2	24.2

m. ZD 45

BRIEN & GER

GRAIN SIZE ANALYSIS

IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL

228	76.2	25.4	9.52	2.0	0.59	0.25	0.074 MM.	OPENING
9 In.	3 In.	1 In.	3/8 In.	Nos. 10	30	60	200	SIEVE

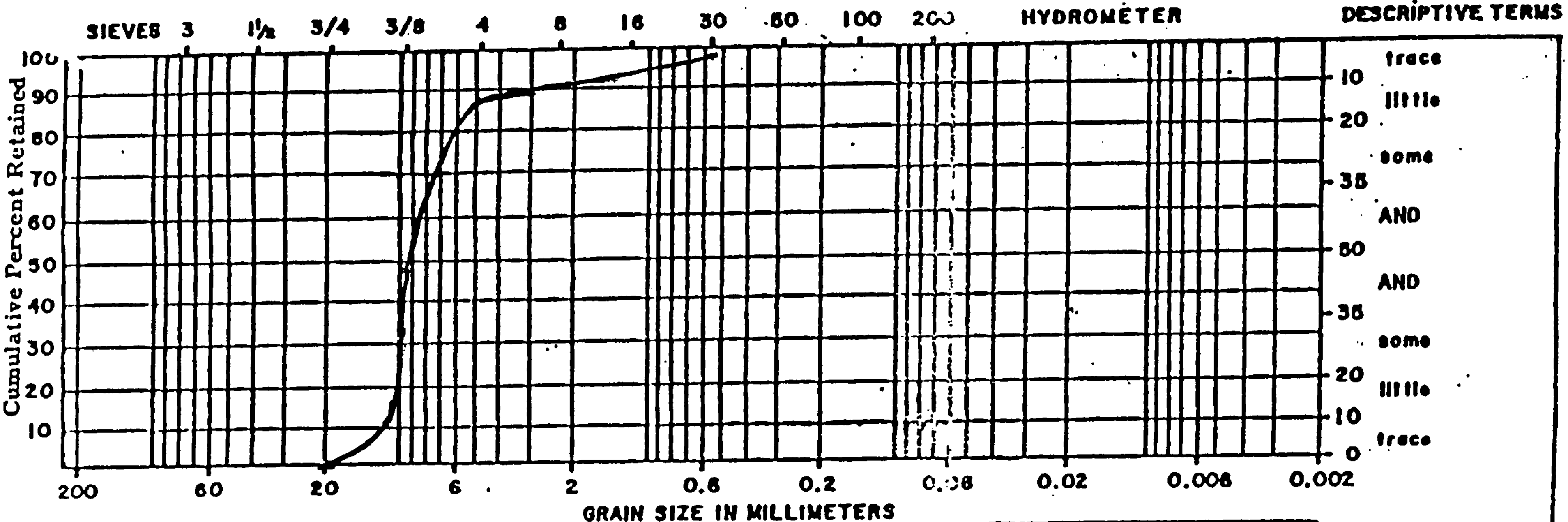
Cortlandville : MW-2D 45

010292

MW-2D
55

GRAIN SIZE A...LYSIS

IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL

228	76.2	25.4	9.52	2.0	0.59	0.25	0.074	MM. OPENING
9 In.	3 In.	1 In.	3/8 In.	Nos. 10	30	60	200	SIEVE

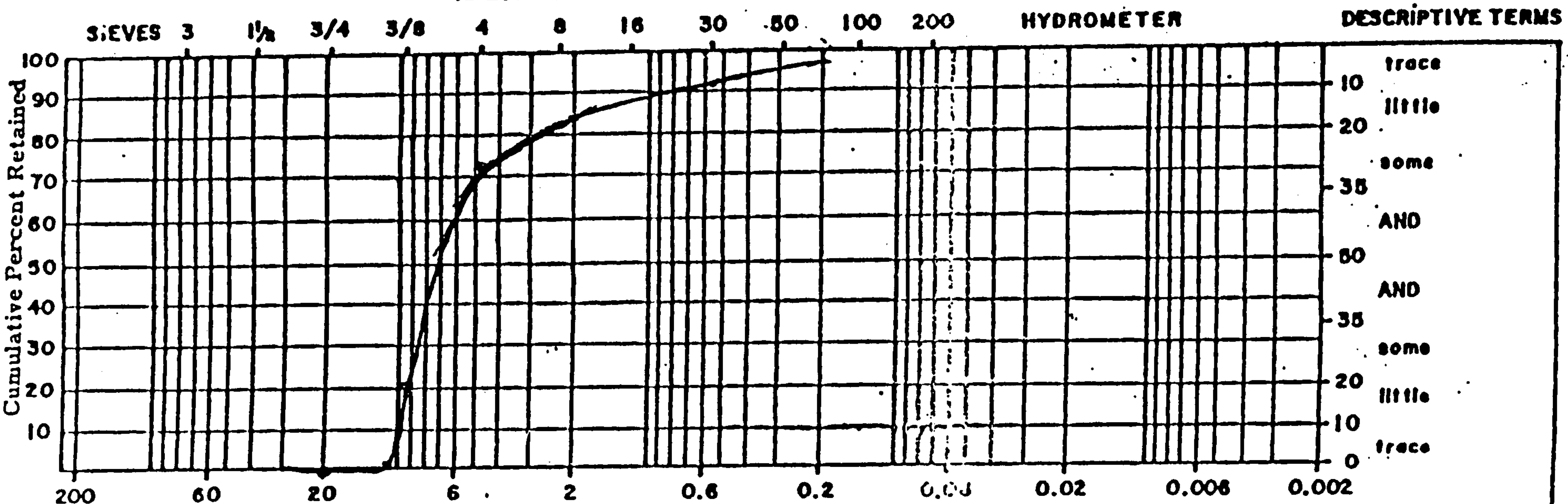
Cortlandville : MW-2D 55

010293

MW-2D 5'

GRAIN SIZE ANALYSIS

IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL

228 76.2 25.4 9.52 2.0 0.59 0.25 0.074 MM. OPENING

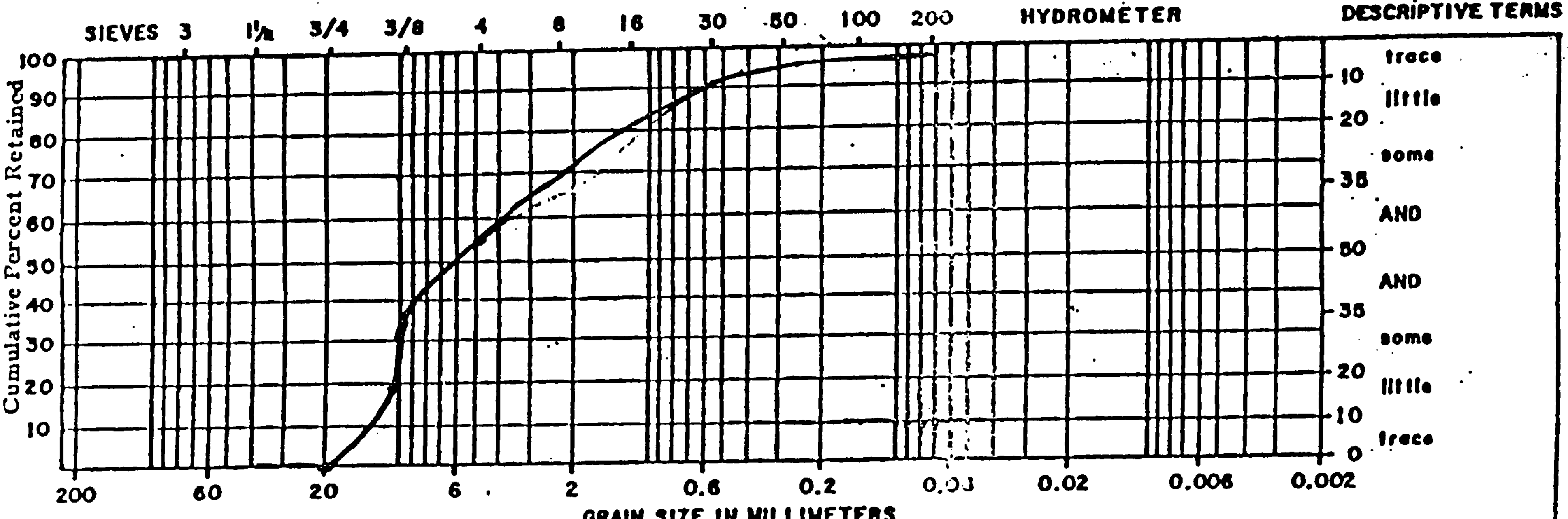
9 In. 3 In. 1 In. 3/8 In. Nos. 10 30 60 200 SIEVE

Cortlandville : MW-2D 60'

MW-Z 10·

ENGGERE

GRAIN SIZE A LYSIS
IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL

228 76.2 25.4 9.52 2.0 0.59 0.25 0.074 MM. OPENING

9 In. 3 In. 1 In. 3/8 In. Nos. 10 30 60 200 SIEVE

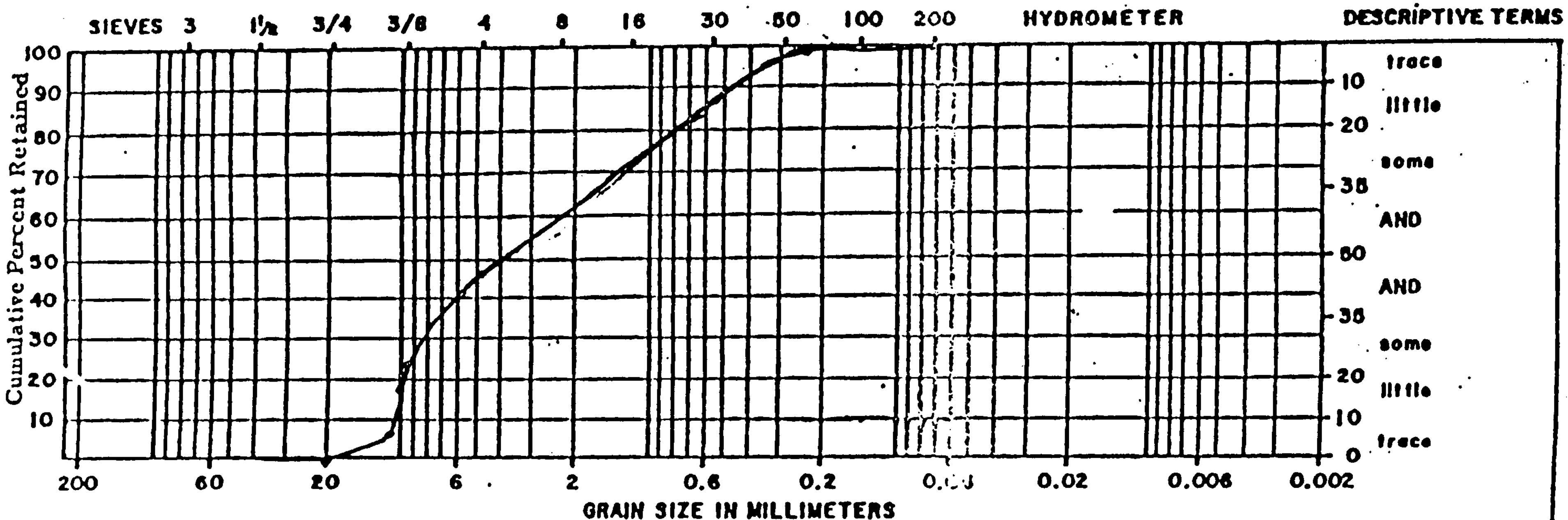
MW-ZD-170 Cortlandville

010295

MW-2D 75'

[logo] ...ENGGERE

GRAIN SIZE A ILYSIS
IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL

228 76.2 25.4 9.52 2.0 0.59 0.25 0.074 MM. OPENING

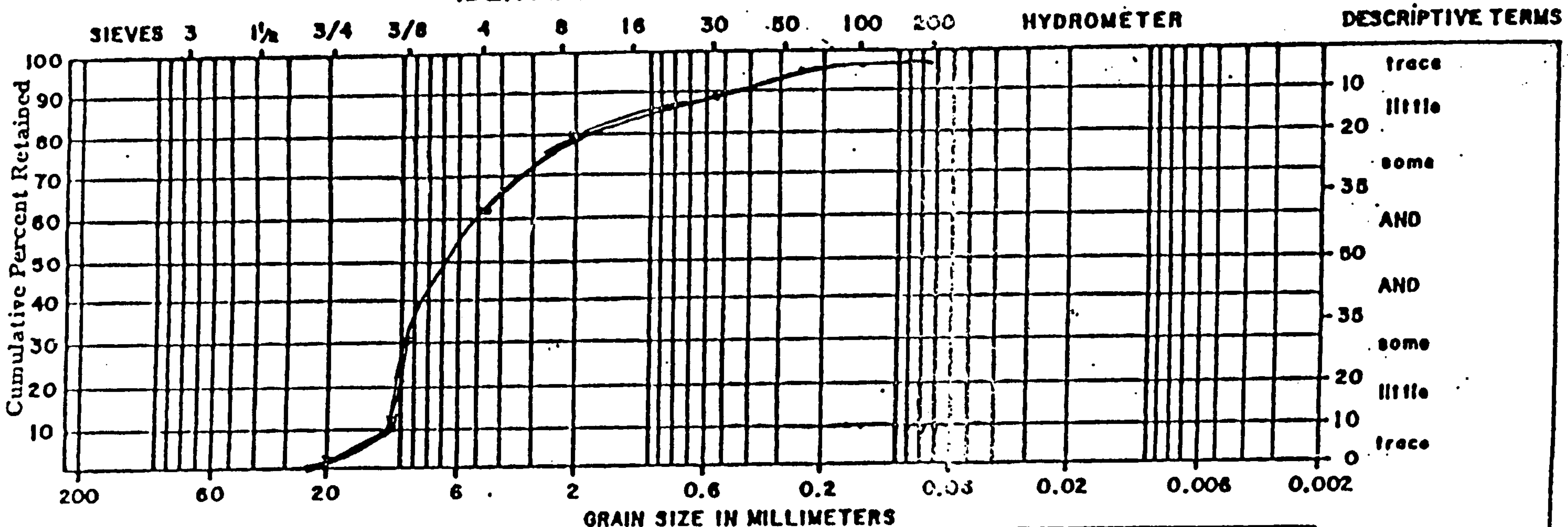
9 In. 3 In. 1 In. 3/8 In. Nos. 10 30 60 200 SIEVE

Cortlandville - MW-2D 75'

MW- 80'

GUTENGOERE

GRAIN SIZE A. .LYSIS
IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL

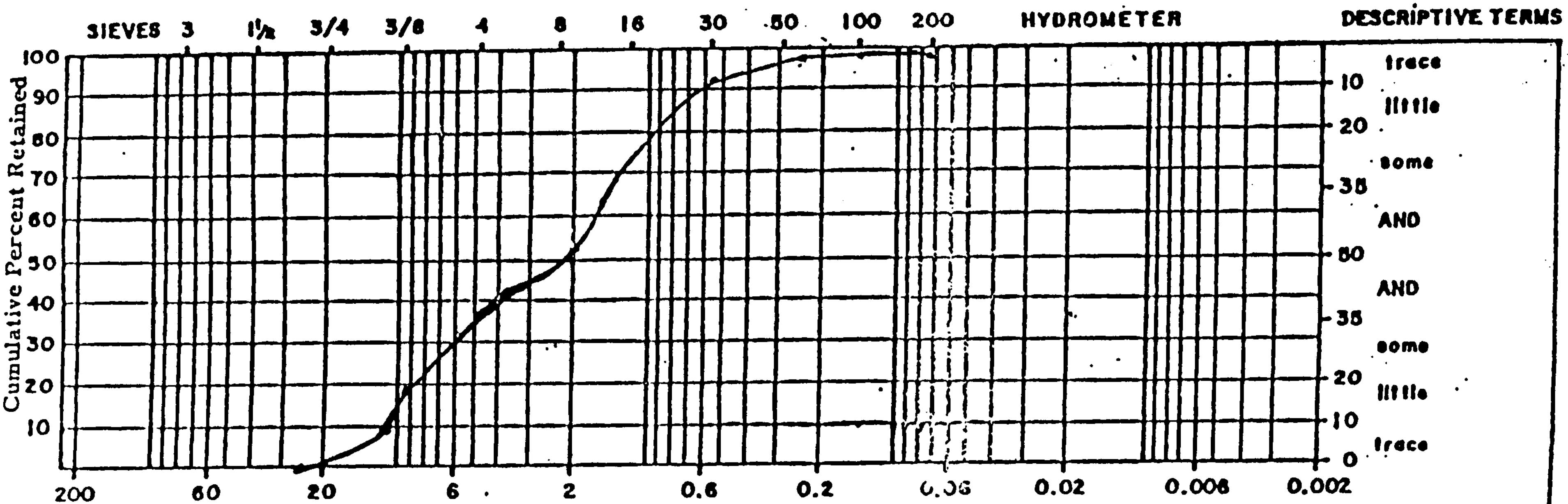
228 76.2 25.4 9.52 2.0 0.59 0.25 0.074 MM. OPENING

9 In. 3 In. 1 In. 3/8 In. Nos. 10 30 60 200 SIEVE

Catlandville: MW-2D 80

MW-
90'

GRAIN SIZE A LYSIS
IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL

228 76.2 25.4 9.52 2.0 0.59 0.25 0.074 MM. OPENING

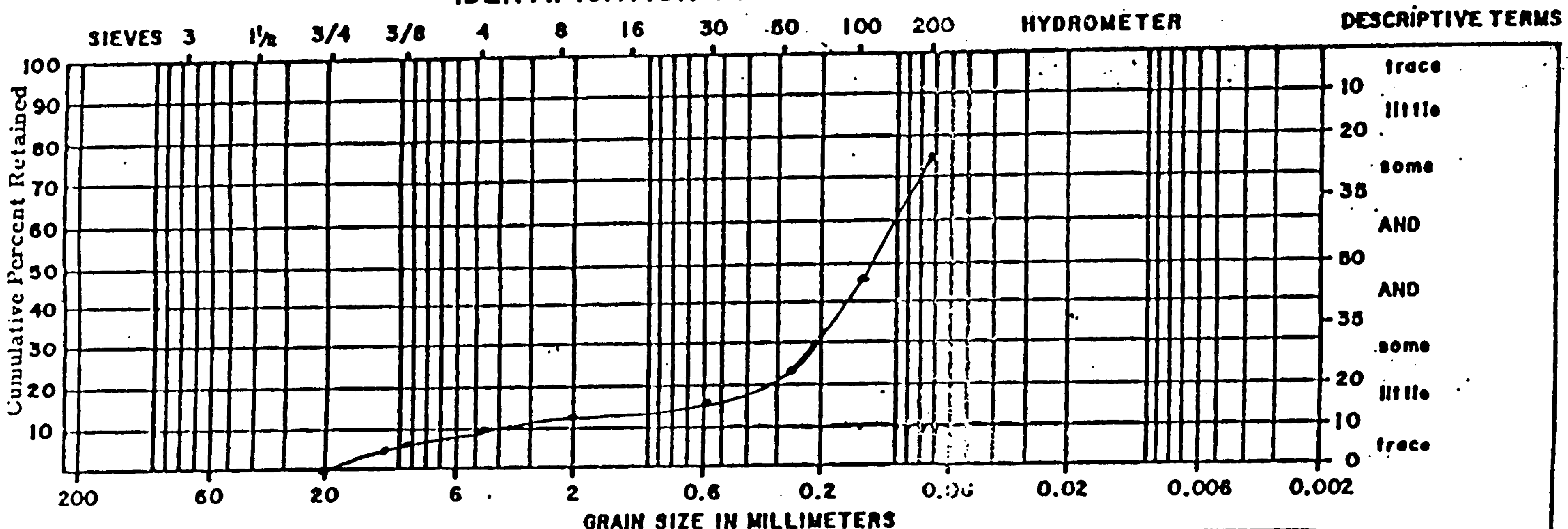
9 In. 3 In. 1 In. 3/8 In. Nos. 10 30 60 200 SIEVE

Cortlandville: MW-2D 90'

MW-   80'

ENGGERE

GRAIN SIZE A LYSIS
IDENTIFICATION AND DESCRIPTION OF SOILS



BOULDERS COBBLES	GRAVEL C	GRAVEL M	GRAVEL F	SAND C	SAND M	SAND F	SILT-CLAY SOIL
228	76.2	25.4	9.52	2.0	0.59	0.25	0.074 MM. OPENING
9 In.	3 In.	1 In.	3/8 In.	Nos. 10	30	60	200 SIEVE

ATTACHMENT A4

Ground Water Sampling Protocols

O'BRIEN & GERE ENGINEERS, INC.

Ground Water Sampling Protocols

GROUND WATER SAMPLING PROTOCOL

Prior to obtaining ground water samples for laboratory analysis, all monitoring wells must be developed as described in the Well Development Protocol.

Sampling Procedures

Use of the following procedures for the sampling of ground water observation wells is dependent upon the size and depth of the well to be sampled and the volume of ground water in the well. To obtain representative ground water samples from wells containing only a few gallons of ground water, the bailing procedures is preferred. To obtain representative ground water samples from wells containing more than a few gallons, the pumping procedure generally facilitates more rapid sampling. Each of these procedures is explained in detail below.

1. Identify the well and record the location on the Ground Water Sampling Field Log, Attachment A.

2. Put on a new pair of disposable gloves.

3. Cut a slit in the center of the plastic sheet, and slip it over the well creating a clean surface onto which the sampling equipment can be positioned.

4. Clean all meters, tools, equipment, etc., before placing on the plastic sheet.

5. Using an electric well probe, measure the depth to the water table and the bottom of the well. If free-phase product is present, use an oil-water interface probe or a clear bottom-valve bailer to determine the thickness of the free product. Record this information in the Ground Water Sampling Field Log.

6. Clean the well depth probe and rinse it with distilled water after use.

7. Compute the volume of water in the well, and record this volume on the Ground Water Sampling Field Log.

8. Attach enough polypropylene rope to a bailer to reach the bottom of the well, and lower the bailer slowly into the well making certain to submerge it only far enough to fill one-half full. The purpose of this is to recover any oil film, if one is present on the water table.

9. Pull the bailer out of the well keeping the polypropylene rope on the plastic sheet. Empty the ground water from the bailer into a glass quart container and observe its appearance. NOTE: This sample will not undergo laboratory analysis, and

is collected to observe the physical appearance of the ground water only.

10. Record the physical appearance of the ground water on the Ground Water Sampling Field Log.

11. Lower the bailer to the bottom of the well, and agitate the bailer up and down to resuspend any material settled in the well.

12. Initiate bailing the well from the well bottom making certain to keep the polypropylene rope on the plastic sheet. All ground water should be dumped from the bailer into a graduate pail to measure the quantity of water removed from the well.

13. Continue bailing the well throughout the water column and from the bottom until a sufficient volume of ground water in the well has been removed, or until the well is bailed dry. If the well is bailed dry, allow sufficient time for the well to recover before proceeding with Step 14. Record this information on the Ground Water Sampling Field Log.

14. Remove the sampling bottles from their transport containers, and prepare the bottles for receiving samples. Inspect all labels to insure proper sample identification. Sample bottles should be kept cool with their caps on until they are ready to receive samples. Arrange the sampling containers to allow for convenient filling. Always fill the containers labeled purgeable priority pollutant first. Filter and add preservatives to appropriate samples.

15. To minimize agitation of the water in the well, initiate sampling by lowering the bailer slowly into the well making certain to submerged it only far enough to fill it completely. Fill each sample container following the instructions listed in the Sample Containerization Procedures, Attachment B. Return each sample bottle to its proper transport container.

16. If the sample bottle cannot be filled quickly, keep them cool with the caps on until they are filled. The vials (3) labeled purgeable priority pollutant analysis should be filled from one bailer then securely capped. NOTE: Samples must not be allowed to freeze.

17. Record the physical appearance of the ground water observed during sampling on the Ground Water Sampling Field Log.

18. After the last sample has been collected, record the date and time, and, and if required, empty one bailer of water from the surface of the water in the well into the 200 ml beaker and measure and record the pH, conductivity and temperature of the ground water following the procedures outlined in the equipment operation manuals. Record this information on the

Ground Water Sampling Field Log. The 200 ml beaker must then be rinsed with distilled water prior to reuse.

19. Begin the Chain of Custody Record.

20. Replace the well cap, and lock the well protection assembly before leaving the well location.

21. Place the polypropylene rope, gloves, rags, and plastic sheeting into a plastic bag for disposal.

22. Clean the bailer by rinsing with control water and then distilled water. Store the clean bailer in a fresh plastic bag.

Sampling Procedures (PUMP)

1. Identify the well and record the location on the Ground Water Sampling Field Log.

2. Put on a new pair of disposable gloves.

3. Cut a slit in the center of the plastic sheet, and slip it over the well creating a clean surface onto which the sampling equipment can be positioned.

4. Clean all meters, tools, equipment, etc., before placing on the plastic sheet.

5. Using an electric well probe, measure the depth to the water table and the bottom of the well. If free-phase product is present use an oil water interface probe or a clean bottom-valve bailer to determine the thickness of the free product. Record this information in the Ground Water Sampling Field Log.

6. Clean the well depth probe and rinse it with distilled water after use.

7. Compute the volume of water in the well, and record this volume on the Ground Water Sampling Field Log.

8. Attach enough polypropylene rope to a bailer to reach just below the surface of the water table, and lower the bailer slowly into the well making certain to submerge it only far enough to fill it one-half full. The purpose of this is to recover any oil film, if one is present on the water table.

9. Pull the bailer out of the well keeping the polypropylene rope on the plastic sheet. Empty the ground water from the bailer into a glass quart container and observe its appearance. NOTE: This sample will not undergo laboratory analysis, and is collected to observe the physical appearance of the ground water only.

10. Record the physical appearance of the ground water on the Ground Water Sampling Field Log.

11. Prepare the submersible pump for operation.

12. Lower the pump to just below the top of the water column and pump the ground water into a graduated pail. Pumping should continue until sufficient well volumes have been removed or the well is pumped dry. If the well is pumped dry, allow sufficient time for the well to recover before proceeding with Step 16. Record this information on the Ground Water Sampling Field Log.

13. Remove the sampling bottles from their transport containers, and prepare the bottles for receiving samples. Inspect all labels to insure proper sample identification. Sample bottles should be kept cool with their caps on until they are ready to receive samples. Arrange the sampling containers to allow for convenient filling. Always fill the vials labelled purgeable priority pollutant first. Filter and add preservatives to appropriate samples.

14. With submersible pump raised to a level just below the surface of the water in the well, fill each sample container following the instructions listed in the Sample Containerization Procedures. Return each sampling bottle to its proper transport container. <u>NOTE:</u> A clean bottom loading stainless steel or Teflon bailer should be used to collect the sample used to fill the sample vials labeled purgeable priority pollutant analysis. Gently lower the bailer into the water to minimize agitation of the water. The vials (2) should be filled from one bailer.

15. If the sample bottle cannot be filled quickly, keep them cool with the caps on until they are filled. <u>NOTE</u>: Samples must not be allowed to freeze.

16. Record the physical appearance of the ground water observed during sampling on the Ground Water Sampling Field Log.

17. After the last sample has been collected, record the date and time, and if required, place a sample of well water into a 200 ml beaker and measure and record the pH, conductivity and temperature of the ground water following the procedures outlined in the equipment operation manuals. Record this information on the Ground Water Sampling Field Log. The 200 ml beaker must then be rinsed with distilled water prior to reuse.

18. Begin the Chain of Custody Record.

19. Remove the submersible pump from the well and clean the pump and necessary tubing both internally and externally. Cleaning is comprised of rinses with a source water and acetone or methanol mixture, and distilled water using

disposable towers and separate wash basins. The pump should then be returned to its covered storage box.

20. Clean the bailer by rinsing with control water, soapy water and/or methanol, then distilled water, store the clean bailer in a fresh plastic bag.

21. Replace the well cap, and lock the well protection assembly before leaving the well location.

22. Place the gloves, towels, disposable shoe covers and plastic sheet into a plastic bag for disposal.

GROUND WATER SAMPLING FIELD LOG

Sample Location ______________________ Well No. __________

Sampled By ______________________ Date __________ Time __________

Weather ______________________ Sampled with Bailer _____ Pump _____

A. WATER TABLE:

Well depth:
(below top of casing) ________ ft.

Well elevation:
(top of casing) ________ ft.

Depth to water table:
(below top of casing) ________ ft.

Water table elevation: ________ ft.

Length of water column (LWC) ____________ ft.

Volume of water in well:

2" diameter wells = 0.163 x (LWC) = __________ gallons
4" diameter wells = 0.653 X (LWC) = __________ gallons
6" diameter wells = 1.469 X (LWC) = __________ gallons

B. PHYSICAL APPEARANCE AT START:

Color ______________ Odor ______________ Turbidity ______________

Was an oil film or layer apparent? ______________________________

C. PREPARATION OF WELL FOR SAMPLING:

Amount of water removed before sampling ________________ gallons.

Did well go dry? ______________

D. PHYSICAL APPEARANCE DURING SAMPLING:

Color ______________ Odor ______________ Turbidity ______________

Was an oil film or layer apparent? ______________________________

E. CONDUCTIVITY ______________

F. pH ______________

G. TEMPERATURE ______________

H. WELL SAMPLING NOTES:

____

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____

UPSTATE LABORATORIES, INC.

GROUNDWATER MONITORING

MANUAL

UPSTATE LABORATORIES, INC.

I. INTRODUCTION

The following procedure manual was compiled with the purpose of evaluating proper techniques for groundwater monitoring at land disposal sites. The main objective of monitoring at land disposal sites is to evaluate groundwater and soils chemistry as it relates to any contaminants which have been placed at a given site. To insure the representative sampling of groundwater, certain precautions must be taken. This manual was designed to give the details of the methods used by Upstate Laboratories' Technical Support Group, to insure a representative sample is collected and that it is not altered nor contaminated during sampling or handling. These procedures are based on manuals issued by the United States Environmental Protection Agency and other groundwater monitoring manuals.

II. WELL DEVELOPMENT

Well development is the process of cleaning the face of the borehole and the formation around the outside of the well screen to permit groundwater to flow easily into the monitoring well. During any drilling process, the side of the borehole becomes smeared with clays or other fines. This plugging action substantially reduces the permeability and retards the movement of water to the well screen.

Before any sample is taken, the technician must be sure that the well has been properly developed. If it is a new installation, or had not been sampled recently, steps must be taken to guarantee that natural formation water is sampled.

III. SAMPLE COLLECTION

To obtain representative samples from a given monitoring well, it should be evacuated or bailed until it is thoroughly flushed of standing water and contains fresh water from the aquifer. The recommended length of time required to pump or bail a well before sampling is dependent on many factors including the characteristics of the well, hydrogeological nature of the aquifer, type of sampling equipment being used, and the parameters being sampled.

The generally accepted procedure is to bail between four and ten well volumes prior to sampling. In those situations where the well is bailed to dryness, the amount bailed prior to sampling will be less. Note also that non-representative samples can result from excessive pre-pumping of the monitoring well. Stratification of the leachate concentrations in the groundwater formation may occur, and excessive bailing can dilute or increase the contaminant concentrations from what is representative of the sampling point of interest.

In most cases, monitoring of temperature, pH and conductivity during bailing will be indicative of an adequate volume. When these three parameters stabilize, it is probable that little or no water from casing storage is being bailed.

To calculate well volume, use the following table which gives you gallons in one foot of well pipe of the corresponding diameter.

WELL CASING VOLUMES

GAL./FT.	1-1/4"=0.077	2" =0.16	3" =0.37	4"= .65
	1-1/2"=0.10	2-1/2"=0.24	3-1/2"=0.50	6"=1.46

IV. MONITORING WELL SAMPLING EQUIPMENT

Upstate Laboratories, Inc. utilizes a variety of equipment with which to bail and sample monitoring wells. Not only does our Technical Support Group maintain various pieces of equipment for sampling on landfills, but our technicians also have a good working knowledge and on hands experience of most types of monitoring equipment.

As with sampling any environmental medium, prevention of contamination during groundwater sampling is a prime consideration during any sampling program. Upstate Laboratories recommends the use of dedicated equipment, i.e., well bailers and pumps are used on only one well and are stored in the well between samplings. Where dedicated sampling equipment is not utilized, all equipment is cleaned using a 5% hydrochloric acid rinse followed by a distilled water rinse. In the case of sampling for organic compounds and volatiles, an acetone, hexane rinse procedure is followed. During bailing and sampling, field personnel wear rubber gloves which are rinsed or changed between wells. Sampling equipment (e.g. bailers and rope) is not allowed to come in contact with the ground, equipment, or other potential sources of contamination. Precleaned sample containers are provided by Upstate Laboratories.

A. Hand Bailers

Hand bailers represent the simplest and most inexpensive methods with which to evacuate and sample groundwater monitoring wells. Their relatively low costs and lack of need for an external power source make them the most reasonable choice for dedicated sampling equipment. These bailers are constructed out of a 5' tube with a bottom check valve. The material is either P.V.C. or stainless steel & teflon for organic sampling. The bailer is raised and lowered by means of nylon or teflon rope and the sample is taken from the screened portion of the well, following adequate bailing.

B. Bladder Pumps

Dedicated air or gas operated bladder pumps offer the most contaminant free method with which to sample a monitoring well. These pumps are placed in a well at the screened portion and have two tubes going up to the surface. One tube is to inflate the pump's bladder, using either air or inert gas. The second tube is the sample discharge line. The bladder pump is most desired when sampling for sensitive organic parameters.

This system offers a wide range of pumping rates, eliminates possible contamination or gas stripping (no air/gas comes in contact with the water sample), and can be used for both well evacuation and well sampling.

The pump can be constructed of P.V.C., stainless steel or teflon. These pumps are controlled by an electronic pressure control box which can be utilized to operate several pump units.

C. Manual Lift Pump

This system is currently manufactured by one company - Brainard Kilman.

The portable 1.7" hand pump, as well as the driller installed float pump model, both work on the simple principle of reverse flow check valves. It consists of a 1.7" extension pipe with a 3/4" actuator pipe inside of it. The pump head and check valve are lowered into a well with the extension pipe and the actuator pipe is lowered into that. As the technician manually lifts the actuator rod (1-3 foot stroke), the water is brought to the surface. As the water is discharged, there is no contact with outside air until it is poured into a sample container, making it suitable for organic sampling. The advantages of this

(Manual Lift Pump Cont'd)

system is its' ability to bail large volumes of water due to the fact that it has a pumping capacity of up to three gallons per minute. This is an especially important consideration for high rate recovery wells or wells with larger diameter casing.

D. Vacuum Pumps

Diaphragm or peristalic vacuum pumps are utilized for evacuation purposes only. Gasoline or manually operated vacuum pumps are used when high recharge rates are a consideration or when large diameter well pipes have been installed. At no time is vacuum lift used to actually sample groundwater, as it would cause degassing and loss of volatile compounds.

These pumps are limited to a lift of less than 25 feet from water level to the surface.

V. EXTENDED LANDFILL MONITORING

Other landfill monitoring techniques, familiar to Upstate Laboratories' personnel, are the sampling of seepage collection galleries, soil-water sampling lysimeters, and groundwater elevation readings.

A. Seepage Galleries

Seepage Galleries are collection areas used to obtain surface runoff or leachate. These consist of large diameter perforated pipes laid horizontally to collect runoff. They should be pumped to replace stagnant water that may have collected between sample intervals, and then sampled when fresh recharge is noted.

B. Soil Water Sampler (Lysimeter)

Lysimeters are pressure-vacuum devices used to obtain insitu moisture samples from soils in the unsaturated zone. A porous ceramic cup is placed in a bore hole to a maximum depth of 50 feet and then backfilled using soil from the boring. When sampling, the lysimeter is placed under vacuum for a period of time (depending on moisture content of the soil) and then pressurized to force the sample to the surface. Disadvantages of this system are low sample volume, and there is no way to repair a unit once in place.

C. Water Level Monitoring

Valuable hydrogeological data can be obtained by the periodic monitoring of the wells and piezometers on a site. Frequency of readings should be determined by the hydrogeologist and project engineer.

(Water Level Monitoring Cont'd)

Water level measurements are made using an electronic water level indicator. Depths are measured from the top of the well pipe to the water surface. These measurements are then converted to an elevation above mean sea-level using survey elevations of the well. These readings must be accurate to ±0.1'.

VI. SAMPLE PRESERVATION

Where necessary, Upstate Laboratories' field crews have the equipment and expertise for filtration and preservation of water samples on site. The proper preservative is normally placed in the container in the laboratory, prior to use in the field. As the sample is obtained, it is taken to Upstate's Technical Support Group field laboratory for preservation. Our mobile laboratory consists of a heated 14 foot trailer containing all the necessary equipment for analysis of several key parameters (e.g. pH, conductivity, redox potential and dissolved oxygen, among others). At this time the sample is then filtered thru a .45 micron filter and then preserved according to E.P.A. protocol, iced and stored. Having this field laboratory on site greatly reduces the potential for contamination by giving our technicians a clean environment in which to work. Sample preservatives are listed with proper container type and holding times in Attachment A.

VII. CHAIN OF CUSTODY

Proper chain of custody procedures are important in establishing quality assurance criteria. Upstate Laboratories' personnel use a combined chain of custody and well characterization sheet for documentation of monitoring well samples. This sheet includes location, log numbers, well development data, preservation data, and results of any parameters run by field personnel. It also contains information concerning time and dates of sample transfer to the laboratory. Additional information forms used by our field technicians include monitoring well elevation sheet, general field note sheet and sampler's information sheet. These forms are all kept in permanent files for our clients at Upstate Laboratories. These forms are included in the following attachment list.

VIII. SPECIAL CONDITIONS

Sampling of groundwater for monitoring of pollutant migration may require the use of equipment and techniques not outlined above. Upstate Laboratories' personnel are experienced in the use of specialized sampling equipment, field monitoring instruments, personnel protective clothing and respiratory protection.

Prior to commencing a groundwater sampling and analysis program, discussions are held among the project engineer, field supervisor, hydrogeologist and laboratory personnel to insure that the resultant data are valid and representative of the aquifer of concern.

REFERENCES

1. Handbook for Sampling and Sample Preservation of Water and Wastewater, United States Environmental Protection Agency, EPA-600/4-82-029, September, 1982.

2. Procedures Manual for Groundwater Monitoring at Solid Waste Disposal Facility, United States Environmental Protection Agency, SW-611, December, 1980.

3. Manual of Groundwater Quality Sampling Procedures, United States Environmental Protection Agency, EPA-600/2-81-160, September, 1981.

4. Groundwater Monitoring Technology, Procedures, Equipment and Application, Robert D. Morrison, Timco Manufacturing, Incorporated, 1983.

<u>ATTACHMENT A</u>

ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Bacteriological Tests:			
Coliform (Total)	P,G	0.008% $Na_2S_2O_3$	30 hours
Standard Plate Count	P,G	0.008% $Na_2S_2O_3$	30 hours
Inorganic Tests:			
Alkalinity	P,G	Cool, 4°C	14 days
Arsenic	P,G	HNO_3 to pH<2	6 months
Barium	P,G	HNO_3 to pH<2	6 months
Cadmium	P,G	HNO_3 to pH<2	6 months
Calcium	P,G	HNO_3 to pH<2	6 months
Chloride	P,G	None	7 days
Chlorine, Free Residual	P,G	None	1 hour
Chromium	P,G	HNO_3 to pH<2	6 months
Color	P,G	Cool, 4°C	48 hours
Fluoride	P,G	None	28 days
Lead	P,G	HNO_3 to pH<2	6 months
Mercury	G	HNO_3 to pH<2	38 days
Nitrate	P	HNO_3 to pH<2	14 days
Chlorinated Supplies	P,G	Cool, 4°C	28 days
Non-Chlorinated Supplies	P,G	H_2SO_4 to pH<2	14 days
pH	P,G	None	1 hour
Selenium	P,G	HNO_3 to pH<2	6 months

ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Silver	P,G	HNO_3 to pH<2	6 months
Sodium	P,G	HNO_3 to pH<2	6 months
Sulfate	P,G	Cool, 4°C	7 days
Temperature	P,G	None	Analyze Immediately
Total Filterable Residue	P,G	Cool, 4°C	7 days
Turbidity	P,G	None	1 hour
Organic Tests:			
Pesticides: Endrin, Lindane, Methoxychlor, Toxaphene	Glass with foil or Teflon lined cap	Cool, 4°C	14 days until extraction and 30 days after extraction
Herbicides: 2,4-D, 2,4,5-TP (Silvex)	Glass with foil or Teflon lined cap	Cool, 4°C	7 days until extraction and 30 days after extraction
Trihalomethanes: Bromodichloromethane, Bromoform, Chlorodibromomethane, Chloroform	Glass with Teflon-lined Septum	0.008% $Na_2S_2O_3$	28 days

ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Bacteriological Tests:			
Coliform, Total and Fecal	P,G	Cool, 4°C	6 hours
Coliform, Total and Fecal in Chlorinated Samples	P,G	Cool 4°C, 0.008% $Na_2S_2O_3$	6 hours
Fecal Streptocci	P,G	Cool, 4°C	6 hours
Inorganic Tests:			
Acidity	P,G	Cool, 4°C	14 days
Alkalinity	P,G	Cool, 4°C	14 days
Ammonia	P,G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Biochemical Oxygen Demand	P,G	Cool, 4°C	48 hours
Bromide	P,G	None	28 days
Biochemical Oxygen Demand, Carbonaceous	P,G	Cool, 4°C	48 hours
Chemical Oxygen Demand	P,G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Chloride	P,G	None	28 days
Chlorine, Total Residual	P,G	Cool, 4°C	Analyze Immediately
Color	P,G	Cool, 4°C	48 hours

ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Cyanide, Total and Amendable to Chlorination	P,G	Cool, 4°C, NaOH to pH>12, 0.6g Asboric Acid	14 days
Fluoride	P	None	28 days
Hardness	P,G	HNO_3 to pH<2 H_2SO_4 to pH<2	6 months
Hydrogen Ion (pH)	P,G	None	Analyze Immediately
Kjeldahl and Organic Nitrogen	P,G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Metals, except Chromium VI and Mercury	P,G	HNO_3 to pH<2	6 months
Chromium VI	P,G	Cool, 4°C	24 hours
Mercury	P,G	HNO_3 to pH<2	28 days
Nitrate	P,G	Cool, 4°C	48 hours
Nitrate-Nitrite	P,G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Nitrite	P,G	Cool, 4°C	48 hours
Oil and Grease	G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Organic Carbon	P,G	Cool, 4°C, HCL or H_2SO_4 to pH<2	28 days
Orthophosphate	P,G	Filter immediately, Cool, 4°C	48 hours
Oxygen, Dissolved			
Probe	G	None	Analyze Immediately
Winkler	G	Fix on site and store in dark	8 hours

ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIM
Phenols	G	Cool, 4°C, H_3PO_4 to pH 4.0, 1.0 $CuSO_4$, ·5 water	28 days
Phosphorus (Elemental)	G	Cool, 4°C	48 hours
Phosphorus, Total	P,G	Cool, 4°C, H_2SO_4 to pH<2	28 days
Residue, Total	P,G	Cool, 4°C	7 days
Residue, Filterable	P,G	Cool, 4°C	7 days
Residue, Nonfilterable	P,G	Cool, 4°C	7 days
Residue, Settleable	P,G	Cool, 4°C	48 hours
Residue, Volatile	P,G	Cool, 4°C	7 days
Silica	P	Cool 4°C	28 days
Specific Conductance	P,G	Cool 4°C	28 days
Sulfate	P,G	Cool, 4°C	28 days
Sulfide	P,G	Cool 4°C, add Zinc Acetate plus Sodium Hydroxide to pH>9	7 days
Sulfite	P,G	None	Analyze Immediately
Surfactants	P,G	Cool, 4°C	48 hours
Temperature	P,G	None	Analyze Immediately
Turbidity	P,G		

Organic Tests:

Purgeable Halocarbons plus Benzyl Chloride and Epichlorohydrin	G, Teflon-lined Septum	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine	14 days

ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Purgeable Aromatics	G, Teflon-lined Septum	Cool, 4°C, 0.008% NaS_2O_3 for Residual Chlorine	7 days
		Preserve as above and HCL tp pH<2	14 days
Acrolein and Acrylonitrile	G, Teflon-lined Septum	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine	14 days for 3 days for Acrolein
		Preserve as above and pH to 4-5	14 days
Phenols	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine	7 days until extraction 40 days after extraction
Benzidines	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine	7 days until extraction 7 days after extraction if stored under inert gas
Phthalate Esters	G, Teflon-lined cap	Cool, 4°C	7 days until extraction 40 days after extraction
Nitrosamines	G, Teflon-lined cap	Cool, 4°C, store in dark, 0.008% $Na_2S_2O_3$ for Residual Chlorine For Diphenylnitrosamine add 0.008% $Na_2S_2O_3$ and adjust pH 7-10 with NaOH within 24 hours of sampling	7 days until extraction 40 days after extraction

ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Nitroaromatics and Isophorone	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine, store in dark	7 days until extraction 40 days after extraction
PCBs	G, Teflon-lined cap	Cool, 4°C	7 days until extraction 40 days after extraction
Pesticides	G, Teflon-lined cap	Cool, 4°C,	72 hours
		Cool, 4°C, pH 5-9, 0.008% $Na_2S_2O_3$ for Residual Chlorine if Aldrin is to be determined	7 days until extraction 40 days after extraction
Polynuclear Aromatic Hydrocarbons	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine only, store in dark	7 days until extraction 40 days after extraction
Haloethers	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine only	7 days until extraction 40 days after extraction
Chlorinated Hydrocarbons	G, Teflon-lined cap	Cool, 4°C	7 days until extraction 40 days after extraction
2,3,7,8-Tetra-chlorodibenzo-p-Dioxin	G, Teflon-lined cap	Cool, 4°C, 0.008% $Na_2S_2O_3$ for Residual Chlorine only	7 days until extraction 40 days after extraction

CHAIN OF CUSTODY FORMS

UPSTATE LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CON-TAINERS							REMARKS

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	Remarks	

SAMPLER'S INFORMATION SHEET

Upstate Laboratories inc.

43 Midler Park Drive • Syracuse, New York 13206 • (315) 437-0255
Southern Region (607) 272-2708 ext. 1

COMPANY NAME: ______________________________

ADDRESS: ______________________________

PHONE: (   ) ____________________

PERSON TO CONTACT: ______________________________

DIRECTIONS: ______________________________

____

____

____

TYPE OF SAMPLING TO BE DONE: ______________________________

____

DATE: ______________ TIME: ______________ HOURS: ______________

PARAMETERS TO BE TESTED FOR: ______________________________

____

____

SAMPLE BOTTLES NEEDED: ______________________________

____

____

OTHER EQUIPMENT NEEDED: ______________________________

____

____

SPECIAL NOTES: ______________________________

____

____

BILLABLE ITEMS: ______________________________

____

Upstate Laboratories inc.

GENERAL FIELD NOTES

Client: ________________________ Project No. __________

Location ________________________ Date __________

Time __________ Sample Crew __________ Notes taken by __________

Type of Sampling ________________________

____

Equipment used ________________________

____

Comments: ________________________

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Note Taker (Signature) __________

Team Leader (Signature) __________

Project Manager (Signature) __________

Upstate Laboratories inc.

MONITORING WELL
CHAIN OF CUSTODY
SAMPLE CHARACTERIZATION

LOG NO. ______________________

CLIENT ______________________ WELL I.D. ______________________

LOCATION ______________________ WELL TYPE/SIZE ______________________

EVACUATION DATE ______________________

TOTAL WELL DEPTH ______________________

DEPTH TO WATER ______________________

WELL VOLUME ______________________

NO. OF VOLUMES ______________________

TOTAL VOLUMES ______________________

ITEM	START	FINISH
TIME		
pH		
TEMPERATURE		
CONDUCTIVITY		
APPEARANCE		
DEPTH		
RECHARGE		

WELL CASING VOLUMES

GAL./FT.	1-1/4"=0.077	2" =0.16	3" =0.37	4"= .65
	1-1/2"=0.10	2-1/2"=0.24	3-1/2"=0.50	6"=1.46

SAMPLING DATE ______________________ pH ______________________ CONDUCTIVITY ______________________

TIME ______________________ TEMPERATURE ______________________ APPEARANCE ______________________

CONTAINERS ______________________

NOTES ______________________

PRESERVATION DATE ______________________

FILTERED YES____ NO____ TIME ______________________

PRESERVED YES____ NO____ TIME ______________________

PRESERVATIVE ☐ H_2SO_4 ☐ HNO_3 ☐ HCl ☐ Cooled 4°C

Other ______________________

CUSTODY SAMPLER'S SIGNATURE ______________________

TRANSFERRED TO #1 ______________________

RECEIVED BY ______________________ DATE ____________ TIME ____________

TRANSFERRED TO #2 ______________________

RECEIVED BY ______________________ DATE ____________ TIME ____________

Upstate Laboratories inc.

PROJECT__________ LOCATION__________

METHOD OF READING__________

REFERENCE POINT__________

DATE______ TIME(START)______ TIME(END)______ INITIALS______

WEATHER CONDITIONS__________

WELL NO.	DEPTH TO WATER	REF.ELEV.	ELEV.	WELL NO.	DEPTH TO WATER	REF.ELEV.	ELEV.

ATTACHMENT A5

Gamma Ray Logs

MW-2D

LOCATION Cortlandville, N.Y. TIME CONSTANT 20 TYPE OF FLUID water

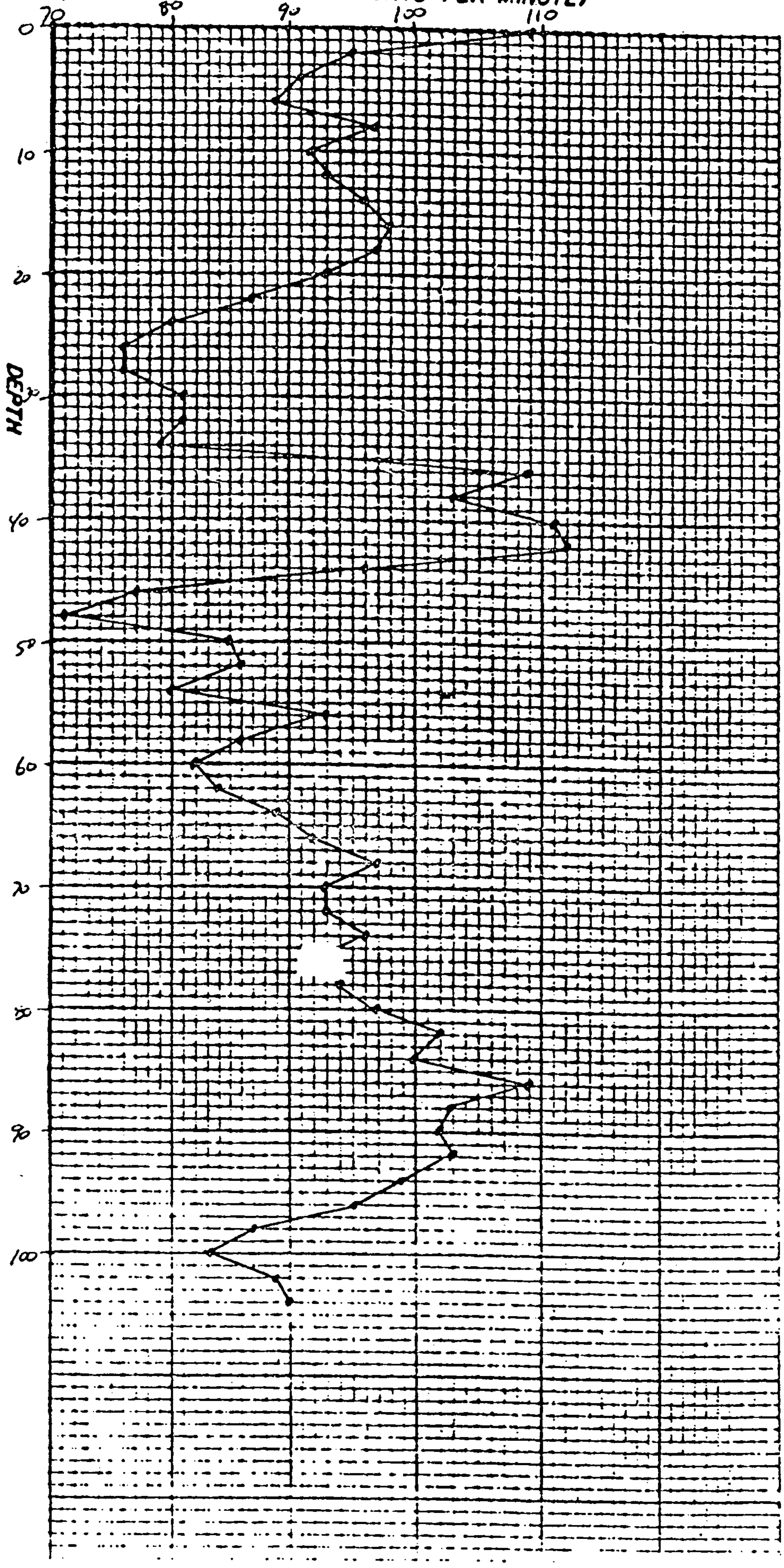
LOGGED BY Bogardus/Bussey RANGE 200 BORE HOLE TYPE Well

DATE/TIME 12/9/86 DEPTH TO FLUID 47.70 PROBE TYPE Scintillator

DESCRIPTION

STRATIGRAPHIC COLUMN

mw - 2D RANGE (COUNTS PER MINUTE) BACKGROUND - 55



MW-3

GAMMA RAY LOG

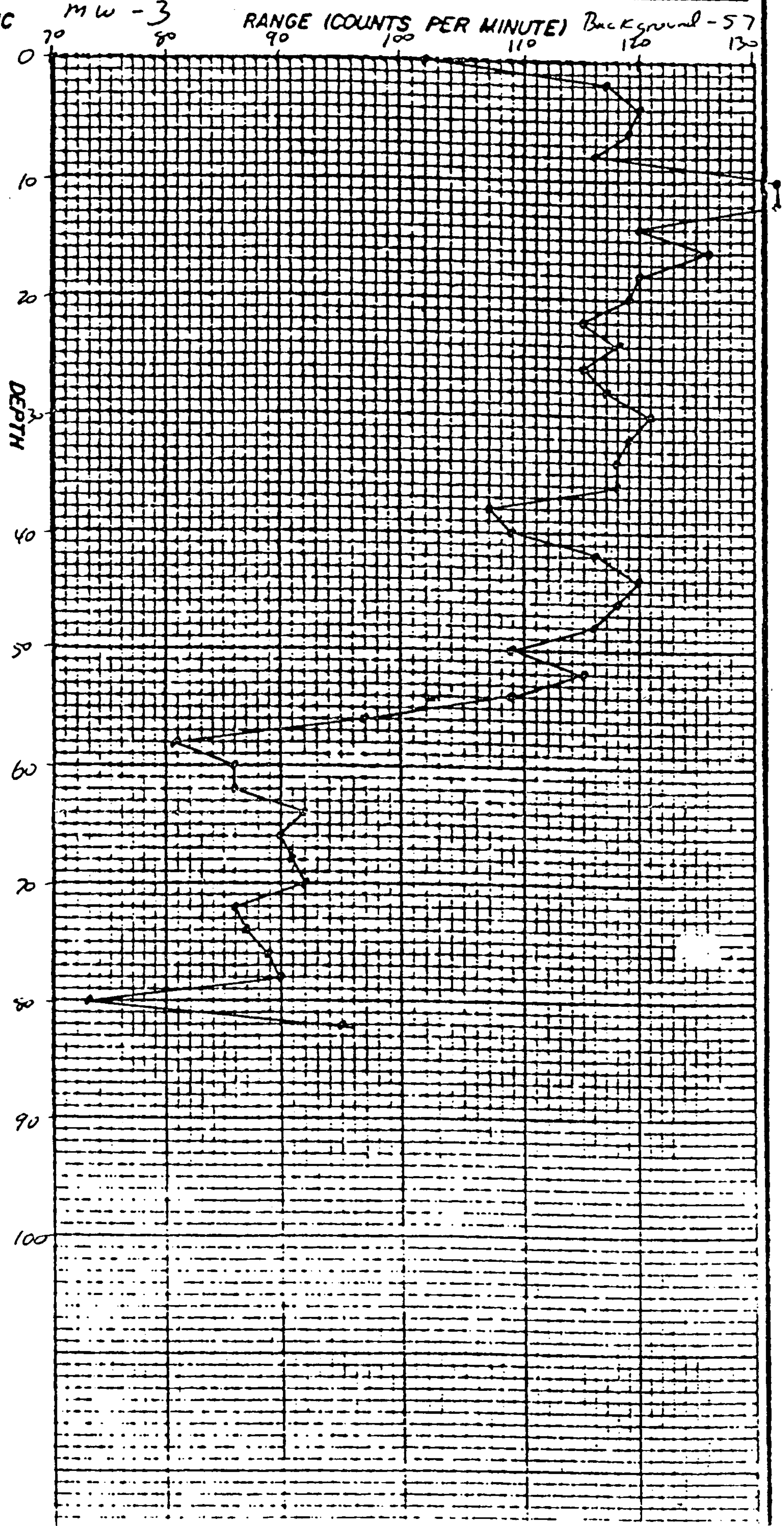
LOCATION Smith Corona Cortlandville, NY TIME CONSTANT 20 TYPE OF FLUID Water

LOGGED BY Bogardus/Bussey RANGE 200 BORE HOLE TYPE Well

DATE/TIME 12/9/86 DEPTH TO FLUID 58.39 PROBE TYPE Scintillator

DESCRIPTION

STRATIGRAPHIC COLUMN



MW-4D

Smith Corona

GAMMA RAY LOG

LOCATION Cortlandville, N.Y. TIME CONSTANT 20 TYPE OF FLUID water

LOGGED BY Bogardus/Bussey RANGE 200 BORE HOLE TYPE Well

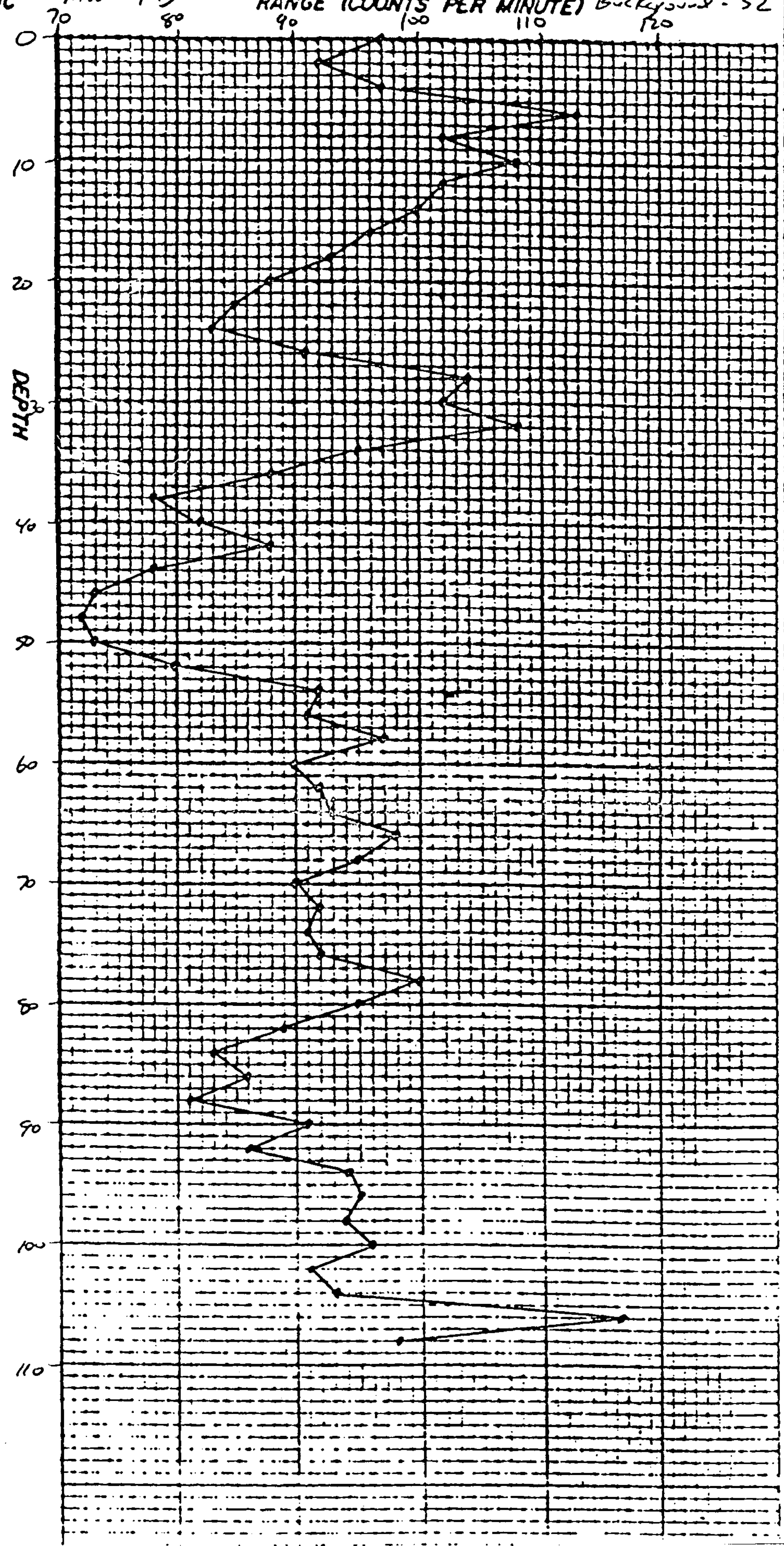
DATE/TIME 12/9/86 DEPTH TO FLUID 46.38 PROBE TYPE Scintillator

DESCRIPTION

STRATIGRAPHIC COLUMN

MW-4D

RANGE (COUNTS PER MINUTE) Background - 52



MW - 5D

GAMMA RAY LOG

Smith-Corona

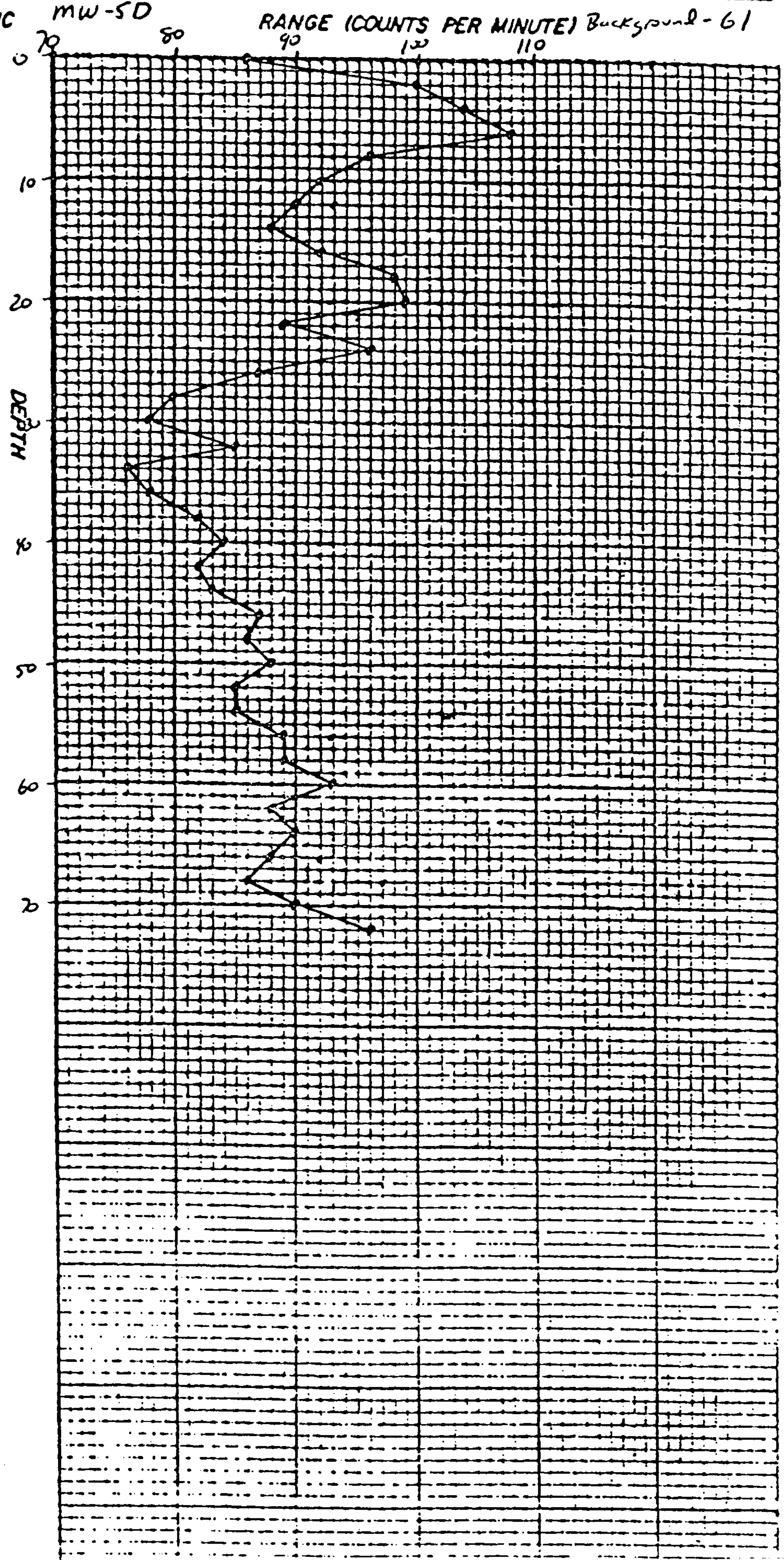
LOCATION Cortlandville, N.Y. TIME CONSTANT 20 TYPE OF FLUID Water

LOGGED BY Bogardus / Bussey RANGE 200 BORE HOLE TYPE Well

DATE/TIME 12/9/86 DEPTH TO FLUID 14.76 PROBE TYPE Scintillator

DESCRIPTION

STRATIGRAPHIC COLUMN



ATTACHMENT A6

Aquifer Test Data

AQUIFER TEST DATA

DRAWDOWN ☒
RECOVERY ☐

RECORDER 2410.010.130

CLIENT: Smith Corona - Cortlandville, N.Y. JOB No. ______ PHASE ______

PUMPING WELL (PW) process well #1 OBSERVATION WELL (OW) mw-6 (ch. 1)

DISCHARGE RATE 850 GPM DISTANCE TO PW 87 FT

DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	7.88	–			
:13	5	7.89	-.01			
:28	20	7.82	.06			
:43	35	7.78	.10			
:58	50	7.76	.12			
7:13	65	7.74	.14			
:28	80	7.73	.15			
:43	95	7.72	.16			
:58	110	7.71	.17			
8:28	140	7.70	.18			
9:43	215	7.68	.20			
11:58	350	7.66	.22			
15:13	545	7.64	.24			
19:58	830	7.62	.26			
11:24	1,072	7.60	.28			
11:26	1,192	7.58	.30			
11:32	1,552	7.56	.32			
11:39	1,972	7.54	.34			
11:49	2,572	7.52	.36			
12:02	3,352	7.50	.38			
12:07	3,652	7.49	.39			

AQUIFER TEST DATA

DRAWDOWN ☒
RECOVERY ☐

RECORDER 2410.010.130

CLIENT: Smith Corona - Cortlandville, N.Y. JOB NO. ______ PHASE ______

PUMPING WELL (PW) process well #1 OBSERVATION WELL (OW) MW-25 (ch. 3)

DISCHARGE RATE 850 GPM DISTANCE TO PW ______ FT

DATE / TIME	ELAPSED TIME (sec)	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	8.80	–			
:13	5	8.81	-.01			
:28	20	8.80	0			
7:13	65	8.80	0			
8:13	125	8.79	.01			
10:58	290	8.79	.01			
13:28	440	8.79	.01			
17:28	680	8.79	.01			
20:28	860	8.79	.01			
:23	1,012	8.79	.01			
:24	1,072	8.77	.03			
11:29	1,372	8.76	.04			
11:41	2,092	8.75	.05			
11:51	2,692	8.75	.05			
12:01	3,292	8.75	.05			
12:10	3,832	8.75	.05			

AQUIFER TEST DATA

DRAWDOWN ☒
RECOVERY ☐

RECORDER 2410.010.130

CLIENT: Smith Corona - Cortlandville, N.Y. JOB NO. ______ PHASE ______

PUMPING WELL (PW) process well #1 OBSERVATION WELL (OW) MW-2D (ch. 4)

DISCHARGE RATE 850 GPM DISTANCE TO PW 900 FT

DATE / TIME	ELAPSED TIME (sec)	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	8.70	-			
:13	5	8.71	-.01			
:28	20	8.69	.01			
:58	50	8.68	.02			
7:43	95	8.67	.03			
9:28	200	8.66	.04			
13:28	440	8.66	.04			
15:28	560	8.66	.04			
16:58	650	8.65	.05			
18:58	770	8.65	.05			
20:58	890	8.65	.05			
11:24	1,072	8.64	.06			
11:25	1,132	8.63	.07			
11:28	1,312	8.62	.08			
11:33	1,612	8.61	.09			
11:50	2,632	8.61	.09			
11:54	2,872	8.60	.10			
12:04	3,472	8.60	.10			
12:10	3,832	8.60	.10			

AQUIFER TEST DATA

DRAWDOWN ☒
RECOVERY ☐

RECORDER 2410.010.130

CLIENT: Smith Corona - Cortlandville, N.Y. JOB No. ______ PHASE ______

PUMPING WELL (PW) process well #1 OBSERVATION WELL (OW) process well #2 (ch. 6)

DISCHARGE RATE 850 GPM DISTANCE TO PW 119 FT

DATE / TIME	ELAPSED TIME (sec)	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	12.32	—			
:13	5	12.33	-.01			
:28	20	12.16	.16			
:43	35	12.01	.31			
:58	50	11.90	.42			
7:13	65	11.82	.50			
:28	80	11.76	.56			
:43	95	11.71	.61			
:58	110	11.67	.65			
8:13	125	11.65	.67			
:28	140	11.63	.69			
:43	155	11.61	.71			
:58	170	11.60	.72			
9:28	200	11.58	.74			
10:13	245	11.56	.76			
11:58	350	11.54	.78			
14:28	500	11.52	.80			
20:13	845	11.50	.82			
11:23	1012	11.49	.83			
11:24	1,072	11.47	.85			
11:26	1,192	11.46	.86			
11:28	1,312	11.45	.87			
11:34	1,672	11.44	.88			
11:39	1,972	11.43	.89			
11:47	2,452	11.42	.90			
11:55	2,932	11.41	.91			
[illegible]07	3,652	11.40	.92			

AQUIFER TEST DATA

DRAWDOWN ☒
RECOVERY ☐

RECORDER 2410.010.130

CLIENT: Smith Corona - Cortlandville, N.Y. JOB NO. ______ PHASE ______

PUMPING WELL (PW) process well #1 OBSERVATION WELL (OW) process well #1 (ch. 8)

DISCHARGE RATE 850 GPM DISTANCE TO PW 6.5 FT

DATE / TIME	ELAPSED TIME (sec)	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	46.52	–			
:13	5	45.82	0.70			
:28	20	42.30	4.22			
:43	35	42.07	4.45			
:58	50	42.05	4.47			
7:13	65	41.97	4.55			
:58	110	41.95	4.57			
9:13	185	41.92	4.60			
:58	230	41.90	4.62			
10:58	290	41.92	4.60			
11:13	305	41.87	4.65			
11:28	320	41.90	4.62			
12:13	365	41.87	4.65			
12:58	410	41.90	4.62			
13:43	455	41.87	4.65			
14:13	485	41.92	4.60			
:28	500	41.90	4.62			
15:13	545	41.87	4.65			
16:28	620	41.85	4.67			
:43	635	41.87	4.65			
17:13	665	41.90	4.62			
19:13	785	41.87	4.65			
20:13	845	41.90	4.62			
:43	875	41.87	4.65			
21:13	905	41.90	4.62			
11:23	1,012	41.85	4.67			
4	1,072	41.82	4.70			

AQUIFER TEST DATA

DRAWDOWN ☒
RECOVERY ☐

RECORDER 2410.010.130

CLIENT: Smith Corona - Cortlandville, N.Y.
JOB NO. ______ PHASE ______

PUMPING WELL (PW) process well #1 OBSERVATION WELL (OW) process well #1 (d.8)

DISCHARGE RATE 850 GPM DISTANCE TO PW ______ FT

DATE / TIME	ELAPSED TIME (sec)	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:25	1,132	41.80	4.72			
11:26	1,192	41.77	4.75			
11:30	1,432	41.75	4.77			
11:31	1,492	41.77	4.75			
11:33	1,612	41.80	4.72			
11:34	1,672	41.72	4.80			
11:35	1,732	41.77	4.75			
11:38	1,912	41.75	4.77			
11:39	1,972	41.77	4.75			
[illegible]:43	2,212	41.75	4.77			
[illegible]44	2,272	41.77	4.75			
11:46	2,392	41.75	4.77			
11:47	2,452	41.77	4.75			

AQUIFER TEST DATA

DRAWDOWN ☐
RECOVERY ☒

RECORDER 2410.010.130

CLIENT: S.C.M. Process Well #1 JOB NO.______ PHASE______

PUMPING WELL (PW)__________ OBSERVATION WELL (OW) M.W. #6 (ch. 1)

DISCHARGE RATE 850 GPM DISTANCE TO PW______ FT

DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
12:17:45	0	7.15	—			
:47	2 sec	7.21	-.06			
:49	4 sec	7.22	-.07			
:51	6 sec	7.23	-.08			
:53	8 sec	7.24	-.09			
:54	9 sec	7.25	-.10			
:56	11 sec	7.26	-.11			
:57	12 sec	7.27	-.12			
:59	14 sec	7.28	-.13			
18:03	18 sec	7.30	-.15			
18:08	23 sec	7.32	-.17			
18:16	31 sec	7.34	-.19			
18:35	50 sec	7.36	-.21			
19:12	87 sec	7.38	-.23			
20:47	182 sec	7.41	-.26			
22:47	302 sec	7.43	-.28			
26:47	542 sec	7.45	-.30			
29:47	722 sec	7.47	-.32			
12:45	1,635 sec	7.49	-.34			
12:52	2,055 sec	7.51	-.36			
13:10	3,135 sec	7.55	-.40			
13:50	5,535 sec	7.60	-.45			
14:20	7,335 sec	7.63	-.48			

DTB

AQUIFER TEST DATA

DRAWDOWN ☐
RECOVERY ☒

RECORDER 2410.010.130

CLIENT: S.C.M. Process Well #1

JOB NO. ________ PHASE ________

PUMPING WELL (PW) ________ OBSERVATION WELL (OW) M.W. #25 (ch. 3)

DISCHARGE RATE 850 GPM

DISTANCE TO PW ________ FT

DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
12:17:45	0	8.57	—			
:47	2 sec	8.59	-.02			
18:47	62 sec	8.59	-.02			
19:07	82 sec	8.60	-.03			
19:11	86 sec	8.59	-.02			
19:14	89 sec	8.60	-.03			
19:16	91 sec	8.59	-.02			
19:32	107 sec	8.60	-.03			
29:47	722 sec	8.61	-.04			
34	975 sec	8.60	-.03			
:35	1035 sec	8.59	-.02			
13:10	3135 sec	8.60	-.03			
13:40	4935 sec	8.61	-.04			
14:20	7335 sec	8.61	-.04			

DB

AQUIFER TEST DATA

DRAWDOWN ☐
RECOVERY ☒

RECORDER 2410.010.130

CLIENT: S.C.M. Process Well #1 JOB No. ______ PHASE ______

PUMPING WELL (PW) ______ OBSERVATION WELL (OW) M.W. #2D (Ch. 4)

DISCHARGE RATE 850 GPM DISTANCE TO PW ______ FT

DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
12:17:45	0	8.44	—			
:47	2 sec	8.47	-.03			
:48	3 sec	8.48	-.04			
:50	5 sec	8.47	-.03			
:52	7 sec	8.48	-.04			
18:00	15 sec	8.49	-.05			
18:14	29 sec	8.50	-.06			
18:47	62 sec	8.51	-.07			
18:48	63 sec	8.50	-.06			
19:07	82 sec	8.51	-.07			
21:47	242 sec	8.52	-.08			
27:47	602 sec	8.53	-.09			
29:47	722 sec	8.52	-.08			
12:34	975 sec	8.51	-.07			
12:37	1155 sec	8.50	-.06			
12:42	1455 sec	8.49	-.05			
12:51	1995 sec	8.50	-.06			
12:55	2235 sec	8.49	-.05			
13:00	2535 sec	8.50	-.06			
13:10	3135 sec	8.51	-.07			
13:50	5535 sec	8.52	-.08			
14:20	7335 sec	8.51	-.07			

AQUIFER TEST DATA

DRAWDOWN ☐
RECOVERY ☒

RECORDER 2410.010.130

CLIENT: S.C.M. Process Well #1 JOB No._____ PHASE _____

PUMPING WELL (PW) _____ OBSERVATION WELL (OW) Process #2 (ch.6)

DISCHARGE RATE 850 GPM DISTANCE TO PW _____ FT

DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
12:17:45	0	11.05	—			
:47	2 sec	11.20	-.15			
:49	4 sec	11.21	-.16			
:51	6 sec	11.23	-.18			
:52	7 sec	11.25	-.20			
:53	8 sec	11.27	-.22			
:54	9 sec	11.28	-.23			
:55	10 sec	11.30	-.25			
:56	11 sec	11.32	-.27			
:57	12 sec	11.34	-.29			
:58	13 sec	11.36	-.31			
18:00	15 sec	11.40	-.35			
18:02	17 sec	11.44	-.39			
18:04	19 sec	11.48	-.43			
18:07	22 sec	11.53	-.48			
18:10	25 sec	11.57	-.52			
18:14	29 sec	11.62	-.57			
18:19	34 sec	11.67	-.62			
18:23	38 sec	11.70	-.65			
18:27	42 sec	11.72	-.67			
18:32	47 sec	11.74	-.69			
18:39	54 sec	11.76	-.71			
18:43	58 sec	11.77	-.72			
18:47	62 sec	11.78	-.73			
18:54	69 sec	11.79	-.74			
19:00	75 sec	11.80	-.75			
19:07	82 sec	11.81	-.76			

DTB

AQUIFER TEST DATA

DRAWDOWN ☐
RECOVERY ☒

RECORDER 2410.010.130

CLIENT: S.C.M. Process well # 1

JOB No. ______ PHASE ______

PUMPING WELL (PW) ______

OBSERVATION WELL (OW) Process well #2 (Ch.6)

DISCHARGE RATE 850 GPM

DISTANCE TO PW ______ FT

DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
19:15	90 sec	11.82	-.77			
19:27	102 Sec	11.83	-.78			
19:42	117 Sec	11.84	-.79			
20:17	152 Sec	11.85	-.80			
21:47	242 Sec	11.88	-.83			
23:47	362 Sec	11.89	-.84			
26:47	542 Sec	11.91	-.86			
30:47	782 Sec	11.92	-.87			
12:34	975 Sec	11.91	-.86			
:35	1035 Sec	11.90	-.85			
12:37	1155 Sec	11.91	-.86			
12:43	1515 Sec	11.92	-.87			
12:49	1875 Sec	11.93	-.88			
12:53	2115 Sec	11.94	-.89			
13:10	3135 Sec	11.97	-.92			
13:30	4335 Sec	11.98	-.93			
13:50	5535 Sec	12.00	-.95			
14:00	6135 Sec	12.01	-.96			
14:20	7335 Sec	12.01	-.96			

AQUIFER TEST DATA

DRAWDOWN ☐
RECOVERY ☒

RECORDER 2410-010-130

CLIENT: Smith-Corona, Process #1 JOB NO.____ PHASE____

PUMPING WELL (PW) ____ OBSERVATION WELL (OW) Pump #1 (ch. 8)

DISCHARGE RATE 850 GPM DISTANCE TO PW 6.5 FT

DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
12:17:45	0	41.40	—			
47	2 sec	43.05	-1.65			
49	4	43.30	-1.90			
50	5	43.92	-2.52			
51	6	44.47	-3.07			
52	7	44.97	-3.57			
53	8	45.42	-4.02			
54	9	45.75	-4.35			
55	10	46.05	-4.65			
56	11	46.27	-4.87			
57	12	46.45	-5.05			
58	13	46.57	-5.17			
59	14	46.65	-5.25			
12:18	15	46.67	-5.27			
12:18:07	22	46.52	-5.12			
12:18:12	27	46.40	-5.00			
12:18:17	32	46.27	-4.87			
12:18:22	37	46.12	-4.72			
12:18:27	42	46.02	-4.62			
:32	47	46.02	-4.62			
:37	52	46.02	-4.62			
:42	57	46.02	-4.62			
:47	62	46.02	-4.62			

		mw 6		MW2S		mw 2D		PROCESS WELL #2		PROCESS WELL #1
4:30 HRS 86/12/23 #01										
	1	7.41	3	8.60	4	8.47	6	11.28	8	41.72
4:20 HRS	1	7.63	3	8.61	4	8.51	6	12.01	8	46.15
4:10 HRS	1	7.62	3	8.61	4	8.52	6	12.01	8	46.15
4:00 HRS	1	7.61	3	8.61	4	8.51	6	12.01	8	46.15
3[illegible] HRS	1	7.60	3	8.61	4	8.52	6	12.00	8	46.15
3:40 HRS	1	7.58	3	8.61	4	8.51	6	11.98	8	46.12
3:30 HRS	1	7.57	3	8.60	4	8.51	6	11.98	8	46.12
3:20 HRS	1	7.58	3	8.60	4	8.51	6	11.97	8	46.10
3:10 HRS	1	7.55	3	8.60	4	8.51	6	11.97	8	46.12
3:01 HRS	1	7.52	3	8.59	4	8.50	6	11.94	8	46.07
3:00 HRS	1	7.52	3	8.59	4	8.50	6	11.94	8	46.07
12:59 HRS	1	7.51	3	8.59	4	8.49	6	11.94	6	46.07
12:58 HRS	1	7.51	3	8.59	4	8.50	6	11.94	8	46.07
12:57 HRS	1	7.51	3	8.59	4	8.50	6	11.94	8	46.07
12:56 HRS	1	7.51	3	8.59	4	8.49	6	11.94	8	46.07
12:55 HRS	1	7.51	3	8.59	4	8.49	6	11.94	8	46.07
12:54 HRS	1	7.51	3	8.59	4	8.50	6	11.93	8	46.07
12:53 HRS	1	7.51	3	8.59	4	8.50	6	11.94	8	46.07
12:52 HRS	1	7.51	3	8.59	4	8.50	6	11.92	8	46.07
12:51 HRS	1	7.50	3	8.59	4	8.50	6	11.94	8	46.07
12:50 HRS	1	7.50	3	8.59	4	8.49	6	11.91	8	46.07
12:49 HRS	1	7.50	3	8.59	4	8.49	6	11.93	8	46.07
12:48 HRS	1	7.49	3	8.59	4	8.49	6	11.92	8	46.07
12:47 HRS	1	7.49	3	8.59	4	8.49	6	11.92	8	46.07
12:46 HRS	1	7.49	3	8.59	4	8.49	6	11.92	8	46.07
12:45 HRS	1	7.49	3	8.59	4	8.49	6	11.92	8	46.07
12:44 HRS	1	7.48	3	8.59	4	8.50	6	11.92	8	46.07
12:43 HRS	1	7.48	3	8.59	4	8.49	6	11.92	8	46.05
12:42 HRS	1	7.48	3	8.59	4	8.49	6	11.91	8	46.05
12[illegible] HRS	1	7.47	3	8.59	4	8.50	6	11.91	8	46.05
12:[illegible] HRS	1	7.47	3	8.59	4	8.50	6	11.91	8	46.05
12:39 HRS	1	7.47	3	8.59	4	8.50	6	11.91	8	46.05
12:38 HRS	1	7.47	3	8.59	4	8.50	6	11.91	8	46.07
12:37 HRS	1	7.47	3	8.59	4	8.50	6	11.91	8	46.07
12:36 HRS	1	7.47	3	8.59	4	8.51	6	11.90	8	46.07
12:35 HRS	1	7.47	3	8.59	4	8.51	6	11.90	8	46.07
12:34 HRS	1	7.47	3	8.60	4	8.51	6	11.91	8	46.10
12:32 HRS										
STATION ID = 01										
12:32:47	1	7.48	3	8.61	4	8.52	6	11.92	8	46.12
12:31:47	1	7.47	3	8.61	4	8.52	6	11.92	8	46.12
12:30:47	1	7.47	3	8.61	4	8.52	6	11.92	8	46.12
12:29:47	1	7.47	3	8.61	4	8.52	6	11.91	8	46.12
12:28:47	1	7.46	3	8.60	4	8.51	6	11.91	8	46.12
12:27:47	1	7.45	3	8.60	4	8.53	6	11.91	8	46.12
12:26:47	1	7.45	3	8.60	4	8.52	6	11.91	8	46.12
12:25:47	1	7.45	3	8.60	4	8.52	6	11.90	8	46.10
12:24:47	1	7.44	3	8.60	4	8.52	6	11.90	8	46.10
12:24:17	1	7.44	3	8.60	4	8.52	6	11.89	8	46.10
12:23:47	1	7.43	3	8.60	4	8.52	6	11.89	8	46.10
12:23:17	1	7.43	3	8.60	4	8.52	6	11.88	8	46.10
12:22:47	1	7.43	3	8.60	4	8.52	6	11.88	8	46.10
12:22:17	1	7.42	3	8.60	4	8.52	6	11.88	8	46.10
12:21:47	1	7.42	3	8.60	4	8.52	6	11.88	8	46.10
12[illegible]:17	1	7.41	3	8.60	4	8.51	6	11.87	8	46.07
12[illegible]:47	1	7.41	3	8.60	4	8.51	6	11.86	8	46.07
12:20:17	1	7.40	3	8.60	4	8.51	6	11.85	8	46.07
12:19:47	1	7.39	3	8.60	4	8.51	6	11.84	8	46.05
12:19:42	1	7.39	3	8.60	4	8.51	6	11.84	8	46.05
12:19:37	1	7.39	3	8.60	4	8.51	6	11.83	8	46.05
12:19:32	1	7.39	3	8.60	4	8.51	6	11.83	8	46.05
12:19:27	1	7.38	3	8.59	4	8.51	6	11.83	8	46.05

12:19:17	1	7.38	3	8.59	4	8.51	6	11.82	8	46.05
12:19:16	1	7.38	3	8.59	4	8.51	6	11.82	8	46.05
12:19:15	1	7.38	3	8.59	4	8.51	6	11.82	8	46.05
12:19:14	1	7.38	3	8.60	4	8.51	6	11.81	8	46.05
12:19:13	1	7.38	3	8.59	4	8.51	6	11.81	8	46.05
12:19:12	1	7.38	3	8.59	4	8.51	6	11.81	8	46.02
12:19:11	1	7.37	3	8.59	4	8.51	6	11.81	8	46.05
12:19:10	1	7.37	3	8.59	4	8.51	6	11.81	8	46.05
12:19:09	1	7.37	3	8.59	4	8.51	6	11.81	8	46.02
12:19:08	1	7.37	3	8.59	4	8.51	6	11.81	8	46.05
12:19:07	1	7.37	3	8.60	4	8.51	6	11.81	8	46.05
12:19:06	1	7.37	3	8.59	4	8.50	6	11.80	8	46.02
12:19:05	1	7.37	3	8.59	4	8.50	6	11.80	8	46.02
12:19:04	1	7.37	3	8.59	4	8.51	6	11.80	8	46.02
12:19:03	1	7.37	3	8.59	4	8.51	6	11.80	8	46.02
12:19:02	1	7.37	3	8.59	4	8.50	6	11.80	8	46.02
12:19:01	1	7.37	3	8.59	4	8.51	6	11.80	8	46.02
12:19:00	1	7.37	3	8.59	4	8.50	6	11.80	8	46.02
12:18:59	1	7.37	3	8.59	4	8.50	6	11.79	8	46.02
12:18:58	1	7.37	3	8.59	4	8.51	6	11.79	8	46.02
12:18:57	1	7.37	3	8.59	4	8.50	6	11.79	8	46.02
12:18:56	1	7.37	3	8.59	4	8.50	6	11.79	8	46.02
12:18:55	1	7.37	3	8.59	4	8.50	6	11.79	8	46.02
12:18:54	1	7.37	3	8.59	4	8.50	6	11.79	8	46.02
12:18:53	1	7.37	3	8.59	4	8.50	6	11.78	8	46.02
12:18:52	1	7.37	3	8.59	4	8.50	6	11.78	8	46.02
12:18:51	1	7.37	3	8.59	4	8.50	6	11.78	8	46.02
12:18:50	1	7.37	3	8.59	4	8.50	6	11.78	8	46.02
12:18:49	1	7.37	3	8.59	4	8.50	6	11.78	8	46.02
12:18:48	1	7.36	3	8.59	4	8.50	6	11.78	8	46.02
12:18:47	1	7.36	3	8.59	4	8.51	6	11.78	8	46.02
12:18:46	1	7.36	3	8.59	4	8.50	6	11.77	8	46.02
12:18:45	1	7.36	3	8.59	4	8.50	6	11.77	8	46.02
12:18:44	1	7.36	3	8.59	4	8.50	6	11.77	8	46.02
12:18:43	1	7.36	3	8.59	4	8.50	6	11.77	8	46.02
12:18:42	1	7.36	3	8.59	4	8.50	6	11.76	8	46.02
12:18:41	1	7.36	3	8.59	4	8.50	6	11.76	8	46.02
12:18:40	1	7.36	3	8.59	4	8.50	6	11.76	8	46.02
12:18:39	1	7.36	3	8.59	4	8.50	6	11.76	8	46.02
12:18:38	1	7.36	3	8.59	4	8.50	6	11.75	8	46.02
12:18:37	1	7.36	3	8.59	4	8.50	6	11.75	8	46.02
12:18:36	1	7.36	3	8.59	4	8.50	6	11.75	8	46.02
12:18:35	1	7.36	3	8.59	4	8.50	6	11.75	8	46.02
12:18:34	1	7.35	3	8.59	4	8.50	6	11.74	8	46.02
12:18:33	1	7.35	3	8.59	4	8.50	6	11.74	8	46.00
12:18:32	1	7.35	3	8.59	4	8.50	6	11.74	8	46.00
12:18:31	1	7.35	3	8.59	4	8.50	6	11.73	8	46.00
12:18:30	1	7.35	3	8.59	4	8.50	6	11.73	8	46.00
12:18:29	1	7.35	3	8.59	4	8.50	6	11.73	8	46.02
12:18:28	1	7.35	3	8.59	4	8.50	6	11.72	8	46.02
12:18:27	1	7.35	3	8.59	4	8.50	6	11.72	8	46.02
12:18:26	1	7.35	3	8.59	4	8.50	6	11.71	8	46.05
12:18:25	1	7.35	3	8.59	4	8.50	6	11.71	8	46.07
12:18:24	1	7.35	3	8.59	4	8.50	6	11.70	8	46.10
12:18:23	1	7.35	3	8.59	4	8.50	6	11.70	8	46.12
12:18:22	1	7.35	3	8.59	4	8.50	6	11.69	8	46.12
12:18:21	1	7.34	3	8.59	4	8.50	6	11.68	8	46.15
12:18:20	1	7.34	3	8.59	4	8.50	6	11.68	8	46.17
12:18:19	1	7.34	3	8.59	4	8.50	6	11.67	8	46.22
12:18:18	1	7.34	3	8.59	4	8.50	6	11.66	8	46.25
12:18:17	1	7.34	3	8.59	4	8.50	6	11.65	8	46.27
12:18:16	1	7.34	3	8.59	4	8.50	6	11.64	8	46.30
12:18:15	1	7.33	3	8.59	4	8.50	6	11.63	8	46.32
12:18:14	1	7.33	3	8.59	4	8.50	6	11.62	8	46.35
12:18:13	1	7.33	3	8.59	4	8.49	6	11.61	8	46.37

12:18:11	1	7.33	3	8.59	4	8.49	6	11.59	8	46.42
12:18:10	1	7.32	3	8.59	4	8.49	6	11.57	8	46.45
12:18:09	1	7.32	3	8.59	4	8.49	6	11.56	8	46.47
12:18:08	1	7.32	3	8.59	4	8.49	6	11.55	8	46.50
12:18:07	1	7.31	3	8.59	4	8.49	6	11.53	8	46.52
12:18:06	1	7.31	3	8.59	4	8.49	6	11.51	8	46.55
12:[illegible]:05	1	7.31	3	8.59	4	8.49	6	11.50	8	46.57
12[illegible]04	1	7.30	3	8.59	4	8.49	6	11.48	8	46.62
12:18:03	1	7.30	3	8.59	4	8.49	6	11.46	8	46.65
12:18:02	1	7.29	3	8.59	4	8.49	6	11.44	8	46.67
12:18:01	1	7.29	3	8.59	4	8.49	6	11.42	8	46.67
12:18:00	1	7.28	3	8.59	4	8.49	6	11.40	8	46.67
12:17:59	1	7.28	3	8.59	4	8.48	6	11.38	8	46.65
12:17:58	1	7.27	3	8.59	4	8.48	6	11.36	8	46.57
12:17:57	1	7.27	3	8.59	4	8.48	6	11.34	8	46.45
12:17:56	1	7.26	3	8.59	4	8.48	6	11.32	8	46.27
12:17:55	1	7.25	3	8.59	4	8.48	6	11.30	8	46.05
12:17:54	1	7.25	3	8.59	4	8.48	6	11.28	8	45.75
12:17:53	1	7.24	3	8.59	4	8.48	6	11.27	8	45.42
12:17:52	1	7.23	3	8.59	4	8.48	6	11.25	8	44.97
12:17:51	1	7.23	3	8.59	4	8.47	6	11.23	8	44.47
12:17:50	1	7.22	3	8.59	4	8.47	6	11.22	8	43.92
12:17:49	1	7.22	3	8.59	4	8.47	6	11.21	8	43.30
12:17:48	1	7.21	3	8.59	4	8.48	6	11.20	8	42.70
12:17:47	1	7.21	3	8.59	4	8.47	6	11.20	8	43.05
12:00 HRS 86/12/23 #01										
	1	7.15	3	8.57	4	8.44	6	11.05	8	41.40
11:55 HRS	1	7.16	3	8.57	4	8.45	6	11.05	8	41.40
11:50 HRS	1	7.17	3	8.58	4	8.46	6	11.06	8	41.40
10:00 HRS	1	7.15	3	8.56	4	8.42	6	11.05	8	41.37
09:45 HRS	1	7.15	3	8.56	4	8.42	6	11.05	8	41.40
09:30 HRS	1	7.15	3	8.56	4	8.42	6	11.06	8	41.37
09[illegible] HRS	1	7.16	3	8.57	4	8.43	6	11.06	8	41.37
09:00 HRS	1	7.16	3	8.57	4	8.44	6	11.06	8	41.37
08:45 HRS	1	7.17	3	8.57	4	8.44	6	11.06	8	41.40
08:30 HRS	1	7.19	3	8.58	4	8.46	6	11.07	8	41.37
08:15 HRS	1	7.20	3	8.57	4	8.45	6	11.08	8	41.42
08:13 HRS	1	7.19	3	8.57	4	8.44	6	11.08	8	41.40
08:12 HRS	1	7.20	3	8.57	4	8.44	6	11.08	8	41.40
08:11 HRS	1	7.20	3	8.57	4	8.44	6	11.08	8	41.40
08:10 HRS	1	7.20	3	8.57	4	8.44	6	11.08	8	41.40
08:09 HRS	1	7.20	3	8.57	4	8.44	6	11.08	8	41.42
08:08 HRS	1	7.20	3	8.57	4	8.44	6	11.08	8	41.42
08:07 HRS	1	7.20	3	8.57	4	8.44	6	11.08	8	41.37
08:06 HRS	1	7.21	3	8.58	4	8.44	6	11.09	8	41.37
08:05 HRS	1	7.21	3	8.58	4	8.45	6	11.08	8	41.37
08:04 HRS	1	7.21	3	8.57	4	8.45	6	11.09	8	41.40
08:03 HRS	1	7.21	3	8.57	4	8.45	6	11.09	8	41.40
08:02 HRS	1	7.21	3	8.58	4	8.45	6	11.09	8	41.40
08:01 HRS	1	7.21	3	8.58	4	8.45	6	11.09	8	41.42
08:00 HRS	1	7.21	3	8.58	4	8.45	6	11.09	8	41.37
07:59 HRS	1	7.21	3	8.58	4	8.45	6	11.09	8	41.40
07:58 HRS	1	7.21	3	8.58	4	8.45	6	11.09	8	41.37
07:57 HRS	1	7.21	3	8.58	4	8.45	6	11.10	8	41.40
07:56 HRS	1	7.22	3	8.58	4	8.45	6	11.09	8	41.40
07:55 HRS	1	7.22	3	8.58	4	8.45	6	11.10	8	41.42
07:54 HRS	1	7.22	3	8.58	4	8.45	6	11.10	8	41.42
07[illegible] HRS	1	7.23	3	8.58	4	8.45	6	11.10	8	41.42
07[illegible] HRS	1	7.23	3	8.58	4	8.45	6	11.10	8	41.40
07:51 HRS	1	7.23	3	8.58	4	8.45	6	11.10	8	41.40
07:50 HRS	1	7.23	3	8.58	4	8.45	6	11.11	8	41.40
07:49 HRS	1	7.23	3	8.58	4	8.45	6	11.12	8	41.40
07:48 HRS	1	7.24	3	8.58	4	8.45	6	11.13	8	41.42
07:47 HRS	1	7.25	3	8.58	4	8.46	6	11.16	8	41.42
07:46 HRS	1	7.26	3	8.58	4	8.46	6	11.20	8	41.42

07:44	HRS	1	7.[illegible]	3	8.59	4	8.48	6	11.57	8	41.52
07:43	HRS	1	7.45	3	8.59	4	8.50	6	11.90	8	46.05
07:42	HRS	1	7.45	3	8.59	4	8.50	6	11.89	8	46.05
07:41	HRS	1	7.45	3	8.59	4	8.50	6	11.89	8	46.05
07:40	HRS	1	7.44	3	8.59	4	8.50	6	11.89	8	46.02
07:39	HRS	1	7.44	3	8.59	4	8.50	6	11.89	8	46.02
07:38	HRS	1	7.43	3	8.59	4	8.50	6	11.88	8	46.02
07[illegible]	HRS	1	7.43	3	8.59	4	8.50	6	11.88	8	46.02
07:36	HRS	1	7.42	3	8.59	4	8.50	6	11.87	8	46.02
07:35	HRS	1	7.42	3	8.58	4	8.49	6	11.87	8	46.02
07:34	HRS	1	7.41	3	8.58	4	8.49	6	11.87	8	46.02
07:33	HRS	1	7.41	3	8.58	4	8.49	6	11.86	8	46.00
07:32	HRS	1	7.40	3	8.58	4	8.49	6	11.86	8	46.00
07:31	HRS	1	7.39	3	8.58	4	8.49	6	11.85	8	46.00
07:30	HRS	1	7.38	3	8.58	4	8.49	6	11.84	8	46.00
07:29	HRS	1	7.37	3	8.58	4	8.49	6	11.82	8	45.97
07:28	HRS	1	7.35	3	8.58	4	8.48	6	11.80	8	45.95
07:27	HRS	1	7.31	3	8.58	4	8.47	6	11.71	8	45.92
07:26	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.37
07:25	HRS	1	7.16	3	8.57	4	8.44	6	11.06	8	41.42
07:24	HRS	1	7.16	3	8.57	4	8.44	6	11.06	8	41.42
07:23	HRS	1	7.16	3	8.57	4	8.44	6	11.06	8	41.45
07:22	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.42
07:21	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.42
07:20	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.45
07:19	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.42
07:18	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.40
07:17	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.42
07:16	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.42
07:15	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.45
07:14	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.45
07:13	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.42
07[illegible]	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.40
07:[illegible]	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.42
07:10	HRS	1	7.17	3	8.57	4	8.45	6	11.07	8	41.40
07:09	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.40
07:08	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.42
07:07	HRS	1	7.16	3	8.58	4	8.45	6	11.07	8	41.42
07:06	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.37
07:05	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.40
07:04	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.42
07:03	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.42
07:02	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.42
07:01	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.42
07:00	HRS	1	7.16	3	8.57	4	8.45	6	11.07	8	41.42
06:59	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.40
06:58	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.40
06:57	HRS	1	7.16	3	8.57	4	8.45	6	11.06	8	41.42
06:56	HRS	1	7.15	3	8.57	4	8.45	6	11.06	8	41.37
06:55	HRS	1	7.16	3	8.57	4	8.43	6	11.06	8	41.42
06:54	HRS	1	7.16	3	8.57	4	8.43	6	11.06	8	41.42
06:53	HRS	1	7.16	3	8.57	4	8.44	6	11.07	8	41.40
06:52	HRS	1	7.16	3	8.57	4	8.44	6	11.07	8	41.42
06:51	HRS	1	7.16	3	8.57	4	8.44	6	11.07	8	41.42
06:50	HRS	1	7.16	3	8.57	4	8.44	6	11.07	8	41.42
06:49	HRS	1	7.16	3	8.57	4	8.44	6	11.07	8	41.42
06:48	HRS	1	7.16	3	8.57	4	8.44	6	11.07	8	41.40
6[illegible]	HRS	1	7.16	3	8.57	4	8.44	6	11.07	8	41.42
6.[illegible]	HRS	1	7.17	3	8.57	4	8.44	6	11.07	8	41.42
6:45	HRS	1	7.17	3	8.57	4	8.44	6	11.07	8	41.40
6:44	HRS	1	7.17	3	8.57	4	8.44	6	11.07	8	41.42
6:43	HRS	1	7.17	3	8.57	4	8.44	6	11.07	8	41.40
6:42	HRS	1	7.17	3	8.58	4	8.44	6	11.07	8	41.40
6:41	HRS	1	7.17	3	8.57	4	8.44	6	11.07	8	41.40
6:40	HRS	1	7.17	3	8.57	4	8.44	6	11.07	8	41.[illegible]

6:38	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.40
6:37	HRS	1	7.17	3	8.58	4	8.45	6	11.07	8	41.42
6:36	HRS	1	7.17	3	8.58	4	8.44	6	11.07	8	41.40
6:35	HRS	1	7.17	3	8.58	4	8.44	6	11.07	8	41.40
6:34	HRS	1	7.17	3	8.58	4	8.44	6	11.07	8	41.40
6:33	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.42
6:3[illegible]	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.42
[illegible]	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.42
6:[illegible]	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.42
6:29	HRS	1	7.17	3	8.58	4	8.45	6	11.08	8	41.37
6:28	HRS	1	7.17	3	8.58	4	8.44	6	11.07	8	41.42
6:27	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.40
6:26	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.42
6:25	HRS	1	7.17	3	8.57	4	8.44	6	11.08	8	41.42
6:24	HRS	1	7.17	3	8.58	4	8.44	6	11.08	8	41.40
6:23	HRS	1	7.18	3	8.58	4	8.45	6	11.08	8	41.40
6:22	HRS	1	7.18	3	8.58	4	8.45	6	11.08	8	41.42
6:21	HRS	1	7.18	3	8.58	4	8.45	6	11.09	8	41.42
6:20	HRS	1	7.18	3	8.58	4	8.45	6	11.08	8	41.40
6:19	HRS	1	7.18	3	8.58	4	8.45	6	11.09	8	41.42
6:18	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.42
6:17	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.42
6:16	HRS	1	7.18	3	8.58	4	8.45	6	11.08	8	41.40
6:15	HRS	1	7.18	3	8.58	4	8.45	6	11.08	8	41.42
6:14	HRS	1	7.19	3	8.58	4	8.45	6	11.08	8	41.40
6:13	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.42
6:12	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.42
6:11	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.40
6:10	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.42
6:09	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.40
6:08	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.40
6:07	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.42
[illegible]	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.42
[illegible]	HRS	1	7.19	3	8.58	4	8.45	6	11.09	8	41.45
6:04	HRS	1	7.19	3	8.58	4	8.45	6	11.10	8	41.42
6:03	HRS	1	7.20	3	8.59	4	8.45	6	11.10	8	41.40
6:02	HRS	1	7.20	3	8.58	4	8.45	6	11.10	8	41.42
6:01	HRS	1	7.20	3	8.58	4	8.45	6	11.10	8	41.42
6:00	HRS	1	7.20	3	8.59	4	8.45	6	11.10	8	41.42
5:59	HRS	1	7.20	3	8.59	4	8.45	6	11.10	8	41.42
5:58	HRS	1	7.20	3	8.59	4	8.45	6	11.10	8	41.40
5:57	HRS	1	7.20	3	8.59	4	8.45	6	11.10	8	41.45
5:56	HRS	1	7.20	3	8.58	4	8.45	6	11.10	8	41.37
5:55	HRS	1	7.20	3	8.58	4	8.45	6	11.10	8	41.42
5:54	HRS	1	7.20	3	8.58	4	8.45	6	11.10	8	41.40
5:53	HRS	1	7.21	3	8.58	4	8.45	6	11.10	8	41.42
5:52	HRS	1	7.21	3	8.58	4	8.45	6	11.10	8	41.42
5:51	HRS	1	7.21	3	8.58	4	8.45	6	11.11	8	41.37
5:50	HRS	1	7.21	3	8.58	4	8.45	6	11.11	8	41.42
5:49	HRS	1	7.21	3	8.58	4	8.45	6	11.11	8	41.42
5:48	HRS	1	7.21	3	8.59	4	8.45	6	11.11	8	41.40
5:47	HRS	1	7.22	3	8.59	4	8.45	6	11.11	8	41.42
5:46	HRS	1	7.22	3	8.59	4	8.45	6	11.12	8	41.40
5:45	HRS	1	7.22	3	8.59	4	8.45	6	11.12	8	41.42
5:44	HRS	1	7.22	3	8.57	4	8.45	6	11.12	8	41.42
5:43	HRS	1	7.23	3	8.59	4	8.45	6	11.13	8	41.42
5:42	HRS	1	7.23	3	8.59	4	8.45	6	11.13	8	41.42
[illegible]	HRS	1	7.24	3	8.59	4	8.46	6	11.14	8	41.42
[illegible]	HRS	1	7.25	3	8.59	4	8.46	6	11.16	8	41.45
5:39	HRS	1	7.25	3	8.59	4	8.46	6	11.19	8	41.45
5:38	HRS	1	7.26	3	8.59	4	8.46	6	11.26	8	41.47
5:37	HRS	1	7.29	3	8.59	4	8.47	6	11.44	8	41.50
5:36	HRS	1	7.44	3	8.59	4	8.50	6	11.70	8	44.57
5:35	HRS	1	7.45	3	8.59	4	8.50	6	11.71	8	46.05
5:34	HRS	1	7.44	3	8.59	4	8.50	6	11.71	8	46.02

05:32	HRS	1	7.43	3	8.59	4	8.50	6	11.90	8	46.05
05:31	HRS	1	7.43	3	8.59	4	8.50	6	11.90	8	46.05
05:30	HRS	1	7.43	3	8.59	4	8.49	6	11.89	8	46.02
05:29	HRS	1	7.42	3	8.59	4	8.49	6	11.89	8	46.02
05:28	HRS	1	7.42	3	8.59	4	8.49	6	11.89	8	46.02
05:27	HRS	1	7.41	3	8.59	4	8.49	6	11.88	8	46.02
05:26	HRS	1	7.41	3	8.59	4	8.49	6	11.88	8	46.02
05[illegible]	HRS	1	7.40	3	8.59	4	8.49	6	11.87	8	46.02
05:24	HRS	1	7.39	3	8.59	4	8.49	6	11.87	8	46.00
05:23	HRS	1	7.38	3	8.59	4	8.49	6	11.86	8	46.00
05:22	HRS	1	7.37	3	8.59	4	8.49	6	11.85	8	46.00
05:21	HRS	1	7.36	3	8.59	4	8.48	6	11.83	8	45.97
05:20	HRS	1	7.34	3	8.59	4	8.48	6	11.80	8	45.95
05:19	HRS	1	7.30	3	8.58	4	8.47	6	11.66	8	46.00
05:18	HRS	1	7.15	3	8.58	4	8.44	6	11.08	8	41.42
05:17	HRS	1	7.15	3	8.58	4	8.44	6	11.08	8	41.42
05:16	HRS	1	7.15	3	8.58	4	8.44	6	11.08	8	41.42
05:15	HRS	1	7.15	3	8.58	4	8.44	6	11.08	8	41.42
05:14	HRS	1	7.15	3	8.58	4	8.44	6	11.07	8	41.40
05:13	HRS	1	7.15	3	8.58	4	8.44	6	11.07	8	41.42
05:12	HRS	1	7.15	3	8.58	4	8.44	6	11.07	8	41.40
05:11	HRS	1	7.15	3	8.58	4	8.44	6	11.08	8	41.42
05:10	HRS	1	7.15	3	8.57	4	8.44	6	11.08	8	41.42
05:09	HRS	1	7.15	3	8.58	4	8.45	6	11.08	8	41.42
05:08	HRS	1	7.16	3	8.58	4	8.45	6	11.08	8	41.42
05:07	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
05:06	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.45
05:05	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
05:04	HRS	1	7.17	3	8.59	4	8.45	6	11.09	8	41.45
05:03	HRS	1	7.17	3	8.59	4	8.45	6	11.08	8	41.42
05:02	HRS	1	7.17	3	8.59	4	8.45	6	11.08	8	41.42
05:01	HRS	1	7.17	3	8.59	4	8.45	6	11.09	8	41.40
05[illegible]	HRS	1	7.16	3	8.58	4	8.45	6	11.09	8	41.42
04[illegible]	HRS	1	7.16	3	8.58	4	8.45	6	11.08	8	41.45
04:58	HRS	1	7.16	3	8.58	4	8.45	6	11.09	8	41.42
04:57	HRS	1	7.16	3	8.58	4	8.45	6	11.08	8	41.40
04:56	HRS	1	7.16	3	8.58	4	8.45	6	11.09	8	41.42
04:55	HRS	1	7.16	3	8.58	4	8.45	6	11.08	8	41.42
04:54	HRS	1	7.16	3	8.58	4	8.45	6	11.08	8	41.42
04:53	HRS	1	7.16	3	8.58	4	8.45	6	11.08	8	41.42
04:52	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.42
04:51	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.40
04:50	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.42
04:49	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.40
04:48	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.42
04:47	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.40
04:46	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.40
04:45	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.42
04:44	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.42
04:43	HRS	1	7.16	3	8.58	4	8.44	6	11.08	8	41.42
04:42	HRS	1	7.16	3	8.58	4	8.44	6	11.09	8	41.37
04:41	HRS	1	7.16	3	8.58	4	8.44	6	11.09	8	41.42
04:40	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.40
04:39	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04:38	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04:37	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04:36	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.40
04[illegible]	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04[illegible]	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.40
04:33	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.40
04:32	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04:31	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04:30	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.40
04:29	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.37
04:28	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42

04:26	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04:25	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.37
04:24	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.42
04:23	HRS	1	7.17	3	8.58	4	8.45	6	11.09	8	41.40
04:22	HRS	1	7.17	3	8.58	4	8.45	6	11.10	8	41.40
04:21	HRS	1	7.18	3	8.58	4	8.45	6	11.10	8	41.40
04:[illegible]	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.42
04[illegible]	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.40
04:18	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.40
04:17	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.45
04:16	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.40
04:15	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.42
04:14	HRS	1	7.18	3	8.58	4	8.45	6	11.10	8	41.40
04:13	HRS	1	7.18	3	8.58	4	8.45	6	11.10	8	41.42
04:12	HRS	1	7.18	3	8.58	4	8.45	6	11.11	8	41.42
04:11	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.42
04:10	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.42
04:09	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.42
04:08	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.42
04:07	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.45
04:06	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.42
04:05	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.42
04:04	HRS	1	7.19	3	8.59	4	8.45	6	11.11	8	41.37
04:03	HRS	1	7.19	3	8.59	4	8.45	6	11.12	8	41.40
04:02	HRS	1	7.19	3	8.59	4	8.45	6	11.12	8	41.42
04:01	HRS	1	7.20	3	8.59	4	8.45	6	11.12	8	41.45
04:00	HRS	1	7.20	3	8.59	4	8.45	6	11.12	8	41.42
03:59	HRS	1	7.20	3	8.59	4	8.45	6	11.12	8	41.40
03:58	HRS	1	7.20	3	8.59	4	8.45	6	11.12	8	41.42
03:57	HRS	1	7.21	3	8.59	4	8.45	6	11.12	8	41.42
03:56	HRS	1	7.21	3	8.59	4	8.45	6	11.13	8	41.42
03:55	HRS	1	7.21	3	8.59	4	8.45	6	11.13	8	41.45
03[illegible]	HRS	1	7.21	3	8.59	4	8.45	6	11.13	8	41.42
03:[illegible]	HRS	1	7.21	3	8.59	4	8.45	6	11.13	8	41.40
03:52	HRS	1	7.21	3	8.59	4	8.45	6	11.13	8	41.40
03:51	HRS	1	7.22	3	8.59	4	8.46	6	11.14	8	41.42
03:50	HRS	1	7.22	3	8.59	4	8.46	6	11.14	8	41.42
03:49	HRS	1	7.22	3	8.59	4	8.46	6	11.14	8	41.45
03:48	HRS	1	7.23	3	8.59	4	8.46	6	11.15	8	41.45
03:47	HRS	1	7.23	3	8.59	4	8.46	6	11.15	8	41.42
03:46	HRS	1	7.24	3	8.59	4	8.46	6	11.17	8	41.45
03:45	HRS	1	7.25	3	8.59	4	8.46	6	11.19	8	41.45
03:44	HRS	1	7.26	3	8.59	4	8.47	6	11.25	8	41.42
03:43	HRS	1	7.28	3	8.60	4	8.47	6	11.40	8	41.52
03:42	HRS	1	7.37	3	8.60	4	8.49	6	11.79	8	41.75
03:41	HRS	1	7.44	3	8.60	4	8.50	6	11.93	8	46.05
03:40	HRS	1	7.44	3	8.60	4	8.50	6	11.93	8	46.05
03:39	HRS	1	7.43	3	8.60	4	8.50	6	11.92	8	46.05
03:38	HRS	1	7.43	3	8.60	4	8.50	6	11.92	8	46.05
03:37	HRS	1	7.43	3	8.60	4	8.50	6	11.92	8	46.05
03:36	HRS	1	7.43	3	8.60	4	8.50	6	11.92	8	46.05
03:35	HRS	1	7.42	3	8.60	4	8.50	6	11.91	8	46.05
03:34	HRS	1	7.41	3	8.60	4	8.50	6	11.90	8	46.02
03:33	HRS	1	7.41	3	8.60	4	8.50	6	11.90	8	46.02
03:32	HRS	1	7.40	3	8.59	4	8.49	6	11.89	8	46.02
03:31	HRS	1	7.39	3	8.59	4	8.49	6	11.89	8	46.02
03:30	HRS	1	7.39	3	8.59	4	8.49	6	11.88	8	46.00
03[illegible]	HRS	1	7.37	3	8.59	4	8.49	6	11.87	8	46.00
03:[illegible]	HRS	1	7.37	3	8.59	4	8.49	6	11.86	8	46.00
03:27	HRS	1	7.35	3	8.59	4	8.49	6	11.85	8	45.97
03:26	HRS	1	7.33	3	8.59	4	8.48	6	11.82	8	45.95
03:25	HRS	1	7.29	3	8.59	4	8.47	6	11.69	8	45.95
03:24	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
03:23	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.45
03:22	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.45

03:20	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.45
03:19	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:18	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:17	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.45
03:16	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.42
03:15	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:14	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:[illegible]	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.42
03:12	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:11	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.40
03:10	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.45
03:09	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:08	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.42
03:07	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.42
03:06	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
03:05	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
03:04	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:03	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
03:02	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
03:01	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
03:00	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
02:59	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:58	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:57	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:56	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
02:55	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
02:54	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:53	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:52	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:51	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:50	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.40
02:49	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:[illegible]	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:[illegible]	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:46	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:45	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.45
02:44	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:43	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42
02:42	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.40
02:41	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:40	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:39	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:38	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.45
02:37	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.40
02:36	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:35	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:34	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.45
02:33	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.40
02:32	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.40
02:31	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:30	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.40
02:29	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:28	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.37
02:27	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:26	HRS	1	7.17	3	8.59	4	8.45	6	11.09	8	41.37
02:25	HRS	1	7.17	3	8.59	4	8.45	6	11.09	8	41.40
02:24	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.42
02:[illegible]	HRS	1	7.16	3	8.59	4	8.45	6	11.09	8	41.40
02:[illegible]	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.40
02:21	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.40
02:20	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.42
02:19	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.40
02:18	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.40
02:17	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.42
02:16	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.42

2:14	HRS	1	7.17	3	8.59	4	8.45	6	11.10	8	41.40
2:13	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.42
2:12	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.40
2:11	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.42
02:10	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.45
2:09	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.42
02:[illegible]8	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.42
02[illegible]	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.40
02:[illegible]	HRS	1	7.18	3	8.59	4	8.45	6	11.10	8	41.40
02:05	HRS	1	7.18	3	8.59	4	8.45	6	11.11	8	41.42
02:04	HRS	1	7.19	3	8.59	4	8.46	6	11.11	8	41.42
02:03	HRS	1	7.19	3	8.59	4	8.46	6	11.11	8	41.40
02:02	HRS	1	7.19	3	8.59	4	8.46	6	11.11	8	41.40
02:01	HRS	1	7.19	3	8.59	4	8.46	6	11.11	8	41.42
02:00	HRS	1	7.19	3	8.59	4	8.46	6	11.12	8	41.42
01:59	HRS	1	7.19	3	8.59	4	8.46	6	11.12	8	41.42
01:58	HRS	1	7.20	3	8.59	4	8.47	6	11.12	8	41.42
01:57	HRS	1	7.20	3	8.60	4	8.47	6	11.12	8	41.42
01:56	HRS	1	7.21	3	8.60	4	8.47	6	11.12	8	41.42
01:55	HRS	1	7.21	3	8.60	4	8.47	6	11.12	8	41.45
01:54	HRS	1	7.21	3	8.60	4	8.47	6	11.12	8	41.42
01:53	HRS	1	7.21	3	8.60	4	8.47	6	11.13	8	41.42
01:52	HRS	1	7.21	3	8.59	4	8.46	6	11.13	8	41.42
01:51	HRS	1	7.21	3	8.59	4	8.46	6	11.13	8	41.45
01:50	HRS	1	7.21	3	8.59	4	8.46	6	11.13	8	41.42
01:49	HRS	1	7.21	3	8.59	4	8.47	6	11.13	8	41.42
01:48	HRS	1	7.22	3	8.59	4	8.47	6	11.14	8	41.42
01:47	HRS	1	7.22	3	8.60	4	8.47	6	11.14	8	41.45
01:46	HRS	1	7.23	3	8.60	4	8.47	6	11.15	8	41.45
01:45	HRS	1	7.23	3	8.60	4	8.47	6	11.17	8	41.42
01:44	HRS	1	7.25	3	8.60	4	8.47	6	11.22	8	41.45
01:43	HRS	1	7.27	3	8.60	4	8.48	6	11.33	8	41.47
01[illegible]	HRS	1	7.32	3	8.60	4	8.49	6	11.61	8	41.60
01:[illegible]	HRS	1	7.44	3	8.60	4	8.51	6	11.92	8	46.05
01:40	HRS	1	7.43	3	8.61	4	8.51	6	11.92	8	46.05
01:39	HRS	1	7.43	3	8.61	4	8.51	6	11.92	8	46.05
01:38	HRS	1	7.43	3	8.61	4	8.51	6	11.91	8	46.05
01:37	HRS	1	7.43	3	8.61	4	8.51	6	11.91	8	46.05
01:36	HRS	1	7.42	3	8.61	4	8.51	6	11.91	8	46.05
01:35	HRS	1	7.42	3	8.61	4	8.51	6	11.90	8	46.05
01:34	HRS	1	7.41	3	8.61	4	8.51	6	11.90	8	46.02
01:33	HRS	1	7.41	3	8.60	4	8.51	6	11.90	8	46.02
01:32	HRS	1	7.40	3	8.60	4	8.51	6	11.89	8	46.02
01:31	HRS	1	7.39	3	8.60	4	8.51	6	11.89	8	46.02
01:30	HRS	1	7.39	3	8.60	4	8.51	6	11.88	8	46.02
01:29	HRS	1	7.38	3	8.60	4	8.51	6	11.88	8	46.00
01:28	HRS	1	7.37	3	8.60	4	8.50	6	11.87	8	46.00
01:27	HRS	1	7.36	3	8.60	4	8.50	6	11.86	8	46.00
01:26	HRS	1	7.35	3	8.60	4	8.50	6	11.84	8	45.97
01:25	HRS	1	7.33	3	8.60	4	8.49	6	11.82	8	45.97
01:24	HRS	1	7.30	3	8.60	4	8.49	6	11.73	8	45.92
01:23	HRS	1	7.14	3	8.59	4	8.46	6	11.08	8	41.42
01:22	HRS	1	7.14	3	8.59	4	8.46	6	11.08	8	41.42
01:21	HRS	1	7.14	3	8.59	4	8.46	6	11.08	8	41.42
01:20	HRS	1	7.14	3	8.59	4	8.46	6	11.09	8	41.45
01:19	HRS	1	7.14	3	8.59	4	8.46	6	11.08	8	41.45
01:18	HRS	1	7.14	3	8.59	4	8.46	6	11.09	8	41.42
01[illegible]	HRS	1	7.14	3	8.59	4	8.46	6	11.08	8	41.45
01[illegible]	HRS	1	7.14	3	8.59	4	8.46	6	11.09	8	41.42
01:15	HRS	1	7.14	3	8.59	4	8.46	6	11.08	8	41.45
01:14	HRS	1	7.14	3	8.59	4	8.46	6	11.09	8	41.40
01:13	HRS	1	7.15	3	8.59	4	8.46	6	11.09	8	41.42
01:12	HRS	1	7.14	3	8.59	4	8.46	6	11.09	8	41.45
01:11	HRS	1	7.15	3	8.59	4	8.46	6	11.09	8	41.42
01:10	HRS	1	7.15	3	8.59	4	8.46	6	11.09	8	41.45

1:08	HRS	1	7.15	3	8.59	4	8.46	6	11.09	8	41.42
1:07	HRS	1	7.15	3	8.59	4	8.46	6	11.09	8	41.42
1:06	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.45
1:05	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42
1:04	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.40
1:03	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.40
1:0[illegible]	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42
1[illegible]	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.40
1:[illegible]	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42
00:59	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.40
00:58	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:57	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42
00:56	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.40
00:55	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42
00:54	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42
00:53	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.45
00:52	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:51	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42
00:50	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:49	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:48	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:47	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:46	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:45	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.37
00:44	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:43	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:42	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:41	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:40	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:39	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:38	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:37	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.40
00[illegible]	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:[illegible]	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.40
00:34	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:33	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:32	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.40
00:31	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:30	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42
00:29	HRS	1	7.15	3	8.60	4	8.46	6	11.10	8	41.42
00:28	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.37
00:27	HRS	1	7.16	3	8.60	4	8.46	6	11.09	8	41.42
00:26	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.42
00:25	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.42
00:24	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.45
00:23	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.42
00:22	HRS	1	7.16	3	8.60	4	8.46	6	11.09	8	41.42
00:21	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.45
00:20	HRS	1	7.16	3	8.60	4	8.46	6	11.09	8	41.42
00:19	HRS	1	7.16	3	8.60	4	8.46	6	11.09	8	41.42
00:18	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.40
00:17	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.42
00:16	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.42
00:15	HRS	1	7.16	3	8.61	4	8.46	6	11.09	8	41.42
00:14	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.40
00:13	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.45
00:12	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.40
00[illegible]	HRS	1	7.16	3	8.60	4	8.46	6	11.09	8	41.42
00[illegible]	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.42
00:09	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.42
00:08	HRS	1	7.16	3	8.60	4	8.46	6	11.09	8	41.40
00:07	HRS	1	7.16	3	8.60	4	8.46	6	11.10	8	41.40
00:06	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.42
00:05	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.42
00:04	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.40

[illegible]	HRS	1	7.18	3	8.61	4	8.46	6	11.10	8	41.42
00:02	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
00:01	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.45
00:00	HRS	1	7.16	3	8.61	4	8.46	6	11.10	8	41.42
23:59	HRS	86/12/22	#01								
		1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:58	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23[illegible]	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:[illegible]	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:55	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:54	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:53	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:52	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:51	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:50	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:49	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.45
23:48	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:47	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:46	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:45	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:44	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:43	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:42	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:41	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:40	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:39	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:38	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:37	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:36	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:35	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:34	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:33	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:[illegible]	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23[illegible]	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:30	HRS	1	7.17	3	8.61	4	8.45	6	11.10	8	41.40
23:29	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:28	HRS	1	7.17	3	8.61	4	8.46	6	11.11	8	41.40
23:27	HRS	1	7.17	3	8.61	4	8.46	6	11.11	8	41.40
23:26	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:25	HRS	1	7.17	3	8.61	4	8.46	6	11.11	8	41.42
23:24	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:23	HRS	1	7.18	3	8.61	4	8.46	6	11.10	8	41.40
23:22	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.40
23:21	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:20	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.42
23:19	HRS	1	7.17	3	8.61	4	8.46	6	11.10	8	41.40
23:18	HRS	1	7.17	3	8.61	4	8.46	6	11.11	8	41.42
23:17	HRS	1	7.17	3	8.61	4	8.46	6	11.11	8	41.42
23:16	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:15	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:14	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:13	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.40
23:12	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.40
23:11	HRS	1	7.18	3	8.61	4	8.47	6	11.11	8	41.42
23:10	HRS	1	7.18	3	8.61	4	8.47	6	11.11	8	41.42
23:09	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.45
23:08	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:[illegible]	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23[illegible]	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:05	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:04	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:03	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:02	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:01	HRS	1	7.18	3	8.61	4	8.46	6	11.11	8	41.42
23:00	HRS	1	7.17	3	8.61	4	8.46	6	11.11	8	41.42

22:57	HRS	1	7.19	3	8.61	4	8.46	6	11.11	8	41.42
22:56	HRS	1	7.19	3	8.61	4	8.46	6	11.11	8	41.42
22:55	HRS	1	7.19	3	8.61	4	8.46	6	11.11	8	41.42
22:54	HRS	1	7.19	3	8.61	4	8.46	6	11.11	8	41.40
22:53	HRS	1	7.19	3	8.61	4	8.46	6	11.11	8	41.40
22:52	HRS	1	7.19	3	8.61	4	8.47	6	11.11	8	41.40
22:51	HRS	1	7.19	3	8.61	4	8.47	6	11.11	8	41.40
22[illegible]	HRS	1	7.19	3	8.61	4	8.47	6	11.12	8	41.42
22:[illegible]	HRS	1	7.19	3	8.61	4	8.47	6	11.12	8	41.42
22:48	HRS	1	7.19	3	8.61	4	8.47	6	11.12	8	41.40
22:47	HRS	1	7.20	3	8.61	4	8.47	6	11.12	8	41.45
22:46	HRS	1	7.20	3	8.61	4	8.46	6	11.12	8	41.45
22:45	HRS	1	7.20	3	8.61	4	8.47	6	11.12	8	41.42
22:44	HRS	1	7.20	3	8.61	4	8.47	6	11.12	8	41.42
22:43	HRS	1	7.20	3	8.61	4	8.47	6	11.12	8	41.40
22:42	HRS	1	7.20	3	8.61	4	8.47	6	11.12	8	41.45
22:41	HRS	1	7.21	3	8.61	4	8.47	6	11.13	8	41.42
22:40	HRS	1	7.21	3	8.62	4	8.47	6	11.13	8	41.42
22:39	HRS	1	7.21	3	8.61	4	8.47	6	11.13	8	41.42
22:38	HRS	1	7.21	3	8.62	4	8.47	6	11.13	8	41.45
22:37	HRS	1	7.21	3	8.62	4	8.47	6	11.13	8	41.45
22:36	HRS	1	7.21	3	8.62	4	8.47	6	11.13	8	41.42
22:35	HRS	1	7.21	3	8.62	4	8.47	6	11.13	8	41.42
22:34	HRS	1	7.21	3	8.62	4	8.47	6	11.13	8	41.42
22:33	HRS	1	7.22	3	8.62	4	8.47	6	11.13	8	41.42
22:32	HRS	1	7.22	3	8.62	4	8.47	6	11.13	8	41.45
22:31	HRS	1	7.22	3	8.62	4	8.47	6	11.14	8	41.45
22:30	HRS	1	7.22	3	8.62	4	8.47	6	11.14	8	41.42
22:29	HRS	1	7.22	3	8.62	4	8.47	6	11.14	8	41.45
22:28	HRS	1	7.22	3	8.62	4	8.47	6	11.14	8	41.45
22:27	HRS	1	7.23	3	8.62	4	8.47	6	11.14	8	41.45
22:26	HRS	1	7.23	3	8.62	4	8.47	6	11.14	8	41.42
22[illegible]	HRS	1	7.23	3	8.62	4	8.47	6	11.14	8	41.42
22[illegible]	HRS	1	7.23	3	8.62	4	8.47	6	11.15	8	41.45
22:23	HRS	1	7.23	3	8.62	4	8.47	6	11.15	8	41.45
22:22	HRS	1	7.23	3	8.62	4	8.47	6	11.15	8	41.45
22:21	HRS	1	7.24	3	8.62	4	8.47	6	11.15	8	41.42
22:20	HRS	1	7.24	3	8.62	4	8.47	6	11.15	8	41.45
22:19	HRS	1	7.24	3	8.62	4	8.47	6	11.15	8	41.45
22:18	HRS	1	7.24	3	8.62	4	8.47	6	11.16	8	41.45
22:17	HRS	1	7.25	3	8.62	4	8.47	6	11.17	8	41.45
22:16	HRS	1	7.25	3	8.62	4	8.47	6	11.17	8	41.45
22:15	HRS	1	7.26	3	8.62	4	8.48	6	11.19	8	41.45
22:14	HRS	1	7.27	3	8.62	4	8.48	6	11.24	8	41.47
22:13	HRS	1	7.29	3	8.63	4	8.49	6	11.33	8	41.50
22:12	HRS	1	7.33	3	8.63	4	8.49	6	11.55	8	41.57
22:11	HRS	1	7.47	3	8.63	4	8.52	6	11.95	8	46.07
22:10	HRS	1	7.47	3	8.63	4	8.52	6	11.94	8	46.07
22:09	HRS	1	7.46	3	8.63	4	8.52	6	11.94	8	46.07
22:08	HRS	1	7.46	3	8.63	4	8.52	6	11.94	8	46.07
22:07	HRS	1	7.45	3	8.63	4	8.52	6	11.94	8	46.07
22:06	HRS	1	7.45	3	8.63	4	8.52	6	11.93	8	46.07
22:05	HRS	1	7.44	3	8.63	4	8.52	6	11.93	8	46.07
22:04	HRS	1	7.44	3	8.63	4	8.52	6	11.92	8	46.05
22:03	HRS	1	7.43	3	8.63	4	8.52	6	11.92	8	46.05
22:02	HRS	1	7.42	3	8.63	4	8.51	6	11.91	8	46.05
22:01	HRS	1	7.41	3	8.63	4	8.51	6	11.90	8	46.05
22[illegible]	HRS	1	7.41	3	8.63	4	8.51	6	11.90	8	46.02
21[illegible]	HRS	1	7.39	3	8.62	4	8.51	6	11.88	8	46.02
21:58	HRS	1	7.38	3	8.62	4	8.51	6	11.86	8	46.00
21:57	HRS	1	7.36	3	8.62	4	8.50	6	11.83	8	46.00
21:56	HRS	1	7.32	3	8.62	4	8.49	6	11.67	8	46.12
21:55	HRS	1	7.18	3	8.61	4	8.47	6	11.11	8	41.47
21:54	HRS	1	7.18	3	8.62	4	8.47	6	11.11	8	41.47
21:53	HRS	1	7.18	3	8.61	4	8.47	6	11.11	8	41.42

21:51	HRS	1	7.18	3	8.61	4	8.47	6	11.11	8	41.47
21:50	HRS	1	7.18	3	8.62	4	8.47	6	11.11	8	41.47
21:49	HRS	1	7.18	3	8.62	4	8.47	6	11.11	8	41.42
21:48	HRS	1	7.18	3	8.62	4	8.47	6	11.11	8	41.47
21:47	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47
21:46	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.50
21:[illegible]	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47
21:[illegible]	HRS	1	7.18	3	8.62	4	8.47	6	11.11	8	41.47
21:43	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47
21:42	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47
21:41	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47
21:40	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47
21:39	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.45
21:38	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47
21:37	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.45
21:36	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:35	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:34	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45
21:33	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:32	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:31	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45
21:30	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:29	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.42
21:28	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:27	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:26	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:25	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.42
21:24	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45
21:23	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:22	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45
21:21	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:[illegible]	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21[illegible]	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45
21:18	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:17	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45
21:16	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:15	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:14	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:13	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.45
21:12	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:11	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
21:10	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
21:09	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47
21:08	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.50
21:07	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
21:06	HRS	1	7.19	3	8.63	4	8.47	6	11.13	8	41.47
21:05	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
21:04	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
21:03	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
21:02	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.50
21:01	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.45
21:00	HRS	1	7.19	3	8.63	4	8.47	6	11.13	8	41.47
20:59	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.50
20:58	HRS	1	7.19	3	8.63	4	8.47	6	11.13	8	41.47
20:57	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
20:56	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
20:55	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45
20[illegible]	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.47
20:[illegible]	HRS	1	7.19	3	8.62	4	8.47	6	11.13	8	41.42
20:52	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.45
20:51	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.45
20:50	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.47
20:49	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.45
20:48	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.47
20:47	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.47

20:45	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.47
20:44	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.47
20:43	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.47
20:42	HRS	1	7.20	3	8.63	4	8.48	6	11.13	8	41.45
20:41	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.45
20:40	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.45
20:39	HRS	1	7.20	3	8.63	4	8.48	6	11.13	8	41.47
20[illegible]	HRS	1	7.20	3	8.63	4	8.48	6	11.13	8	41.45
20:37	HRS	1	7.20	3	8.63	4	8.48	6	11.13	8	41.47
20:36	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.45
20:35	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.50
20:34	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.45
20:33	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.45
20:32	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.47
20:31	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:30	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:29	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.47
20:28	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.45
20:27	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.45
20:26	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.42
20:25	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:24	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:23	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:22	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:21	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.45
20:20	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:19	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.45
20:18	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.45
20:17	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:16	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:15	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.45
20:14	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20[illegible]	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:[illegible]2	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
20:11	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.45
20:10	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.47
20:09	HRS	1	7.21	3	8.62	4	8.46	6	11.14	8	41.50
20:08	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.47
20:07	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.45
20:06	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.47
20:05	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.45
20:04	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.45
20:03	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.45
20:02	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.47
20:01	HRS	1	7.22	3	8.62	4	8.48	6	11.14	8	41.47
20:00	HRS	1	7.21	3	8.62	4	8.48	6	11.14	8	41.47
19:59	HRS	1	7.21	3	8.62	4	8.48	6	11.15	8	41.47
19:58	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47
19:57	HRS	1	7.21	3	8.63	4	8.48	6	11.15	8	41.50
19:56	HRS	1	7.21	3	8.63	4	8.48	6	11.15	8	41.50
19:55	HRS	1	7.21	3	8.63	4	8.49	6	11.15	8	41.47
19:54	HRS	1	7.21	3	8.63	4	8.48	6	11.15	8	41.45
19:53	HRS	1	7.21	3	8.63	4	8.49	6	11.15	8	41.47
19:52	HRS	1	7.21	3	8.63	4	8.48	6	11.15	8	41.45
19:51	HRS	1	7.21	3	8.63	4	8.48	6	11.15	8	41.47
19:50	HRS	1	7.21	3	8.63	4	8.48	6	11.15	8	41.47
19:49	HRS	1	7.21	3	8.63	4	8.49	6	11.15	8	41.47
19[illegible]	HRS	1	7.22	3	8.63	4	8.48	6	11.15	8	41.47
19[illegible]	HRS	1	7.22	3	8.63	4	8.48	6	11.15	8	41.47
19:46	HRS	1	7.22	3	8.63	4	8.48	6	11.15	8	41.47
19:45	HRS	1	7.22	3	8.63	4	8.48	6	11.15	8	41.47
19:44	HRS	1	7.22	3	8.63	4	8.48	6	11.15	8	41.50
19:43	HRS	1	7.22	3	8.63	4	8.48	6	11.15	8	41.45
19:42	HRS	1	7.22	3	8.63	4	8.49	6	11.15	8	41.47
19:41	HRS	1	7.22	3	8.63	4	8.49	6	11.15	8	41.50

9:39	HRS	1	7.22	3	8.63	4	8.49	6	11.15	8	41.47
9:38	HRS	1	7.22	3	8.63	4	8.49	6	11.15	8	41.47
9:37	HRS	1	7.22	3	8.63	4	8.49	6	11.15	8	41.47
9:36	HRS	1	7.22	3	8.63	4	8.49	6	11.15	8	41.47
9:35	HRS	1	7.22	3	8.63	4	8.49	6	11.16	8	41.50
9:34	HRS	1	7.22	3	8.63	4	8.49	6	11.15	8	41.47
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9:18	HRS	1	7.23	3	8.63	4	8.49	6	11.16	8	41.47
9:17	HRS	1	7.23	3	8.63	4	8.49	6	11.16	8	41.47
9:16	HRS	1	7.23	3	8.63	4	8.49	6	11.16	8	41.47
9:15	HRS	1	7.23	3	8.63	4	8.49	6	11.16	8	41.47
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9:12	HRS	1	7.23	3	8.63	4	8.49	6	11.16	8	41.45
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18:38	HRS	1	7.27	3	8.64	4	8.50	6	11.18	8	41.47
18:37	HRS	1	7.27	3	8.64	4	8.50	6	11.18	8	41.50
18:36	HRS	1	7.27	3	8.64	4	8.50	6	11.19	8	41.50
18:35	HRS	1	7.27	3	8.64	4	8.50	6	11.19	8	41.47

18:33	HRS	1	7.27	3	8.64	4	8.50	6	11.19	8	41.52
18:32	HRS	1	7.28	3	8.65	4	8.50	6	11.19	8	41.50
18:31	HRS	1	7.28	3	8.65	4	8.50	6	11.20	8	41.47
18:30	HRS	1	7.28	3	8.65	4	8.50	6	11.20	8	41.50
18:29	HRS	1	7.28	3	8.65	4	8.50	6	11.20	8	41.52
18:28	HRS	1	7.29	3	8.65	4	8.50	6	11.20	8	41.52
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18[illegible]	HRS	1	7.29	3	8.65	4	8.50	6	11.21	8	41.50
18:[illegible]	HRS	1	7.29	3	8.65	4	8.50	6	11.21	8	41.52
18:24	HRS	1	7.30	3	8.65	4	8.51	6	11.21	8	41.50
18:23	HRS	1	7.30	3	8.65	4	8.51	6	11.22	8	41.52
18:22	HRS	1	7.30	3	8.65	4	8.51	6	11.22	8	41.52
18:21	HRS	1	7.31	3	8.65	4	8.51	6	11.23	8	41.52
18:20	HRS	1	7.31	3	8.65	4	8.51	6	11.25	8	41.52
18:19	HRS	1	7.33	3	8.65	4	8.51	6	11.27	8	41.55
18:18	HRS	1	7.33	3	8.65	4	8.51	6	11.32	8	41.55
18:17	HRS	1	7.35	3	8.65	4	8.52	6	11.43	8	41.60
18:16	HRS	1	7.40	3	8.65	4	8.53	6	11.69	8	41.67
18:15	HRS	1	7.52	3	8.66	4	8.55	6	12.01	8	46.15
18:14	HRS	1	7.52	3	8.66	4	8.55	6	12.01	8	46.15
18:13	HRS	1	7.52	3	8.66	4	8.55	6	12.01	8	46.15
18:12	HRS	1	7.52	3	8.66	4	8.55	6	12.00	8	46.15
18:11	HRS	1	7.51	3	8.66	4	8.55	6	12.00	8	46.12
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18:08	HRS	1	7.50	3	8.66	4	8.55	6	11.98	8	46.12
18:07	HRS	1	7.49	3	8.66	4	8.55	6	11.98	8	46.12
18:06	HRS	1	7.49	3	8.66	4	8.55	6	11.98	8	46.12
18:05	HRS	1	7.48	3	8.66	4	8.55	6	11.97	8	46.10
18:04	HRS	1	7.47	3	8.66	4	8.55	6	11.96	8	46.10
18:03	HRS	1	7.45	3	8.65	4	8.54	6	11.95	8	46.10
18:02	HRS	1	7.44	3	8.65	4	8.54	6	11.92	8	46.07
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17:57	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.55
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17:54	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.55
17:53	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.52
17:52	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.55
17:51	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.55
17:50	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.55
17:49	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.55
17:48	HRS	1	7.24	3	8.65	4	8.50	6	11.19	8	41.55
17:47	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.57
17:46	HRS	1	7.24	3	8.65	4	8.50	6	11.18	8	41.55
17:45	HRS	1	7.24	3	8.65	4	8.50	6	11.19	8	41.55
17:44	HRS	1	7.24	3	8.65	4	8.50	6	11.19	8	41.55
17:43	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.52
17:42	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.55
17:41	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.55
17:40	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.55
17:39	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.57
17:38	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.52
17:37	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.55
17[illegible]	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.52
17[illegible]	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.55
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17:33	HRS	1	7.25	3	8.65	4	8.50	6	11.19	8	41.52
17:32	HRS	1	7.25	3	8.65	4	8.51	6	11.19	8	41.57
17:31	HRS	1	7.25	3	8.65	4	8.51	6	11.19	8	41.55
17:30	HRS	1	7.25	3	8.65	4	8.51	6	11.19	8	41.55
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17:27	HRS	1	7.25	3	8.65	4	8.51	6	11.19	8	41.55
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17:23	HRS	1	7.25	3	8.65	4	8.51	6	11.20	8	41.52
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17:10	HRS	1	7.26	3	8.66	4	8.51	6	11.20	8	41.55
17:09	HRS	1	7.26	3	8.66	4	8.51	6	11.20	8	41.60
17:08	HRS	1	7.27	3	8.66	4	8.51	6	11.21	8	41.55
17:07	HRS	1	7.27	3	8.66	4	8.51	6	11.21	8	41.57
17:06	HRS	1	7.27	3	8.67	4	8.52	6	11.21	8	41.57
17:05	HRS	1	7.26	3	8.66	4	8.51	6	11.21	8	41.55
17:04	HRS	1	7.27	3	8.66	4	8.51	6	11.21	8	41.55
17:03	HRS	1	7.27	3	8.66	4	8.51	6	11.21	8	41.57
17:02	HRS	1	7.27	3	8.66	4	8.51	6	11.21	8	41.55
17:01	HRS	1	7.27	3	8.66	4	8.51	6	11.21	8	41.57
17:00	HRS	1	7.27	3	8.66	4	8.51	6	11.21	8	41.55
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16:35	HRS	1	7.28	3	8.67	4	8.52	6	11.22	8	41.57
16:34	HRS	1	7.28	3	8.67	4	8.52	6	11.22	8	41.57
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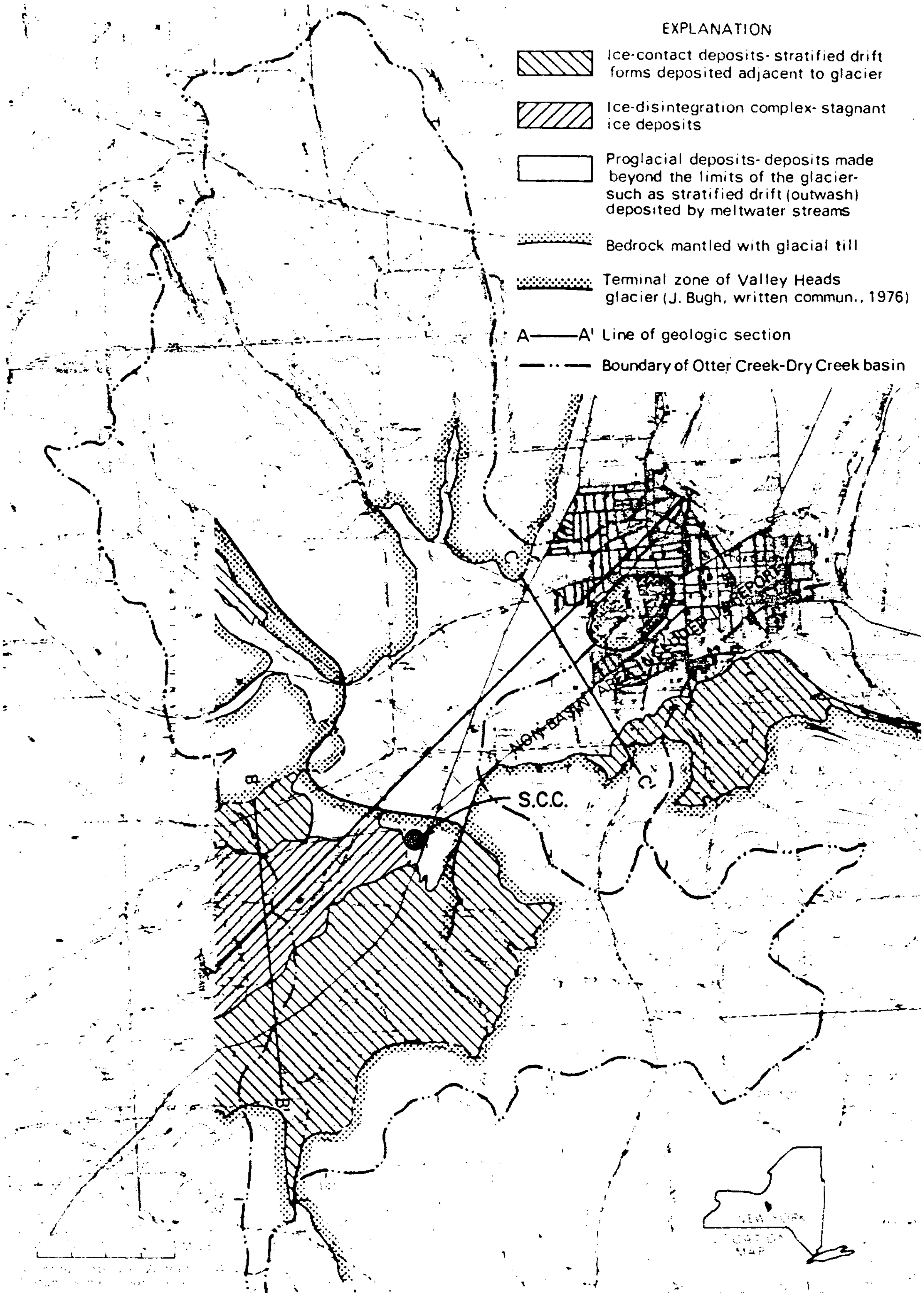
16:25	HRS	1	7.29	3	8.67	4	8.53	6	11.23	8	41.55
16:24	HRS	1	7.29	3	8.67	4	8.53	6	11.23	8	41.55
16:23	HRS	1	7.29	3	8.67	4	8.53	6	11.22	8	41.55

EXHIBIT A1

Portion of U.S.G.S. Water Resource Investigation 78-3

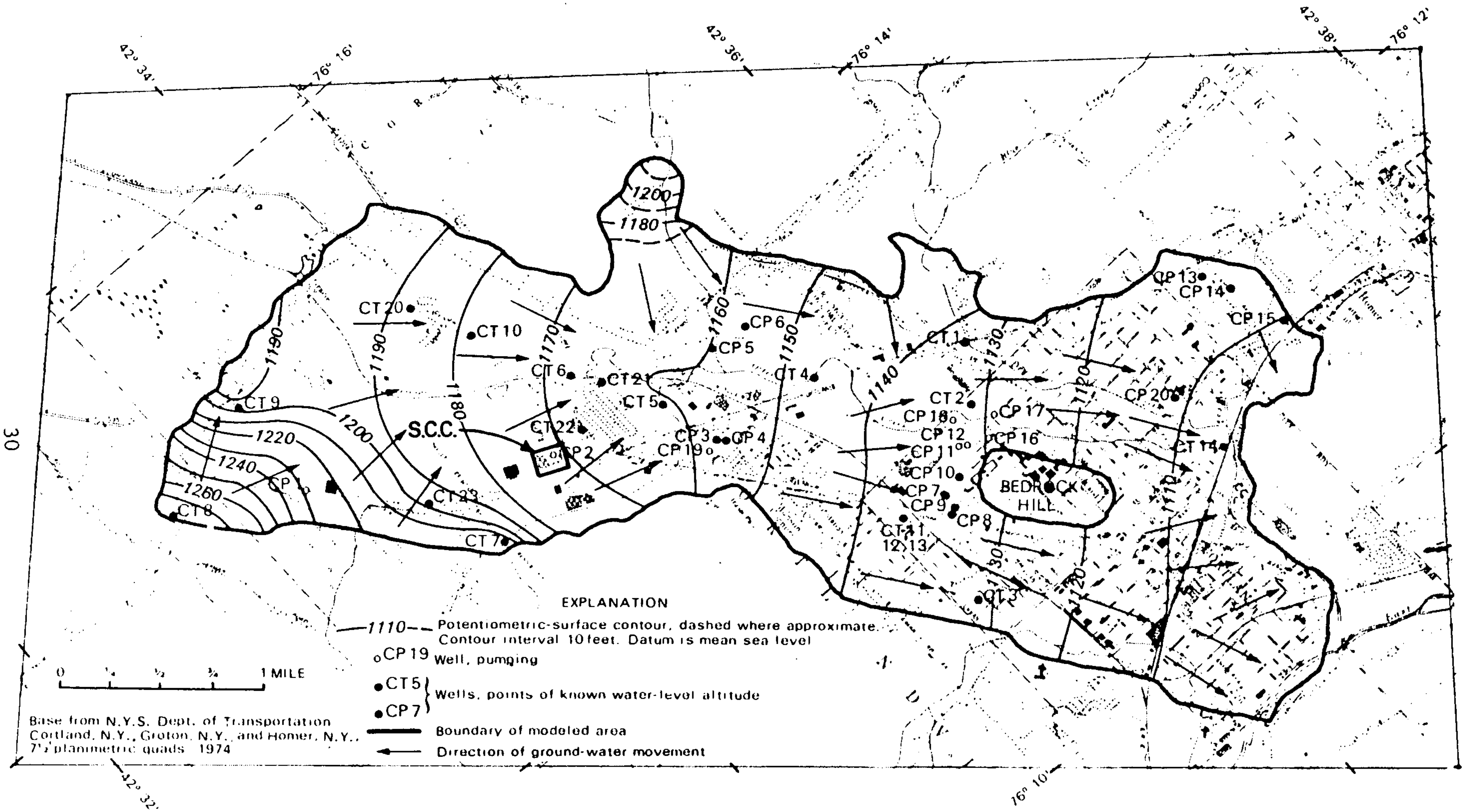
Geology of Otter Creek-Dry Creek basin



Geology adapted from R.G. LaFleur, 1965, written commun.

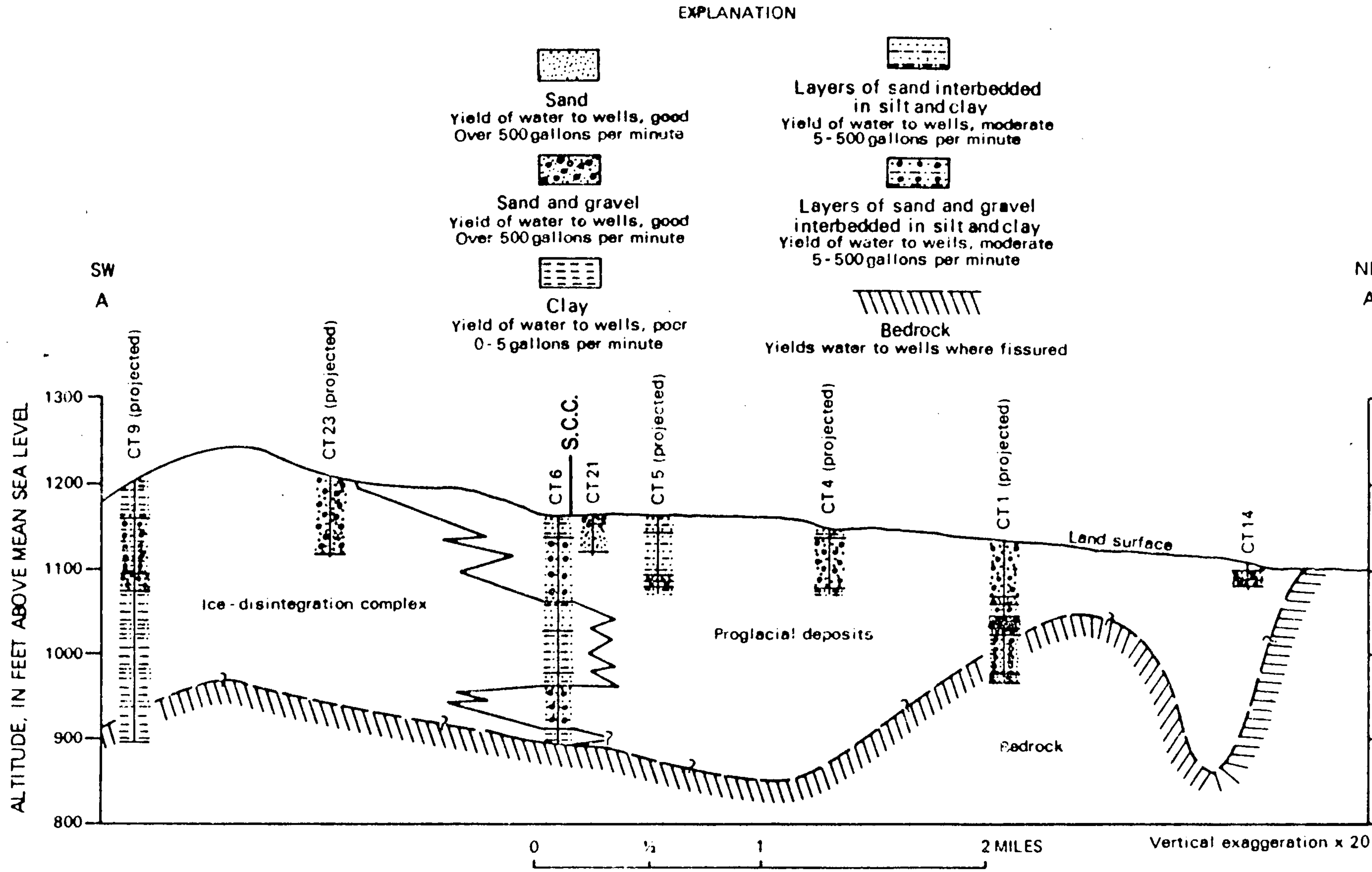
SOURCE: U.S.G.S. Water Resource Investigation 78-3

Potentiometric surface of Otter Creek-Dry Creek aquifer on March 5, 1976, and direction of ground-water movement.



SOURCE: U.S.G.S. Water Resource Investigation 78-3

Geologic section along length of Otter Creek-Dry Creek basin.



SOURCE: U.S.G.S. Water Resource Investigation 78-3

EXHIBIT A2

On-Site Process Well Investigation

APPENDIX A-2

GROUND WATER INVESTIGATION

FOR

SMITH-CORONA-MARCHANT INC.

SOUTH CORTLAND, NEW YORK

Mr. James Condron
Assistant Works Manager

Stewart Bros Inc.
Ground Water Consultants
Schenectady, N.Y.

CONTENTS

Illustrations:

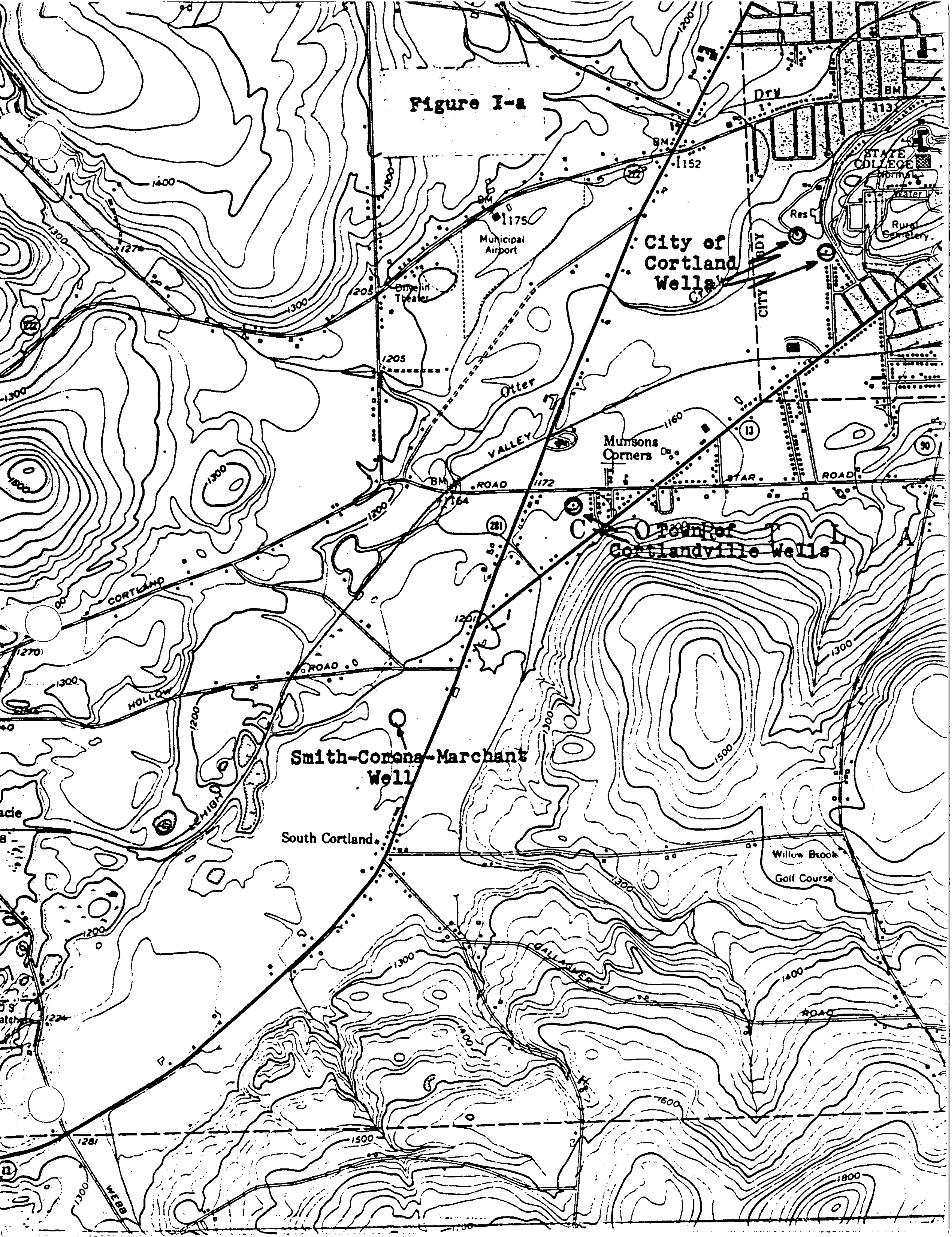
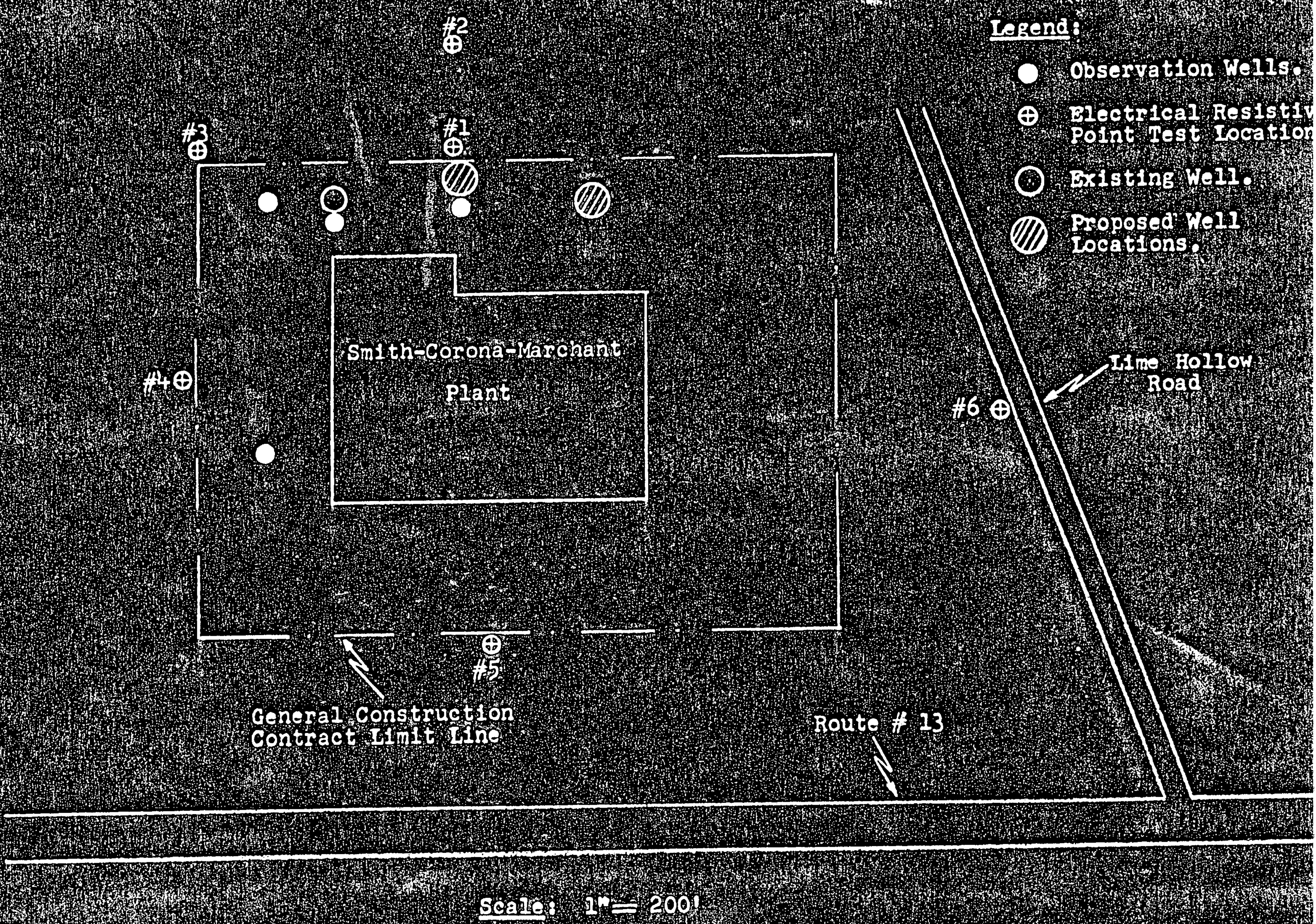
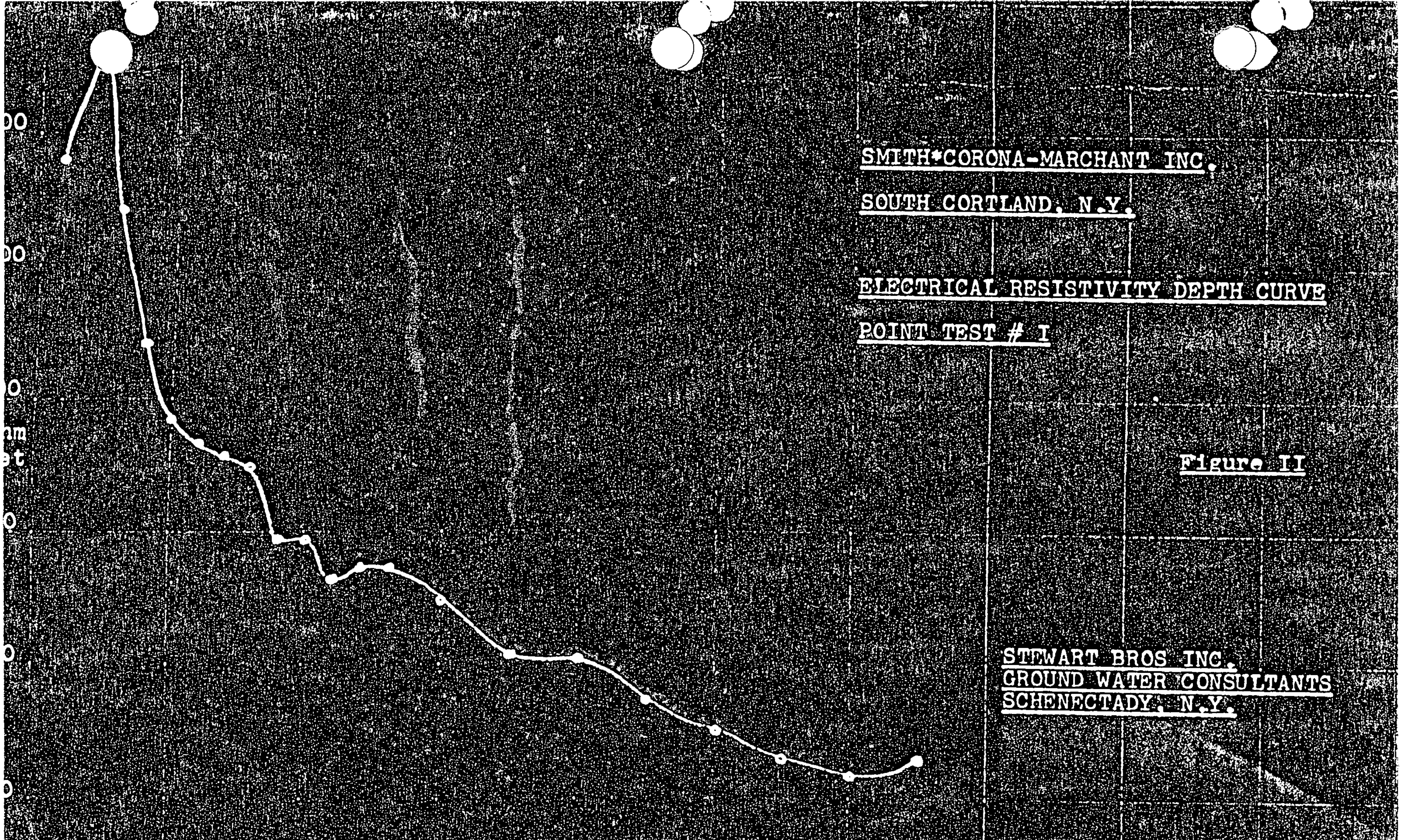

City of
Cortland
Wells
Town of
Cortlandville Wells
Smith-Corona-Marchant
Well
Municipal
Airport
Drive in
Theater
Munsons
Corners
South Cortland
Willow Brook
Golf Course
STATE
COLLEGE
Normal
Rural
Cemetery
Res
Dry
Otter
VALLEY
ROAD
STAR
ROAD
CORTLAND
HOLLOW
ROAD
GALLAGHER
ROAD
WEBB
CITY BDY
1152
1175
1160
1172
1164
1205
1201
1270
1281
1224
1300
1400
1500
1600
1800

Figure I-a

Figure I

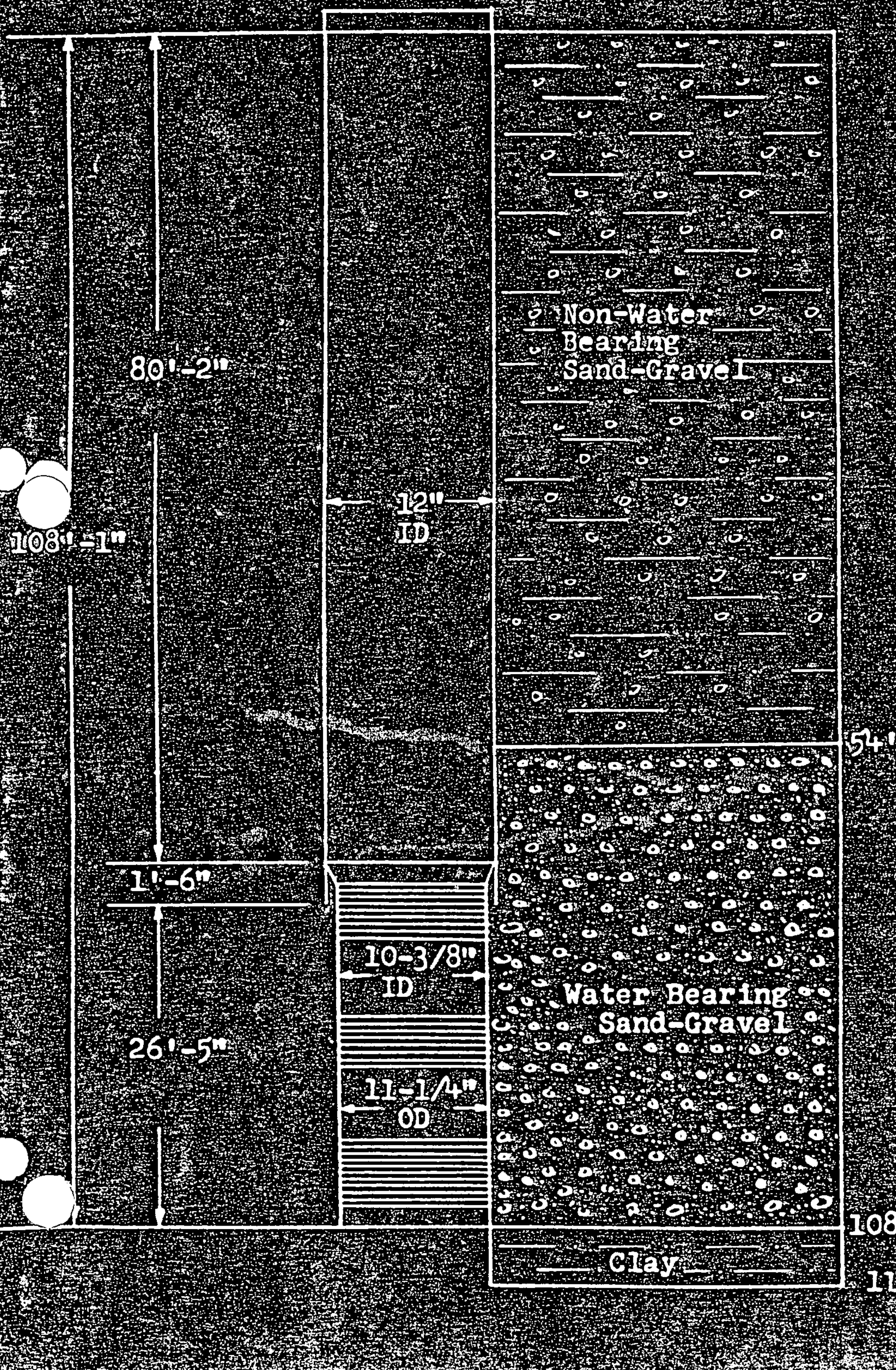

Legend:
Observation Wells.
Electrical Resistiv
Point Test Location
Existing Well.
Proposed Well
Locations.
#1
#2
#3
#4
#5
#6
Smith-Corona-Marchant
Plant
Lime Hollow
Road
General Construction
Contract Limit Line
Route # 13
Scale: 1" = 200'


SMITH*CORONA-MARCHANT INC.
SOUTH CORTLAND, N.Y.
ELECTRICAL RESISTIVITY DEPTH CURVE
POINT TEST # I
Figure II
STEWART BROS INC.
GROUND WATER CONSULTANTS
SCHENECTADY, N.Y.
20
40
60
80
100 Feet
120

WELL LOG

SMITH-CORONA-MARCHANT INC.

SOUTH CORTLAND, N.Y.



TYPE WELL:

Single Cased
Screened Gravel
Filter Well

SCREEN:

Mfg....E.E. Johnson Inc.
Alloy....Everdur
Size.....12" Nominal
Length...27 feet
Slot Opening

Slot Size
Top 2'..........#70
Next 5'..........#40
Next 9'..........#50
Next 6'..........#40
Next 5'..........#60

Attachments...Standard

STATIC LEVEL...51.36'

PUMPING TEST:

Date..Sept. 22-25, 1959
Type Pump...Turbine
GPM.......1000
Draw Down...11 ft
Test Duration..72 hrs.

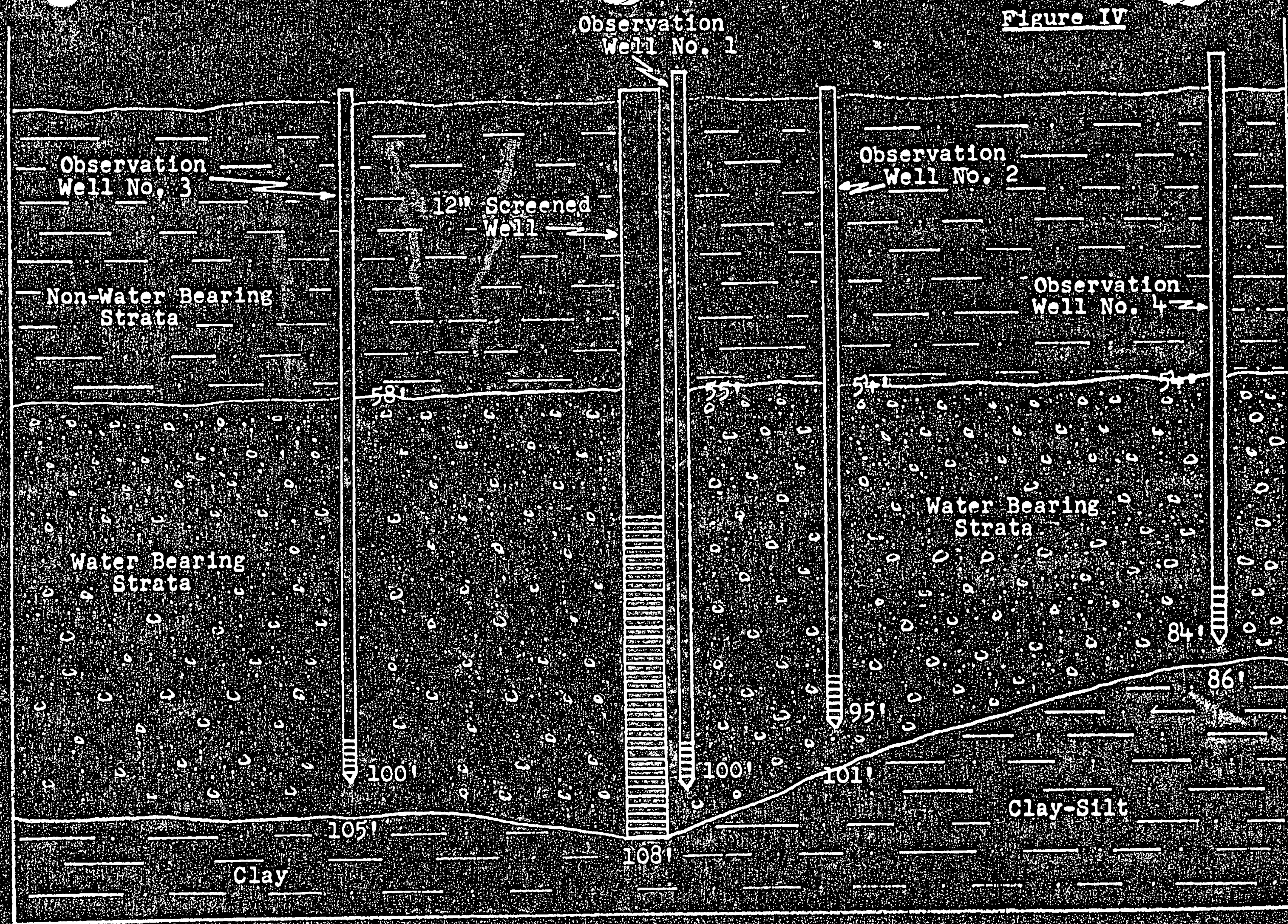


Figure IV
Observation Well No. 1
Observation Well No. 3
12" Screened Well
Observation Well No. 2
Observation Well No. 4
Non-Water Bearing Strata
Water Bearing Strata
Water Bearing Strata
58'
55'
54'
54'
84'
86'
95'
100'
100'
101'
105'
108'
Clay-Silt
Clay

Figure V

STEWART BROS., INC.

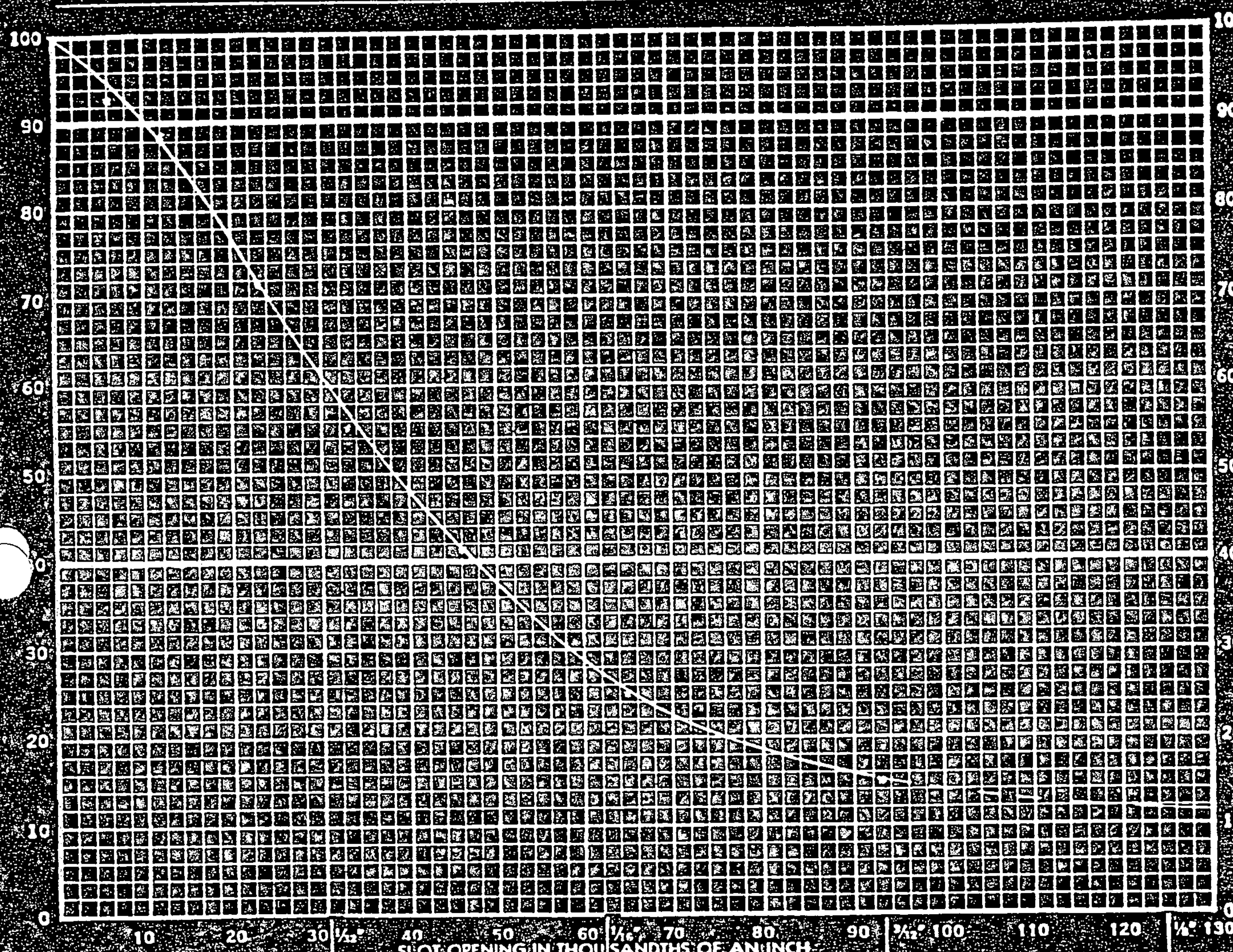
SCHENECTADY, N. Y.

Sample sent in by Smith-Corona Marchant Date July 1959

Address South Cortland, N.Y.

From well of 12" Well

Remarks Sample Taken at 94 ft



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
.131			
.093	110	110	14.80
.065	77	187	25.20
.046	115	302	40.60
.033	117	419	55.00
.023	114	533	71.80
.016			
.012	124	657	88.50
.008			
.006	30	687	92.50
SCREEN	56	743	100.00

NOTES:

SLOT OPENING RECOMMENDED:

RECOMMENDED SCREEN: DIA. IN. LENGTH FT.

BY:

SAND ANALYSIS

STEWART BROS., INC.

SCHENECTADY, N. Y.

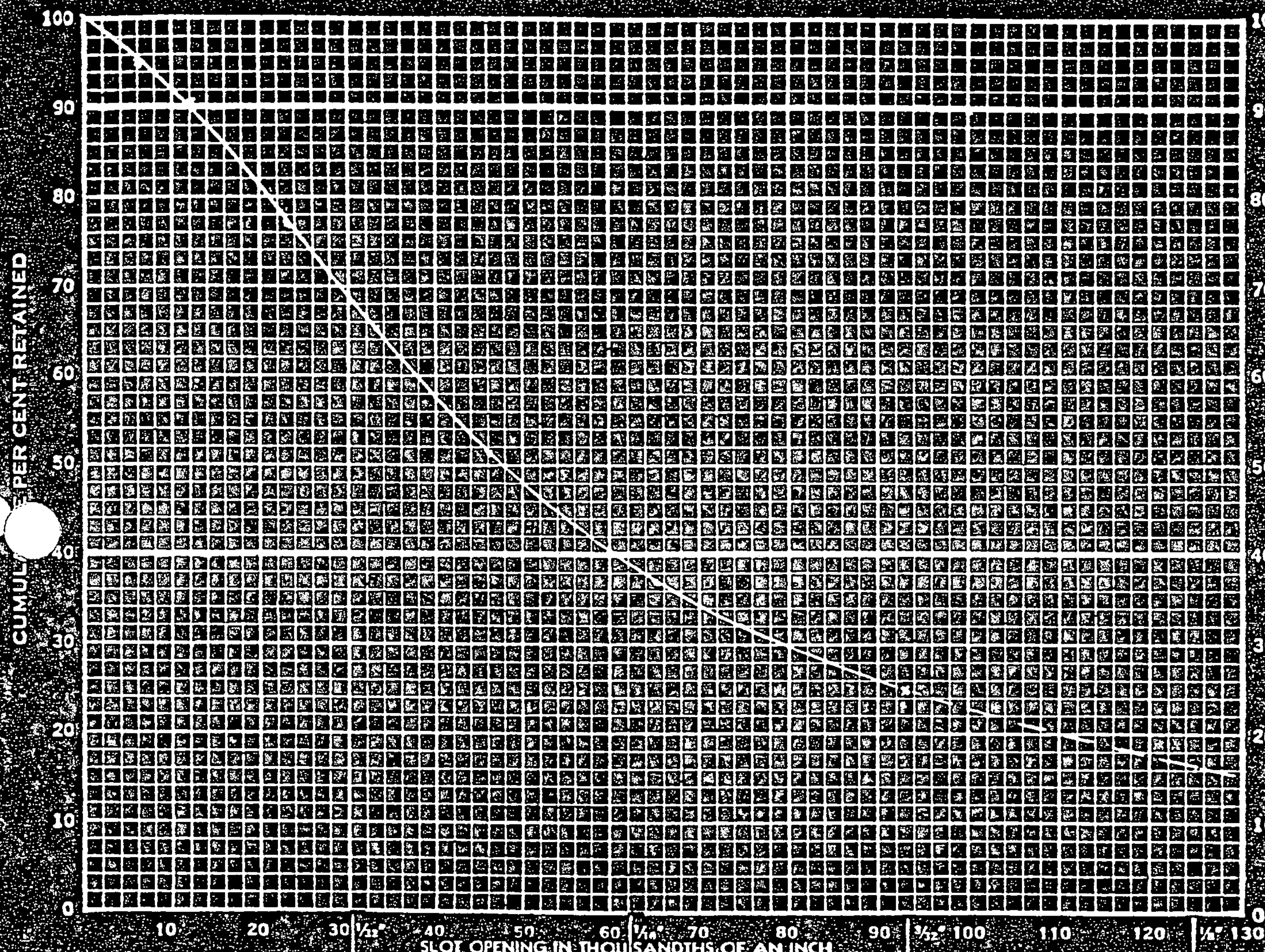
Figure VI

Sample sent in by Smith-Corona Marchant Date 1959

Address South Cortland, N.Y.

From well of Test Well # 1

Remarks Sample taken at 108'



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
.131			
.093	208	208	25.3
.065	100	308	37.4
.046	116	424	51.5
.033	115	539	65.5
.023	97	636	77.3
.016			
.012	108	744	90.3
.008			
.006	36	780	94.6
~~SCREEN~~	43	823	100.0

NOTES:

SLOT OPENING RECOMMENDED:

RECOMMENDED SCREEN: DIA. IN. LENGTH FT.

BY

SAND ANALYSIS

STEWART BROS., INC.

SCHENECTADY, N. Y.

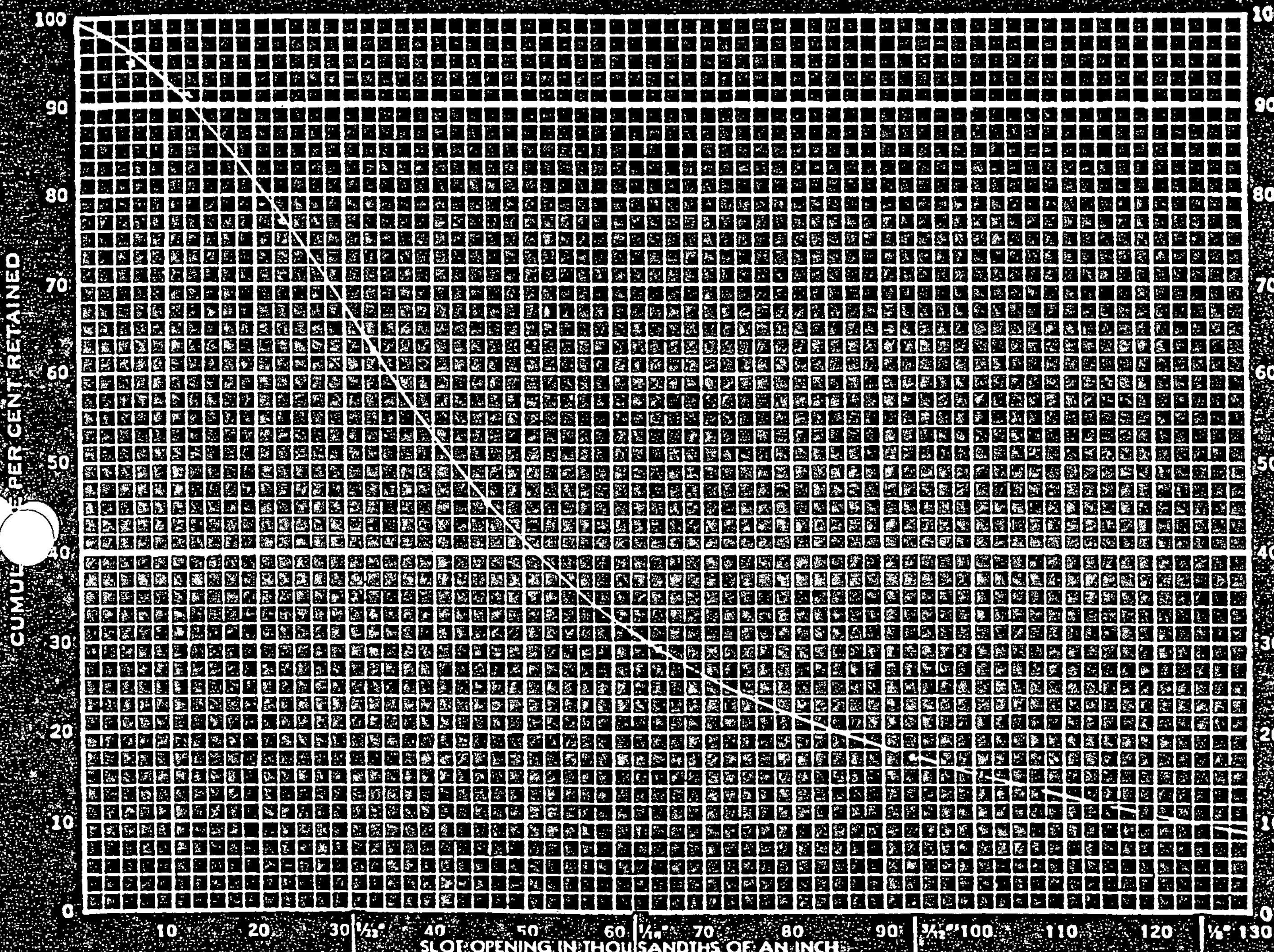
Figure VII

Sample sent in by Smith-Corona-Marchant Inc. Date 1959

Address South Cortland, N.Y.

From well of Test Well # 2

Remarks Sample taken at 80'



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
.131			
.093	138	138	17.4
.065	97	235	29.7
.046	127	362	45.6
.033	133	495	62.5
.023	112	607	76.7
.016			
.012	116	723	91.3
.008			
.006	28	751	94.8
XXXXX	42	793	100.

NOTES:

SLOT OPENING RECOMMENDED:

RECOMMENDED SCREEN: DIA. IN. LENGTH FT.

BY:

SAND ANALYSIS

STEWART BROS., INC.

Figure VIII

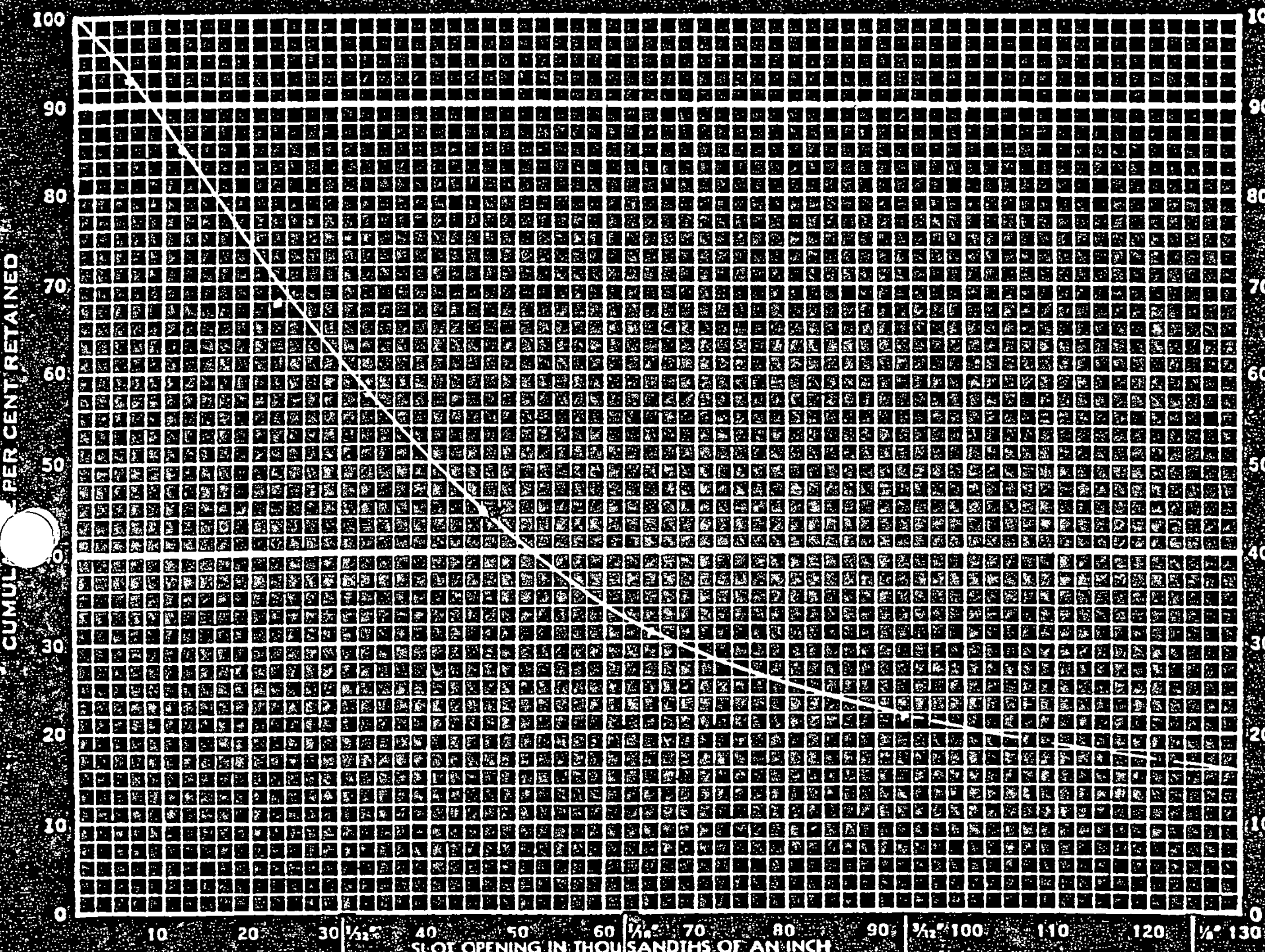
SCHENECTADY, N. Y.

Sample sent in by: Smith-Corona-Marchant Date: 1959

Address: South Cortland, N.Y.

From well of: Test Well # 3

Remarks: Sample taken at 80'



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
.131			
.093	175	175	21.8
.065	83	258	30.9
.046	99	357	44.5
.033	103	460	57.3
.023	88	548	68.2
.016			
.012	132	680	84.7
.008			
.006	66	746	93.1
XXXX			100.

NOTES:

SLOT OPENING RECOMMENDED:

RECOMMENDED SCREEN: DIA. IN. LENGTH FT.

BY:

SAND ANALYSIS

STEWART BROS., INC.

SCHENECTADY, N. Y.

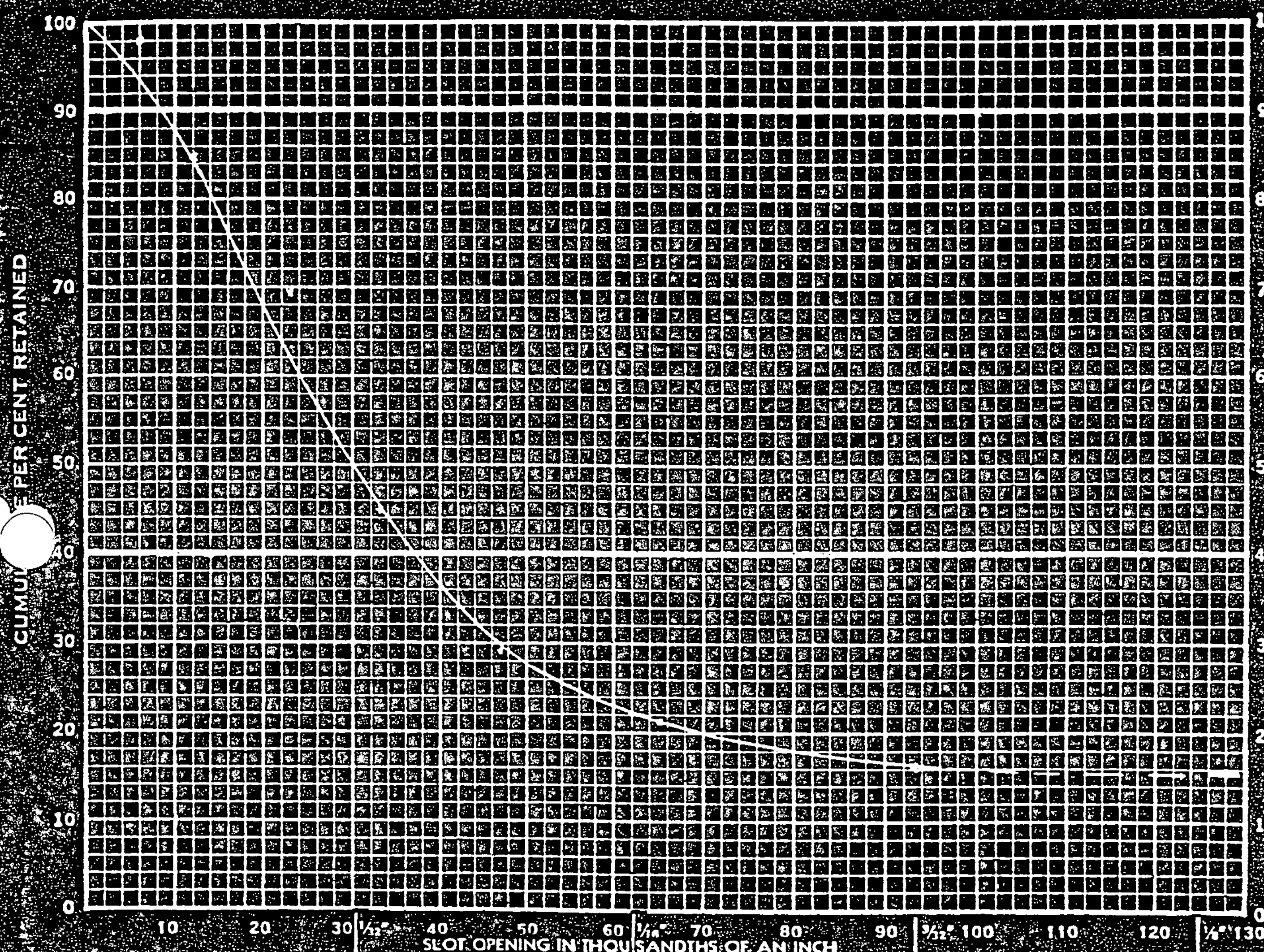
Figure IX

Sample sent in by: Smith-Corona-Marchant Date: 1959

Address: South Cortland, N.Y.

From well of: Test Well # 4

Remarks: Sample taken at 85'



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
.131			
.093	107	107	16.2
.065	35	142	21.5
.046	52	194	29.4
.033	101	295	44.7
.023	164	459	69.6
.016			
.012	166	625	94.8
.008			
.006	22	647	98.2
XXXXXX SCREEN	13	660	100.0

NOTES:

SLOT OPENING RECOMMENDED:

RECOMMENDED SCREEN: DIA. IN. LENGTH FT.

BY:

GROUND WATER INVESTIGATION

SMITH-CORONA-MARCHANT INC.

SOUTH CORTLAND, NEW YORK

The purpose of this investigation is to determine the Potential yield of the Plant area, and the manner by which this yield can be developed. Also to produce a Well which can be used as a permanent Well.

GEOPHYSICAL SURVEY:

The first phase of this investigation was the Geophysical Survey by means of Electrical Resistivity. The purpose of this Survey was to select specific sites with the best possibilities for suitable Granular material (Sands-Gravels). This investigates the general plant property more quickly and economically than by Test Wells alone.

A total of 6 sites were investigated by means of Electrical Resistivity. Locations of the Point Tests are shown on Figure (I).

The data at each of the Points tested is favorable, which indicates the area in general has good possibilities.

See Figure (II) for typical Resistivity-Depth Curve. See table of contents for tabulation of the Resistivity data.

The exploratory test wells substantiated this data. The selection of the Test Well sites was based on the Resistivity data. Water Bearing Sand-Gravel was found at all locations tested.

HYDROLOGICAL SURVEY:

The first part of this Survey was the exploratory Test Well. A total of 4 such wells were drilled at the locations indicated on Figure (I).

See Figure (IV) Vertical section thru the Aquifer for the thickness of Aquifer at each point. Figures VI, VII, VIII and IX represent typical sand analysis curves for these 4 test wells.

Each of these wells were converted to permanent observation wells, at the exact sites of the test wells.

PUMPED WELL:

After an Analysis of all Test Well data, the location of the Pumped ~~Well~~ was selected, and is 6.75' from observation well # 1. See Figure (I). Figure (V) represents Typical Sand Analysis Curve for the Pumped Well.

This is a Single Cased Screened Gravel Filter Well. It is equipped with a 27 foot Johnson 12" Everdur Wire Wound Screen with standard attachments. The details of the Well Construction and Log are shown on Figure (III).

PUMPAGE DURING TEST:

The 72 hour Pumping Test, to determine the Well Capacity and the Hydrological properties of the Aquifer, was started 10:13 AM September 22, 1959 and completed 10:30 AM September 25, 1959. Recovery readings were taken and recorded after the Pumping had ceased.

The Pumping rate was 1000 GPM and continued for the duration of the Test.

Readings of Draw Down and Pumping rates in the Pumped Well were recorded and tabulated, as well as draw down and recovery readings in the observation wells. These are included in this report, see table of contents.

AQUIFER TEST ANALYSIS:

The first step in the analysis of the test was to construct time-drawdown graphs with the data obtained from each of the four observation wells and the pumped well.

The slopes for the Pumped Well and the observation wells indicate transmissibilities in excess of 500,000 gpd/ft and coefficients of storage less than 10^{-5}. Because the transmissibilities are much higher than the thickness and graduation of the Aquifer justifies, and the calculated coefficients of storage are far lower than would normally be expected, it is felt that a recharge image has affected the expansion of the cone of depression. The reflection of the recharge image apparently occured immediately after starting the Pump, (perhaps within the first 5 minutes) because only one slope is evident during the first 150 minutes of pumping.

The recharge image might be caused by one or more of the following:

1. A more favorable part of the Aquifer at some distance from the pumped well. This could represent a thickening of the Aquifer or it could be represented by a zone of higher permeability.
2. Leakage from overlying or underlying formations.
3. Interception by the cone of depression of a surface body of water that is hydraulically connected to the Aquifer.

The data suggests that the recharge image is probably due to (1) a more favorable part of the Aquifer some distance away.

A reliable estimate of the actual formation transmissibility may be obtained from a distance-draw down graph. This type of graph is relatively unaffected by either boundry or recharge conditions if the distance to the boundry or source is considerable as compared to the distances the observation wells are from the pumped well.

The slope of this graph indicates an Aquifer Tranmissibility of about 190,000 gpd/ft. The calculated coefficient of storage is far too high considering the physical conditions of the Aquifer and this confirms the earlier supposition that recharge is occurring from an external source.

The extent of the cone of depression as obtained from the distance-draw down graph is about 500 feet.

DESIGN OF FUTURE WELLS:

The optimum pumping rate of the present 12-inch Well is 1000 GPM.

The Aquifer appears to be able to support 1500 GPM Wells if they can be spaced at least 200 feet apart. Any new well should be located in a place where the Aquifer apprears at least as favorable as it is at the site of the present 12-inch well.

It is possible that other sites may be found on the plant's property where the Aquifer would be thicker and more permeable.

The diameter of any new 1500 GPM Wells should be 20 inches. A minimum of 50% of the Aquifer thickness should be screened. The approx. locations should be as indicated on Figure (1). It would be advisable before any new wells were constructed, to drill 2 or 3 more test wells to determine if other sites on the property produce better sections of the Aquifer.

These proposed Wells should be SINGLE CASED SCREENED NATURAL GRAVEL FILTER WELLS, the same type as the existing 12-inch Screened Well.

This Ground Water Investigation has determined excellent Aquifer capable of producing considerable additional Water, from the Plant property.

STEWART BROS INC.
GROUND WATER CONSULTANTS
Schenectady, New York

Date September 1959

Location: Smith-Corona-Marchant Inc.
South Cortland, New York

Draw Down Measurements
12" Screened Pumping Well

PUMPING TEST:

Screen bottomed at.........................108.00'
Screen length.......................... 27.00'
Static Level........................... 51.36'
Thickness of Aquifer...................... 53.00'
Overburden....Sand-Gravel Silt-Clay Binder
Pumping Rate............................1000GPM
Pump Cut on....10:13AM Sept. 22, 1959
Pump Cut off...10:30AM Sept. 25, 1959

Date	Elapsed Time Minutes	Draw Down Feet	G.P.M.	Temp.
Sept. 22, 1959				
10:13AM	3	10'	1049	
	9	10½	1049	
	11	10½	1049	
	13	10½	1060	
	15	10½	1060	
	17	11	1060	
	19	11	1060	
	21	11	1060	
	27	11	1060	
	29	11	1060	
	31	11	1060	
	33	11	1060	
	35	11	1060	
	37	11	1060	
	39	11	1060	
	41	11¼	1071	
	43	11¼	1071	
	49	11¼	1071	
	51	11¼	1071	
	53	11¼	1071	
	55	11¼	1071	
	57	11¼	1071	
	59	11½	1082	
	73	11½	1082	
	76	11½	1082	
	79	11½	1082	
	86	11½	1082	

Date	Elapsed Time Minutes	Draw Down Feet	G.P.M.	Temp.
Sept. 22, 1959	91	11½'	1082	
	96	11½	1082	
	101	11½	1082	
	106	11½	1082	
	116	11½	1082	
	126	11½	1082	
	146	12	1082	
At 150 minutes, Pumping rate cut back to 1001 GPM				47° F.
	151	11'	1001	
	158	11	1001	
	225	11	1001	
	287	11	1001	
	347	11	1001	
	407	11	1001	
	467	11	1001	
	527	11	1001	
	587	11	1001	
	642	11	1001	
	707	11	1001	
	768	11	1001	
	827	11	1013	
	887	11	1013	
	950	11	1013	
	1007	11	1013	
	1068	11	1013	
	1128	11	1013	
	1190	11	1013	
	1247	11	1013	
	1307	11	1013	
	1367	11	1013	47° F.
	1427	11	1013	
	1487	11	1013	
	1547	11	1013	
	1607	11	1013	
	1667	11	1013	
	1727	11	1013	
	1787	11	1013	
	1847	11	1001	
	1907	11	1001	
	1962	11	1001	
	2023	11	1001	
	2088	11	1001	
	2147	11	1001	

Date	Elapsed Time Minutes	Draw Down Feet	G.P.M.	Temp.
	2207	11'	1001	47° F.
	2262	11	1001	
	2322	11	1001	
	2382	11	1001	
	2442	11	1001	
	2507	11	1001	
	2562	11	1001	
	2627	11	1001	
	2687	11	1001	
	2747	11	1001	
	2807	11	1001	
	2867	11	1001	
	2927	11	1001	
	2987	11	1001	
	3047	11	1001	
	3107	11	1001	
	3167	11	1001	
	3227	11	1001	
	3287	11	1001	
	3347	11	1001	
	3392	11	1001	
	3453	11	1001	
	3511	11	1001	
	3573	11	1001	
	3632	11	1001	
	3693	11	1001	
	3752	11	1001	
	3813	11	1001	
	3871	11	1001	
	3933	11	1001	
	3994	11	1001	
	4052	11	1001	
	4112	11	1001	
	4187	11	1013	
	4247	11	1013	
	4308	11	1013	
Sept. 25, 1959	Pump Cut off 10:30 AM			
Recovery	32	1'		

Location: Smith-Corona-Marchant Inc.
South Cortland, New York

Draw Down Measurements
For Observation Well # 1

PUMPING TEST:

Distance from Pumped Well................ 6.75'
Depth of Well Point.....................102.00'
Static Level............................ 51.36'
Thickness of Aquifer.................... 53.00'
Overburden.....Dry Sand Gravel-clay binder
Pumping Rate............................1000GPM
Pump Cut on.....10:13AM Sept. 22, 1959
Pump Cut Off....10:30AM Sept. 25, 1959

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
10:13AM		
	6	7.15'
	8	7.20
	10	7.22
	12	7.26
	14	7.28
	16	7.37
	18	7.37
	20	7.38
	22	7.41
	27	7.41
	28	7.42
	30	7.45
	32	7.45
	34	7.45
	36	7.50
	38	7.51
	40	7.46
	42	7.48
	44	7.49
	50	7.53
	52	7.50
	54	7.50
	56	7.50
	58	7.50
	60	7.54

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959	72	7.52'
	75	7.58
	80	7.59
	85	7.55
	90	7.55
	95	7.57
	100	7.62
	105	7.59
	115	7.58
	125	7.61
	130	7.62
	145	7.62
At 150 minutes, Pumping Rate Cut back to 1001 GPM		
12:51PM	158	6.97'
	226	6.99
	286	7.05
	345	7.19
	406	7.13
	465	7.08
	522	7.12
	587	7.14
	642	7.15
	707	7.12
	768	7.14
Sept. 23, 1959		
12:00AM	827	7.19'
	886	7.19
	950	7.21
	1007	7.21
	1067	7.20
	1127	7.18
	1188	7.17
	1247	7.17
	1307	7.08
	1365	7.11
	1426	7.06
	1486	7.08
	1542	7.01
	1604	6.98
	1662	7.00
	1725	6.93
	1783	7.00
	1849	6.91

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 23, 1959	1907	6.95'
	1962	6.95
	2023	6.95
	2087	6.97
	2148	6.97
	2156	7.00
	2262	7.01
Sept. 24, 1959		
12:55AM	2322	7.00'
	2382	6.97
	2442	6.97
	2507	6.99
	2562	6.99
	2622	6.99
	2682	7.01
	2744	7.01
	2805	7.00
	2862	6.99
	2922	6.95
	2985	6.92
	3040	6.94
	3104	6.93
	3165	6.93
	3224	7.01
	3283	7.00
	3347	6.92
	3392	6.97
	3453	7.03
	3511	7.05
	3573	6.99
	3632	7.02
	3693	7.01
	3752	7.02
	3813	7.00
	3871	7.01
	3933	7.01
	3992	6.83
	4052	6.58
	4112	6.70
	4179	6.98
	4244	6.74
	4297	7.05
Pump Cut Off 10:30 AM	Sept. 25, 1959	
Recovery	31	.24

Location: Smith-Corona-Marchant Inc.
South Cortland, New York

Draw Down Measurements
For Observation Well # 2

PUMPING TEST:

Distance from Pumped Well.................102.2'
Depth of Well Point.......................95.75'
Static Level..............................51.57'
Thickness of Aquifer......................47.00'
Overburden....Dry Sand-Gravel Silt binder..
Pumping Rate..............................1000GPM
Pump Cut on.....10:13AM Sept. 22, 1959
Pump Cut off....10:30AM Sept. 25, 1959

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
10:13AM		
	2	1.45'
	4	1.45
	6	1.45
	8	1.45
	10	1.45
	12	1.45
	14	1.47
	16	1.50
	18	1.50
	20	1.52
	22	1.52
	24	1.52
	26	1.53
	28	1.53
	30	1.54
	32	1.55
	34	1.55
	36	1.58
	38	1.58
	40	1.58
	42	1.58
	44	1.58
	46	1.58
	48	1.59
	50	1.59
	52	1.59

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959	54	1.59'
	56	1.59
	58	1.60
	60	1.60
	62	1.60
	65	1.60
	70	1.60
	75	1.60
	80	1.60
	85	1.61
	90	1.61
	95	1.61
	100	1.61
	105	1.62
	110	1.62
	115	1.62
	120	1.62
	130	1.62
	140	1.63
At 150 minutes, Pumping Rate Cut back to 1001 GPM		
1:00PM	167	1.57'
	220	1.58
	284	1.60
	292	1.61
	342	1.61
	412	1.62
	462	1.64
	514	1.64
	576	1.64
	632	1.64
	692	1.64
	751	1.65
	812	1.66
Sept. 23, 1959		
12:42AM	869	1.67'
	932	1.66
	991	1.67
	1050	1.67
	1112	1.67
	1172	1.66
	1232	1.67
	1305	1.66
	1362	1.68
	1422	1.68

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 23, 1959	1482	1.68'
	1540	1.70
	1601	1.72
	1660	1.66
	1722	1.67
	1780	1.66
	1845	1.60
	1902	1.67
	1961	1.67
	2011	1.67
	2072	1.67
	2131	1.67
	2193	1.67
	2253	1.68
Sept. 24, 1959		
12:45AM	2312	1.69'
	2372	1.70
	2433	1.69
	2492	1.67
	2551	1.68
	2613	1.69
	2672	1.70
	2739	1.67
	2802	1.70
	2857	1.71
	2917	1.68
	2982	1.71
	3037	1.69
	3102	1.68
	3162	1.68
	3217	1.73
	3280	1.70
	3345	1.73
	3397	1.72
	3458	1.74
	3517	1.73
	3576	1.73
	3637	1.72
	3697	1.73
	3757	1.73
	3817	1.72
	3876	1.73
	3936	1.73
	3998	1.70
	4057	1.69
	4122	1.70

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 24, 1959	4185	1.75'
	4242	1.71
	4302	1.77
	Pump Cut off 10:30 AM	
	2	.28'
	4	.39
	6	.37
	8	.37
	10	.36
	12	.36
	14	.35
	16	.34
	18	.34
	20	.33
	26	.32
	34	.31

Location: Smith-Corona-Marchant Inc.
South Cortland, New York

Draw Down Measurements for Observation Well # 3

PUMPING TEST:

Distance from Pumped Well...............198.00'
Depth of Well Point.....................100.00'
Static Level............................ 51.88'
Thickness of Aquifer.................... 47.00'
Overburden....Sand-Gravel Silt-Clay binder
Pumping Rate............................1000GPM
Pump Cut on.....10:13AM Sept. 22, 1959
Pump Cut off....10:30AM Sept. 25, 1959

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
10:13AM		
	2	.82'
	4	.84
	6	.85
	8	.88
	10	.88
	12	.88
	14	.90
	16	.91
	18	.92
	20	.92
	22	.92
	24	.92
	26	.92
	28	.92
	30	.93
	32	.94
	34	.95
	36	.96
	38	.96
	40	.96
	42	.96
	44	.96
	46	.96
	48	.96
	50	.96

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959	52	.96'
	54	.96
	56	.96
	58	.96
	60	.97
	64	.97
	70	.96
	75	.98
	80	.98
	85	.99
	90	.99
	95	.98
	100	.98
	105	1.00
	110	1.00
	115	1.00
	120	1.00
	130	1.01
	142	1.01

At 150 Minutes Pumping Rate cut back to 1001 GPM

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
12:55PM	162	.94'
	232	.93
	292	.96
	347	.98
	412	.97
	470	.95
	526	.95
	592	.95
	647	.96
	702	.96
	762	.96
	822	.96
Sept. 23, 1959		
12:54AM	881	.96'
	942	.93
	1002	.96
	1061	.94
	1123	.94
	1181	.94
	1241	.90
	1312	.97
	1369	.95

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 23, 1959	1429	.97'
	1487	.95
	1547	.95
	1607	.96
	1666	.96
	1727	.95
	1787	.94
	1853	.95
	1910	.94
	1967	.94
	2030	.94
	2082	.94
	2143	.95
	2202	.95
Sept. 24, 1959		
12:00AM	2267	.96'
	2328	.96
	2389	.96
	2451	.96
	2501	.98
	2567	.98
	2628	.98
	2687	.97
	2747	.98
	2807	.98
	2867	.98
	2927	.97
	2987	.95
	3047	.95
	3107	.96
	3167	.96
	3227	1.01
	3287	1.00
	3349	.97
	3412	.98
	3467	.99
	3530	.98
	3588	.98
	3649	.99
	3707	.98
	3767	.98
	3829	.99
	3887	.98
	3949	.98
	4011	.93
	4072	.94

Date		Elapsed Time Minutes	Draw Down Feet
Sept. 24, 1959		4117	.93'
		4187	1.00
		4247	1.01
		4307	1.02
Sept. 25, 1959	Pump Cut off 10:30AM		
		2	.20'
		4	.19
		6	.19
		8	.17
		10	.17
		12	.16
		14	.16
		16	.16
		18	.15
		20	.15
		22	.14
		24	.14
		26	.14
		28	.13
		30	.13
		32	.13
		34	.13
		36	.12

Location: Smith-Corona-Marchant Inc.
South Cortland, New York

Draw Down Measurements
for Observation Well # 4

PUMPING TEST:

Distance from Pumped Well..................408.90'
Depth of Well Point........................ 85.60'
Static Level............................... 50.46'
Thickness of Aquifer....................... 32.00'
Overburden....Sand-Gravel Silt-Clay Binder
Pumping Rate...............................1000GPM
Pump Cut on....10:13AM Sept 22, 1959
Pump Cut off...10:30AM Sept 25, 1959

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
10:13AM		
	2	.13'
	4	.13
	6	.18
	8	.18
	10	.18
	12	.19
	14	.19
	16	.20
	18	.17
	20	.19
	22	.20
	24	.18
	26	.20
	28	.17
	30	.20
	32	.19
	34	.20
	36	.20
	38	.20
	40	.20
	42	.18
	44	.23
	46	.19
	48	.19
	50	.18

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959	52	.20'
	54	.20
	56	.20
	58	.21
	60	.20
	65	.13
	70	.20
	75	.18
	80	.18
	85	.17
	90	.20
	95	.18
	100	.20
	105	.20
	110	.20
	115	.20
	120	.23
	130	.15
	140	.13

At 150 Minutes Pumping Rate cut back to 1001 GPM

Sept. 22, 1959		
1:06PM	173	.13'
	217	.14
	276	.15
	336	.18
	396	.18
	465	.18
	517	.20
	578	.14
	637	.14
	697	.11
	757	.11
	817	.18
Sept. 23, 1959		
12:48AM	875	.20'
	938	.21
	997	.25
	1055	.27
	1118	.26
	1177	.25
	1237	.25
	1302	.33

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 23, 1959	1357	.33'
	1417	.33
	1477	.34
	1537	.34
	1602	.33
	1655	.35
	1717	.32
	1777	.38
	1842	.38
	1897	.38
	1957	.38
	2016	.38
	2077	.38
	2138	.38
	2199	.36
	2258	.39
Sept. 24, 1959		
12:51AM	2318	.39
	2378	.39
	2437	.39
	2498	.39
	2559	.42
	2617	.41
	2677	.42
	2737	.42
	2800	.40
	2852	.41
	2915	.43
	2977	.45
	3037	.45
	3097	.45
	3157	.45
	3212	.46
	3277	.44
	3338	.42
	3405	.47
	3463	.46
	3521	.46
	3582	.46
	3641	.46
	3702	.45
	3763	.47
	3822	.45
	3881	.47
	3941	.46
	4003	.47

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 24, 1959	4065	.48'
	4127	.47
	4172	.46
	4237	.45
	4310	.53
Sept 25, 1959	Pump Cut Off at 10:30 AM	
	2	.45'
	4	.45
	6	.45
	8	.45
	10	.45
	12	.45
	14	.44
	16	.44
	18	.44
	20	.44
	22	.44
	24	.44
	26	.44
	28	.44
	30	.44
	32	.44
	34	.44
	36	.44
	38	.44
	40	.44
	42	.44
	44	.44
	46	.44
	48	.44

Smith-Corona-Marchant Inc.
South Cortland, New York

May 1959

Electrical Resistivity
POINT TEST # 1

A		P		R	
4	Feet	135.	ohms	3400.	ohm feet
8	"	75.	"	3770.	" "
12	"	42.5	"	3210.	" "
16	"	27.	"	2710.	" "
20	"	20.	"	2420.	" "
24	"	15.5	"	2340.	" "
28	"	13.0	"	2290.	" "
32	"	11.2	"	2250.	" "
36	"	8.7	"	1970.	" "
40	"	7.85	"	1970.	" "
44	"	6.65	"	1835.	" "
48	"	6.2	"	1870.	" "
52	"	5.7	"	1860.	" "
60	"	4.6	"	1730.	" "
70	"	3.5	"	1540.	" "
80	"	3.	"	1530.	" "
90	"	2.42	"	1365.	" "
100	"	2.	"	1251.	" "
110	"	1.65	"	1140.	" "
120	"	1.45	"	1090.	" "
130	"	1.40	"	1140.	" "

Smith-Corona-Marchant Inc.
South Cortland, New York

May 1959

Electrical Resistivity
POINT TEST # 2

A		P		R	
4	Feet	130.	ohms	3260.	ohm feet
8	"	61.5	"	3140.	" "
12	"	32.2	"	2430.	" "
16	"	23.5	"	2360.	" "
20	"	17.8	"	2240.	" "
24	"	14.5	"	2180.	" "
28	"	12.	"	2110.	" "
32	"	10.	"	2070.	" "
36	"	8.2	"	1850.	" "
40	"	7.3	"	1830.	" "
44	"	6.5	"	1795.	" "
48	"	5.7	"	1720.	" "
52	"	5.2	"	1700.	" "
60	"	4.1	"	1545.	" "
70	"	3.4	"	1490.	" "
80	"	2.9	"	1450.	" "
90	"	2.4	"	1355.	" "
100	"	1.92	"	1205.	" "
110	"	1.88	"	1300.	" "
120	"	1.6	"	1205.	" "
130	"	1.42	"	1160.	" "

Smith-Corona-Marchant Inc.
South Cortland, N ew York

May 1959

Electrical Resistivity
POINT TEST # 3

A		P		R	
4	Feet	140.	ohms	3520.	ohm feet
8	"	70.	"	3520.	" "
12	"	47.	"	3540.	" "
16	"	36.	"	3390.	" "
20	"	27.	"	3390.	" "
24	"	21.5	"	3240.	" "
28	"	17.	"	2990.	" "
32	"	14.	"	2820.	" "
36	"	12.2	"	2760.	" "
40	"	10.2	"	2550.	" "
44	"	8.4	"	2320.	" "
48	"	7.2	"	2170.	" "
52	"	6.1	"	1990.	" "
60	"	4.75	"	1790.	" "
70	"	3.7	"	1630.	" "
80	"	2.95	"	1480.	" "
90	"	2.4	"	1355.	" "
100	"	1.95	"	1225.	" "
110	"	1.76	"	1215.	" "
120	"	1.45	"	1090.	" "
130	"	1.21	"	986.	" "

Smith-Corona-Marchant Inc.
South Cortland, New York

May 1959

Electrical Resistivity
POINT TEST # 4

A		P		R	
4	Feet	170.	ohms	4260.	ohm feet
8	"	81.5	"	4090.	" "
12	"	57.	"	4300.	" "
16	"	34.	"	3420.	" "
20	"	24.	"	3020.	" "
24	"	19.	"	2860.	" "
28	"	14.5	"	2550.	" "
32	"	11.5	"	2310.	" "
36	"	8.9	"	2010.	" "
40	"	8.1	"	2030.	" "
44	"	6.65	"	1840.	" "
48	"	6.3	"	1900.	" "
52	"	5.75	"	1875.	" "
60	"	4.	"	1505.	" "
70	"	3.4	"	1495.	" "
80	"	2.72	"	1365.	" "
90	"	1.95	"	1100.	" "
100	"	1.85	"	1035.	" "
110	"	1.45	"	1005.	" "
120	"	.70	"	830.	" "
130	"	.78	"	636.	" "

Smith-Corona-Marchant Inc.
South Cortland, New York

May 1959

Electrical Resistivity
POINT TEST # 5

A		P		R		
4	Feet	185.	ohms	4650.	ohm	feet
8	"	84.	"	4280.	"	"
12	"	46.	"	3470.	"	"
16	"	29.	"	2920.	"	"
20	"	20.	"	2510.	"	"
24	"	16.5	"	2490.	"	"
28	"	1.38	"	2430.	"	"
32	"	11.5	"	2310.	"	"
36	"	8.15	"	1845.	"	"
40	"	7.3	"	1830.	"	"
44	"	6.35	"	1755.	"	"
48	"	5.6	"	1690.	"	"
52	"	4.85	"	1585.	"	"
60	"	4.15	"	1585.	"	"
70	"	3.1	"	1360.	"	"
80	"	2.45	"	1230.	"	"
90	"	2.1	"	1185.	"	"
100	"	1.8	"	1130.	"	"
110	"	1.6	"	1105.	"	"
120	"	1.4	"	1055.	"	"
130	"	1.3	"	1060.	"	"

Smith-Corona-Marchant Inc.
South Cortland, New York

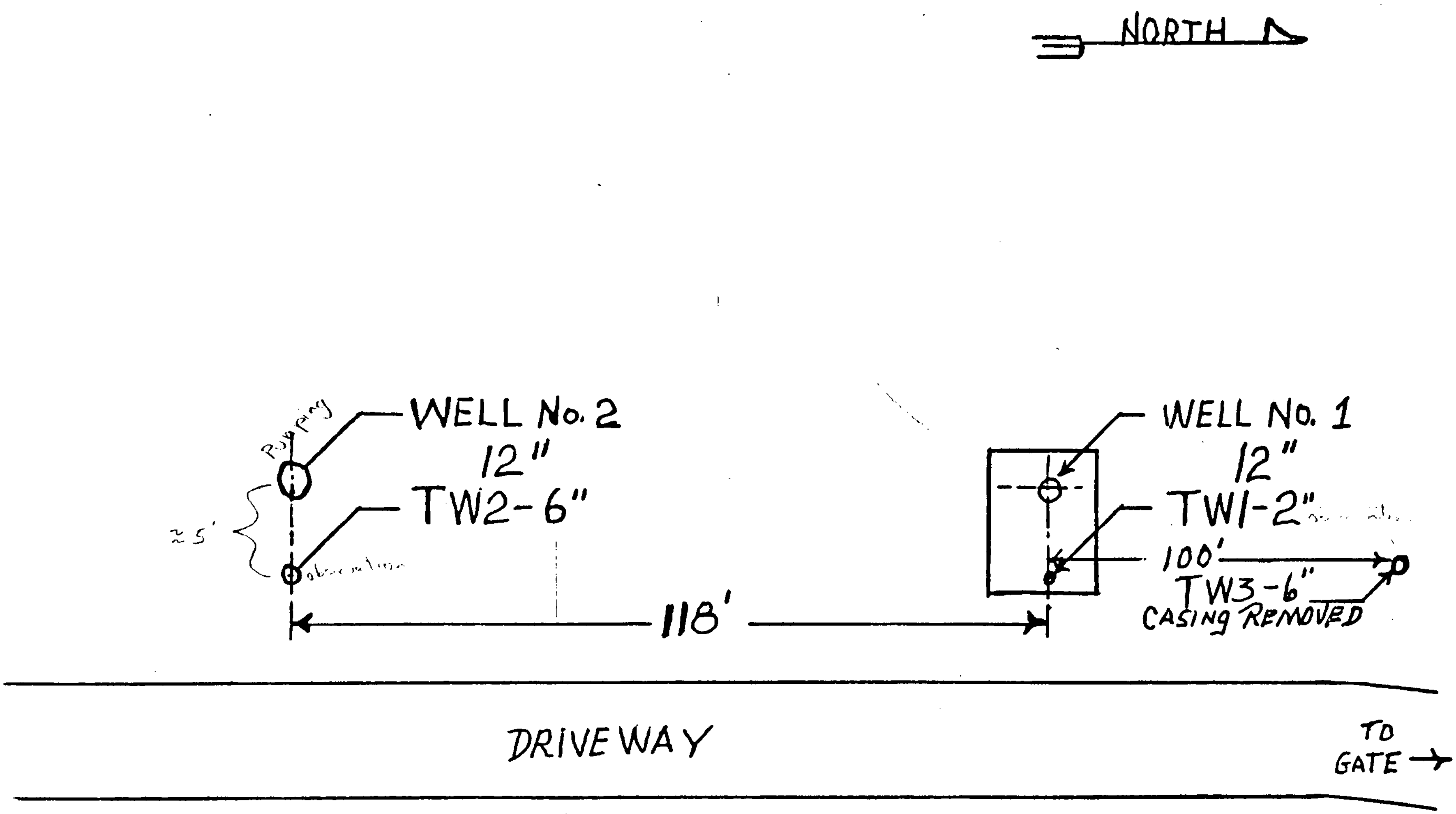
May 1959

Electrical Resistivity
POINT TEST # 6

A		P		R	
4	Feet	54.5	ohms	1370.	ohm feet
8	"	41.	"	2060.	" "
12	"	31.	"	2340.	" "
16	"	23.	"	2320.	" "
20	"	18.5	"	2320.	" "
24	"	15.	"	2260.	" "
28	"	12.5	"	2200.	" "
32	"	10.8	"	2170.	" "
36	"	9.2	"	2080.	" "
40	"	8.3	"	2080.	" "
44	"	6.8	"	1880.	" "
48	"	5.78	"	1740.	" "
52	"	4.5	"	1470.	" "
60	"	4.02	"	1515.	" "
70	"	3.3	"	1450.	" "
80	"	2.55	"	1280.	" "
90	"	2.06	"	1165.	" "
100	"	1.75	"	1100.	" "
110	"	1.45	"	1002.	" "
120	"	1.2	"	905.	" "
130	"	1.0	"	816.	" "

RANDOLF WELL & PUMP CO.
R.D. 4, CORTLAND, NY

1-1-75



LOCATION OF WELLS
- SCM -

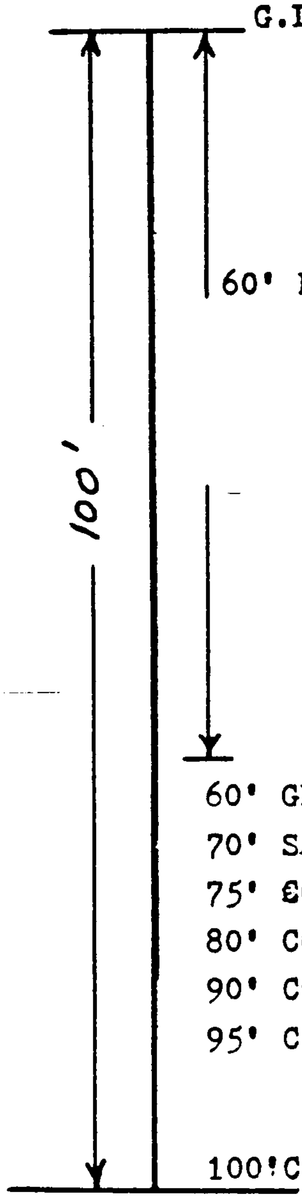
Randolph Well & Pump Co. Inc.

WELL DRILLING
WATER SYSTEMS

R.D. 4, CORTLAND, NEW YORK • PHONE 756-6581 or 838-3550

WELL NO. 2 - 12"
LOG OF WELL

G.L.



60' DRY GRAVEL

60' GRAVEL - FIRST WATER
70' SAND & GRAVEL
75' COARSE SAND
80' COARSE SAND
90' COARSE SAND
95' COARSE SAND

100' COARSE SAND
102' GRAVEL w/HARDPAN - NO WATER

Randolph Well & Pump Co. Inc.

WELL DRILLING
WATER SYSTEMS

R.D. 4. CORTLAND, NEW YORK ● PHONE 756-6581 or 838-3550

WELL NO. TW3 - 6"

LOG of WELL

FEET		
0-5	GRAVEL & COBBLE-STONE	
5-10	COARSE GRAVEL	
10-15	COARSE GRAVEL	
15-20	GRAVEL	
20-25	GRAVEL	
25-30	DRY GRAVEL	
30-35	DRY GRAVEL	
35-40	DRY GRAVEL	
40-45	DRY GRAVEL	
45-50	DRY GRAVEL	
50-55	DRY GRAVEL	
55-60	DRY GRAVEL	
60-65	GRAVEL - First Water	
65-70	WATER, SAND & GRAVEL	30GPM
70-75	WATER, SAND & GRAVEL	30GPM
75-80	COARSE SAND	30GPM
80-85	COARSE GRAVEL	30GPM
85-90	COARSE SAND - Hard-pan in water - Baildown	
90-95	COARSE SAND - Hard-pan in water - Baildown	
95-100	COARSE SAND	
100-102	GRAVEL w/Hard-pan - NO WATER	

CASING REMOVED

30 ALLENDALE ROAD
BINGHAMTON, N. Y. 13903
722 - 0030

COSTELLO'S LABORATORY INC.
SUCCESSOR TO NELSON & LAUDER
CHARLES V. COSTELLO
CONSULTING SANITARY CHEMIST

LABORATORY FOR
SANITARY & ANALYTICAL
CHEMISTRY

RESULTS OF EXAMINATION OF WATER

LABORATORY NO. C 44/75 COLLECTED BY Randolph Well and Pump Co.

DATE COLLECTED 1/1/75 RECEIVED 1/1/75 REPORTED 1/5/75

PLACE South Cortland N. Y. (CITY, TOWN, VILLAGE OR HAMLET) COUNTY Cortland N. Y.

SAMPLING POINT Smith Corona Marchant

OWNER Smith Corona Corpn TENANT

BACTERIAL EXAMINATION

TEST FOR COLIFORM GROUP

BACTERIA PER ML. AGAR. 35oC - 24 HRS. 1 M. P. N. * / 100 ML less than 1.1

THIS WATER WAS ______ OF A SATISFACTORY SANITARY QUALITY WHEN THE SAMPLE WAS COLLECTED

PHYSICAL EXAMINATION

COLOR 1 TURBIDITY 1 ODOR + COLD Veg. + HOT

CHEMICAL EXAMINATION

RESULTS IN PARTS PER MILLION

IRON (FE)	.08	AMMONIA FREE (AS N)		OXYGEN CONSUMED (O)	
MANGANESE (MN)	less than 0.1 as Rec'd	NITROGEN CONSTITUENTS: ALB. AMMONIA (AS N)		CHLORIDES (Cl)	24
CARBON DIOXIDE (CO_2)	5.0	NITRITES (AS N)		TOTAL HARDNESS (AS $CaCO_3$)	198
FLOURIDES (F)	.70	NITRATES (AS N)	1.1	ALKALINITY (AS $CaCO_3$)	177
TOTAL SOLIDS	284	LOSS OF IGNITION		CALCIUM (AS $CaCO_3$)	169
BICARBONATES	212	SULFATES	19	MAGNESIUM (AS $CaCO_3$)	29
SILICA		COPPER		ELECTROMETRIC PH VALUE	7.3
TOTAL PHOSPHATES		ORTHO PHOSPHATES		META PHOSPHATES	
SUSPENDED MATTER		TEMPT AIR ° F		TEMPT WATER °F	
DETERGENTS					

REMARKS:

* MOST PROBABLE NUMBER
+1=VERY SLIGHT, 2=SLIGHT, 3=DISTINCT, 4=DECIDED, 5=EXTREME

Charles V. Costello
CHARLES V. COSTELLO

INDEX OF SAND ANALYSIS

RANDOLPH WELL & PUMP
SCM SOUTH CORTLAND
NEW YORK PLANT
WELL #2

SAND ANALYSIS

UOP JOHNSON DIVISION

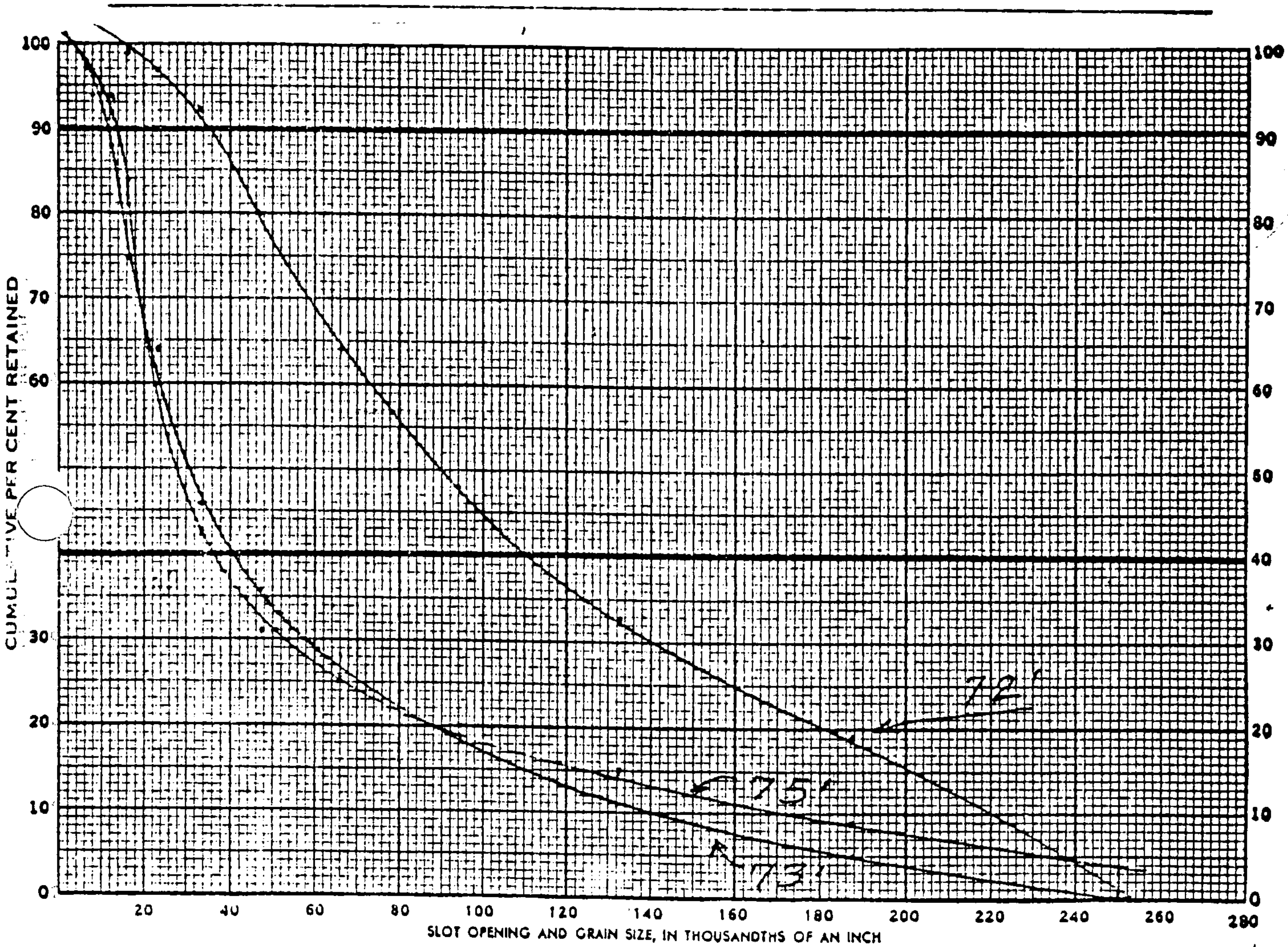
315 North Pierce Street
Saint Paul, Minn. 55104

Sample sent in by Randolph Well & Pump Co., Inc.

Town Cortland State N.Y. Date 10/30/74

From well of SCM South Cortland, N.Y. Plant

Remarks Well #2



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED 72'	73'	75'
.250	1	1	4
.187	12	5	9
.132	33	11	15
.094	47	19	20
.066	64	28	25
.047	80	36	31
.033	92	46	4[illegible]
.023	97	60	64
.016	99	75	84
.012		83	94
SCREEN	.00[illegible]	94	97
SLOT	[illegible]	97	98

Notes:

Recommended Slot Opening: TOP 12' 90 SLOT
BOTTOM 18' 70 SLOT

Recommended Screen: Dia 12" in. Length 30 Ft.

By:

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS.

SAND ANALYSIS

UOP JOHNSON DIVISION

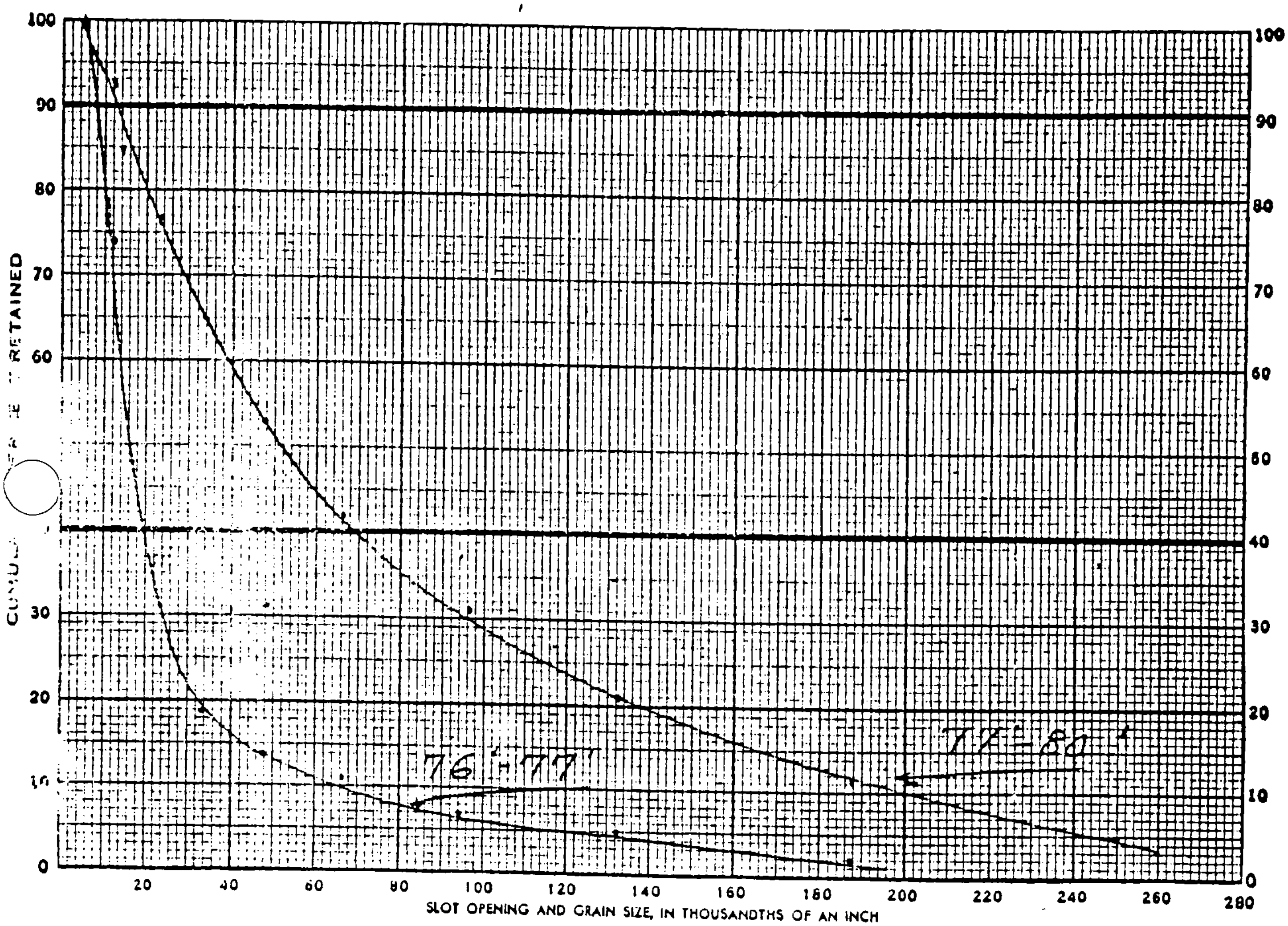
315 North Pierce Street
Saint Paul, Minn. 55104

Sample sent in by. Randolph Well & Pump Co., Inc.

Town Cortland State N.Y. Date 10/30/74

From well of SCM South Cortland, N.Y. Plant

Remarks Well #2



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED 76-77'		77-80'
.250			5
.187	2		11
.132	5		21
.094	7		31
.066	11		42
.047	14		[illegible]
.033	19		65
.023	37		77
.016	50		85
[illegible]	74		92
SCREEN, SLOT	[illegible]		95

Notes:

Recommended Slot Opening:

Recommended Screen: Dia. in. Length Ft.

By:

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS

SAND ANALYSIS

UOP JOHNSON DIVISION

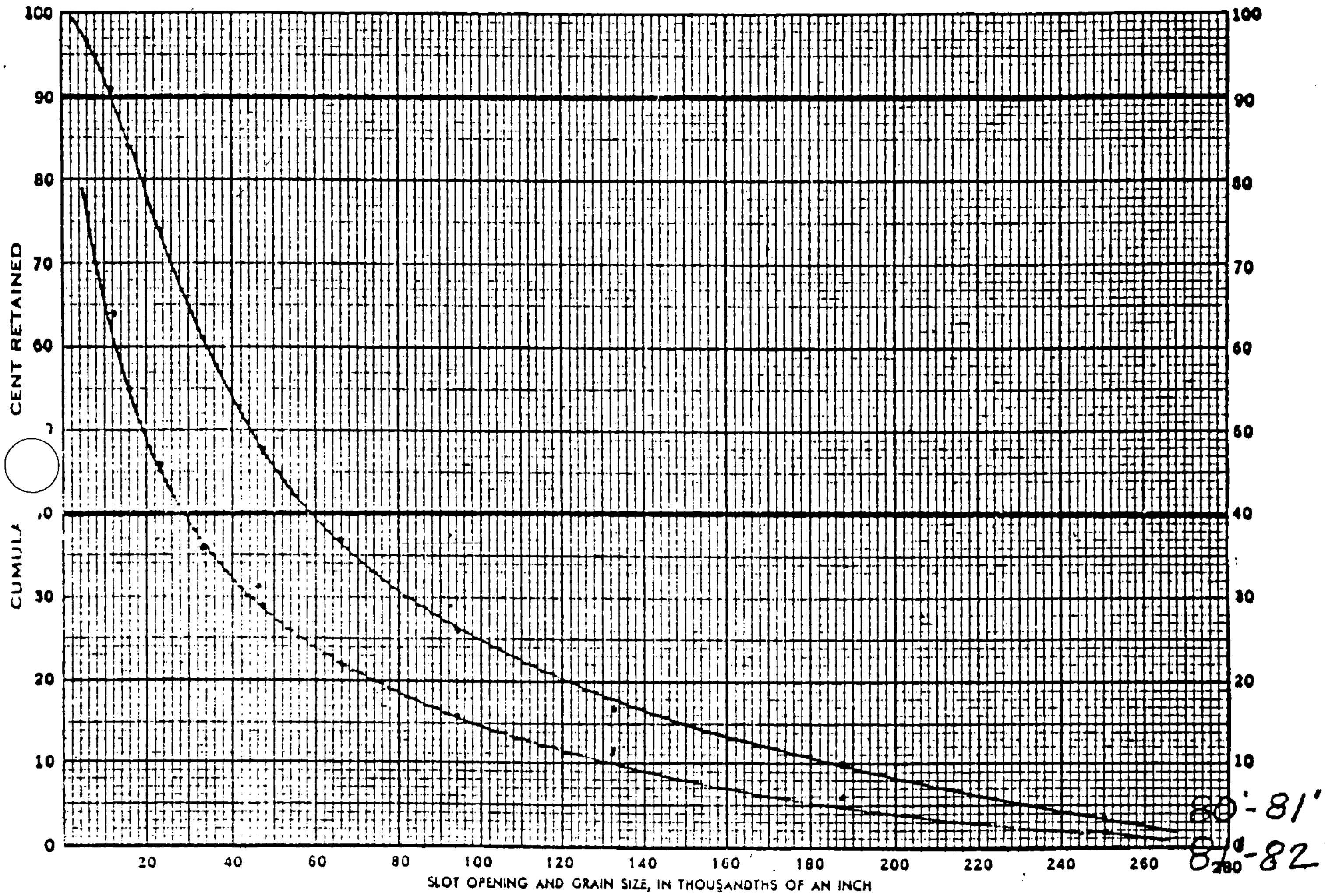
315 North Pierce Street
Saint Paul, Minn. 55104

Sample sent in by: Randolph Well & Pump Co., INc.

Town: Cortland State: N.Y. Date: 10/30/74

From well of: SCM South Cortland, N.Y. Plant

Remarks: Well #2



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED 80'-81'		81'-82'
.250	4		3
.187	10		6
.132	17		11
.094	26		16
.066	37		22
.047	48		29
.033	61		36
.023	74		46
.016	87		55
.012	91		64
SCREEN, [illegible]	95		70
SLOT [illegible]	[illegible]		76

Notes:

Recommended Slot Opening:

Recommended Screen: Dia. ______ in. Length ______ Ft.

By:

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS"

SAND ANALYSIS

UOP JOHNSON DIVISION

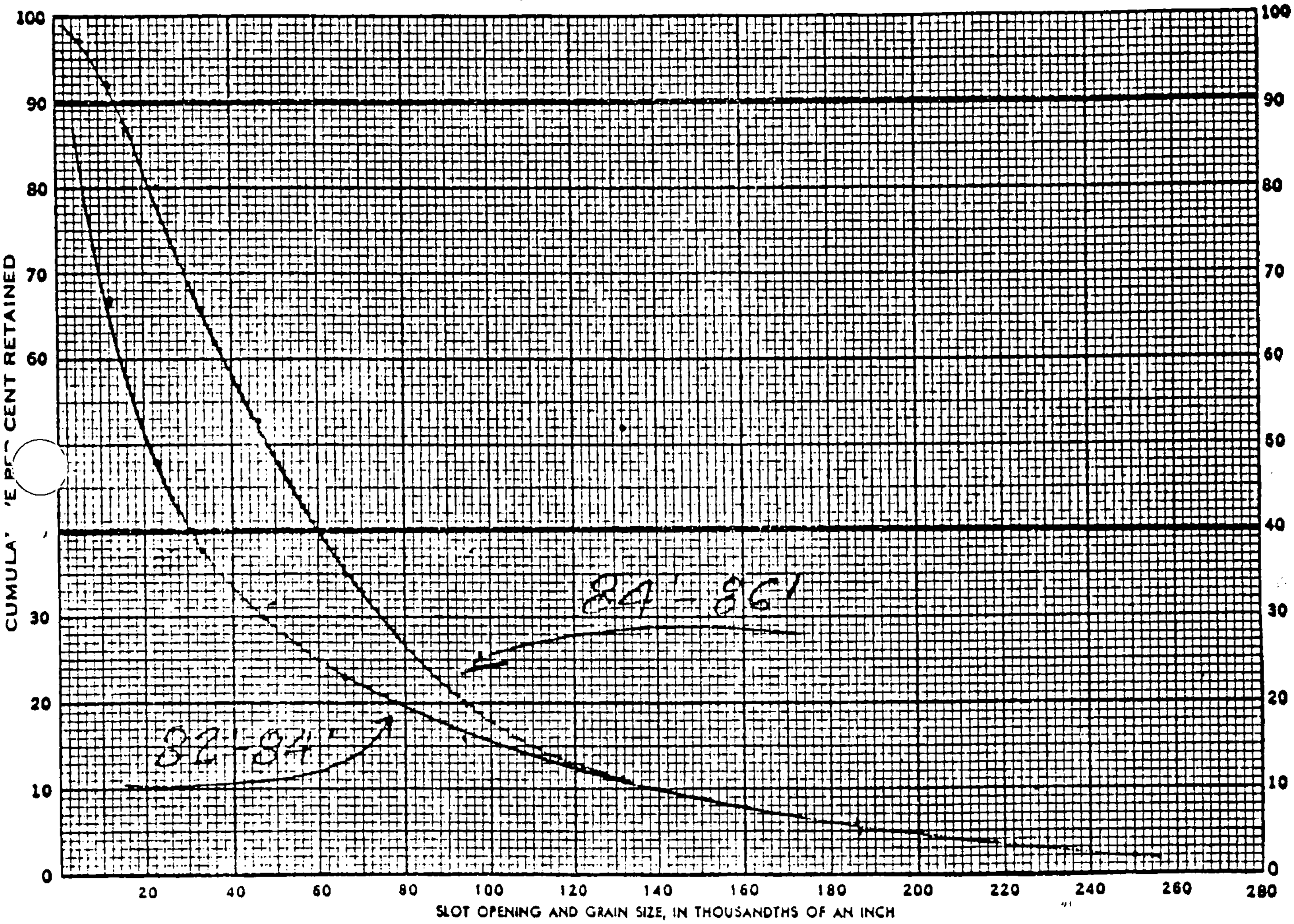
315 North Pierce Street
Saint Paul, Minn. 55104

Sample sent in by Randolph Well & Pump Co., Inc.

Town Cortland State N.Y. Date 10/30/74

From well of SCM South Cortland, N.Y. Plant

Remarks Well #2



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED 82'-84'		84'-86'
.250	2		2
.187	5		5
.132	11		11
.094	16		20
.066	23		35
.047	30		52
.033	37		66
.023	45		80
.016	[illegible]		87
.012	[illegible]		92
SCREEN .J[illegible]	74		95
SLOT [illegible]	[illegible]		97

Notes:

Recommended Slot Opening:

Recommended Screen: Dia. in. Length Ft.

By:

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UOP JOHNSON DIVISION

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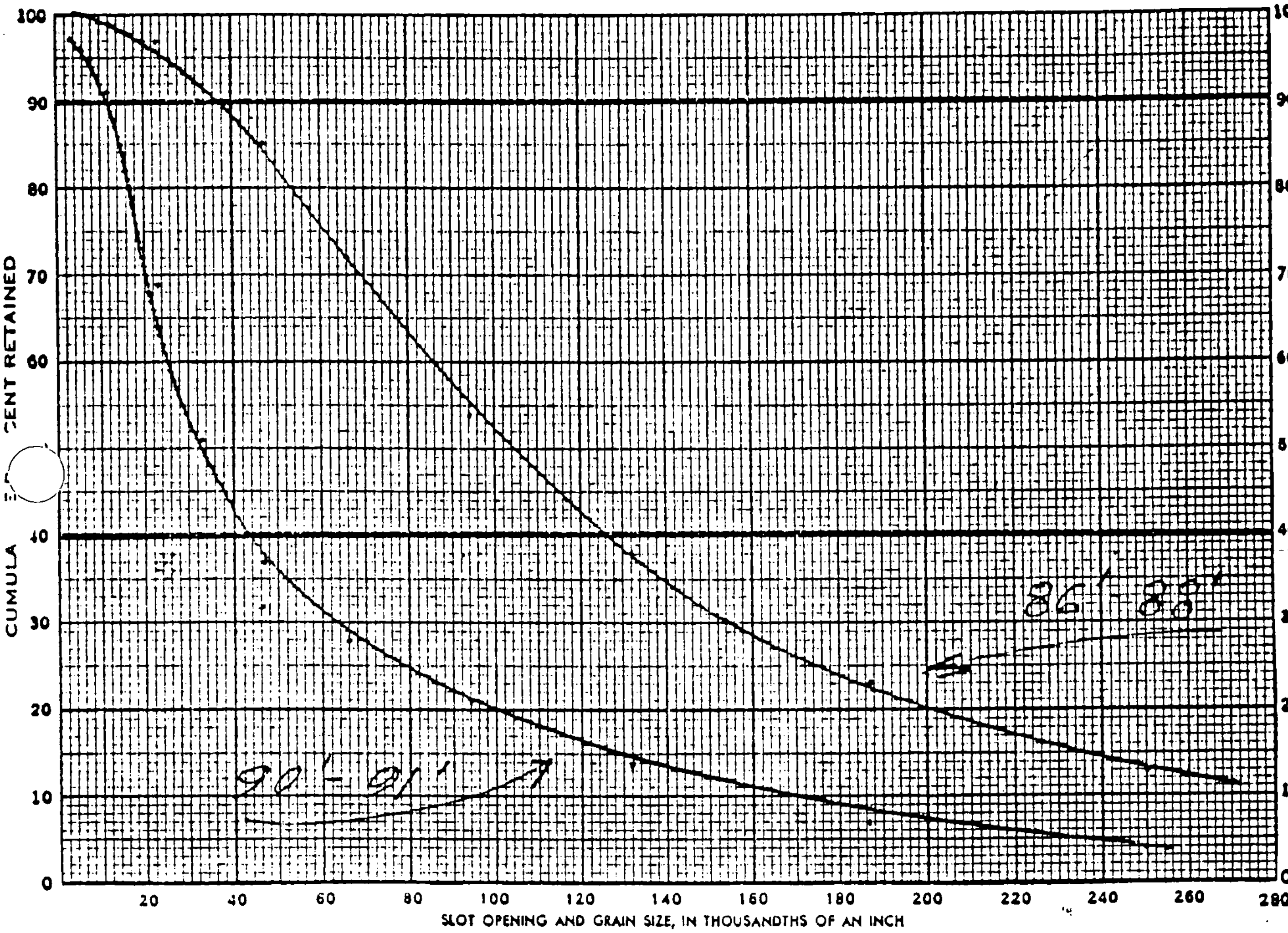


SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
	86'-88'		90'-91'
.250	13		4
.187	23		7
.132	33		14
.094	54		21
.066	72		29
.047	85		37
.033	90		51
.023	97		63
.016	98		82
.012	99		97
SCREEN SLOT .015 / .010			95 / 96

Notes:

Recommended Slot Opening:

Recommended Screen: Dia. in. Length Ft.

By:

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS

SAND ANALYSIS

UOP JOHNSON DIVISION

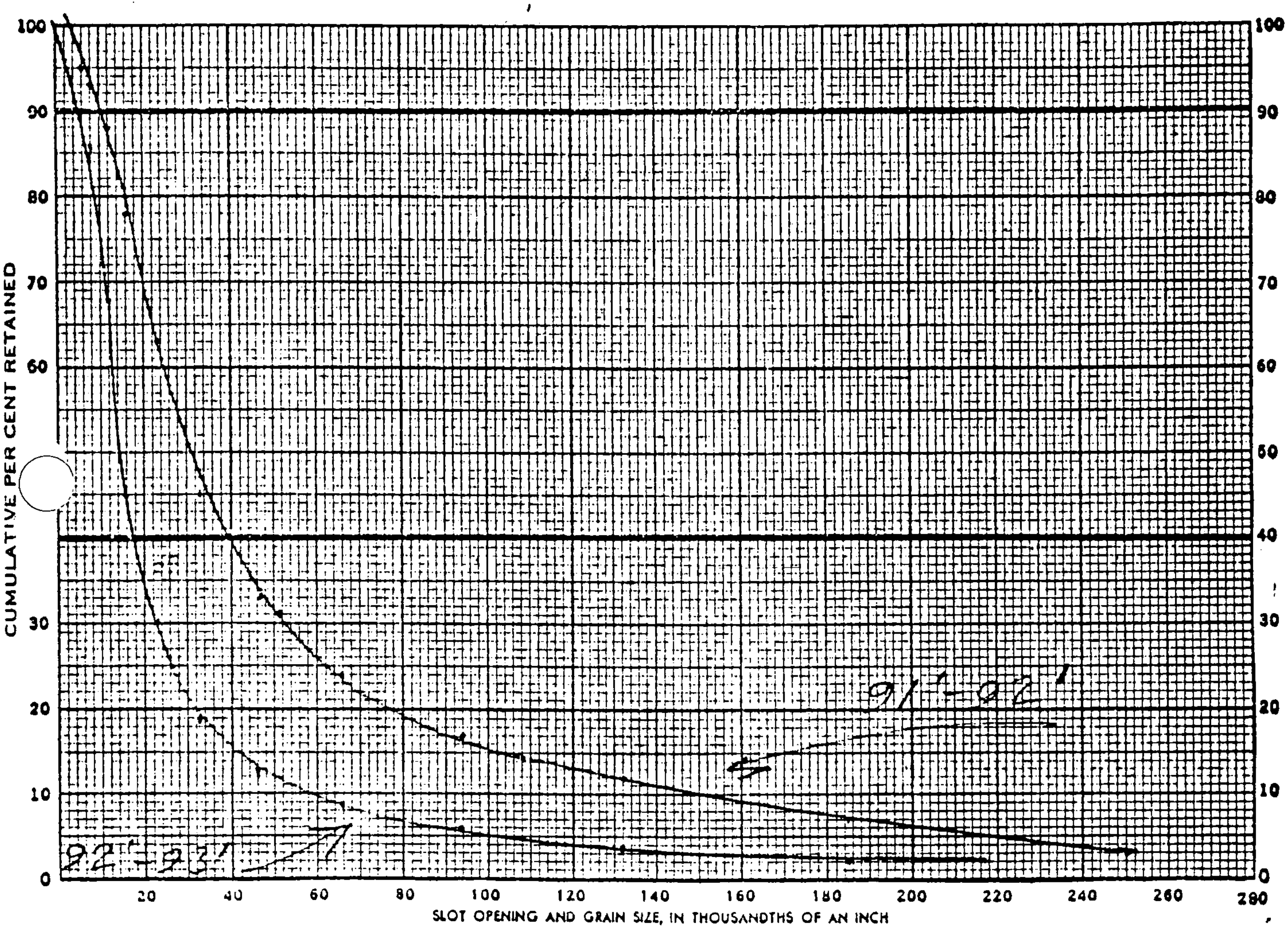
315 North Pierce Street
Saint Paul, Minn. 55104

Sample sent in by Randolph Well & Pump Co., INc.

Town Cortland State N.Y. Date 10/30/74

From well of SCM South Cortland, N.Y. Plant

Remarks Well #2



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
	91'-92'		92'-93'
.250	[illegible]		
.187	7		2
.132	12		4
.094	17		6
.066	21		9
.047	[illegible]		13
.033	45		19
.023	[illegible]		[illegible]
.016	[illegible]		45
[illegible]	[illegible]		[illegible]
SCREEN SLOT [illegible]	[illegible]		[illegible]

Notes:

Recommended Slot Opening:

Recommended Screen: Dia. in. Length Ft.

By:

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS.

SAND ANALYSIS

UOP JOHNSON DIVISION

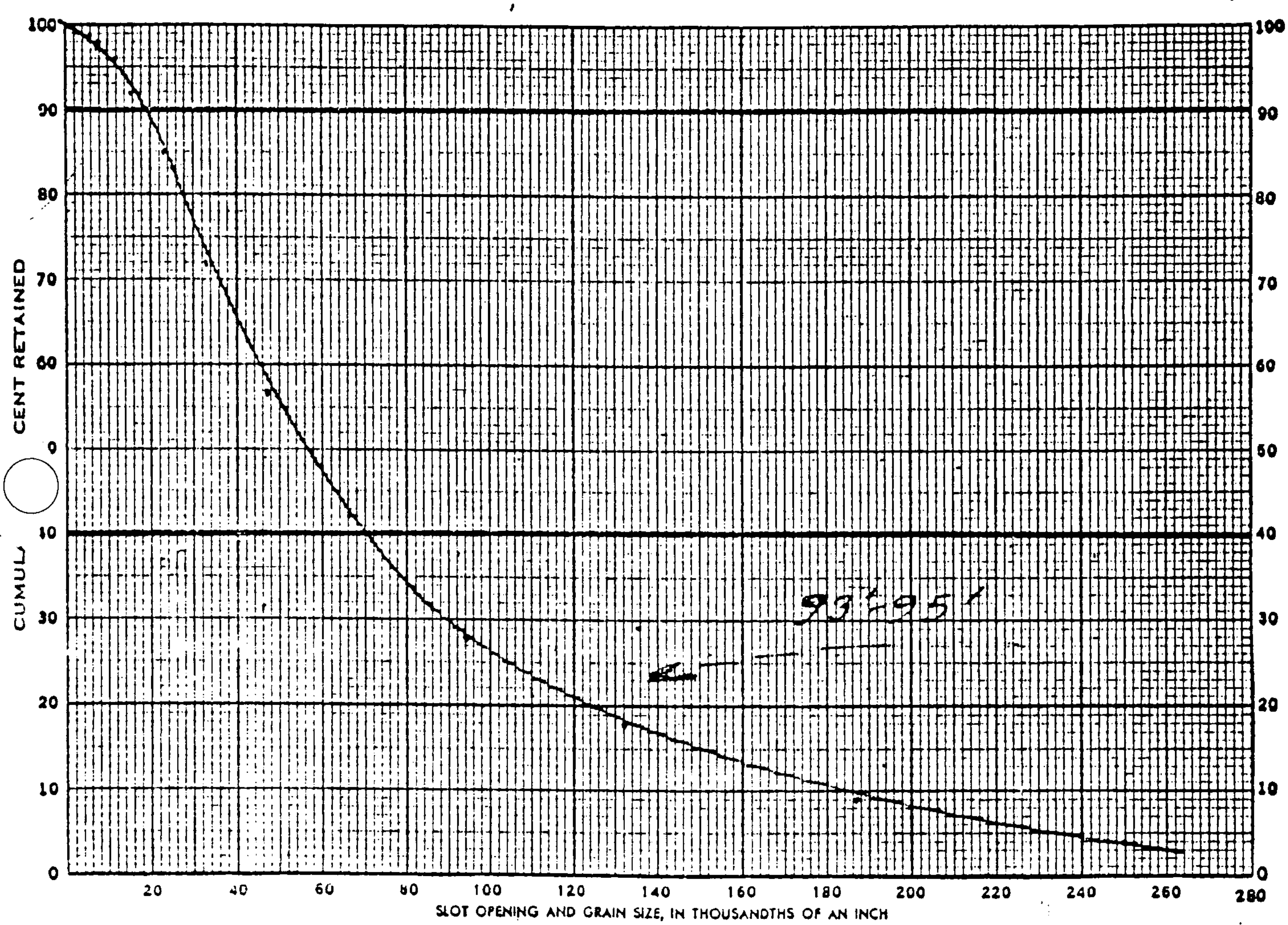
315 North Pierce Street
Saint Paul, Minn. 55104

Sample sent in by Randolph Well & Pump Co., Inc.

Town Cortland State N.Y. Date 10/30/74

From well of SCM South Cortland, N.Y. Plant

Remarks Well #2



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
	93-95'		
.250	4		
.187	9		
.132	15		
.094	[illegible]		
.066	42		
.047	57		
.033	72		
.023	[illegible]		
.016	[illegible]		
.012	96		
SCREEN, [illegible] SLOT, [illegible]	[illegible]		

Notes:

Recommended Slot Opening:

Recommended Screen: Dia. in. Length Ft.

By:

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS

SAND ANALYSIS

UOP JOHNSON DIVISION

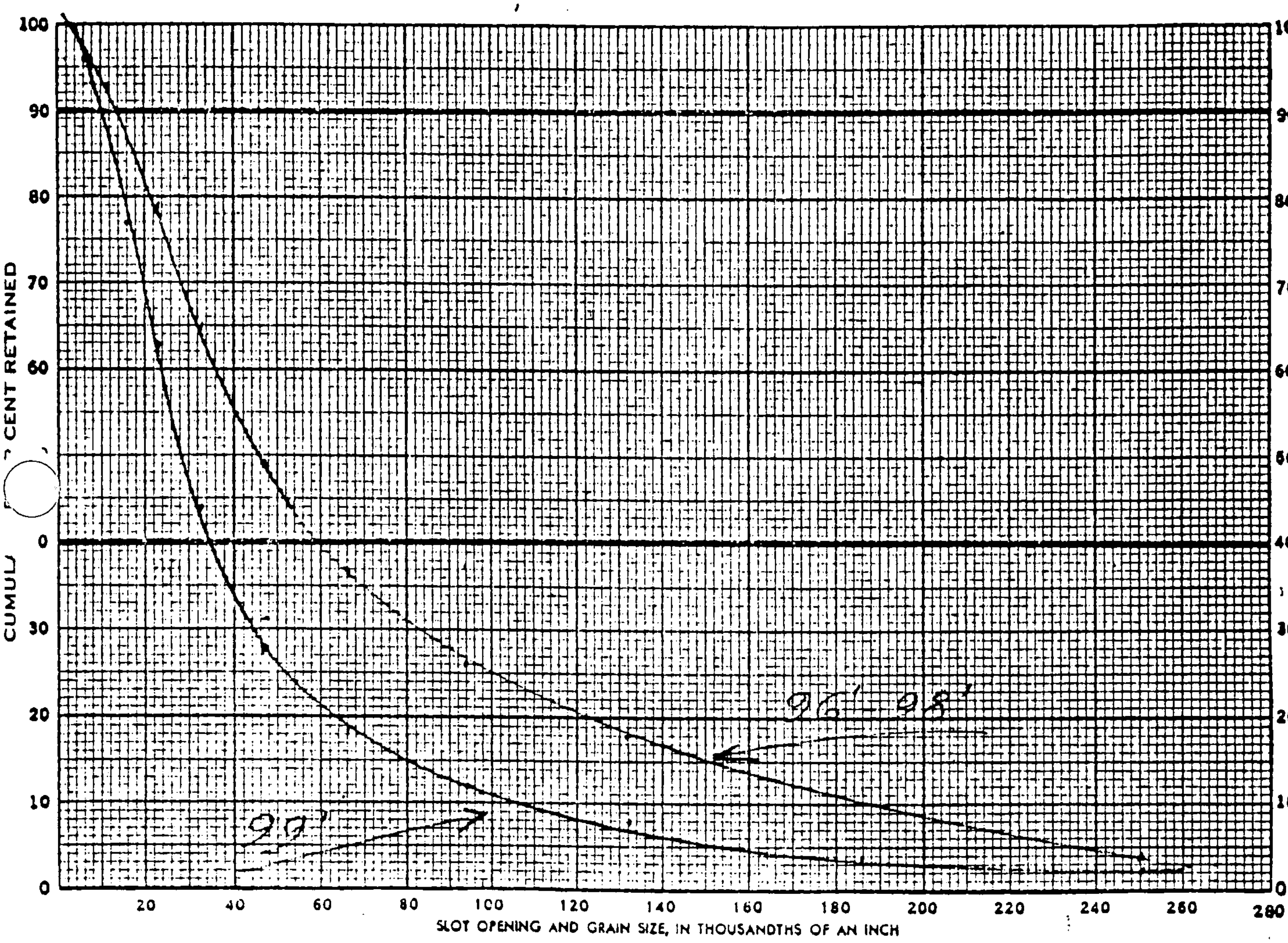
315 North Pierce Street
Saint Paul, Minn. 55104

Sample sent in by Randolph Well & Pump Co., Inc.

Town Cortland State N.Y. Date 10/30/74

From well of SCM South Cortland, N.Y. Plant

Remarks Well #2



SIEVE OPENINGS	CUMULATIVE PER CENT RETAINED		
	96'-98'		90'
.250	4		3
.187	10		4
.132	15		5
.094	26		12
.066	37		19
.047	49		29
.033	[illegible]		44
.023	[illegible]		63
.016	87		77
.012	93		87
SCREEN SLOT .008 .006	96 [illegible]		93 [illegible]

Notes:

Recommended Slot Opening:

Recommended Screen: Dia. in. Length Ft.

By:

SO MANY CONSIDERATIONS ENTER INTO THE MAKING OF A GOOD WELL THAT, WHILE WE BELIEVE SLOT SIZES FURNISHED OR RECOMMENDED FROM SAND SAMPLES ARE CORRECT WE ASSUME NO RESPONSIBILITY FOR THE SUCCESSFUL OPERATION OF JOHNSON WELL SCREENS

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 1 OF 2

RECORD OF TEST

Well No. TW1-2" Date 12-31-74

For

Well Located At PUMP PIT

TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.		
1:00 A.M.			42' 1"			
2 - HR.	42' 4"	P.N.R.		548		
3 "	48' 0"	P.R.		554		
4 "	42' 4½"	P.NR		"		
5 "	42' 4½"	"		"		
6 "	42' 4½"	"		"		
7 "	42' 5"	"		"		
8 "	42' 5"	"	ΔS = .33	"		
9 "	48' 2"	P.R.		"		
1[illegible] "	48' 2"	P.R.		554		
"	42' 7½"	— INCREASED TO — P.N.R.		888		
12 "	42' 7"	"		896		
13 "	42' 7"	"		"		
14 "	42' 7½"	"		"		
15 "	42' 7½"	"		"		
16 "	42' 7½"	"		"		
17 "	42' 9"	P.R.		"		
18 "	42' 7½"	P.N.R.		896		

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED

TYPE

STAGES

SIZE

SHOP NO.

DISCHARGE

DEPTH OF SETTING

SUCTION FT. INCH PIPE

SIZE OF PULLEY

INCH ORIFICE ON

WIDTH OF WEIR

DEPTH AIR LINE

AIR PRES. WHEN NOT PUMPING

STATIC LEVEL

Height of gauge above base

WITNESS FOR PURCHASER

Ray Randolph

FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 2 OF 2

RECORD OF TEST

Well No. TW1-2" Date

For

Well Located At PUMP PIT.

TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR
19 HR.	42' 7½"	P.N.R.		896	
20 "	42' 7½"	"	ΔS = .54		
21 "	42' 8½" —	INCREASED TO — P.N.R.		1065	76½"
22 "	42' 8½"	"			
23 "	42' 8"	"			
24 "	42' 8"	"			
25 "	42' 8"	"			
26 "	42' 8"	"			
27 "	42' 8"	"			
2[illegible] "	42' 8"	"			
[illegible] "	42' 8"	"			
30 "	42' 8"	P.N.R.	.58	1065	76½"

NOTE:

WATER BACK TO STATIC LEVEL IN 6 MIN.

ake & size of engine or motor used:

emarks:

DESCRIPTION OF PUMP USED	
YPE	SIZE OF PULLEY
TAGES	INCH ORIFICE ON
IZE	WIDTH OF WEIR
HOP NO.	DEPTH AIR LINE
ISCHARGE	AIR PRES. WHEN NOT PUMPING
DE[illegible] OF SETTING	STATIC LEVEL
SU[illegible] FT. INCH PIPE	Height of gauge above base

Ray Randolph

WITNESS FOR PURCHASER

FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 1 OF 3

RECORD OF TEST

Well No. TW 2-6"

Date 12-31-74

For

Well Located At

TIME / 1st HR.	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.		
1:00 A.M.	FROM TOP OF CASING.	P.N.R.	47'6½"			
:05 MIN	48'8½"	"		554		
:10 "	48'8½"	"		"		
:15 "	48'9"	"		"		
20 "	48'9½"	"		"		
25 "	48'8½"	"		"		
30 "	48'8"	"		"		
45 "	48'8½"	"		"		
2 - HR.	48'9"	"		554		
3 "	48'8"	P.R.		554		
[illegible] "	48'9½"	P.N.R.		"		
5 "	48'8½"	"		"		
6 "	48'8½"	"		"		
7 "	48'8½"	"		554		
8 "	48'9"	"		"		
9 "	48'9"	P.R.		"		
10 "	48'9"	P.R.	DS - 1.21	554		
	—	INCREASED	TO —			

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED

TYPE

STAGES

SIZE

SHOP NO.

DISCHARGE

DEPTH OF SETTING

SUCTION FT. INCH PIPE

SIZE OF PULLEY

INCH ORIFICE ON

WIDTH OF WEIR

DEPTH AIR LINE

AIR PRES. WHEN NOT PUMPING

STATIC LEVEL

Height of gauge above base

WITNESS FOR PURCHASER

FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 2 OF 3

RECORD OF TEST

Well No. TW 2 - 6" Date

For

Well Located At

TIME 10 1/4 HR.	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR
9 HR.-5 MIN	49'8"	P. R.		888	
10 MIN.	49' 8½"	P. R.		"	
20 MIN.	49' 8½"	"		"	
30 MIN.	49' 8½"	"		"	
45 MIN	49' 8½"	"		"	
11-HR.	49'9	P.N.R.		"	
12 "	49'9"	"		"	
13 "	49'9"	"		"	
14 "	49' 9½"	"		888	
15 "	49'9"	"		"	
[illegible] "	49' 8½"	"		"	
1[illegible] "	49' 8½"	P.R.		"	
18 "	49' 8½"	P.N.R.		"	
19 "	49' 8½"	"		"	
20 "	49' 8½"	"	ΔS = 2.17	888	
	—	INCREASED	TO —	"	
21 "	50' 3½"	P.N.R.		1065	76½"
22 "	50' 3½"	"		"	

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED	
TYPE	SIZE OF PULLEY
STAGES	INCH ORIFICE ON
SIZE	WIDTH OF WEIR
SHOP NO.	DEPTH AIR LINE
DISCHARGE	AIR PRES. WHEN NOT PUMPING
DEPTH OF SETTING	STATIC LEVEL
SUCTION FT. INCH PIPE	Height of gauge above base

WITNESS FOR PURCHASER

FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 3 OF 3

RECORD OF TEST

Well No. TW2 - 6"　　　　Date

For

Well Located At

TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR.
23 HR.	50'3"	PNR.		1065	76½"
24 "	50'3½"	"		"	"
25 "	51'3½"	P.R.		"	"
26 "	51'3½"	PNR		"	"
27 "	51'3½"	PNR.		"	"
28 "	51'3½"	P.N.R.		"	"
29 "	51'3½"	P.N.R.		"	"
30 "	51'3½"	P.N.R.	DS = 3.75	1065	76½"

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED

TYPE

STAGES

SIZE

SHOP NO.

DISCHARGE

DEPTH OF SETTING

SUCTION FT. INCH PIPE

SIZE OF PULLEY

INCH ORIFICE ON

WIDTH OF WEIR

DEPTH AIR LINE

AIR PRES. WHEN NOT PUMPING

STATIC LEVEL

Height of gauge above base

WITNESS FOR PURCHASER

FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 1 OF 5

RECORD OF TEST

Well No. 2 - 12" Date 12-31-74

For SMITH-CORONA OPERATIONS

Well Located At ROUTE 13 — SOUTH CORTLAND PLANT

TIME 1ST HR.	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR
1:00 AM	FROM TOP OF CASING	ΔS	47'5½"	548	20"
½ MIN.	49'-5½"	2.		"	
1 "	49'-6½"	2.08		"	
1½ "	49'-7"	2.12		"	
2 "	49'-7½"	2.16		"	
2½ "	"			"	
3 "	"			"	
3½ "	"			"	
4 "	"			"	
4½ "	"			"	
[illegible] "	"			548	20"
10 "	"			"	"
15 "	"			"	20"
20 "	"			"	"
25 "	"			"	20½"
30 "	"			"	"
45 "	"			"	"
2ND HR.	49'-8½"	2.25		554	20½"

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED	
TYPE	LINE-SHAFT TURBINE
STAGES	4
SIZE	12"
SHOP NO.	4
DISCHARGE	10"
DEPTH OF SETTING	
SUCTION	FT. INCH PIPE

SIZE OF PULLEY

5" INCH ORIFICE ON 6" PIPE

WIDTH OF WEIR

~~DEPTH AIR LINE~~ ELECTRIC-PROBE

AIR PRES. WHEN NOT PUMPING

STATIC LEVEL

Height of gauge above base

WITNESS FOR PURCHASER

Ray Randolph

FOR: RANDOLPH WELL & PUMP CO.

* PUMP NOT RUNNING
* PUMP RUNNING

RANDOLPH WELL & PUMP CO.
R. D. 4, CORTLAND, N. Y.

SHEET 2 OF 5

RECORD OF TEST

Well No. 2 - 12"
Date
For
Well Located At

TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR
3-HR. 120	50'-3½"	P.R. *	ΔS 2.83	554	20½"
4 " 180	49'-9½"	P.N.R. *	2.33		21"
5 " 240	49'-8½"	"	2.25		21"
6 " 300	" "	"			20"
7 " 360	" "	"			20"
8 " 420	49'-9½"	"	2.33	554	21"
9 " 480	50'-3½"	P.R. *	2.83		
10 " 540	51'-9½"	P.R *	4.33		21"
		INCREASE-TO			
10 & ½ MIN.	51'-10½"	P.R. *	4.41	888	52"
MIN	52'		4.54		
1.2 "	52'-½"		4.58		
2 "	52'-1½"		4.66		
2½ "	52'-2"		4.70	888	52"
3 "	52'-2"				
3½ "	52'-2"				
4 "	52'-2"				
4½ "	52'2"			888	52"

Make & size of engine or motor used:
Remarks:

DESCRIPTION OF PUMP USED
TYPE
STAGES
SIZE
SHOP NO.
DISCHARGE
DEPTH OF SETTING
U... FT. INCH PIPE

SIZE OF PULLEY
INCH ORIFICE ON
WIDTH OF WEIR
DEPTH AIR LINE
AIR PRES. WHEN NOT PUMPING
STATIC LEVEL
Height of gauge above base

WITNESS FOR PURCHASER

Raymond Randolph
FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 3 OF 5

RECORD OF TEST

Well No. 2 - 12"

Date

For

Well Located At

TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR.
5 MIN.	52' 2½"		4.74	888	52"
10 MIN.	52' 3"		4.78		"
15 MIN.	51' 9½"	P.N.R.	4.33		"
20 MIN.	51' 9½"			888	52"
30 MIN	51' 9"		4.29	896	53"
45 MIN	51' 9½"	P.N.R.	4.33		"
11-HR. 600	"				"
12 " 660	"			896	53"
13 " 720	"	P.N.R.			"
14 " 780	"			896	53"
" 840	"				"
16 " 900	51' 9½"	P.N.R.		896	53"
17 " 960	52' 3½"	P.R.	4.83		52"
18 " 1020	51' 8½"	P.N.R.	4.25		"
19 " 1080	51' 8½"				"
20 " 1140	51' 8½"	P.N.R.			52"
		INCREASE-TO			
20 HR. ½ MIN	52' 6½"		5.08	1065	76½"

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED	SIZE OF PULLEY
TYPE	INCH ORIFICE ON
STAGES	WIDTH OF WEIR
SIZE	DEPTH AIR LINE
SHOP NO.	AIR PRES. WHEN NOT PUMPING
DISCHARGE	STATIC LEVEL
DEPTH OF SETTING	Height of gauge above base
SUCTION FT. INCH PIPE	

WITNESS FOR PURCHASER

Raymond Randolph

FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y.

SHEET 4 OF 5

RECORD OF TEST

Well No. 2 - 12" Date

For

Well Located At

TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR
1 MIN.	52' 6½"		5.08	1065	76½"
1½ "	52' 7½"		5.17		
2 "	"			1065	76½"
2½ "	"				
3 "	"				
3½ "	"			1065	76½"
4 "	52' 7½"				
4½ "	52' 7½"				
5 "	52' 8"		5.21	1065	76½"
[illegible] "	53' 5"	P.R. *	5.96		
[illegible] "	53' 5½"	"	6.00		
20 "	53' 6"	"	6.04	1065	76½"
30 "	53' 7"	P.R. *	6.12		
45 "	53' 0"	P.N.R. *	5.54		
21-HR. 1200	53' ½"	P.N.R. *	5.58	1065	76½"
22 " 1260	53' 0"	"	5.54		
23 " 1320	53' 11½"	"	6.50		
24 " 1380	53' 7"	P.R.	5.13	1065	76½"

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED	
TYPE	SIZE OF PULLEY
STAGES	INCH ORIFICE ON
SIZE	WIDTH OF WEIR
SHOP NO.	DEPTH AIR LINE
DISCHARGE	AIR PRES. WHEN NOT PUMPING
DEPTH OF SETTING	STATIC LEVEL
SUCTION FT. INCH PIPE	Height of gauge above base

WITNESS FOR PURCHASER

Raymond Randolph

FOR: RANDOLPH WELL & PUMP CO.

RANDOLPH WELL & PUMP CO.
R. D. 4, CORTLAND, N. Y.

RECORD OF TEST

Well No. 2 - 12" Date

For

Well Located At

TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR	
25 HR.	53' 0"	P.N.R.	5.54	1065	$76\frac{1}{2}$"	
26 "	53' 0"	"		"		
27 "	53' 0"	"		"		
28 "	53' 0"	"		"		
29 "	53' 0"	"		"		
30 "	53' 0"	P.N.R		1065	$76\frac{1}{2}$"	
		— END OF	TEST —			

	—	RECOVERY —	TIME —			
1 MIN.	$47'8\frac{1}{2}$"					
2 "	$47'7\frac{1}{2}$"					
3 "	47' 7"					
4 "	$47'6\frac{1}{2}$"					
5 "	47' 6"					
6 "	$47'5\frac{1}{2}$		$47'5\frac{1}{2}$"			

Make & size of engine or motor used:

Remarks:

DESCRIPTION OF PUMP USED		SIZE OF PULLEY	
TYPE	LINE - SHAFT - TURBINE	5 INCH ORIFICE ON 6" PIPE	
STAGES	4	WIDTH OF WEIR	
SIZE	12"	~~DEPTH AIR LINE~~	ELECTRIC PROBE
SHOP NO.	4	AIR PRES. WHEN NOT PUMPING	
DISCHARGE	10"	STATIC LEVEL	
DEPTH OF SETTING		Height of gauge above base	
SUCTION	FT. INCH PIPE		

WITNESS FOR PURCHASER

Raymond Randolph
FOR: RANDOLPH WELL & PUMP CO.

APPENDIX D-1

APPENDIX D-1

ATTACHMENT D1

SOIL AND TANK REMOVAL SPECIFICATIONS

O'BRIEN & GERE

February 26, 1987

Ms. Jean H. McCreary
NIXON, HARGRAVE, DEVANS & DOYLE
Lincoln First Tower
P.O. Box 1051
Rochester, NY 14603

Re: Smith Corona -
Cortlandville, NY Facility
Surface Soil and Underground
Tank Removal

File: 2410.010.510

Dear Ms. McCreary:

Investigations conducted by O'Brien & Gere at Smith Corona Corporation's (SCC) Cortlandville, NY facility have indicated that some on-site surface soils exhibit elevated concentrations of certain organic solvents and heavy metals. The contaminants are, to a large extent, oils and associated materials that are related to material handling practices and compressor venting. The on-site surface soil contamination appears to be unrelated to the environmental problems that are present off-site. The concentrations of organic compounds and heavy metals in the surface soils presently pose little risk to human health or the environment. However, in order to prevent any future problems which may be associated with these materials, we recommend that the contaminated surface soils be excavated and disposed of in an appropriate waste disposal facility.

In addition to the excavation and disposal of contaminated surface soils, SCC desires to dispose of similarly contaminated soil, presently stockpiled on the site, which was excavated during the removal of an 18,000 gal. underground storage tank in December, 1986. They would also like to remove a 10,000 gal. underground storage tank and dispose, as appropriate, any soils excavated during removal of the tank that are not suitable for backfill.

We have enclosed a document containing Technical Specifications governing the excavation and removal of contaminated surface soils, removal of stockpiled contaminated soils, and removal of the underground storage tank. The specifications included are as follows:

Section 02000 - Earthwork
Section 02001 - Select Fill
Section 02002 - Erosion Control
Section 02003 - Embankment Material
Section 02004 - Removal of Contaminated Surface Soils
Section 02005 - Restoration of Surfaces
Section 02006 - Tank Removal

A discussion of pertinent details relative to the three activities is presented below.

Excavation and Removal of Surface Soils

The approximate areas and depths of excavation of surface soils are indicated on Figure 1 of the Technical Specifications. A total volume of 250 cubic yards (c.y.) is estimated to be removed, which is comprised of approximately 105 c.y., 50 c.y., 60 c.y., and 35 c.y. from Areas A, B, C, and D, respectively. The excavated areas will be backfilled to existing grade with suitable material.

The contaminated surface soils are non-hazardous, as they do not contain listed hazardous wastes, nor are they expected to exhibit characteristics of hazardous wastes. They also contain less than 1% by weight of halogenated organic compounds. The ranges of concentrations of various organic compounds and heavy metals observed in samples of the soils are presented in the attached table. The soils could be disposed of in either an intermediate landfill designed for non-hazardous industrial wastes or a hazardous waste landfill. The contractor shall provide quotations for both options.

Removal of Stockpiled Soil

The approximate location of the stockpiled soil is presented on Figure 1 of the specifications. The volume of stockpiled soil is estimated at 150 to 200 c.y. The analytical data presented in the attached table is representative of the stockpiled soil. We are currently awaiting the results for samples of the soil obtained earlier this month which are being analyzed for volatile organic compounds (EPA Methods 601 and 602), total and EP Toxic lead, PCB's, and ignitability. We do not expect these analyses to change our assessment that the soil is non-hazardous.

Underground Storage Tank Removal

Figure 1 of the specifications identifies the approximate location of the 10,000 gal. underground storage tank to be excavated. At the present time, the tank is empty. The tank formerly contained No. 2 fuel oil.

A portion of the pavement adjacent to the tank may have to be removed (and subsequently replaced) in order to excavate the tank. The soils that are excavated will be evaluated in the field by an engineer from O'Brien & Gere to determine whether part or all of this material will be incorporated into the excavation as backfill or removed for off-site disposal. The contractor should quote a unit price per cubic yard for removal and disposal of any soil unsuitable for backfill. The tank, once removed, will be placed at a nearby location specified by SCC. The final disposition of the tank will be the responsibility of SCC.

All the areas involved in these activities are within a security fence. An engineer from O'Brien & Gere will be present on-site during the implementation of the program. Smith Corona personnel will provide removal of snow accumulations from the work areas.

If you have any questions regarding this matter, please call me at (315) 451-4700.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Steven R. Garver, P.E.
Vice President

DMC:dn/8:2

Enclosure

SUMMARY OF EXPECTED SURFACE SOIL CONCENTRATIONS*
SMITH CORONA CORPORATION
CORTLANDVILLE, NEW YORK

Parameter	Range of Concentrations
Antimony (tot.)	30. ppm
Arsenic (tot.)	4.6 - 7.4 ppm
Beryllium (tot.)	<1.0 ppm
Cadmium (tot.)	<1.0 - 5.9 ppm
Chromium (tot.)	11. - 35. ppm
Copper (tot.)	29. - 930. ppm
Lead (tot.)	55. - 240. ppm
Mercury (tot.)	0.04 - 0.20 ppm
Nickel (tot.)	50. - 490. ppm
Selenium (tot.)	<0.1 ppm
Silver (tot.)	2. ppm
Thallium (tot.)	14. - 23. ppm
Zinc (tot.)	84. - 1030. ppm
Cyanide	<2. - 3.6 ppm
Phenol	<0.05 - 4.8 ppm
Trichloroethylene	<1 - 100,000 ppb
trans-1,2-Dichloroethylene	<1 - 36,000 ppb
1,1,1-Trichloroethane	<10 - 19,000 ppb
Chloroform	<10 - <1,000 ppb
Vinyl Chloride	<10 - 2,100 ppb
Xylene	<100 - 10,000 ppb
Ethylbenzene	<100 - 1,200 ppb

* Based on actual results and knowledge of operations.

2410.010

TECHNICAL SPECIFICATIONS

SURFACE SOIL AND UNDERGROUND STORAGE TANK REMOVAL

SMITH CORONA CORPORATION
CORTLANDVILLE, NY

FEBRUARY, 1987

O'BRIEN & GERE ENGINEERS, INC.
1304 BUCKLEY ROAD
SYRACUSE, NEW YORK 13221

EARTHWORK - SECTION 02000

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. Excavation, trenching, and backfilling including the loosening, removing, refilling, transporting, storage and disposal of all materials classified as "earth" necessary to be removed for the completion of the work.

2. Excavation to the widths and depths directed by the Engineer.

B. Related Work Specified Elsewhere

1. Select Fill: Section 02001
2. Removal of Contaminated Surface Soils: Section 02004
3. Restoration of Surfaces: Section 02005
4. Tank Removal: Section 02006

1.02 TESTING

A. All soil compaction testing including field and laboratory services shall be provided by the Contractor.

1.03 SUBMITTALS

A. Reports of all field and laboratory tests.

B. Copies of all necessary permits and certifications of waste haulers and disposal facilities.

C. Properly excused manifests and written certification of proper transport and final disposal of materials.

PART 2 - EXECUTION

2.01 GENERAL

A. Limits of Excavation

1. Excavations shall be made to the elevations or subgrades specified.

2. Whenever excavations are carried beyond or below the lines and grades as directed by the Engineer, all such excavated space shall be refilled with select fill material as directed by the Engineer. All refilling of unauthorized excavations shall be at the Contractor's expense.

EARTHWORK - SECTION 02000

3. All material which slides, falls or caves in to the established limits of excavations due to any cause whatsoever shall be removed and disposed of as contaminated surface soils as specified in Section 02004. No extra compensation will be paid to the Contractor for any materials ordered for refilling the void areas left by the slide, fall or cave in.

4. In no case will undercutting excavation faces be permitted.

B. Dust Control

1. The Contractor shall provide control of dust, at times designated by the Engineer by wetting surfaces contributing to the dust problem. The use of calcium chloride or oils to control dust on surfaces is prohibited.

2.02 REMOVAL OF WATER

A. General

1. The Contractor shall, at all times during construction, provide and maintain proper and satisfactory means and devices for the removal of all water entering the excavations, and shall remove all such water as fast as it may collect, in such manner as shall not interfere with the progression of the work.

2. Unless otherwise specified, all excavations which extend down to or below the static groundwater elevations shall be dewatered by lowering and maintaining the groundwater beneath such excavations at all times when work thereon is in progress.

3. Water pumped or drained from excavations or water courses encountered in the work, shall be discharged in a manner acceptable to the Engineer.

4. Any damage caused by or resulting from dewatering operations shall be the sole responsibility of the Contractor.

2.03 BACKFILLING

A. General

1. All excavations shall be backfilled to the original surface of the ground or to such other grades as may be shown, specified or directed.

2. Backfilling shall be done with suitable excavated materials which can be satisfactorily compacted during refilling of the excavation. In the event the excavated materials are not suitable, select fill as specified or ordered by the Engineer shall be used for backfilling.

3. Any settlement occurring in the backfilled excavations shall be refilled and compacted.

B. Unsuitable Materials

1. Stones, pieces of rock or pieces of pavement greater than one cubic foot in volume or greater than 1.5 feet in any single dimension shall not be used in any portion of the backfill.

2. All stones, pieces of rock or pavement shall be distributed through the backfill and alternated with earth backfill in such a manner that all interstices between them shall be filled with earth.

3. Frozen earth shall not be used for backfilling.

4. Materials taken from the site during excavation that do not correspond with the materials required for backfilling.

C. Compaction and Density Control

1. Backfill shall be compacted to a minimum of 90% of the Modified Proctor density.

2. Where required, to assure adequate compaction, in-place density test shall be made by an approved testing laboratory.

   a. The moisture-density relationship of the backfill material shall be determined by ASTM D1557, Method D.

      1) Compaction curves for the full range of materials used shall be developed.

   b. In-place density shall be determined by the methods of ASTM D1556 or ASTM D2922 and shall be expressed as a percentage of maximum dry density.

EARTHWORK - SECTION 02000

3. Where required, to obtain the optimum moisture content, the Contractor shall add, at his expense, sufficient water during compaction to assure the specified maximum density of the backfill. If, due to rain or other causes, the material exceeds the optimum moisture content, it shall be allowed to dry, assisted if necessary, before resuming compaction or filling efforts.

4. The Contractor shall be responsible for all damage or injury done to pipes, structures, property or persons due to improper placing or compacting of backfill.

2.04 STORAGE OF MATERIALS

A. Excavated Materials

1. All onsite excavated materials shall be stored in covered roll off boxes at onsite locations so as not to endanger the work, and so that easy access may be had at all times to all parts of the excavation and so as not to interfere with the owner's operation.

2.05 DISPOSAL OF MATERIALS

A. Disposal

1. All spoil material (excavated material unsuitable for backfill) shall be disposed of offsite, as contaminated surface soils as specified in Section 02004 as approved by the Engineer.

2.06 OTHER REQUIREMENTS

A. Unfinished Work

1. When, for any reason, the work is left unfinished, all excavated areas shall be filled and all watercourses left unobstructed with the surfaces in a safe and satisfactory condition.

B. Hauling Material Offsite

1. Prior to leaving the site, all equipment which has been in contact with the excavated soils shall be decontaminated to the satisfaction of the Engineer. Decontamination of equipment shall consist of a minimum of one wash with control water. Decontamination of equipment shall take place on-site on a decontamination area constructed, operated, and maintained by the Contractor. The decontamination area shall consist of an impermeable area (sloped to a sump area) with appropriate height curbing. The

contractor shall be responsible for the complete operation of the decontamination area and shall treat all wash water collected in accordance with all Federal, State, and Local regulations.

2. All excavated material destined for offsite disposal at a waste disposal facility will be transported in permitted covered roll off boxes.

3. The Contractor is responsible for obtaining all state, county, and town permits, or variations to allow transport of any and all materials or equipment on public roadways.

C. Safety Equipment

1. The Contractor shall provide all necessary safety equipment to his employees, the Engineer and his representatives, and the Owner's representatives. The following safety equipment will be used at all times by all personnel located within the limits of the site where contact with contaminated material may result.

   - Hard hats and steel reinforced protection boots.
   - Safety glasses or goggles complying with OSHA Standard ANSI 287.1-1968
   - Disposable rubber boots or overshoes.
   - Disposable rubber gloves.
   - Nonporous disposable coverall.

   All disposable safety equipment shall be stored at and disposed of at locations approved by the Engineer.

2. The Contractor shall comply with all of the provisions covering workers involved in hazardous waste operations as setforth in 29CFR1910.120.

3. The Contractor shall comply with all safety standards required by the Owner.

- END OF SECTION -

SELECT FILL - SECTION 02001

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

Select fill materials shall be used as either lining or special backfill as specified or as directed by the Engineer.

1.02 SUBMITTALS

A. The name and location of the source of the material.

B. Samples and test reports of the material.

PART 2 - PRODUCTS

2.01 LISTING OF SELECTED FILL MATERIALS

A. Type A

1. Thoroughly washed screened gravel or clean, sound, tough, hard stone free from coatings. It shall consist of crushed and uncrushed particles and shall have a gradation by weight of 100% passing a 1-1/2 inch square opening, not more than 25% passing a 3/4 inch square opening and not more than 5% passing a 1/2 inch square opening.

B. Type B

1. Thoroughly washed clean, sound, tough, hard crushed limestone or approved equal free from coatings. Gradation of particles by weight shall be the same as specified for Type A material.

C. Type C

1. Thoroughly washed, clean, sound, tough, hard, crushed limestone or approved equal free from coatings. It shall have a gradation by weight of 100% passing a one inch square opening and not more than 15% passing a 1/4 inch square opening.

D. Type D

1. Clean, washed, coarse sand having the following gradation by weight:

% Passing	Sieve
100	3/8-inch
95 - 100	No. 4
80 - 100	No. 8
50 - 85	No. 16
25 - 60	No. 30
10 - 30	No. 50
2 - 10	No. 100

E. Type E

1. Run-of-bank gravel or other acceptable granular material free from organic matter with a gradation by weight of 100% passing a 1-1/2 inch square opening, 30 to 65% passing a 1/4 inch square opening, and not more than 10% passing a No. 200 mesh sieve.

F. Type F

1. Run-of-crusher hard durable limestone or approved equal having the following gradation by weight:

% Passing	Sieve
100	1-1/2 inch
95 - 100	1 inch
65 - 80	1/2 inch
40 - 60	1/4 inch
0 - 10	No. 200

G. Type G

1. A mixture of Type E material and Portland cement mixed in a ratio of 15:1 and placed and compacted in a dry state.

H. Type H

1. A broadly graded sand and gravel blast furnace slag or stone free from organic matter with the following gradation by weight.

% Passing	Sieve
100	6 - inch
25 - 75	No. 4
5 - 40	No. 40
0 - 10	No. 200

SELECT FILL - SECTION 02001

I. Type I

1. Rip-Rap shall consist of light stone fill, with a gradation by weight of 90-100% lighter than 100 pounds; 50-100% larger than 6 inches; and 0-10% smaller than 1/2 inch.

J. Type J

1. Pea gravel, consisting of a clean washed naturally rounded aggregate with a mix of particle sizes not less than 1/8-inch more than 3/4 inch.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Select Fill where specified or directed shall be placed in accordance with Section 02000 - Earthwork, and Section 02003 - Embankment Material.

3.02 SETTLEMENTS

A. Any settlement in the finished work that occurs during the contract period shall be corrected by the Contractor at his own cost and expense.

3.03 HAULING MATERIAL ON STREETS

1. When it is necessary to haul off-site material over streets or pavements, the Contractor shall provide suitable tight vehicles so as to prevent deposits on the streets or pavements. In all cases where any materials are dripped from the vehicles, the Contractor shall clean up the same as often as required to keep the streets and pavements clean from dirt, mud, stone or other hauled material. The Contractor is responsible for obtaining all state, county, and town permits or variations to allow transport of any and all materials or equipment or public roadways.

- END OF SECTION -

EROSION CONTROL - SECTION 02002

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. Erosion control shall consist of operations performed by the Contractor to minimize erosion of soils into drainage channels and lands adjacent to or affected by the Work.

PART 2 - EXECUTION

2.01 PERFORMANCE OF WORK

A. Earthwork shall not be initiated at a given location until the method and sequencing of all operations are approved by the Engineer.

B. The Contractor shall schedule and conduct his operations to minimize erosion materials from the site.

C. The Engineer shall have the authority to limit the surface area of contaminated materials exposed by excavation, and to direct the Contractor to implement erosion and control measures as may be deemed necessary.

2.02 SEDIMENTATION CONTROL

A. Temporary silt dams with upgradient settling basins shall be constructed at locations as may be required to allow sediment to be removed before runoff water leaves the Work Area.

B. Sediment collected behind silt dams shall be periodically removed and disposed of in accordance with Section 02004 - Removal of Contaminated Surface Soils.

C. Silt dams shall be repaired or replaced as required, and at the completion of the Tank Removal Project shall be removed and disposed of in accordance with Section 02004 - Removal of Contaminated Surface Soils.

- END OF SECTION -

EMBANKMENT MATERIAL - SECTION 02003

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. Embankment material shall include backfill for excavations where select fill materials are not specified.

2. Embankment material shall be free from frost, stumps, trees, roots, sods, muck, marl, vegetable matter or other unsuitable material and shall be suitable for compaction as described in the following provisions.

B. Related Work Specified Elsewhere

1. Earthwork: Section 02000

2. Restoration of Surfaces: Section 02005

1.02 TESTING

A. All soil testing services necessary for the Contractor to obtain an approved embankment material shall be provided by the Contractor. All density testing including field and laboratory services required during installation of the embankment material shall be provided by the Contractor.

1.03 SUBMITTALS

A. Source(s) of borrow materials;

B. Location of spoil area(s); and

C. Samples and test reports of proposed embankment material.

PART 2 - PRODUCTS

2.01 EMBANKMENT MATERIAL

A. Embankment material shall be obtained from a source approved by the Engineer.

B. Stones shall not exceed 3 inches in greatest dimension and shall be well distributed throughout the soil mass. Stone shall be defined as rock material either in its natural or broken state.

EMBANKMENT MATERIAL - SECTION 02003

C. Stones not well mixed with soil material shall not be used in embankment material unless the stone material is sufficiently deteriorated or friable so as to be compatible to achieve minimum voids and required density.

D. If at any time during the contract the Engineer requests soils testing to insure that the characteristics of the embankment material obtained from the borrow area(s) are suitable, the Contractor shall perform these tests at no cost to the owner.

PART 3 - EXECUTION

3.01 PLACEMENT AND COMPACTION

1. Embankment materials shall be placed in lifts not greater than 12-inches of thickness unless greater thickness is allowed by the Engineer upon demonstration by the Contractor that the material and compaction efforts are adequate to obtain the required density.

2. If the required density is not obtained, compaction of the embankment material shall continue until specified densities are obtained. Improperly compacted embankment material shall be removed.

3. All areas receiving embankment material shall be compacted to 90% of the maximum density achieved during the modified proctor density test (ASTM D-1557-78, Method C).

- END OF SECTION -

REMOVAL OF CONTAMINATED SURFACE SOILS - SECTION 02004

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. Excavation including the loosening, removing, refilling, transporting, storage and disposal of all materials classified by the Engineer as contaminated surface soils for the completion of the work.

2. Excavation to the widths and depths as determined by the Engineer.

B. Related Work Specified Elsewhere

1. Earthwork: Section 02000

PART 2 - EXECUTION

2.01 GENERAL

A. General Provisions

1. All provisions for excavation and backfilling as specified in Earthwork - Section 02000 shall apply to this specification for the removal and disposal of contaminated subsurface soils together with the provisions specified herein.

B. Limits of Excavation

1. Excavations shall be made to the limits, elevations or subgrades determined by the on-site Engineer to be contaminated. The approximate limits of excavation are shown on Figure 1.

2.02 REMOVAL OF WATER

A. General

1. Unless otherwise directed by the Engineer, all water removed from excavations shall be diverted to a temporary storage unit.

2. The Contractor shall test the water using a method approved by the Engineer, in accordance with all applicable state and local regulations to determine proper disposal methods.

3. The Contractor shall submit the test results and the proposed disposal method to the Engineer for review.

4. The Contractor shall treat, if necessary, and dispose of the water using the reviewed disposal method.

2.03 STORAGE OF MATERIALS

A. All contaminated soils shall be placed and stored in water tight roll off boxes in a location so as not to endanger the work.

B. The Contractor shall ensure that all contaminated soil which is excavated is deposited into the roll off boxes and that no spillage of contaminated soil onto clean areas occurs. If spillage occurs, the contaminated soil and any surrounding soil which the Engineer deems necessary shall be excavated by the Contractor and placed into the roll off boxes.

C. Traffic shall be maintained at all times in accordance with the Owner's requirements.

2.04 BACKFILLING AND COMPACTION

A. Prior to backfill of the excavation from which contaminated materials have been removed, the Engineer shall obtain soil samples of the visually clean soil at the bottom of the pit. The excavation shall then be backfilled by the Contractor.

B. All excavations shall be backfilled and compared to original grade in preparation for restoration of the surface. This backfill and compaction shall be as specified in Section 02000 - Earthwork.

- END OF SECTION -

RESTORATION OF SURFACES - SECTION 02005

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. All types of surfaces, pavements, sidewalks, curbs, gutters, culverts and other features disturbed, damaged or destroyed during the performance of the work shall be restored and maintained, as specified herein or as directed by the Owner.

2. The quality of materials and the performance of work used in the restoration shall produce a surface or feature equal to the condition of each before the work began.

B. Related Work Specified Elsewhere

1. Earthwork: Section 02000

1.02 SCHEDULE OF RESTORATION

A. A schedule of restoration operations shall be submitted by the Contractor for review.

B. In general, permanent restoration of surfaces will not be permitted until one month's time has elapsed after excavations have been completely backfilled as specified, unless otherwise specified by Owner. A greater length of time, but not more than nine months may be allowed to elapse before permanent restoration of street surfaces is undertaken, if additional time is required for shrinkage and settlement of the backfill.

C. The replacement of surfaces at anytime, as scheduled or as directed, shall not relieve the Contractor of responsibility to repair damages by settlement or other failures.

PART 2 - EXECUTION

2.01 TEMPORARY PAVEMENT

A. Immediately upon completion of refilling of the trench or excavation, the Contractor shall place a temporary pavement over all disturbed areas of streets, driveways, sidewalks, and other travelled places where the original surface has been disturbed as a result of his operations.

RESTORATION OF SURFACES - SECTION 02005

B. Unless otherwise specified or directed, the temporary pavement shall consist of Cold Mix Bituminous Pavement, in conformance with State Standards to such a depth as required to withstand the traffic to which it will be subjected.

C. For dust prevention, the Contractor shall treat all surfaces, not covered with cold patch, as frequently as may be required.

D. The temporary pavement shall be maintained by the Contractor in a safe and satisfactory condition until such time as the permanent paving is completed. The Contractor shall immediately remove and restore all pavements as they become unsatisfactory.

2.02 PERMANENT PAVEMENT REPLACEMENT

A. The permanent and final repaving of all streets, driveways and similar surfaces where pavement has been removed, disturbed, settled or damaged by or as a result of performance of the Contract shall be repaired and replaced by the Contractor, by a new and similar pavement.

   1. The top surface shall conform with the grade of existing adjacent pavement and the entire replacement shall meet the New York State DOT Standard Specifications for the particular types of pavement.

2.03 PREPARATION FOR PERMANENT PAVEMENT

A. When scheduled and within the time specified, the temporary pavement shall be removed and a base prepared, at the depth required by the New York State DOT, to receive the permanent pavement.

   1. The base shall be brought to the required grade and cross-section and thoroughly compacted before placing the permanent pavement.

   2. Any base material which has become unstable for any reason shall be removed and replaced with compacted base materials.

B. Prior to placing the permanent pavement all service boxes, manhole frames and covers and similar structures within the area shall be adjusted to the established grade and cross-section.

C. The edges of existing asphalt pavement shall be cut a minimum of one foot beyond the excavation or disturbed base whichever is greater.

RESTORATION OF SURFACES - SECTION 02005

1. All cuts shall be parallel or perpendicular to the centerline of the street.

2.04 ASPHALT PAVEMENT

A. The permanent asphalt pavement replacement for streets, driveways and parking area surfaces shall be replaced with bituminous materials of the same depth and kind as the existing unless otherwise specified.

B. Prior to placing of any bituminous pavement a sealer shall be applied to the edges of the existing pavement and other features.

C. The furnishing, handling and compaction of all bituminous materials shall be in accordance with the New York State Department of Transportation Standards.

2.05 CONCRETE PAVEMENT AND PAVEMENT BASE

A. Concrete pavements and concrete bases for asphalt, brick or other pavement surfaces shall be replaced with 4000 psi minimum 28 day strength concrete, air-entrained.

B. Paving slabs or concrete bases shall be constructed to extend one foot beyond each side of the trench and be supported on undisturbed soil. Where such extension of the pavement will leave less than two feet of original pavement slab or base, the repair of the pavement slab or base shall be extended to replace the slab to the original edge of the pavement or base unless otherwise indicated on the Contract Drawings.

C. Where the edge of the pavement slab or concrete base slab falls within the excavation, the excavation shall be backfilled with Select Fill Type F compacted to 95% maximum dry density as determined by ASTM D698 up to the base of the concrete.

D. The new concrete shall be of the same thickness as the slab being replaced and shall contain reinforcement equal to the old pavement.

1. New concrete shall be placed and cured in accordance with the applicable provisions of the New York State Department of Transportation Standards.

2.06 STONE OR GRAVEL PAVEMENT

A. All pavement and other areas surfaced with stone or gravel shall be replaced with material to match the existing surface unless otherwise specified.

RESTORATION OF SURFACES - SECTION 02005

1. The depth of the stone or gravel shall be at least equal to the existing.

2. After compaction the surface shall conform to the slope and grade of the area being replaced.

2.07 LAWNS AND IMPROVED AREAS

A. The area to receive topsoil shall be graded to a depth of not less than 4 inches or as specified, below the proposed finished surface.

   1. If the depth of existing topsoil prior to construction was greater than 4 inches, topsoil shall be replaced to that depth.

B. Topsoil, seeding and mulch will be provided to obtain a lawn equivalent to that of surrounding areas.

C. When required to obtain germination, the seeding areas shall be watered in such a manner as to prevent washing out of the seed.

D. Any washout or damage which occurs shall be regraded and reseeded until a good sod is established.

E. The Contractor shall maintain the newly seeded areas, including regrading, reseeding, watering and mowing, in good condition.

2.08 OTHER TYPES OF RESTORATION

A. Trees, shrubs and landscape items damaged or destroyed as a result of construction operations shall be replaced in like species and size.

   1. All planting and care thereof shall meet the standards of the American Association of Nurserymen.

B. Water courses shall be reshaped to the original grade and cross-section and all debris removed. Where required to prevent erosion, the bottom and sides of the water course shall be protected.

C. Culverts destroyed or removed as a result of the construction operations shall be replaced in like size and material and shall be replaced at the original location and grade. When there is minor damage to a culvert and with the consent of the Engineer, a repair may be undertaken, if satisfactory results can be obtained.

RESTORATION OF SURFACES - SECTION 02005

D. Should brick pavements be encountered in the work, the restoration shall be as directed.

2.09 MAINTENANCE

A. The finished products of restoration shall be maintained in an acceptable condition for and during a period of one year following the date of Substantial Completion or other such date as set forth elsewhere in the Contract Documents.

- END OF SECTION -

TANK REMOVAL - SECTION 02006

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

1. All labor, materials, services and equipment necessary for the removal of the tank as specified as part of this Contract.

B. RELATED WORK SPECIFIED ELSEWHERE

1. Earthwork: Section 02000

2. Removal of Contaminated Surface Soils: Section 02004

3. Restoration of Surfaces: Section 02005

1.02 QUALITY ASSURANCE

A. Applicable codes, standards and specifications:

1. Town of Cortlandville, New York Fire Regulations

2. New York State Bulk Petroleum Storage Regulations

3. National Fire Prevention Association, Volume 30, "Flammable and Combustible Liquids Code"

4. National Fire Protection Association, Volume 327, "Cleaning or Safeguarding Small Tanks and Containers"

5. American Petroleum Institute, AP1-2015, "Cleaning Petroleum Storage Tanks"

6. American Petroleum Institute, AP1-2015A, "A Guide for Controlling the Lead Hazard Associated with Tank Entry and Cleaning"

7. American National Standards Institute, ANSI-Z28.2, "Standard Practices for Respiratory Protection"

8. National Institute for Occupational Safety and Health, NIOSH, "Working in Confined Space"

PART 2 - EXECUTION

2.01 TANK REMOVAL

A. Prior to removal of the tanks, the Owner will remove all free liquid product, residual liquids and any sludges or solids from the tank and connecting lines.

TANK REMOVAL - SECTION 02006

B. Prior to commencing any work on the tank, it shall be tested for flammable vapors in accordance with Volume 327 of the National Fire Protection Association and all other applicable regulations.

C. The Contractor shall excavate and remove the tank, removing soil as necessary for removal of the tank and as specified in Section 02000 - Earthwork. This soil shall be stockpiled for use as backfill unless determined to be contaminated by the Engineer's visual observation. If determined to be contaminated, the soil shall be handled as specified in Section 02004, Removal of Contaminated Subsurface Soils.

D. The Contractor shall disconnect piping at all tank openings. All piping shall be removed and disposed.

E. Prior to backfill of the excavation, the Engineer shall visually inspect the excavation for contamination. Should contamination be present, as determined by the Engineer, the Contractor shall remove and dispose of the contaminated subsurface soil as specified in Section 02004 - Removal of Contaminated Subsurface Soils.

F. Upon completion of removal of contaminated material or if no contamination is present, as determined by the Engineer, the Contractor shall backfill the excavation and restore the surface as specified in Section 02000, Earthwork and Section 02005, Restoration of Surfaces.

2.02 SCHEDULE OF TANK REMOVAL

A. General

The schedule of work is shown solely for the convenience of the Engineer and the Contractor and does not necessarily include all items of work which are specified and which are required.

Tank Location	Capacity (gal)	Material Stored	Material of Construction
Smith Corona Corp. Cortlandville, New York	10,000	No. 2 Fuel Oil	Steel

- END OF SECTION -

ATTACHMENT D2

TANK REMOVAL SOILS DATA

Approved by the Environmental Protection Agency for the:
Bacteriological examination of Potable Water
Metals by Atomic Absorption
Wet Chemistry
Volatile Organics
Pesticides, Herbicides

Friend Laboratory, Inc.

446 BROAD STREET ● WAVERLY, N. Y. 14892-1445
Phone (607) 565-2893

Chemical and Bacterial analysis of:
WATER
STREAM POLLUTION
WASTEWATER
SLUDGE
SOIL
DAIRY PRODUCTS
FOODS *and* MORE

Key for Report
< = Less than
> = Greater than
Pt. Co. U. = Platinum Cobalt Units
PPM = Parts per Million
UG/L = Micrograms per Liter
MG/L = Milligrams per Liter
NTU = Nephelometric Turbidity Unit
ND = None detected
UMHOS = Micromhos per Centimeter

Plant Mgr.
Company Name
Address

Smith-Corona Corporation
Attn: Ray
P. O. BOX 2020
Cortland, NewYork 13045

Date Received: June 12, 1984

Pick up by:

SAMPLE SOURCES

Analysis Performed:		Underground storage tank PLTI			
pH					
B.O.D. 5 28 mg/L					
C.O.D. mg/L					
Total Hardness mg/L					
Kjeldahl Nitrogen mg/L					
Dissolved Solids mg/L					
Suspended Solids mg/L					
Total Solids mg/L					
Volatile Solids mg/L					
PCB's ppm		< 10			
Copper					
Iron					
Nickel					
Zinc					
Arsenic					
Barium					
Cadmium					
Chromium					
Lead					
Mercury					
Selenium					
Silver					

CC:

Date 6 29 84

Approved by: [signature]
Manager

Comments:

Upstate Laboratories inc.

103 Horton Place • East Syracuse, New York 13057 • Phone 315/437-0255

July 2, 1984

PREPARED FOR SETTLEMENT PURPOSES

010678

Mr. James Condron
SCM Corp.
839 Route 13 South
P.O. Box 2020
Cortland, New York 13045

Re: Analysis Report #70284001

Dear Mr. Condron:

Please find enclosed the results of your sample that was delivered to Upstate Laboratories, Inc. by Mr. John Antczak of Environmental Oil on June 27, 1984. Due to the nature of the sample, i.e., two layers, both an analysis of the top oil layer and an extraction of a homogeneous mixture of both layers were completed. For your records, I have also enclosed copies of these chromatograms, as well as a copy of an aroclor 1260 standard.

If you have any questions, or if we can be of any further service, please do not hesitate to call.

Sincerely,

UPSTATE LABORATORIES, INC.

Carolyn Van Doren

Carolyn Van Doren
Senior Chemist

CVD/cm

Enclosures

cc/encs: file
N. Scala

Plt I Underground Tank- Waste oil

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 70284001
July 2, 1984

ULI #19784001

Sample Identification	Total PCBs (ppm)
Top oil layer	<5
Extraction	<5

PREPARED FOR SETTLEMENT PURPOSES

010679

Approved: [illegible]

[illegible]

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 010887001
Date: January 8, 1987

EPA 601/602: Waste from Underground Tank

CLIENT I.D. - Smith Corona	#2-U 11/11/86	#3-U 11/11/86		
ULI I.D.	31986007	31986008		
EPA 601:				
Chloromethane	<50	<50		
Bromomethane	<50	<50		
Dichlorodifluoromethane	<50	<50		
Vinyl Chloride	<50	<50		
Chloroethane	<50	<50		
Methylene Chloride	<50	<50		
Trichlorofluoromethane	<50	<50		
1,1-Dichloroethylene	<50	<50		
1,1-Dichloroethane	49	<50		
t-1,2-Dichloroethylene	110	<50		
Chloroform	<50	<50		
1,2-Dichloroethane	<50	230		
1,1,1-Trichloroethane	<50	<50		
Carbon Tetrachloride	<50	<50		
Bromodichloromethane	<50	<50		
1,2-Dichloropropane	<50	<50		
t-1,3-Dichloropropylene	<50	<50		
Trichloroethylene	8.5%	4.4%		
Dibromochloromethane	<50	<50		
1,1,2-Trichloroethane	<50	<50		
c-1,3-Dichloropropylene	<50	<50		
1,1,2,2-Tetrachloroethane	<50	<50		
Tetrachloroethylene	450	<50		
Bromoform	<50	<50		
2-Chloroethylvinyl ether	<50	<50		
EPA 602 (including Xylenes):				
Benzene	<50	<50		
Toluene	4300	1500		
Ethylbenzene	72	<50		
Xylenes	1700	300		
Halogenated Aromatics (601/602):				
Chlorobenzene	<50	<50		
1,2-Dichlorobenzene	<50	<50		
1,3-Dichlorobenzene	<50	<50		
1,4-Dichlorobenzene	<50	<50		

All results are expressed as ppm unless otherwise stated.

Approved: ______________________

Date: 1/08/87

Client: Smith Corona

Report #: 010887001
Date: January 8, 1987

UPSTATE LABORATORIES, INC.

PCB Analysis

CLIENT I.D.	ULI CODE	PCB CONCENTRATION (ppm) 1221	1016	1242	1248	1254	1260	TOTAL
#2-U 11/11/86	31986007							<50
#3-U 11/11/86	31986008							<50

have copy from Cordion

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Approved: [signature]

Date 1/08/87

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 112086002
Date: November 20, 1986

EPA 601/602:

CLIENT I.D. Smith Corona	Underground Tank (18,000)			
ULI I.D.	29586012			
EPA 601:				
Chloromethane	<10			
Bromomethane	<10			
Dichlorodifluoromethane	<10			
Vinyl Chloride	39			
Chloroethane	<10			
Methylene Chloride	<10			
Trichlorofluoromethane	<10			
1,1-Dichloroethylene	<10			
1,1-Dichloroethane	<10			
t-1,2-Dichloroethylene	<10			
Chloroform	<10			
1,2-Dichloroethane	<10			
1,1,1-Trichloroethane	<10			
Carbon Tetrachloride	<10			
Bromodichloromethane	<10			
1,2-Dichloropropane	<10			
t-1,3-Dichloropropylene	<10			
Trichloroethylene	2500			
Dibromochloromethane	<10			
1,1,2-Trichloroethane	<10			
c-1,3-Dichloropropylene	<10			
1,1,2,2-Tetrachloroethane	<10			
Tetrachloroethylene	<10			
Bromoform	<10			
2-Chloroethylvinyl ether	<10			
EPA 602 (including Xylenes):				
Benzene	<10			
Toluene	120			
Ethylbenzene	<10			
Xylenes	<10			
Halogenated Aromatics (601/602):				
Chlorobenzene	<10			
1,2-Dichlorobenzene	<10			
1,3-Dichlorobenzene	<10			
1,4-Dichlorobenzene	<10			

All results are expressed as ppm.

Approved: [signature]

Date: 11/20/86

Client: Smith Corona

Report #: 112086002
Date: November 20, 1986

UPSTATE LABORATORIES, INC.

PCB Analysis

CLIENT I.D.	ULI CODE	PCB CONCENTRATION (ppm) 1221	1016	1242	1248	1254	1260	TOTAL
Underground Tank (18,000)	29586012							<10

Approved: [signature]
11/20/86

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

WASTE CHARACTERIZATION DATA

Exhibit A

BFI Waste Systems

BROWNING-FERRIS INDUSTRIES

CECOS INTERNATIONAL

PRODUCT CODE

WCD NUMBER

REVIEWED BY

BFI WASTE CODE

------- COMPLETING THIS FORM

1. GENERAL INFORM/

a) Generator's Nan

x No: NYD002246023

ion No:

c) Generating Facility Complete Address: 839 Route __ _ Cortland, NY 13045

0

d) Authorized Company Representative: James Condron Title: Manager, Plant Engineering

e) Phone Number: 607 753-6011 After Hours Phone Number: Same

f) Emergency Contact: Same Title: Same Phone Same

g) General Description of The Waste: Contaminated Soil

h) Process Generating Waste: Plant Clean Up

2. WASTE PROPERTIES @ 25°C:

a) Physical State: [x] Solid [ ] Powder [ ] Liquid [ ] Semi-solid (sludge) or [ ] Mixture—Describe ____ Viscosity: [ ] Low N/A [ ] Medium [ ] High

b) Phases/Layers: [x] Single [ ] Bilayered [ ] Multilayered

Percentage Volume Each Layer: Top 100% %, Solid ; Middle ____ %, ____ ; Bottom ____ %, ____

c) Density: ~ 1 [ ] Lbs./gal. [ ] Lbs./yd.^{3} [x] g./cc. [ ] Other____

d) Odor: [ ] None [x] Mild or [ ] Strong [ ] — Describe ____

e) Vapor Pressure (in mm of Hg): N/A (f) Color(s): Brown

g) pH: Neutral (h) Solubility (g./100 g. H_2O): <5%

i) Flash Point: None [ ] °F [ ] °C [ ] Open Cup [ ] Closed Cup

3. REACTIVITY:

Hydrophoric	[ ] Yes [x] No	Autopolymerizable	[ ] Yes [x] No	Shock Sensitive	[ ] Yes [x] No
Acid Reactive	[ ] Yes [x] No	Alkaline Reactive	[ ] Yes [x] No	Pyrophoric	[ ] Yes [x] No
Explosive	[ ] Yes [x] No	Thermally Sensitive	[ ] Yes [x] No		

4. THIS WASTE CONTAINS:

Biological Materials	[ ] Yes [x] No	Pathogens	[ ] Yes [x] No	Pesticides	[ ] Yes [x] No
Etiological Agents	[ ] Yes [x] No	Dioxins	[ ] Yes [x] No	Oils	[x] Yes [ ] No
Free Cyanide	[ ] Yes [x] No	Free Sulfide	[ ] Yes [x] No	Free Ammonia	[ ] Yes [x] No
Radioactive Materials	[ ] Yes [x] No	Free Liquids	[ ] Yes [x] No	Absorbents	[ ] Yes [x] No
OSHA Carcinogens	[x] Yes [ ] No	PCBs: (circle one)	A B C D		

If yes, specify type (if applicable) and concentration in the waste composition, Section 5.

5. COMPLETE WASTE COMPOSITION:

ORGANIC		INORGANIC	
Cutting Oil	< 1%	Dirt, Grit, Stone	Balance
Hydraulic Oil		Concrete	
		(ASPPM) Total Pb 55-240; Cd < 5.9;	
Chlorinated Solvents < 170ppm Total		Cr 11-35; Hg < 0.2; Ag < 2; As < 7.4	

6. Is this waste a "Hazardous Waste" as defined by regulations of the U.S. Environmental Protection Agency pursuant to 40 CFR 261 of the Resource Conservation and Recovery Act? No

Is this a "Hazardous Waste" as defined by State or Local Regulation? No

Is a sample included? [ ] Yes [x] No

8. Anticipated Volume: 450 [ ] Gallons [ ] Tons [x] Cubic Yards [ ] Other ____

Per: [ ] Day [ ] Week [ ] Month [ ] Year, or [x] Other One time

To be transported in: [x] Bulk [ ] CECO-PAK [ ] Drums (type/size) ____

BFI WASTE CODE

PRODUCT CODE

9. **MANIFEST INFORMATION**

Proper USDOT Shipping Name	USDOT Hazard Class	UN or NA No.	Local Haz. Waste No.
Non-Regulated	None	N O N E	None

USEPA Hazardous Waste No(s).

N O N E

USEPA Haz. Code(s)

N O N E

10. Required personal protective equipment & handling procedures: Gloves, respirator

11. Supplemental information attached: Analysis

No. of pages 8

12. **GENERATOR'S CERTIFICATION:**
I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omissions of composition or properties exists, and that all known or suspected hazards have been disclosed.
GENERATOR'S AUTHORIZED SIGNATORY:

3/11/87 James Condon, Manager, Plant Engineering JC

DATE SIGNATURE TITLE INITIALS

13. **THIS SECTION IS FOR REGULATORY AGENCY DOCUMENTATION**

A. APPROVAL STATUS: [ ] ACCEPTABLE [ ] APPROVAL WITHHELD [ ] DISAPPROVED

B. REASONS OR SPECIAL CONDITIONS FOR APPROVAL STATUS:

SIGNATURE TITLE/AGENCY

REPRESENTATIVE SAMPLE CERTIFICATE

This form is to be completed by the person obtaining the sample, preferably a representative of the generator. DO NOT COLLECT OR FORWARD SAMPLES THAT ARE RADIOACTIVE, SHOCK SENSITIVE, EXPLOSIVE, OR PYROPHORIC.

Generator's Company Name Company's Address

Location of Sampling: Unit, Pond, Pit, Tank, etc. Process Producing Waste

Date Sampled: Time Sampled: AM PM Volume of Sample Collected:

Type of Waste: (circle)
Sludge Wastewater Solid Mix Other (specify)

Phases/Layers: (circle) Single Bilayered Multilayered

Type of Sampler: (circle)
Coliwasa Grain Trier Scoop Auger Pond Weighted Bottle Thief Other (specify)

Composite Sample: Number of sub-samples Volume of sub-samples

Field Information: (Comments)

I certify this sample is representative of the waste to be managed.

Collector

Print Name Signature Telephone Number

Title Company

Rev: 3/86

ADDENDUM TO
WASTE CHARACTERIZATION DATA

Exhibit A

CECOS

NOTE: This addendum is to be utilized only for wastes which are destined for CECOS' Niagara Falls, New York TSDF

Product Code ______

WCD Number ______

Reviewed By ______

BFI Waste Code ______

INSTRUCTIONS FOR WASTE CHARACTERIZATION DATA ADDENDUM

SECTION 1 - GENERAL INFORMATION:

i) Business Contact - The name, title and telephone number of an individual representing the generator that the quote letter and contract addendum should be sent to.

j) Billing Address - The complete address to which the invoice, quote letter, and contract addendum should be sent to, if different than the Generating Facility Complete Address.

SECTION 4 - WASTE CONTAINS:

- Organic Priority Pollutants - The 109 organic chemicals designed as priority pollutants by EPA - FOR AQUEOUS WASTES ONLY.

SECTION 8 - VOLUME:

8. (a) Indicate the type of vehicle (i.e.: Box Van, Roll-Off, Vac Truck, etc.).

SECTION 12 - GENERATOR'S CERTIFICATION:

An authorized representative of the generator must sign the document and initial for recognition. The WCD will not be processed nor a disposal approval issued without this section completed.

IMPORTANT: PLEASE READ INSTRUCTIONS BEFORE COMPLETING THIS ADDENDUM

1. GENERAL INFORMATION:

i) Business Contact: David Verostko Title: Director, Emp. Relations Phone: (607) 753-6011

j) Billing Address: Same

4. THIS WASTE CONTAINS:

Organic Priority Pollutants in excess of 50 ppm (Aqueous Wastes Only) N/A [ ] Yes [ ] No
If yes, specify type and concentration in the waste composition, Section 5.

8. (a) Type of Vehicle: Dump truck, roll off

12. GENERATOR'S CERTIFICATION:

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omissions of composition or properties exists, and that all known or suspected hazards have been disclosed.

GENERATOR'S AUTHORIZED SIGNATORY:

3/11/87 | [signature] | Manager, Plant Engineering | JC
Date | Signature | Title | Initials

FOR CECOS USE ONLY

PREPARED FOR SETTLEMENT PURPOSES

010675

A. DISPOSAL SITE ______

B. DISPOSAL METHOD

1. ______ 3. ______
2. ______ 4. ______

C. REGULATORY CORRESPONDENCE

1. TYPE [ ] NOTIFICATION [ ] SUPPLEMENTAL REQUEST

2. NUMBER ______
(DEC "N" OR "R" NUMBER)

Date | Signature | Title

______ E OPERATIONS MUST BE NOTIFIED ______ WORKING DAYS PRIOR TO SHIPMENT
______ F MAXIMUM ______ % SETTLEABLE SOLIDS BY VOLUME
______ G NOT TO POSSESS ANY STRONG ODORS
______ H MUST NOT BE DUSTY
______ I ______ TRIAL LOADS ONLY ______ (NO. OF DRUMS)
______ J OTHER ______

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site

No. 1 West of Tank Center - 3 Feet Below Grade

SAMPLE NO. A6572 DATE COLLECTED 12/15/86 DATE REC'D. 12/16/86 DATE ANALYZED 1/8/87

	ppb
[redacted]	
Bromomethane	
[redacted]	
Chloroethane	
[redacted]	
1,1-Dichloroethene	
[redacted]	
t-1,2-Dichloroethene	1700.
[redacted]	
1,2-Dichloroethane	
[redacted]	
Carbon tetrachloride	
[redacted]	
1,2-Dichloropropane	

	ppb
t-1,3-Dichloropropene	<1000.
[redacted]	
Benzene	
[redacted]	
1,1,2-Trichloroethane	
[redacted]	
2-Chloroethylvinyl ether	<10000.
[redacted]	
1,1,2,2-Tetrachloroethane	<1000.
[redacted]	
Toluene	2000.
[redacted]	
Ethylbenzene	<1000.
[redacted]	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 74 %

2-Bromo-1-chloropropane = 68 %

Trifluorotoluene = 102 %

µg/kg wet weight

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: 2-2-87

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
No. 2 Backfill Pile

SAMPLE NO. A6573 DATE COLLECTED 12/15/86 DATE REC'D. 12/16/86 DATE ANALYZED 1/12/87

	ppb		ppb
[illegible]		t-1,3-Dichloropropene	<1000.
Bromomethane		[illegible]	
[illegible]		Benzene	
Chloroethane		[illegible]	
[illegible]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[illegible]	
[illegible]		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene		[illegible]	
[illegible]		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		[illegible]	
[illegible]		Ethylbenzene	
1,2-Dichloropropane		[illegible]	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	100	%
2-Bromo-1-chloropropane	=	88	%
Trifluorotoluene	=	93	%

µg/kg wet weight

Authorized: [illegible]

Date: 2-2-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
No. 3 - First Truckload

SAMPLE NO. A6574 DATE COLLECTED 12/15/86 DATE REC'D. 12/16/86 DATE ANALYZED 1/8/87

	ppb		ppb
		t-1,3-Dichloropropene	<1000.
Bromomethane			
		Benzene	
Chloroethane			
		1,1,2-Trichloroethane	
1,1-Dichloroethene			
		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene	(220.)		
		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane			
		Toluene	
Carbon tetrachloride			
		Ethylbenzene	
1,2-Dichloropropane			

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 53 %

2-Bromo-1-chloropropane = 66 %

Trifluorotoluene = 89 %

µg/kg wet weight

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: 2-2-87

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
No. 4 - Side of Tank

SAMPLE NO. A6575 DATE COLLECTED 12/15/86 DATE REC'D. 12/16/86 DATE ANALYZED 1/9/87

	ppb		ppb
		t-1,3-Dichloropropene	<1000.
Bromomethane			
		Benzene	
Chloroethane			
		1,1,2-Trichloroethane	
1,1-Dichloroethene			
		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene	(330.)		
		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane			
		Toluene	
Carbon tetrachloride			
		Ethylbenzene	
1,2-Dichloropropane			

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURRORGATE RECOVERIES:

Bromochloromethane	=	83	%
2-Bromo-1-chloropropane	=	87	%
Trifluorotoluene	=	86	%

µg/kg wet weight

Authorized: [signature]

Date: 2-2-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
No. 5 - Backfill Pile

SAMPLE NO. A6576 **DATE COLLECTED** 12/15/86 **DATE REC'D.** 12/16/86 **DATE ANALYZED** 1/12/87

	ppb		ppb
[illegible]		t-1,3-Dichloropropene	<1000.
Bromomethane		[illegible]	
[illegible]		Benzene	
Chloroethane		[illegible]	
[illegible]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[illegible]	
[illegible]		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene		[illegible]	
[illegible]		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		[illegible]	
[illegible]		Toluene	
Carbon tetrachloride		[illegible]	
[illegible]		Ethylbenzene	
1,2-Dichloropropane		[illegible]	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane	=	99	%
2-Bromo-1-chloropropane	=	88	%
Trifluorotoluene	=	94	%

µg/kg wet weight

Authorized: [signature]

Date: 2-2-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
No. 6 - Last Bucket Out

SAMPLE NO. A6577 DATE COLLECTED 12/15/86 DATE REC'D 12/16/86 DATE ANALYZED 1/12/87

	ppb		ppb
		t-1,3-Dichloropropene	<1000.
Bromomethane			
		Benzene	
Chloroethane			
		1,1,2-Trichloroethane	
1,1-Dichloroethene			
		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene			
		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane			
		Toluene	
Carbon tetrachloride			
		Ethylbenzene	
1,2-Dichloropropane	↓		

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 98 %

2-Bromo-1-chloropropane = 85 %

Trifluorotoluene = 95 %

µg/kg wet weight

Authorized: [signature]

Date: 2-2-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT: O'Brien & Gere Engineers, Inc. JOB NO. 3435.001.100

DESCRIPTION: Nixon Hargrave, SCM Site
No. 7 - Center West Windrow

SAMPLE NO. A6578 DATE COLLECTED 12/15/86 DATE REC'D. 12/16/86 DATE ANALYZED 1/9/87

	ppb		ppb
Bromomethane		t-1,3-Dichloropropene	<1000.
Chloroethane		Benzene	<1000.
1,1-Dichloroethene		1,1,2-Trichloroethane	
t-1,2-Dichloroethene		2-Chloroethylvinyl ether	<10000.
1,2-Dichloroethane		1,1,2,2-Tetrachloroethane	<1000.
Carbon tetrachloride		Toluene	<1000.
1,2-Dichloropropane		Ethylbenzene	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 80 %

2-Bromo-1-chloropropane = 83 %

Trifluorotoluene = 93 %

µg/kg wet weight

Authorized: [signature]

Date: 2-2-87

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'Brien & Gere Engineers, Inc. **JOB NO.** 3435.001.100

DESCRIPTION Nixon Hargrave, SCM Site
No. 8 Center - Center Windrow

SAMPLE NO. A6579 **DATE COLLECTED** 12/15/86 **DATE REC'D.** 12/16/86 **DATE ANALYZED** 1/9/87

	ppb		ppb
Bromomethane		t-1,3-Dichloropropene	<1000.
Chloroethane		Benzene	
1,1-Dichloroethene		1,1,2-Trichloroethane	
t-1,2-Dichloroethene	(670.	2-Chloroethylvinyl ether	<10000.
1,2-Dichloroethane		1,1,2,2-Tetrachloroethane	<1000.
Carbon tetrachloride		Toluene	
1,2-Dichloropropane		Ethylbenzene	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 84 %

2-Bromo-1-chloropropane = 82 %

Trifluorotoluene = 89 %

μg/kg wet weight

OBG Laboratories, Inc.
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Authorized: [signature]

Date: 2-2-87

OBG LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

2410.010.612

SURVEY: NIXON HARGRAVE / SMITH CORONA / CORTLANDVILLE

SAMPLERS: (Signature) J. Kevin Farmer

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	SAMPLE TYPE Water Grab.	SAMPLE TYPE Air	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
	WEST OF TANK CENTER 3 FT BELOW GRADE	12/15/86	1045		✓		1	3	O+G, VHO
	BACKFILL PILE	12/15/86	1100		✓		2	3	O+G, VHO
	FIRST TRUCKLOAD	12/15/86	1205		✓		3	~~4~~ 3	O+G, VHO
	SIDE OF TANK	12/15/86	1225		✓		4	~~4~~ 3	O+G, VHO
	BACKFILL PILE	12/15/86	1355		✓		5	~~4~~ 3	O+G, VHO
	LAST BUCKET OUT	12/15/86	1430		✓		6	~~4~~ 3	O+G, VHO
	CENTER WEST WINDROW	12/15/86	1500		✓		7	~~4~~ 3	O+G, VHO
	CENTER-CENTER WINDROW	12/15/86	1505		✓		8	~~4~~ 3	O+G, VHO

Relinquished by: (Signature) J. Kevin Farmer	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time
Dispatched by: (Signature) — Date/Time	Received for Laboratory by: Ann Eckert	Date/Time 12-15-86 5:30 pm
Method of Shipment: AUTOMOBILE		

OBG Laboratories, Inc.
Box 4942 / 1304 Buckley Road / Syracuse, New York 13221 / (315) 457-1494
Oakdale Medical Building / 700 Harry L. Drive / Johnson City, New York 13790

OBG

LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site, Tank Removal #2, #1

SAMPLE NO. D3433 DATE COLLECTED 12-19-86 DATE REC'D. 12-29-86 DATE ANALYZED 1-13-87

	ppb		ppb
Bromomethane		t-1,3-Dichloropropene	<100.
Chloroethane		Benzene	
1,1-Dichloroethene		1,1,2-Trichloroethane	
t-1,2-Dichloroethene		2-Chloroethylvinyl ether	<1000.
1,2-Dichloroethane		1,1,2,2-Tetrachloroethane	<100.
Carbon tetrachloride		Toluene	
1,2-Dichloropropane		Ethylbenzene	<1000.

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments: Petroleum Products Present

SURROGATE RECOVERIES:

Bromochloromethane = 77%

2-Bromo-1-chloropropane = 70%

Trifluorotoluene = 81%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: February 9, 1987

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site, Tank Removal #2, #2

SAMPLE NO. D3434 DATE COLLECTED 12-19-86 DATE REC'D. 12-29-86 DATE ANALYZED 1-13-87

	ppb		ppb
[redacted]		t-1,3-Dichloropropene	<100.
Bromomethane		[redacted]	
[redacted]		Benzene	
Chloroethane		[redacted]	
[redacted]		1,1,2-Trichloroethane	
1,1-Dichloroethene		[redacted]	
[redacted]		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		[redacted]	
[redacted]		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		[redacted]	
[redacted]		Toluene	
Carbon tetrachloride		[redacted]	
[redacted]		Ethylbenzene	<1000.
1,2-Dichloropropane		[redacted]	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 85%

2-Bromo-1-chloropropane = 81%

Trifluorotoluene = 83%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: February 9, 1987

OBG
LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site, Tank Removal #2, #3

SAMPLE NO. D3435 DATE COLLECTED 12-19-86 DATE REC'D. 12-29-86 DATE ANALYZED 1-13-87

	ppb
[redacted]	
Bromomethane	
[redacted]	
Chloroethane	
[redacted]	
1,1-Dichloroethene	
[redacted]	
t-1,2-Dichloroethene	
[redacted]	
1,2-Dichloroethane	
[redacted]	
Carbon tetrachloride	
[redacted]	
1,2-Dichloropropane	

	ppb
t-1,3-Dichloropropene	<100.
[redacted]	
Benzene	<100.
[redacted]	
1,1,2-Trichloroethane	
[redacted]	
2-Chloroethylvinyl ether	<1000.
[redacted]	
1,1,2,2-Tetrachloroethane	<100.
[redacted]	
Toluene	
[redacted]	
Ethylbenzene	<1000.
[redacted]	

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 76%

2-Bromo-1-chloropropane = 72%

Trifluorotoluene = 67%

OBG Laboratories, Inc.
Box 4942/1304 Buckley Rd./Syracuse, NY/13221/(315) 457-1494

Authorized: [signature]

Date: February 9, 1987

OBG LABORATORIES, INC.

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC. JOB NO. 3435.001.100

DESCRIPTION Nixon-Hargrave, SCM site, Tank Removal #2, #4

SAMPLE NO. D3436 DATE COLLECTED 12-19-86 DATE REC'D. 12-29-86 DATE ANALYZED 1-13-87

	ppb		ppb
		t-1,3-Dichloropropene	<100.
Bromomethane			
		Benzene	
Chloroethane			
		1,1,2-Trichloroethane	
1,1-Dichloroethene			
		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene			
		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane			
		Toluene	
Carbon tetrachloride			
		Ethylbenzene	<1000.
1,2-Dichloropropane			

Methodology: Federal Register—40 CFR, Part 136, October 26, 1984

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 88%

2-Bromo-1-chloropropane = 88%

Trifluorotoluene = 89%

Authorized: a Albert

LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

SURVEY: Nixon - Hardgrave: Cowlesville

SAMPLERS: (Signature) Peter Bogardus

STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE TYPE Water Comp.	Grab.	Soil	SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
Tank Removal	Sample #1	12/19/86	11:00AM			✓		1	Hold until
#2	#2	✓	"			✓		1	further Notice
Tank Removal	#3	✓	"			✓		1	from G.A.S;
#2	#4	✓	"			✓		1	P.G.B or
									S.R. Garver

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Peter G. Bogardus		6:20p 12/19/86
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by Mobile Laboratory for field analysis: (Signature)	Date/Time

Dispatched by: (Signature)	Date/Time	Received for Laboratory by:	Date/Time
		[signature]	12/19/86 6:20

Method of Shipment: Company Van

EXHIBIT D1

DETREX VAPOR DEGREASER INFORMATION

To: File

Report: Detrex, vapor-solvent degreaser; Dept. 104

This report deals with the retirement and removal of a vapor degreaser from the "machining area" of the Smith Corona manufacturing facility at South Cortland.

Location:

This degreaser, when operational, was located in the "Automatic Screw Machine" department of Smith Corona's South Cortland, New York facility. Activities described in this report took place in the above mentioned area; as well as outside the plant to the rear of the building.

Dates:

The activities and observations stated in this report took place on Monday, October 20, 1986 (last day of operation); Friday and Saturday, October 24 and 25, 1986 (removal from operating location): Wednesday, October 29, 1986 (cleaning).

Activities and Observations:

On Monday, October 20, 1986, I went to the Department 104 (Automatic Screw Machine) area to observe the Detrex vapor degreaser in operation. Although I have watched the operation of this degreaser many times over the years, I felt because of it's retirement later that day, I would look it over one more time while it was in operation. The degreaser was gray in color; and because of the nature of the work performed with the machine (degreasing), it was stained with oil. I looked the pipe connections over very closely for any leakage; I found none.

During this inspection, I also wanted to re-establish my understanding of the design of the vapor condensers and water separators. I re-oriented myself as to the piping layout and location of the various critical items relative to the cooling water interaction with the machine. It has been and still is my opinion that it is impossible for "Trichlor" to get mixed into the cooling water that supports the vapor condensation function, except by someone manually placing it in the water flow at the sight funnel, which is at eye level on the degreaser.

The water pressure at the condensing coil piping I would judge to be 30 to 40 psi. If a leak occurred, water would leak into the "Trichlor", not "Trichlor" into the water. Also, each condenser has a collection trough which leads to an automatic water/solvent separator. The principal that the separator works on is the difference in specific gravity between water and "Trichlor". There is a condensing coil and water/solvent separator on both the actual degreaser and the solvent still.

On Friday and Saturday, October 24 and 25 the degreaser and still were removed from their operating location, to the boiler room at the rear of the factory. This was done after all "Trichlor" was removed from the equipment and placed in containers.

On Wednesday, October 29, 1986, arrangements had been made for Environmental Oil, Inc. to come on site and clean the unit for disposal.

As Smith Corona maintenance personnel dismantled the unit, Environmental Oil personnel cleaned the pieces of the degreaser. The residue of the cleaning process was placed in containers. The disassembling and cleaning was done over a diked plastic ground cover.

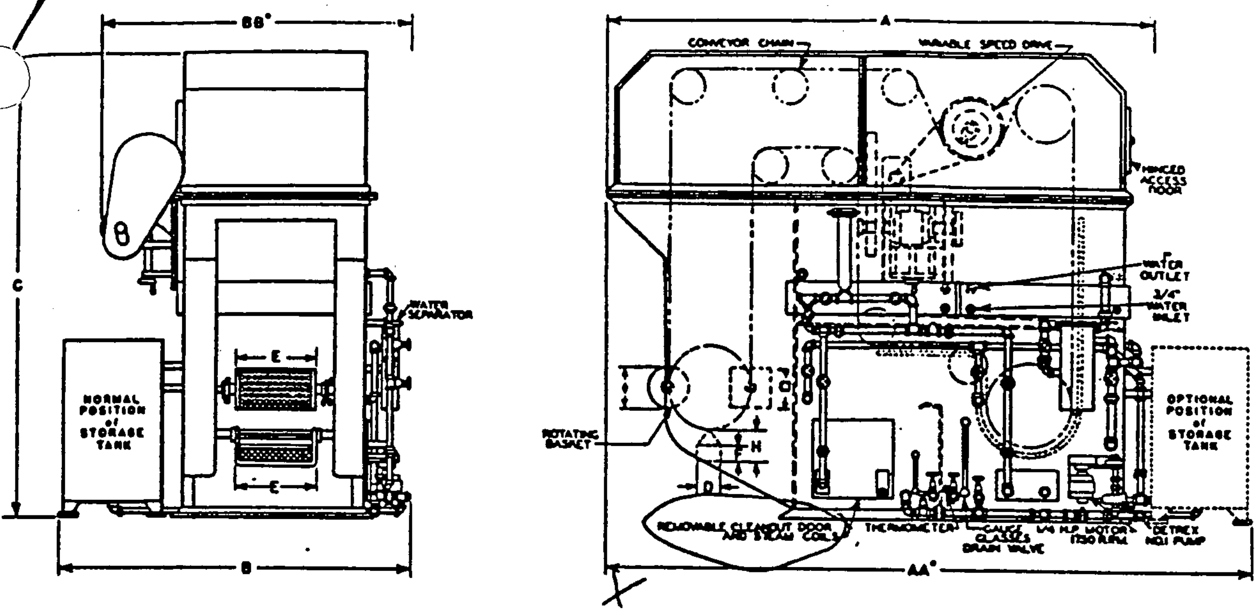
As the unit was disassembled and cleaned, I examined, as best I could, all tank joints, pipe connections, and liquid containment components for evidence of leakage, I found none.

The cleaned components and sections of the degreaser and still were placed in a scrap gondola for removal by Wallace Steel Company.

Attachments:

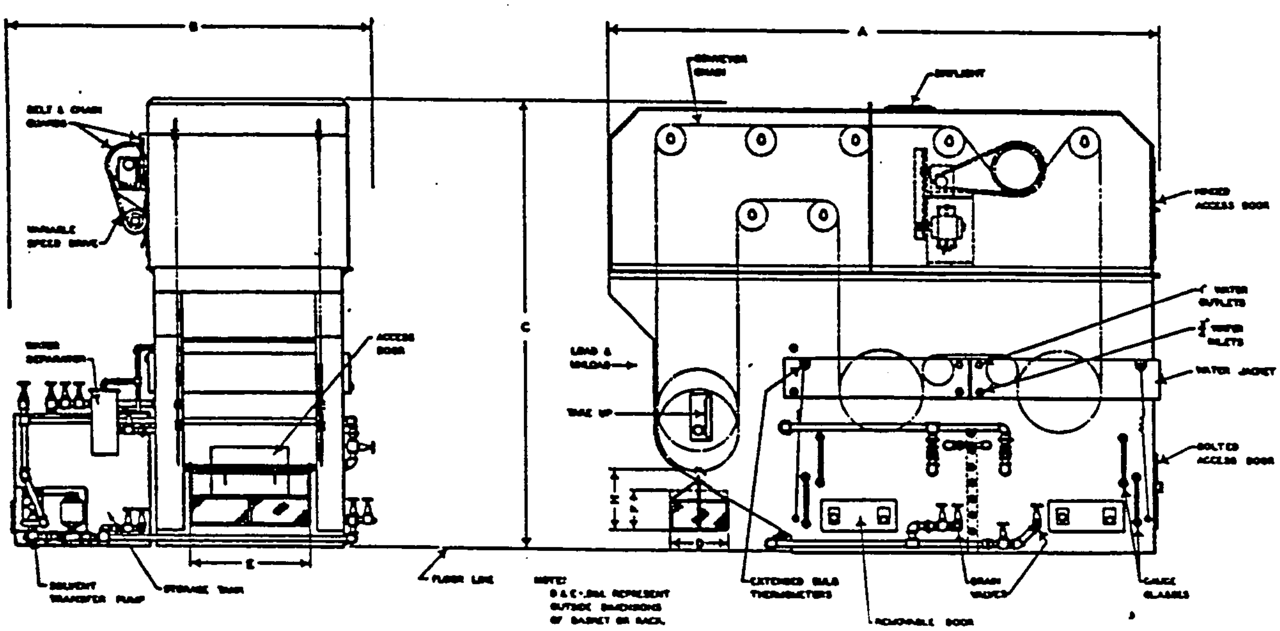
Eric J. Cleveland

Eric J. Cleveland
10/31/86



DETREX Model 1DCR750-1S Degreaser
Steam-heated, Return-type Crossbar Conveyor, Rotary Basket Design

Degreaser described in attached report.



DETREX Model 2DCR650-1S Degreaser
Steam-heated, Return-type Crossbar Conveyor

DETREX WATER SEPARATOR

(Schematic Drawing)

As its name implies, the water separator is used in the operation of a degreaser to remove water from solvent. It is placed in the solvent run-back line leading from the collection trough or pan of the machine.

Any moisture in the machine will collect on the condenser surfaces, washdown into the collecting trough or pan and pass to the water separator intermixed with condensed solvent. The water rises to the surface and is drained off at intervals, daily or more often, depending on the amount of water being eliminated.

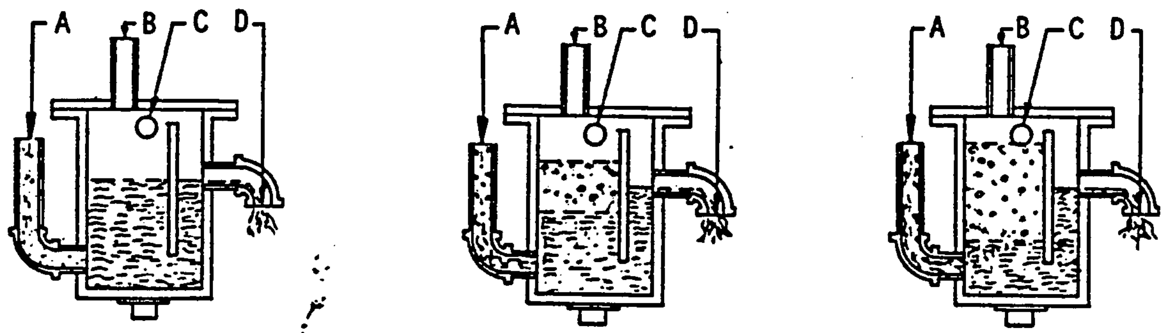


Fig. 11 Fig. 12 Fig. 13

(A • Solvent & Water Inlet B • Vent C • Water Outlet D • Solvent Outlet)

OPERATION:

The operation of a water separator is based on the principles of the difference in specific gravity and immiscibility of water and solvent, with the water rising rapidly and forming a layer on top of the solvent.

Figure 11 shows the normal run of water-free solvent thru the separator, solvent entering thru a pipe line from the trough or pan and leaving thru a pipe to the storage tank or degreaser.

Figure 12 illustrates water entering the separator and collecting on top of the solvent to the left of the baffle.

Figure 13 shows sufficient water has collected on the top of the solvent overflow out of the separator thru the water outlet. Any additional water entering will be discharged as the drain valve in the water outlet is opened.

If it is found that an excessive amount of water exists in an installation, check the following points:

1. Is water being carried into the machine on the parts being cleaned?

2. Are the condenser coils too cold so that moisture from the air is being condensed? Unit should be operated so that "sweating" is held to a minimum on the water jacket or condenser coils.

3. Are there any leaks in the coils or condenser?

4. If steam-heated machine, check steam coils for leaks. To do this, it will be necessary to drain the machine or make the inspection at the regular clean-out period.

Air pressure may be applied to steam coils while submerged in cold solvent and the possible leaks determined by the presence of air bubbles.

To assist in removing as much dissolved water as possible, submerged cooling coils are often incorporated in water separators, particularly on distillation equipment.

PITS:

When a solvent degreasing unit is installed in a pit, adequate area around the unit proper should be provided, allowing access to all clean-out doors and complete removal of the heating elements. Degreasing equipment installed in a pit that is more than 18" deep must be provided with mechanical ventilation. Such ventilation may be provided with a slot in a duct running the length of the pit on one side near the equipment. This box may be connected by a flip damper arrangement on the ventilating housing on the degreaser unit or may be connected to a separate suction system. Such a system should provide for a minimum of two air changes per minute. Each pit should be provided with a drain to sewer or a sump pump to facilitate good housekeeping.

B - SERVICE CONNECTION DATA

INSTALLATION of SOLVENT DEGREASING EQUIPMENT

The installation of each degreasing machine should be reviewed in detail with the DETREX representative to insure the checking of the location, installation piping, wiring and proper setting of controls.

SERVICE CONNECTIONS:

WATER - The main cooling water line to the degreaser should be properly sized for the maximum demand. The following supply lines (Table 1) are recommended:

TABLE 1

FOR PRESSURE RANGE 25 to 40 psig

Water Required Gals. Per Hour	200	300	500	800	1200	2000
Supply Header ips	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"

One main water valve should be supplied to start and shut off the water supply. Individual control valves should be installed in each water inlet on the degreaser to assist in regulating the desired rate of flow. Siphon breakers should be installed in water supply lines to comply with plumbing conditions in many areas.

Water outlets from condenser jackets or coils should not be connected directly to sewer lines but should drain into open sight funnel. This type of connection provides a convenient means of checking both water flow and outlet temperature. No valves or constrictions should be installed in the water discharge line. In event that local conditions prevent the use of sight funnels, visual flow meters should be installed in each water outlet and the water supply pressure reduced to 20 psig, (Fig. 1).

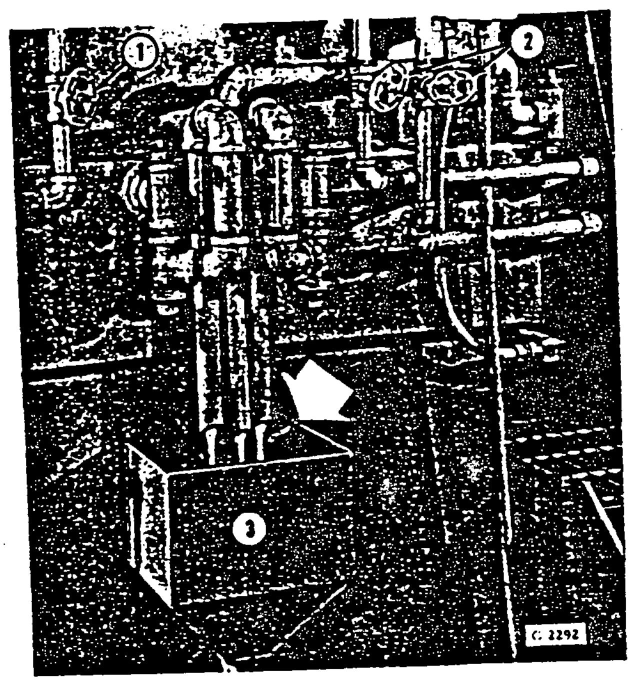


Fig. 1 Regulate Flow of Condenser Water Discharge

NOTES: Recommended method of water supply connections: (1) Main shut off valve (Gate). (2) Individual needle valves (Crane No. 88 or equal) in each water inlet line. (3) Open sight funnel. Tag main shut-off valve (1) for operating instructions.

V. PARTS INFORMATION

HOW TO ORDER REPLACEMENT PARTS

Important

The following information should be given on all orders for replacement parts:

1. Purchase Order Number
2. Shipping Instructions
3. Invoicing Instructions
4. Electrical Characteristics (Voltage, Phase and Cycle)

The following information is very important and may be obtained directly from the Nameplate on the Machine:

5. Model Number
6. Serial Number
7. Size

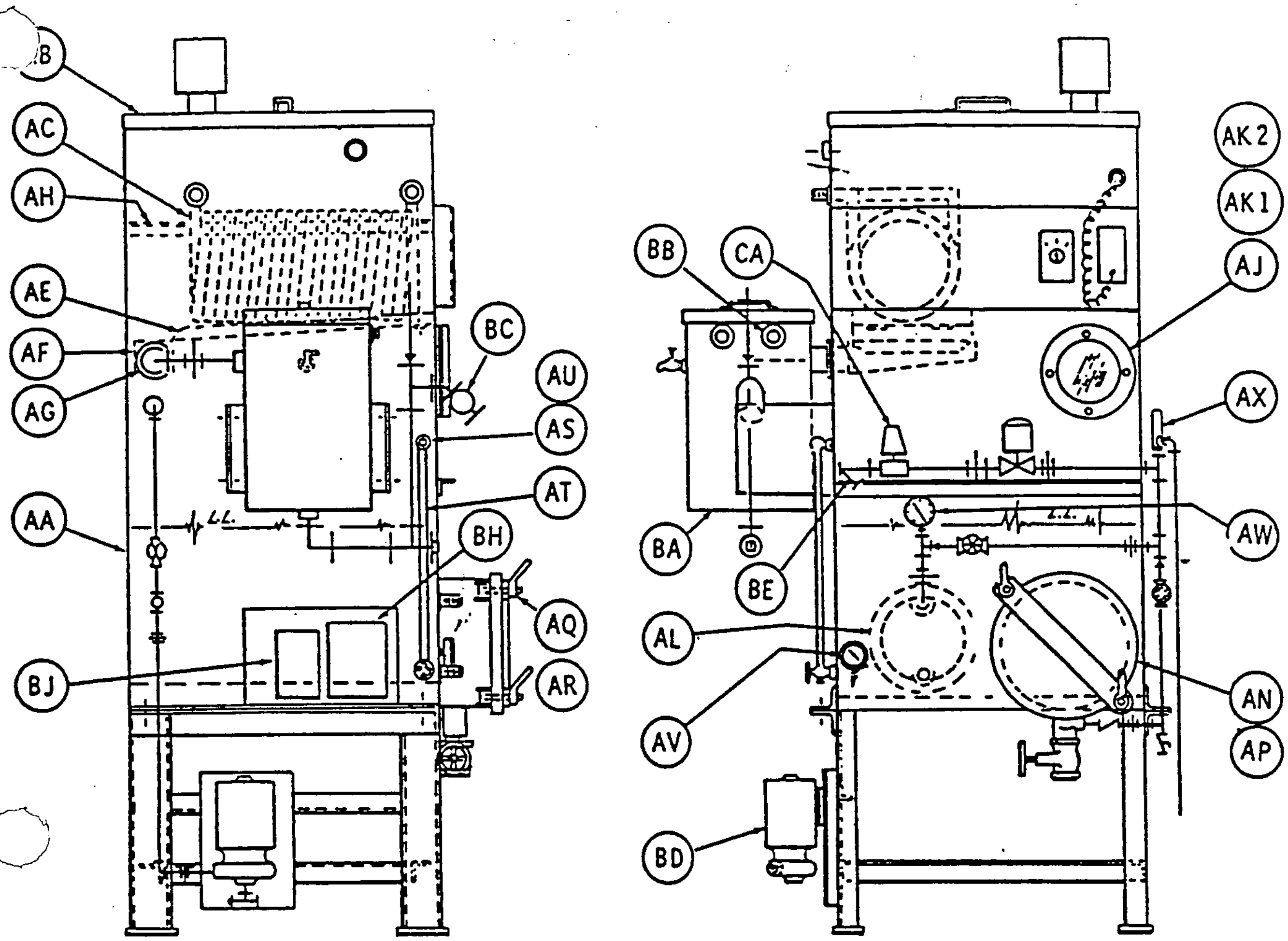
Refer to Parts List and include:

8. Quantity Required
9. Part Number
10. Full Description of Part Wanted
11. Parts Orders should be addressed to:

DETREX CHEMICAL INDUSTRIES, INC.
Parts Order Department
15331 Idaho
Detroit, Michigan 48238

The minimum invoice for each part order is $3.00.

REPLACEMENT PARTS LIST for DETREX S-60S STILL



Ref. Dwg. SD 250.5064

Parts Drawing

SYM.	PART NUMBER	DESCRIPTION	QUANTITY
AA	1590.5039-1	Still Body, FF-1 Coated - Steam Heated	1
	1590.5039-2	Still Body, Stainless Steel - Steam Heated	1
AB	2600.5388-5	Top Cover	1
AC	2300.5018-6	Condenser Coil (Galvanized Pipe)	1
	2300.5072-6	Condenser Coil (Copper Tube)	1
	2300.5077-1	Condenser Coil (Copper Finned Tube)	1
	2300.5077-2	Condenser Coil (Copper Finned Tube)	1
AE	6370.5027-3	Condensate Pan	1
AF	8700.5046-2	Condensate Trough	1
AG	9420.5071-35	Washer (Teflon)	2
AH	7940.5346-3	Support - Condenser Coil (Helical Coils)	2
	7940.5373-1	Support - Condenser Coil (Finned Type)	1
AJ	4140.2-1	Glass - Porthole	1
AK1	4020.41-1	Gasket - Porthole (Vellumoid)	1
AK2	4020.41-2	Gasket - Porthole (Buna)	1

REPLACEMENT PARTS for DETREX S-60S (Steam-Heated) STILL (Cont'd.)

SYM.	PART NUMBER	DESCRIPTION	QUANTITY
AL	2300.5059-1	Steam Coil	1
AN	2980.5125-1	Clean-out Door	1
AP	4020.5581-125	Gasket - Clean-out Door	1
AQ	5580.5056-1	Lever	2
AR	6500.5013-2	Pin - Hinge	1
AS	4060.6-1	Gauge Glass Cocks	(Set)
AT	4140.5-11	Gauge Glass	1
AU	7340.22-1	Seal - Gauge Glass	2
AV	8490.5007-1	Thermometer	1
AW	4060.4-1	Gauge 0-30 lb. (Tri)	1
	4060.4-2	Gauge 0-60 lb. (Perk)	1
AX	9204.1-1	Valve Pop - Safety - 20 lb. (Tri)	1
	9204.4-1	Valve Pop - Safety - 60 lb. (Perk)	1
BA	9461.5009-1	Water Separator (FF-1 Coated)	1
	9461.5010-1	Water Separator (Stainless Steel)	1
BB	2310.5028-1	Coil - Water Separator (FF-1 Coated)	1
	2310.5025-1	Coil - Water Separator (Stainless Steel)	1
BC	4060.3-2	Visi-Flo	1
	4020.43-1	Gasket - Visi-Flo	2/glass
	4140.8-1	Glass	2
BD	6661.5075-402	Pump and Motor - 230/460/3/60 (motor pump)	1
	6660.28-1	Pump Only - Belt Driven (optional)	1
	1520.13-1	Belt - "V"	1
	5820.5021-110	Motor - 1/3 hp - 1750 rpm - TEBB, 115/230/1/60 (For Belt Driven Pump)	1
BE	1591.1-4	Steam Strainer Body	1
	7300.5-4	Steam Strainer Screen	1

ACCESSORIES for S-60S STILL

SYM.	PART NUMBER	DESCRIPTION	QUANTITY
CA	9230.2-2	Steam Pressure Reducer (Outlet 0-15 lb.)	1
	9230.2-20	Steam Pressure Reducer (Outlet 30-125 lb.)	1
	2500.11-1	Condenser Water Temperature Control	1
	6960.2-1	Receptacle - Water Temperature Control	1
	8660.5010-5	Steam Trap	1

NOTE: For Electrical Parts, see Wiring Diagram.

DETREX CHEMICAL INDUSTRIES, INC.
P.O. BOX 501, DETROIT, MICHIGAN 48232

ENVIRONMENTAL OIL, INC.

P.O. Box 315 Syracuse, New York 13209 (315) 471-0503

October 29, 1986

To Whom It May Concern:

This is to verify that the machine's Detrex vapor phase degreaser, Reserve Tank and Solvent Still have been cleaned in accordance with New York State Department of Environmental Conservation specifications at the SCM facility in Cortland, New York.

Richard A Oliver

ENVIRONMENTAL OIL, INC.

RECEIVED
NOV 19 19[illegible]
E. CLEVELAND