Report



Site Investigation and Interim Remedial Action Plan

Smith Corona Corporation Cortlandville, New York

November 1988



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PORT

SITE INVESTIGATION - INITIAL REMEDIATION

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SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

NOVEMBER, 1988

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APPENDIX A
SITE INVESTIGATION

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 The split-spoons were decontaminated between each sample 100 ft. 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.

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 No evidence of contaminants in deeper soil was detected in these 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

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. evidence of soil contamination was observed between 10 ft. and 40 ft. in 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 Petroleum products and chlorinated solvents were (Appendix D). 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

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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/ft² (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 visually inspected by the supervising was The screen 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/ftHydraulic Conductivity (K) is $6,200 - 8,900 \text{ gpd/ft}^2$ (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/fti= 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. 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 The runoff from the SCC building roof still drains to the A-15). 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



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
SHITH CORONA CO.
CORTLANDVILLE, NEW YORK

F	EL C	RESI	LTS	(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	-	-	-	-	-	
<u>_4+00</u>	(1	0	-	-	-	_	-	
27	300	250+	100,000	36,000	(1000	(1000	(1,000	
++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
+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 LI	¥112						

TABLE A2 (continued)
MISCELLANDUS 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	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	#
16	(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 RML 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
TOE 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	(i	(1	a	(1	(1
COLLECTED 11/19/86							
DRY MELL	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: PRIDRITY POLLUTANTS SMITH CORDNA CO. CORTLANDVILLE, NEW YORK

METALS 7000 series		Si	mple Loca	tion
		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
CHRONIUM		11	35	15
COPPER		29	930	46
LEAD		62	240	55
HERCURY		(09	0.2	0.04
NICKLE		50	490	74
SELENIUM		(.1	(. 1	(.1
SILVER		5	2	5
THALLIUM		21	14	23
ZINC		84	1030	130
EPA Method 9010				
CYANIDE	(ррш)	(2	3.6	(2
PHENOL.		1.6	4.8	(.05
PERCENT TOTAL SOLIDS		95.3	93	95.4
EPA Method 8010 & 8020 (mo	dified)			
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.

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

Subsurface Soil Samples: Field Screening Results

Tce Draeger Tube (ppm)	ĸ	۵	m	+	0	0	0	0		0	0	0	0	0	0	0	0
를 를																	
Hun bbs		ਖ਼	ଧ	=	5	=	=	₽		=	=	=	Ξ	=	2	=	2
Depth (ft)	27-29	40.5	47-49	57-59	69-49	197-17	87-89	6676		ر م 1-5	φ	6-8	8-10	17-19	27-29	40.5	47-49
Boring Number	B-9	con't								B-10							
Tce Draeger Tube (ppm)	81	3	м	0	0	0	0	0		ъ	ત્ય	rs	+	0			
	۶.	90	=	Ξ	=	=	=	=		80	9	_	=	=			
Hand (bbs)	ν.	•						Ī			-						
Depth (ft)	Q-2	2-4,	9	6-8,	٠113	17-19	27-29	37-39		9-2	2-43	4-6	8-10	17-19			
Boring Number	9- 8									B-9							
Tce Draeger Tube (ppm)	0	0	0	0		2	10	ده	0	0	0	2	0	0			
Hun (both	2	=	=	=		S	*	1.2	•	t	8	1200	=	5			
Depth (ft)	6- 5-0	2-4,	19	6-9		6-5	2-41	94	6-8	8 -10	17-19	47-49	61-63	63-65	 		
Boring Number	9					₽- 7											

Subsurface Soil Samples: Amalytical Results

	₽° •	B-6 B-6 41-61 81-101	B-7 2°-4°	B-7	B-7 471-491	8-7 61'-63'	B-8 0'-2'	B-8 6' -8'	B-8 37'-39'	B-9 0'-2'	B-9	B-9	B-9 47'-49'	₽-10 0-2	₽-10 4-6'	B-10 47-49°
FIELD SCREENING Draeger tube (tce)	٥	0	S	0	1200	•	81	٥	۰	ស	+	4	જ્ઞ	0	•	0
Hnu	=	5	S	ı	∼	=	ୟ	=		ហ	=	ผ	ଧ	=	=	=
GWALYTICAL DATA																
t-1,2-Dichloroethene	01)	01)	ĸ	9	000	38	810	9		8	3	2	178	95	9	87
Trichloroethene	9	∞	1000	150 051	813	83	7900	ଯ		430	3 2	9	8	01)	(10	330
Tetrachlomothene	(10	(10	95)	95)	81	001)	₽	9		91)	9	16	90	9	9	010
Toluene	95	01)	93	01)	813	9E	813	013	95)	(10	9	ጽ	01) (100	93	(10	(10
Ethv]henzene	95	01)	(10	(10	905	200	0 00	93		(10	93	19	90	93	013	(10
Xylenes	01)	01)	01)	01)	013	(100	(180	(10		(10	(10	7	(18	(10	9	93

Note: Amalytical results in ug/kg wet weight

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

WELL	TOP OF CASING ELEVATION (FT)	TOP OF PVC Elevation (FT)	GROUND Elevation (FT)	SCREENED Elevation (FT)	ACUIFER MATERIAL Screened (FT)	10/1	GROUNDWATER ELEVATIONS (FT) 5/86 11/7/86 11/12/86 11/1	EVATIONS 11/12/86	(FT) 11/14/86	12/3/86	12/5/86
∓	1189.70	1189.36	1187.0	1143.4 - 1173.4	SAND & GRAVEL	1165.05	1164.35		1164.97 1165.05	1167.58	1167.8
S2-18	1214, 97	1214.59	1213.1	1144.0 - 1144.0	SAND & GRAVEL	1164.62	1164.62 1164.15 1164.84	1164.84	1164.91	1167.58	1167.9
##-5D	1215.61	1215.17	1213.1	1111.6 - 1131.6	SAND & GRAVEL	1	1	•	1	1167.31	1167.65
*	1231.73	1231.58	1229.1	1148.3 - 1178.3	SAND & GRAVEL	1169.78	1169.37	1169.61	1169.67	1171.99	1172.43
S † *	1214.04	1213.39	1212.0	1139.6 - 1159.6	SAND & GRAVEL	!	ı	ł	1	1167.97	1168.31
Q+-+10	1214.63	1214.23	1212. 1	1110.2 - 1130.2	SAND & GRAVEL	l	1	1		1167.72	1168.11
24 -58	1182.38	1182.07	1180.0	1142.7 - 1162.7	SAND & GRAVEL	1	1	1	-	1166.53	1167.78
1 -50	1182.68	1182,49	1180.0	1110.8 - 1130.8	SAND & GRAVEL	1	İ	1	1	1166.28	1167.49
9	1216.76	1215.87	1215.0	1158.6 - 1168.6	SAND & GRAVEL			1	1	1	1
7-1	1217.67	1217.15	1215.5	1158.4 - 1168.4	SAND & GRAVEL	l	-	1	1	1	1
8-	1216.97	1216.42	1215.3	1155.0 - 1165.0	SAND & GRAVEL		<u> </u>		1		1
6-1	1217.21	1217.56	1215.1	1117.1 - 1137.1	SAND & GRAVEL	1			1	1	•

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 SWITH CORONA CO.
CORTLAMBVILLE, NEW YORK

WELL	12/9/86	12/10/86	12/11/86	12/19/86	static 12/9/86 12/10/86 12/11/86 12/19/86 12/22/86 12/23/86	12/23/86	3/12/87	4/2/87	4/2/87 4/16/87 4/30/87 5/14/87	1/30/87 5		5/28/87	6/11/87	22/87	78/6/1	7/23/87 8/6	8/6/87 8/2	8/20/87
<u>=</u>	1168.08	1	1168.15	1168.15 (1173.60)	1	1167.72	1168.26	1169.26	1172.36	1171.07	1169.56	1168.37	1166.81	1166.11 1165.07		1164.14 1163.18	. 18	
£ ₹	1168.17	1	1168.24	1168.40	1168.40 1167.67	1167.72	1168.54	1168.28	1168.28 1171.54	1171.41	1171.41 1170.06 1168.49 1167.23 1165.96	1168.49	1167.23		1170.05	1164.31 1163.13		1161.77
ਨ ਵ	1167.91	I	1168.02	1168.02 1168.21 1167.67	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
£-3	1173.34	1	1173.71	1173.76	1	1173.83	1174.48	1177.58	1182,28	1181.56	1179.19	1176. 73	1174.47	1172.38	1171.18	1176.73 1174.47 1172.38 1171.18 1169.53 1168.58		1167.28
S+-194	1168.52		1168.61	1168.75	1	1168.04	1167.74	1169.69	1167.74 1169.69 1172.89 1171.85		1170.27	1168.59 1167.48		1166.44	1165.21	1164.47 1163.38		1162.26
₩- 40	1168.25	١	1168.33	1168.42	l	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
₹	1168.08	1	1168.18	1168.46	1	1167.83	1168.07	1163.02	1171.67	1171.37	1170.16	1168.72	1167.49	1166.27	1165.41	1165.41 1164.65 1163.36		1162.17
G-18	1167.92	1	1167.82	1167.98	1	1167.44	1167.89	1168.44	1168.44 1171.29 1170.84		1169.49 1168.09 1167.12 1166.06 1165.35	1168.09	1167.12	1166.06		1165.06 1163.16		1162.01
9	1	1168.97	1168.87	1168.81	1169.46	1168.7	1168.62	1	1173.77	1173.07	1172.15	1170.29	1169.02	1167.37	1166.42	1165.87 1164.25		1163.51
7-1	I	1168.94	1169	1168.90	1169.08	1168.6	1169.15	l	1173.3	1173.05	1171.5 1169.78	1169. 78	1168.4	1157.34	1166.13	1168.4 1157.34 1166.13 1165.56 1164.11	=======================================	
8-	1	1168.83	1168.9	1168.9 1168.84 1169.54		1168.75	1169.22		1168.92	1173.42	1172.36	1170.2	1169.28	1170.2 1169.28 1167.42 1166.62		1161.42 1164.51		1161.89
6-1	!	1168.59	1168.59 1168.85 1168.51	1168.51	1168.90	1168	1170.16	1	1173.96	1173.31	1172.51	1170.65	1169.61	1167.14 1162.56		1166.19 1165.01		1163.36
Note: Al	Note: All elevations from assumed datum of 1190 ft at U.S.G.S.	ns from a	ssumed da	tum of 11'	90 ft at (mell ct-22	•										

TABLE A6 WATER QUALITY TABLE: MONITORING WELLS SNITH 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 1	1/26	12/3	12/11	3/12	4/16	4/30	5/14	5/28	6/11	6/25	7/9	7/23	8/6
MH-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
NH- 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
√ ₩-20																	
) Trichloroethene						20	24	24	15	20	24	23	28	28	28	31	38
T-1,2-Dichloroethene						7	9	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1
i, i, i-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		TRACE	{1	(1	(1	(1	(1	(1	(1
Tetrachloroetheme					_	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1	5
MI- 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
MH-4S															•		
Trichloroethene						(1	(1 (.	7 2	TRACE	_		TRAC	E 1	TRACE	2	(1	(1
T-1,2-Dichloroethe ne				_		· {1		(1		••		{1	(1	(1	(1	(1	(1
1,1,1-Trichloroethane				-		(1		(1				(1	(1	(1	(1	(1	(1
Chloroform						· (1	(1	(1	(1	2	(1	(5	(10	(10	(5	(5	(5
MH-4D																	
Trichloroethene			-				(1 (.			TRACE		-	i	2	2	1	TRACE
T-1,2-Dichloroethene						· (1								(1	{1	(1	(1
1, 1, 1-Trichloroethane						· (1		(1	TRACE			(1	(1	(1	⟨1	(1	(1
Chloroform						· (1	. (1	(1	4	. 2	: (1	(5	{10	(10	(5	(5	(5

⁻ Analysis by OBG Laboratories Inc.

⁻ 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
MH-5S																	
Trichloroetheme						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
MH-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	(i	TRACE	(1	(1	{1	⟨1	(1	(1	(1
Chloroform						(1	(1	(1	(1	2	(1	⟨5	(10	(1	(5	(5	(5
MJ-6																	
Trichloroetheme							240	270	190		120		200		64		28
T-1,2-Dichloroethene							6	(1	(10		(5		(5		(1		(10
1,1,1-Trichloroethame							8	2	(10		(5		(5		(1		(10
Chloroform							3	2			(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
16H-7																	
Trichloroethene							36	290 (610/600)	700		31		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
161-8																	
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		. (·	(10		(10
Chloroform							29	10	(10		(20		(50) 	(5		(10
M- 9																	
Trichloroethene							6	4	8		5		1504		6		5
T-1,2-Dichloroethene							(1	(1			(1		. (5		(1		(1
1, 1, 1-Trichloroethane							(1	(1	(1		(1		((1		(1
Chloroform							(1	(1	(1		(1		(50		(5		(1

^{4 -} Analysis by OBG Laboratories Inc.

Analytical Results in PPB

Analyzed using EPA methods 601 & 602

^{5 -} Analysis by Upstate Laboratories, Inc

[^] Sample split with MYSDEC Wells probably switched

All other parameters below detection limits

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

	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	2/5	2/12	3/13	4/16	4/23	4/30	5/7	5/14	6/4	6/11	6/18	6/25	7/2	8/6	8/13
Process Well #1															
Trichloroethene	2	5	4	4	- 2	i	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	(i	1	(1	(1	(1	. 1	(1	(1 T	RACE	(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-Dichloroeth ene	(1	(1	(1	(1	{1	(1	(1	(1	(1	(1	(1	(1	(1	(1	(1
1,1,1-Trichloroethame	(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		i	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	i	i	(1	1	TRACE	(1	(1	TRACE	TROCE						
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 -} Amalysis by New York State Department of Health

Analytical results in ppb

All others below detection limits

Analyzed using EPA method 601 & 602

^{2 -} Analysis by New York State Department of Environmental Conservation

^{3 -} Analysis by Cortland County Health Department

^{4 -} Amalysis by OBG Laboratories, Inc.

^{5 -} Amalysis by Upstate Laboratories, Inc.

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

	1 9/15	2 9/19 9/	3 /23	3 9/24 :	4 10/15	5 10/23	5 10/30	5 10/31	5 11/7	5 11/20	5 11/26	5 12/4	5 12/11	5 12/24	5 1/2	5 1/15	5 1/22	5 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-Trichloroethame	(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	,	2	TRACE		,	
T-1,2-Dichloroethene	(1					(1	(1		(1	(1	(1	(1	3 (1	(1	(1	. 4 (1	6 (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	\1 \5	(1	(1
Browodichloromethane	a					(1	(1		(1	(1	(1	(1	(1	(1	(1	(1	(1	(1
Lagoon Water																		
Trichloroethene		5					,		14		14	,,	TRACE	T0000	,,			
T-1,2-Dichloroethene		(1					3 (1	1 (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	
Chloroform		(1					(1	(1	(1	(1	(5	(5		(1	(1	(5	(1	(1
G1101 0101 m		٠.					11	11	11	14	13	13	11	11	/1	/J	11	11
Outfall from Lagoon																		
Trichloroethene		22		_			4		3	4	(i	(1	TRACE	(1	(1	TRACE	TRACE	(1
T-1,2-Dichloroethene		(1					(1		₹1	(1	(1	(1	(1	{1	(1	(1	(1	(1
i, i, i-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

Analytical results in ppb

^{2 -} Analysis by New York State Department of Environmental Conservation

^{3 -} Analysis by Cortland County Health Department

^{4 -} Analysis by OBG Laboratories, Inc.

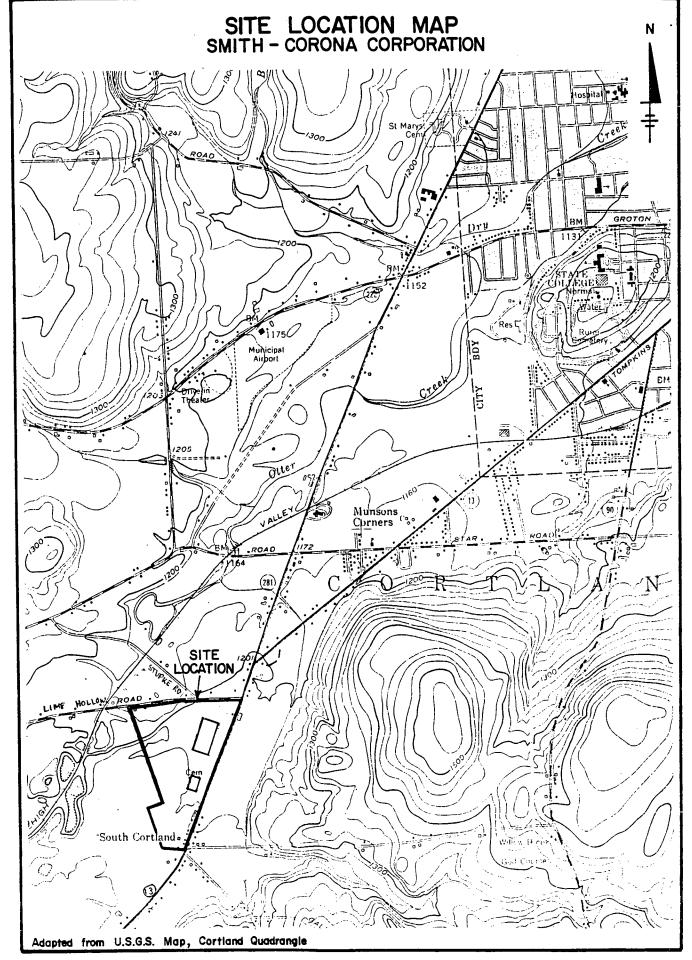
^{5 -} Analysis by Upstate Laboratories, Inc.

All others below detection limits

Analyzed using EPA method 601 & 602

Figures

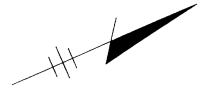






SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

SITE PLAN



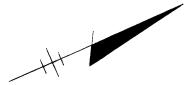
- LEGEND
- USGS OBSERVATION WELL
- → MONITORING WELLS
- PROPERTY LINE

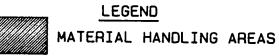


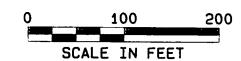


SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

SITE USE MAP



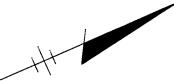






SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

SOIL SAMPLING



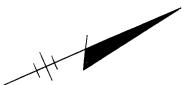
- AREAS OF VISUAL SOIL
- → SOIL SAMPLE TRAVERSE AND SAMPLE LOCATION
- MISCELLANEOUS SOIL SAMPLES





SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

SURFACE SOIL SURVEY ANALYTICAL RESULTS

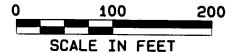


LEGEND

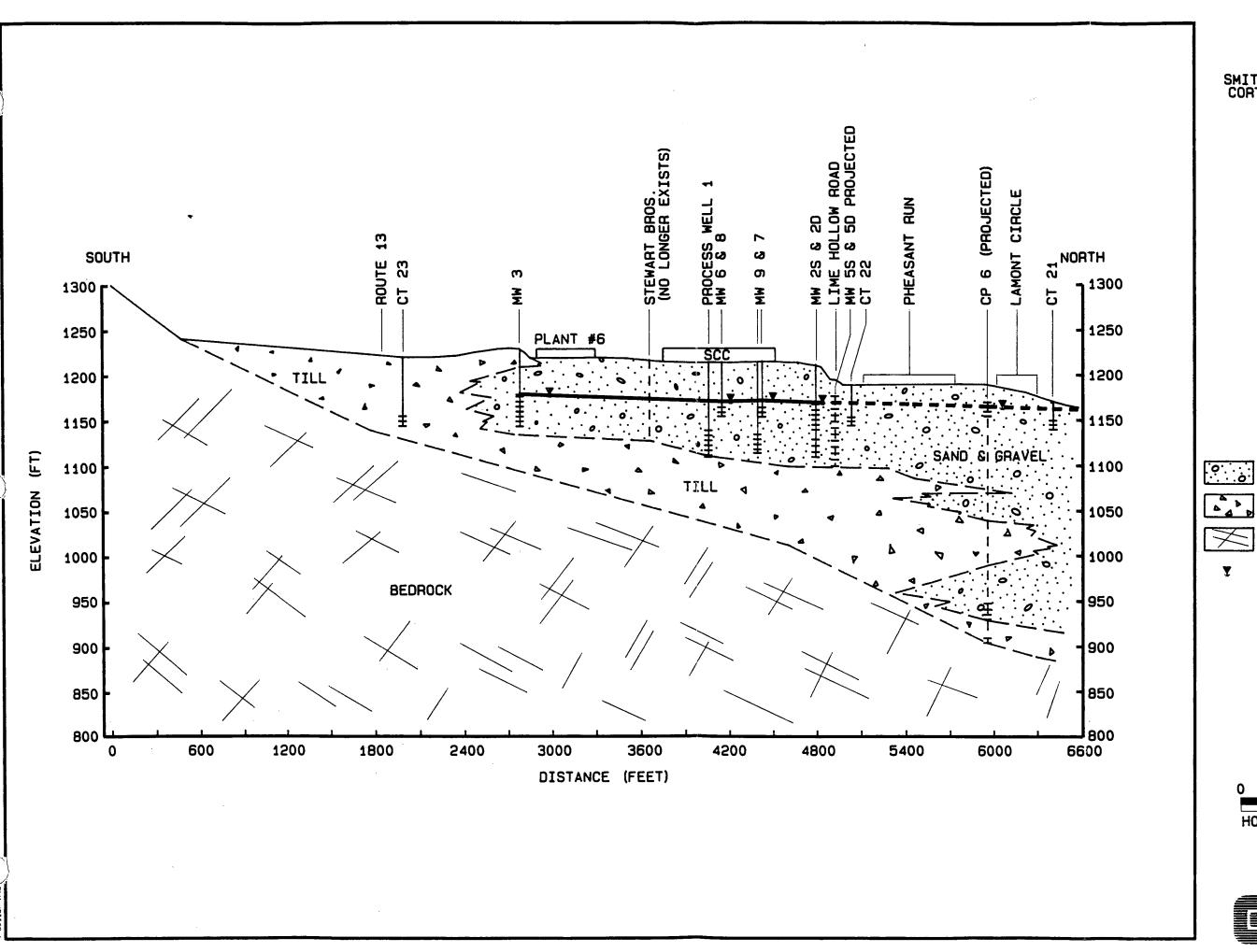
- ▲ LABORATORY SAMPLE
- 1 HNU (PPM)
- 2 DRAGER TUBE TCE (PPM)
- 3 TCE (MG/KG)
- 4 T, 1, 2, DCE (MG/KG)
- 1. 1. 1. TCA (MG/KG)
- 6 CHLOROFORM (MG/KG)
- 7 VINYL CHLORIDE (MG/KG)
- 3 XYLENE (MG/KG)
- ETHYLBENZENE (MG/KG)



TEST BORING







SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

HYDROGEOLOGIC CROSS SECTION

LEGEND

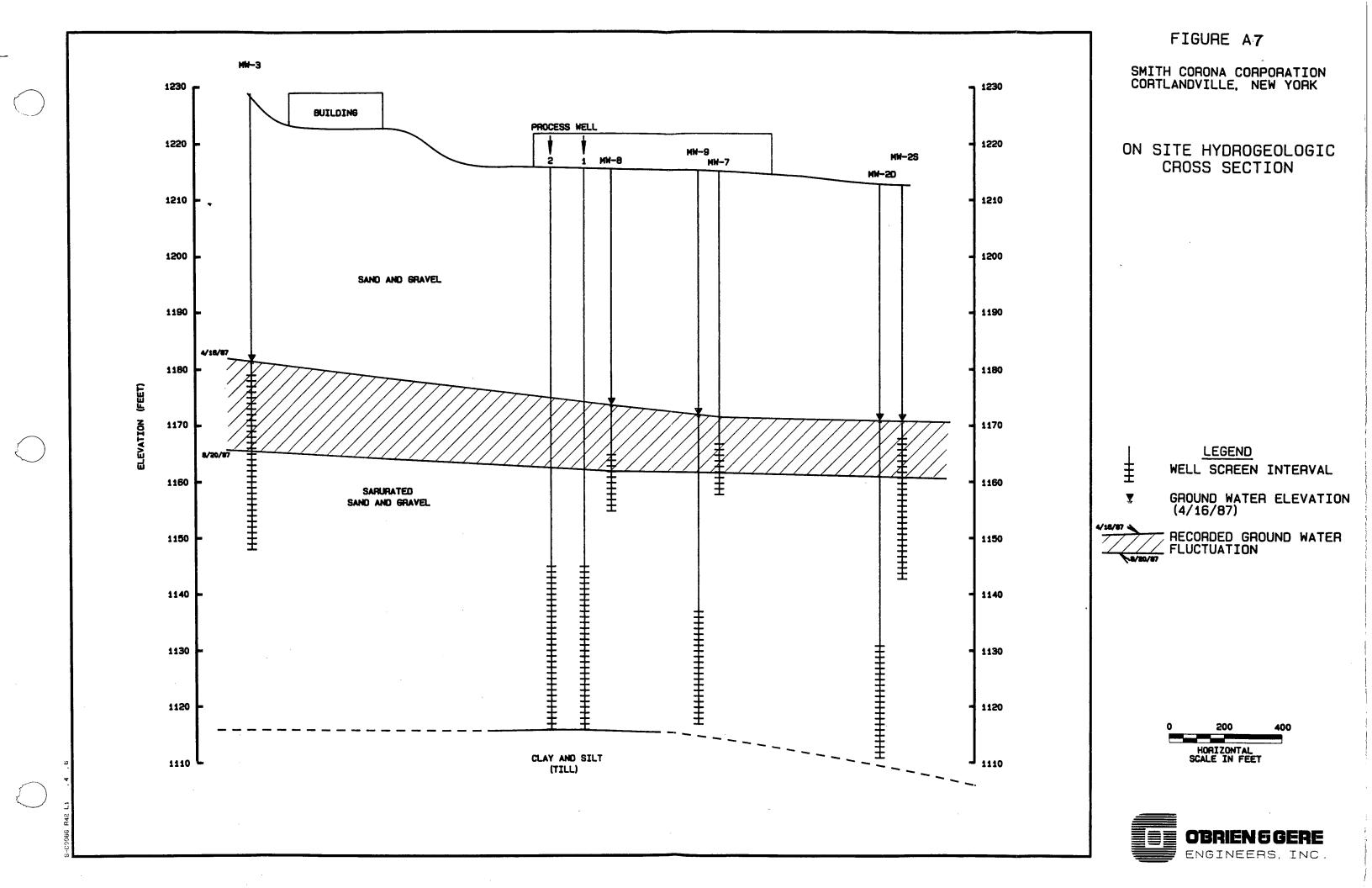
SAND AND GRAVEL

BEDROCK

TYP. GROUND WATER ELEV.

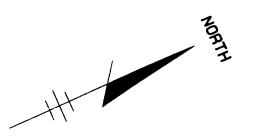
300 600 HORIZ. SCALE IN FEET





SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

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

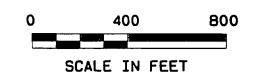


- <u>LEGEND</u>

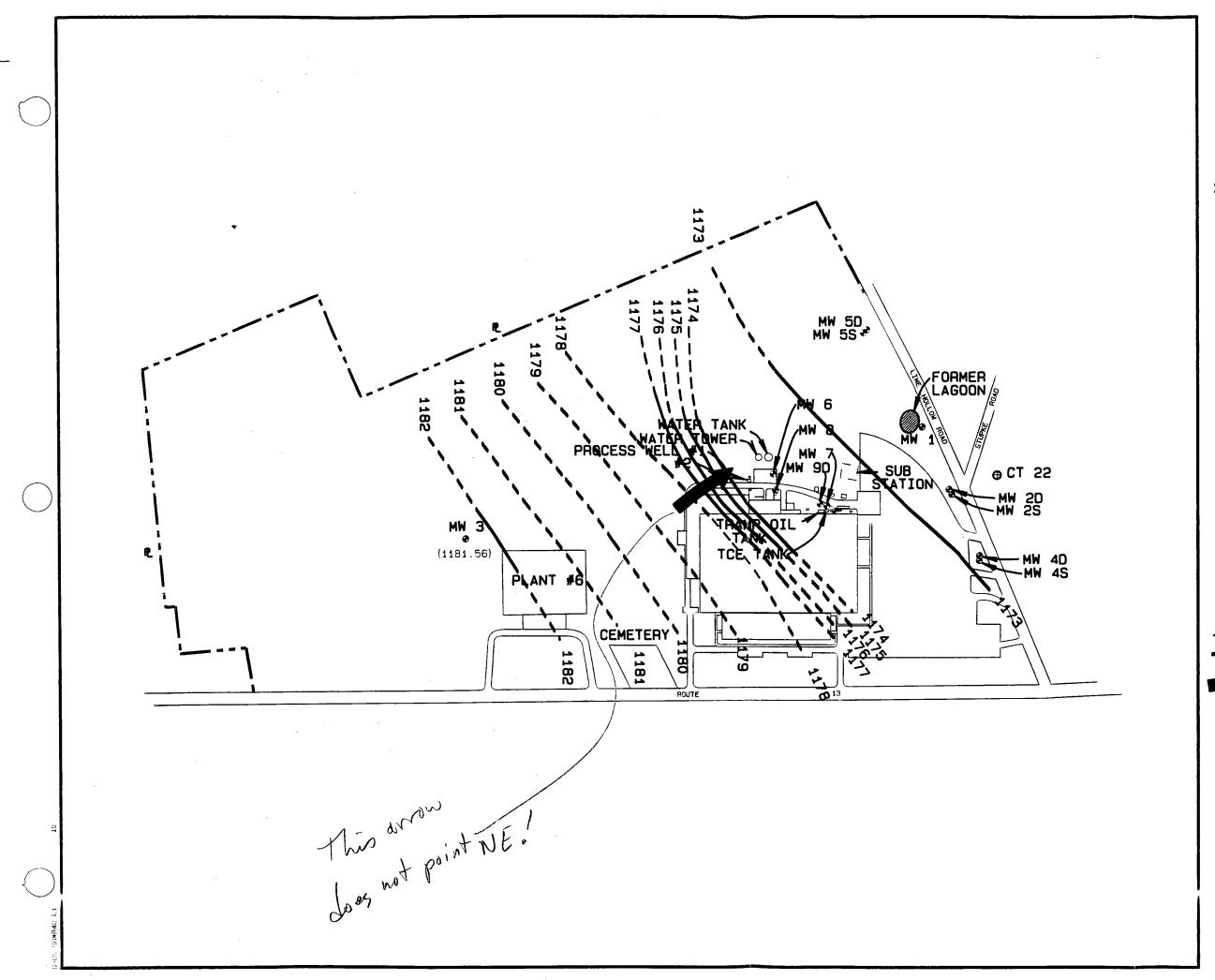
 USGS OBSERVATION WELL
- ◆ MONITORING WELLS
- PROPERTY LINE

- EQUIPOTENTIAL LINE

GROUND WATER FLOW DIRECTION

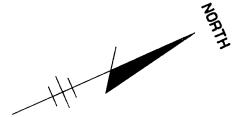






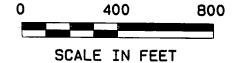
SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

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



- USGS OBSERVATION WELL
- MONITORING WELLS
- U.S.G.S. OBSERVATION WELL
- EQUIPOTENTIAL LINE

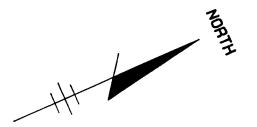






SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

SHALLOW GROUND WATER FLOW DIRECTION 8/20/87



LEGEND

- USGS OBSERVATION WELL
- → MONITORING WELLS
- PROPERTY LINE

- EQUIPOTENTIAL LINE

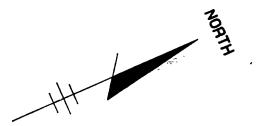
GROUND WATER FLOW DIRECTION

0 400 800
SCALE IN FEET



SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

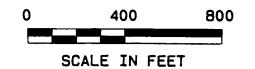
DEEP GROUND WATER FLOW DIRECTION 8/20/87



LEGEND

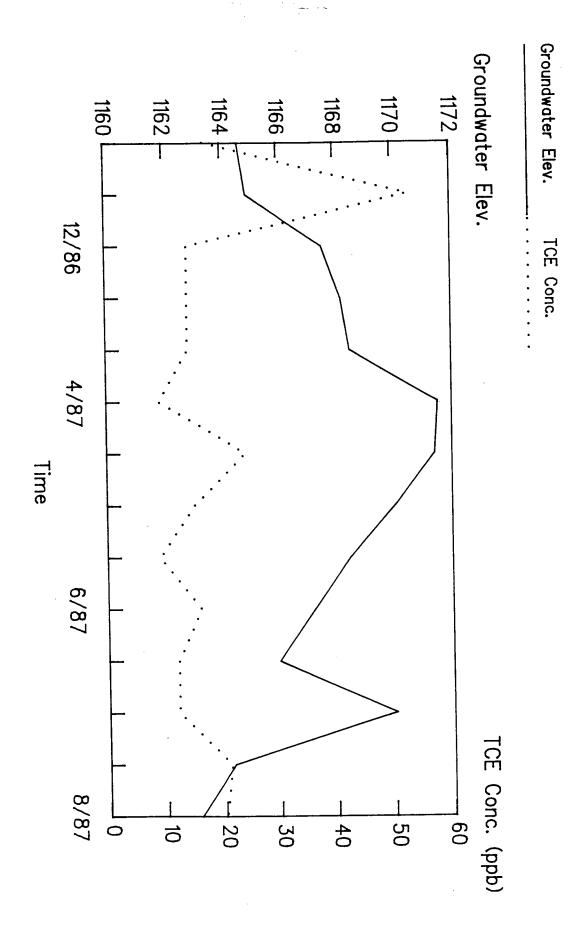
- ⊕ USGS OBSERVATION WELL
- **♦** MONITORING WELLS
- PROPERTY LINE

- EQUIPOTENTIAL LINE





GROUNDWATER ELEV. AND TCE CONC. VS. TIME SMITH CORONA WELL 2S



GROUNDWATER ELEV. AND TCE CONC. VS. TIME SMITH CORONA MW-2D

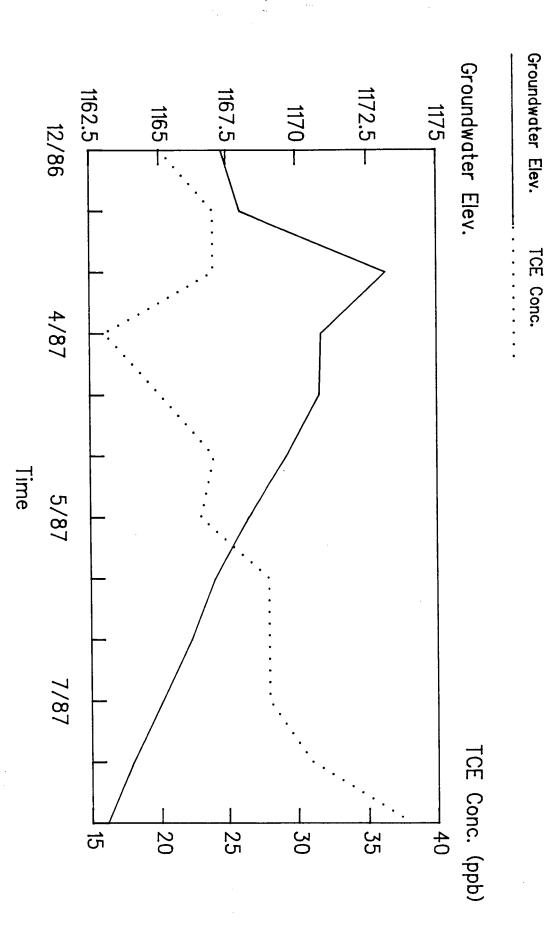
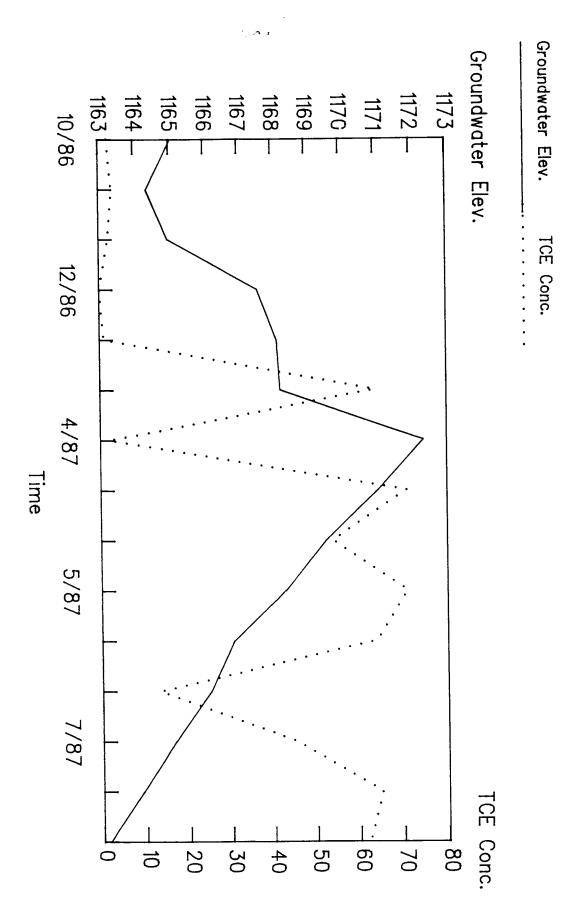


Figure A14

GROUNDWATER ELEV. AND TCE VS. TIME SMITH CORONA MW-1



PRECIPITATION AND TCE VS. TIME SMITH CORONA MW-1

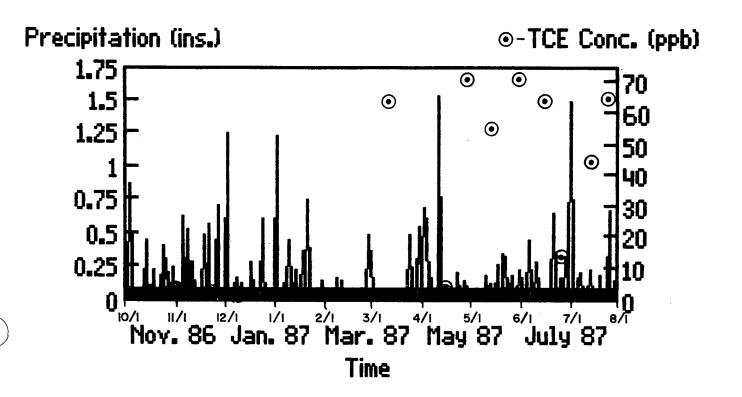
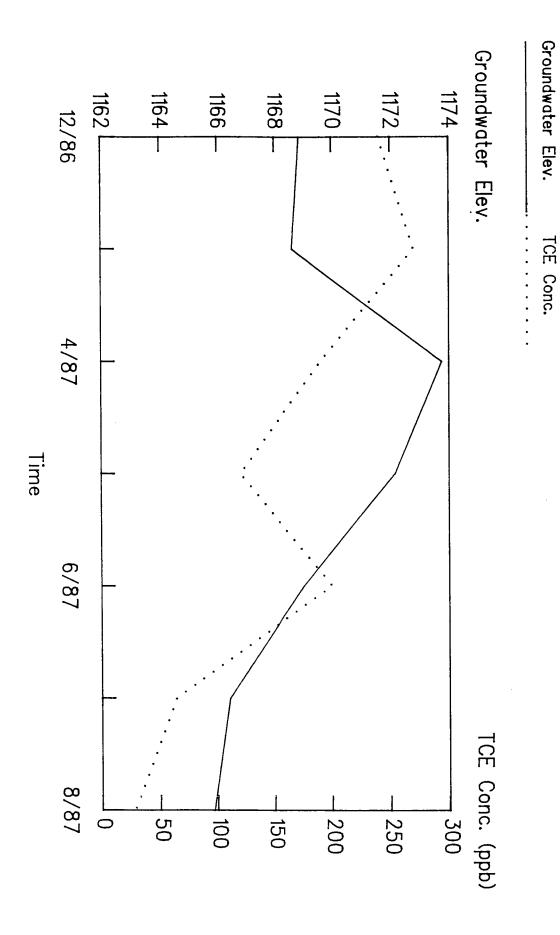
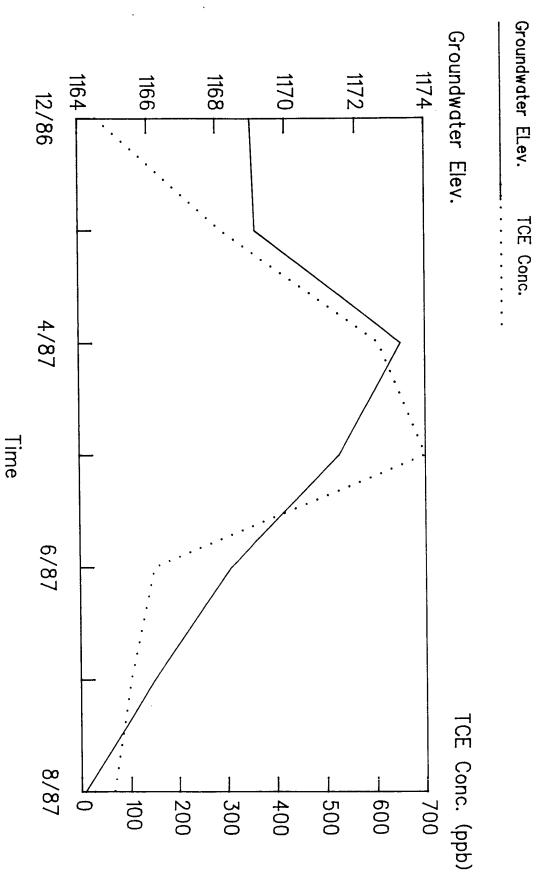


Figure A16

GROUNDWATER ELEV. AND TCE CONC. VS. TIME SMITH CORONA MW-6



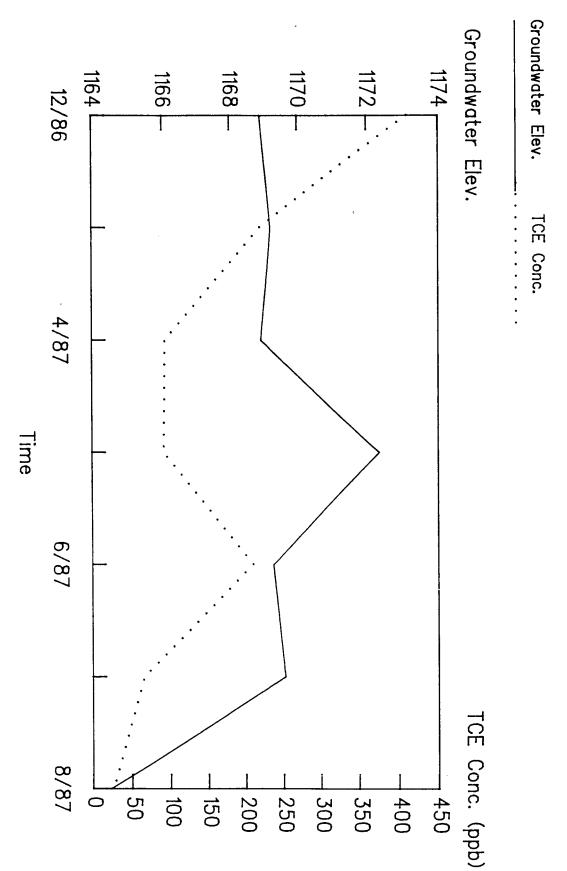
GROUNDWATER ELEV. AND TCE CONC. VS. TIME SMITH CORONA MW-7



--5

Figure A18

GROUNDWATER ELEV. AND TCE CONC. VS. TIME SMITH CORONA MW-8



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 in entropy and nippled fitting were noted. The tank was installed in 1971 by SCC since 3'% and used until 1980 to store waste cutting oil. In general, the condition 2'% of the tank was good with no visible signs of holes or stress cracks. $126'\% \times \frac{31.1}{12}\%$ The only signs of rust or corrosion were at the top of the tank.

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 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

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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 CECOS soil were removed by Ceees International, Inc. Upon testing, Ceces 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 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 reroute 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



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

LOCATION	(PPM)			(PPB)		
	0 & G	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

0 & 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

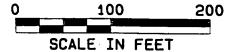


SMITH CORONA CORPORATION CORTLANDVILLE, NEW YORK

LIMITS OF



AREA OF SOIL REMOVAL (AVE. DEPTH OF EXCAVATION)





ATTACHMENT A1

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ATTACHMENT 2

Analytical Data



CLIENT SMITH CORONA CORPO	RATION		_JOB NO. 2114.003.517
DESCRIPTION #1			
	ed as ug/kg wet i	weight	
SAMPLE NO. A3697 DATE COLL	ECTED	DATE REC'D. 9-30-86	DATE ANALYZED 10-1-86
	ppb		ррь
Oppomentation of	and Anne	t-1,3-Dichloropropene	<100.
Bromomethane		องส์เกิดเกิดที่ดีก็สำคัญ	的,并不是1994年的 , 是1995年
างกับเลยเลี้ยงสามา	7. 1. 5. 6 1. 28 11. 1	Benzene	<100.
Chloroethane		and the state of t	
ลสุรัติเกรโลยุจุลกับสังใช	GENERAL TRANSPORT	1,1,2-Trichloroethane	
1,1-Dichloroethene		This distriction	
e enparte en ar a		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		resigned grants and selection	
- one hours and		1,1,2,2-Tetrachloroethar	ne <100.
1,2-Dichloroethane		Stancian Chineses	
STATE STATE OF THE		Toluene	
Carbon tetrachloride		enperacolation	
अनुकारका माधाना संस्कृत		Ethylbenzene	
1,2-Dichloropropane	V	TWO DESCRIPTION	三世 经基本
		Freen 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: Classification of the Control of the Co



CLIENT SMITH CORONA CORPORATION	<u> </u>		_JOB NO2114.	003.517
DESCRIPTION #3				
Results reported as	ug/kg wet w	veight		
SAMPLE NO. A3699 DATE COLLECTED		DATE REC'D. 9-30-86	_DATE ANALYZED	10-1-86
	ppb			ррь
Consideration and the first first first	KANDEN VES	t-1,3-Dichloropropene	<1	00.
Bromomethane		is consideration as	handelik.	122 27 6 29
Coupe our les services de la company de la c		Benzene		
Chloroethane		्राहरकात्वानस्य विद्या		
Pantaurite artilogota (1996)		1,1,2-Trichloroethane		
1,1-Dichloroethene		and applications are	encyle.	Na Company
and the second second second		2-Chloroethylvinyl ether	r <10	000.
t-1,2-Dichloroethene		estimatelyings		
ercological established		1,1,2,2-Tetrachloroetha	ne <	100.
1,2-Dichloroethane		eat regulation of the		deregation
A STATE OF THE STA		Toluene		
Carbon tetrachloride		and property of	a er en	45751256
) La destinations con qualities (1995) in 1995		Ethylbenzene		Ţ
1,2-Dichloropropane	V			
		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

Authorized: October 16, 1986

Date: October 16, 1986



CLIENT SMITH CORONA COR	PORATION		_JOB NO2114.003.517
DESCRIPTION #2			
Results repo	rted as ug/kg wet	weight	
SAMPLE NO. A3698 DATE CO	LLECTED	DATE REC'D. 9-30-86	DATE ANALYZED 10-1-86
	ррь		ррь
i. Ajhroninisky veres i sistemis	£ (6]97000	t-1,3-Dichloropropene	<1000.
Bromomethane		Security in house	AND THE PROPERTY OF THE PARTY O
cyclipratical contents and the	5° 6' 5' 4 - 15 - 5' 5' 5' 5'	Benzene	<100.
Chloroethane		4. Phiome introduction	and the Company of the Company
Morphotes notices 200	A STEEL BOOK BOOK LOSS	1,1,2-Trichloroethane	
1,1-Dichloroethene		and said the control of the	
Tradication of the		2-Chloroethylvinyl ethe	r
t-1,2-Dichloroethene	8500.	Astrophicities of the section	
Zungtiginet street (1) teles		1,1,2,2-Tetrachloroetha	ne <100.
1,2-Dichloroethane		Serennia menses	
Particulation and Constitution		Toluene	
Carbon tetrachloride		Activition profession (at vice and a second
Property Complete Comment	in the state of th	Ethylbenzene	750.
1,2-Dichloropropane	<1000.	TANDATE FOR THE	na tha na maile an
		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: October 16, 1986



CLIENT SMITH CORONA CO	RPORATION	JOB	NO. 2114.003.517
DESCRIPTION #4			
	orted as ug/kg wet	weight	
4.07.00	OLLECTED		E ANALYZED 10-1-86
	ppb		ppb
of the matrix of the last of the		t-1,3-Dichloropropene	<100.
Bromomethane	<100.	editation in the seasters.	A STATE OF THE STA
comacinities as a second	Section 1980	Benzene	<100.
Chloroethane	<100.	And Consideration of the below of	
Copyright and distributed as a second		1,1,2-Trichloroethane	
1,1-Dichloroethene		activity of the first transfer	
Contraction of the	**	2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	27,000.		and the second
า หลุ่งเหตุการการ การ (1.2 ค.ศ.) เกาะสาราชการการการการการการการการการการการการการก		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane	<100.	TELLERIO COLCUPTO SECURIO	
and the second second		Toluene	
Carbon tetrachloride		anicus in the later see	
		Ethylbenzene	1200.
1,2-Dichloropropane		-Victoria	SAMORES DESIGN
		Freen 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: CMUTH

Date: October 16, 1986



CLIENT SMITH CORONA C	ORPORATION		JOB NO	2114.003.517
DESCRIPTION #5	~		· · · · · · · · · · · · · · · · · · 	
Results repo	rted as ug/kg wet	weight		
SAMPLE NO. A3701 DATE CO	LLECTED	_DATE REC'D. 9-30-86	_DATE ANAL	YZED 10-1-86
	ppb			ррь
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Bromomethane		safeightors upplease and		
Gregord 25, 25, 25, 25, 25, 25, 25, 25, 25, 25,		Benzene		
Chloroethane		Maynor to conquer		
audinging emparties as a	rama, ne ila	1,1,2-Trichloroethane		
1,1-Dichloroethene		(4 Kamphodalogic)	1707205	40年3月2日本
The state of the s		2-Chloroethylvinyl ethe	r .	<10,000.
t-1,2-Dichloroethene	2900.	agreement of the		anamine de de
william in the	the consequition of	1,1,2,2-Tetrachioroetha	ne	<1000.
1,2-Dichloroethane	<1000.	and the consideration of the	egether a so	
can it made 6 that still a resident		Toluene		**
Carbon tetrachloride	<1000.	នីទីតំបែលចំណ្រែស្រីការ ។		Children Dates a
Carrent Chinard China to Carre		Ethylbenzene		**
1,2-Dichloropropane		entropies in the first	142-3 (6) X	e dimentalis.
		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: October 16, 1986



CLIENT	SMITH COR	ONA CORPORATION			_JOB NO2114.	.003.517
DESCRIPTION	# 6					
	Resu1	ts reported as u	g/kg wet	weight		
SAMPLE NO.	A3702	DATE COLLECTED	-	DATE REC'D. 9-30-86	DATE ANALYZED	10-1-86
			ppb			ррь
atopieson.		The Control Section	30 1 2 2 2 2 3 3 A	t-1,3-Dichloropropene	· <	100.
`Bromome	thane			द्वानितान्त्र तिवा ४६ ४ हेन		The Sale
SALING SILE	direction.			Benzene	ζ'	100.
Chloroeth	nane			, telline alembining unit	be to see a	
- Manipoli	vialities 2.		图标识别	1,1,2-Trichloroethane		1
1,1-Dichle	oroethene			ત્યાન જ ઉત્તાર હો છે. જો છે છે છે છે છે છે		
\$25:Cill	Pice Pyring			2-Chloroethylvinyl ethe	r <10	000.
t-1,2-Dich	nloroethene			5.30 (\$4.74.3)		10.000
1000	4.3			1,1,2,2-Tetrachloroetha	ne <	100.
1,2-Dichle	oroethane			Fifteente contracts.		10 TO
· · · · · · · · · · · · · · · · · · ·	unice di terr	A Section States		Toluene	- · · · · · · · · · · · · · · · · · · ·	
Carbon te	etrachloride			Soulferenthy integral	and your specific	ALC: N
1. 5-16-111e'-11	algheighthi			Ethylbenzene		170.
1,2-Dichle	oropropane		V			ng Fisher
				Freen 113	<	100

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 69%

2-Bromo-1-chloropropane = 71%

Trifluorotoluene = 68%

Authorized: ____

te: <u>October 16, 1986</u>



CLIENT	SMITH COF	RONA CORPORATION	!	, , , , , , , , , , , , , , , , , , ,	_JOB NO211	4.003.517
DESCRIPTIO						
D2001111 110		ts reported as	ug/kg wet	weight		
SAMPLE NO.		DATE COLLECTED _	_	_DATE REC'D. 9-30-86	DATE ANALYZE	10-1-86
			ppb			ppb
Statio on			iogijes	t-1,3-Dichloropropene		<100.
Bromom	ethane			Partition grading and a second		
astronia.	of Contract			Benzene	,	
Chloroet	hane			્રક્રા ફિલ્લામાં આવેલા છે.		44 (4. 44 (A)
a Majavio	alicantendinasi		7.30	1,1,2-Trichloroethane		
1,1-Dich	loroethene		<100.	we residuoid abis.		
्रक्ति में जीवे	erentinees			2-Chloroethylvinyl ethe	r <	1000.
t-1,2-Dic	hloroethene			A Transfer and the		ering en S
en die	1.5474			1,1,2,2-Tetrachloroetha	ne	<100.
1,2-Dich	loroethane	ang terser som me <u>s</u> ngapakan ang m <u>a</u>		Soleonois lichters		The Party
The Park				Toluene		
Carbon	tetrachloride	dill a man language de Nierka gere en de		of District Control		1/4
	gile culting			Ethylbenzene		350.
C-60 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	loropropane	office the second secon		on'National Section		Well and the Second
				Freon 113		<100.

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 73%

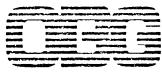
2-Bromo-1-chloropropane = 87%

Trifluorotoluene = 89%

Authorized: ONATA

Date: October 16, 1986

DRIVENIA? Bulding 5mith Cocom Berler Nock



LABORATORIES, INC. CHAIN OF CUSTODY RECORD

URYEY				SAN	IPLER!	S: ¡Sign	sturej				
Smith	h Corona - Cortlandville				Duy MPIET	<u> </u> &	wen	sen			
NOITATZ RBBMUH	STATION LOCATION	31A0	TIME	We	MPLETY ITET Gross.	SOIL	SEQ. NO.	NO. OF CONTAINERS		AHALYSI BEQUIRE	
A	opposite compressor room	10/30/86			ļ	/	1	2	VH	0+1	BTX
ß	n n	11				1	2	2			lartin or
С	Near woste bins	11				/	3	2	6,	Swen	son
D	near belongiound trink	11				/	4	2		···	
٤	TCE tank	-				/	5	2			
F	Manhole Sediment	11				/	6	2			
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	ihed by: Isignoviel Ly Swenson		Recei	ved by	/: (Sigm	nurej				Date	/Time
	shed by: (Signatural		Received by: Islamires						Date	/Time	
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Relinqui	shed by: (signatura)			ved by sis: (sig		il e Lat	orato	ory for field		Date	/Time
Dispatch	sed by: (Signature)	Date	Time	Reco	ivad	for to	potal	ory by:		Date	Time
Merhod	of Shipment:				JA.	in	VIZY	Vandy	ng (ي رن ر	16 O.C



CLIENT O'BRIEN & GERE ENGINEERS, INC.		JOB NO. 3435.001.100		
DESCRIPTION Nixon-Hargrave (2410.010	.130), SCM Progra	m, Opposite Compressor	Room A	
SAMPLE NO. D1223 DATE COLLECTED 1)-30-86 DATE REC'D.	10-31-86 DATE ANALYZE	n 11-3-86	
р	pb		ррь	
Colorometranes	A. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10		(100.	
Bromomethane	# Onlow	Shore - Tape and the		
Vinyl chionde	Benzene			
Chloroethane	= Dio omo	dolonen ne market in the		
*Nejtovjene ontoride	1,1,2-Tric	hloroethane		
1,1-Dichloroethene	ve se	iling to the way to the		
####Dichio comane # 2 1 1 1 1 1	2-Chloro	ethylvinyl ether <	1000.	
t-1,2-Dichloroethene	13)00000	ūt i said said said said said said said sa	0000 77 78 8	
#Guioloume:	1,1,2,2-Te	etrachloroethane	<100.	
1,2-Dichloroethane	in the state of th	ionitina a servicio de	aligen every in	
aremeniculos marce	Toluene	<	1000.	
Carbon tetrachloride	Manager of the state of the sta	Papital Cale Color	em second	
Econominate - 4-18-18-18-18-18-18-18-18-18-18-18-18-18-	Ethylben	zene <	1000.	
1,2-Dichloropropane	- XVIenes		iono sie de la company	

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

Comments:

SURROGATE RECOVERIES:

= 72% **Bromochloromethane**

2-Bromo-1-chloropropane = 81%

Trifluorotoluene = 94%

Authorized:

December 3, 1986



CLIENT O'BRIEN & GERE ENGINEERS, INC.				
DESCRIPTION Nixon-Hargrave (2410.010.130), SC	M Program, Opposite Compressor Room B			
SAMPLE NO. D1224 DATE COLLECTED 10-30-86 D	ATE REC'D. 10-31-86 DATE ANALYZED 11-3-86			
ррь	ррь			
Conformations	t-1,3-Dichloropropene <100.			
Bromomethane	■ Trichioroethene			
#Viny/schloride	Benzene			
Chloroethane	Application of the proposition o			
A NeinyienGehlondov — September 1991	1,1,2-Trichloroethane			
1,1-Dichloroethene	A PERPENIOR OF THE PERPENIES.			
#anaplonoreances C	2-Chloroethylvinyl ether <1000.			
t-1,2-Dichloroethene	adionomic of the second of the second			
Religion and the second of the	1,1,2,2-Tetrachloroethane <100.			
1,2-Dichloroethane	rualicialistication personal description and the second			
#2 Kir i i i i dido del penero e e e e e e e e e e e e e e e e e e	Toluene <1000.			
Carbon tetrachloride	Selicopius de la company de la			
#150mocleuloonellenesses #	Ethylbenzene <1000.			
1,2-Dichloropropane	White the second			

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 85% 2-Bromo-1-chloropropane = 79%

Trifluorotoluene = 84%

Authorized: December 3, 1986



CLIENT O'BRIEN & GERE ENGINEERS, INC.	JOB NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Prog	ram, Near Waste Bin C
SAMPLE NO. D1225 DATE COLLECTED 10-30-86 DATE RE	C'D. 10-31-86 DATE ANALYZED 11-3-86
ррь	ррь
	Dichloropropene <100.
Bromomethane	oregination and the second of the second
Niny[chlorida] Benze	ene
Chloroethane	mostic for contains a series of the series o
Methylepezenopide 1,1,2-	Trichloroethane
1,1-Dichloroethene	elegible of godeness and the second s
- 1) - Dichio joethane - 2-Chi	oroethylvinyl ether <1000.
t-1,2-Dichloroethene	ര്ക്ക് - ? - പ്രാം പ്രാം പ്രാം പ്രാം പ്രാം പ്ര
	2-Tetrachloroethane <100.
1,2-Dichloroethane	gricioalifaciae e se a come extens e great
Tolue	
Carbon tetrachloride gijo	Openion of the Airly of the Airly
Bromodicinorome hanes Ethyl	benzene <1000.
1,2-Dichloropropane	And are a second

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 58%

2-Bromo-1-chloropropane = 64%

Trifluorotoluene = 90%

> Authorized: December 3, 1986

Date:_



CLIENT O'BRIEN & GERE ENGINEERS,	INC.	JOI	B NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.0	010.130), S	CM Program, Near Below	Ground Tank D
SAMPLE NO. D1226 DATE COLLECTED	10-30-86	DATE REC'D. 10-31-86 DA	TE ANALYZED 11-3-86
	ppb		ppb
Saviological Case of the Samuel	emile s	t-1,3-Dichloropropene	<100.
Bromomethane		aritenoroathare	
Sylogical services		Benzene	
Chloroethane		#Elitioniogilorginginame - r	
Methylene chlorida - 2000		1,1,2-Trichloroethane	
1,1-Dichloroethene		न ्यामा मार्गामा (गुर्वेश (विकास	
% 就是到GillorociteTitle=14-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		weropoorge as very line	4000en
& Quiorottis Tr		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		and the property of the second	valuos sass
SAMPLE GOOD OF DEED AND THE SAMPLE OF THE SA		Toluene	<1000.
Carbon tetrachloride			
Seropodicalorometripia.		Ethylbenzene	<1000.
1,2-Dichloropropane		Dojejj Severa (* 2002)	anosza z

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 75%

2-Bromo-1-chloropropane = 81%

Trifluorotoluene = 93%

Authorized: December 3, 1986



CLIENT O'BRIEN & GERE ENGINEERS, INC.	
DESCRIPTION Nixon-Hargrave (2410.010.130), SCM Pr	rogram, TCE Tank E
SAMPLE NO. D1227 DATE COLLECTED 10-30-86 DATE	REC'D. 10-31-86 DATE ANALYZED 11-3-86
ppb	ppb
#1Phlotomethate to the fellow the	,3-Dichloropropene <100.
Bromomethane	Ginocolicine and the second second
WinVienlonda Be	enzene <100.
Chloroethane	of the control of the
##Actinylene on forides 1,1	,2-Trichloroethane
1,1-Dichloroethene	A STATE OF THE STA
	Chloroethylvinyl ether <1000.
t-1,2-Dichloroethene 2600	SWOOD STATE OF STATE
Contrological 1,1	1,2,2-Tetrachloroethane <100.
1,2-Dichloroethane	inconfiguration of the control of the configuration
	oluene <1000.
Carbon tetrachloride	inganismusia – postania reginina da i
Welloworich own them to the second of the se	hylbenzene <1000.
7. · · · · · · · · · · · · · · · · · · ·	ieno a compressione de la compre

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 75%

2-Bromo-1-chloropropane = 85%

Trifluorotoluene = 94%

Authorized: OMATA

Date: December 3, 1986



CLIENT O'BRIEN & GERE ENGINEERS,	INC.	·	JOB NO. <u>3435.001.100</u>
DESCRIPTION Nixon-Hargrave (2410.	010.130), S	CM 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
renominations.	tamin s	t-1,3-Dichloropropene	<100.
Bromomethane		en (Anocolinent)	
WANTA AUDIO OF STATE		Benzene	
Chloroethane		and the modification of the state of	
AND MOUNTAINED AND A STATE OF THE STATE OF T		1,1,2-Trichloroethane	
1,1-Dichloroethene		scales Dichloropropends	
-Figerdaloidelinam		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		· From deing = 70 + 75	
Zoniojojome, p		1,1,2,2-Tetrachloroethan	• <100.
1,2-Dichloroethane		ego e ellocente est	
THE TENNING COURSE THE TENNING THE		Toluene	£1,000.
Carbon tetrachloride		ะ ใหญ่งเมื่อรู้สหรัฐเลียง เมื่อสมัย	
Assicinosionicionentris (Sec. 3)		Ethylbenzene	<1000.
1,2-Dichloropropane	V	Popular Production	
		تتنف الفراوات واستجاب المساوات والمساوات	والمراقب والمراقب فيناه في المراقب

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 67%

2-Bromo-1-chloropropane = 71%

Trifluorotoluene = 68%

Authorized: December 3, 1986



CLIENT O'BRIEN & GERE ENGINEER	S, INC.	Jo	в NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (241)	0.010.130), SC	CM Program, Trip Blank	
SAMPLE NO. D1229 DATE COLLECT	ED 10-30-86	DATE REC'D. 10-31-86 DA	TE ANALYZED 11-4-86
	ppb		ppb
Chloromainane		t-1,3-Dichloropropene	<1.
Bromomethane		###feilogefjilliggel	
Winy chloride		Benzene	
Chloroethane		and interest of the second of the second	
#Meinylene onloade		1,1,2-Trichloroethane	
1,1-Dichloroethene		an enegongologones as	
Appropriate the second of the		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene		Asianologia e a residente e e e e e e e e e e e e e e e e e e	in the second
STORTION OF THE STORY OF THE ST		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane		Estregio ethnice e est	
so Nati Denoropopulati		Toluene	
Carbon tetrachloride		Tennostizat est est a	
section of the control of the contro		Ethylbenzene	
1,2-Dichloropropane	V	Set (DROS)	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 87% 2-Bromo-1-chloropropane = 87%

Trifluorotoluene = 94%

> Authorized: December 3, 1986

Date: _



O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY				SAMPLER	S: (Sign	rature)		
Nim	- Hurlagane: Con	undri	le	Piste	B	oacl	relys	. A.
STATION NUMBER	STATION LOCATION	DATE	TIME	SAMPLE 1' Water Come. Grab.	Soil with	SEQ. NO.	NO. OF	ANALYSIS
1+00	Tum 1	114186	11:00		V		氢十	See Bot
1+50			11125					Martin
1+79			11:35					4 VHO'S, E
1+124			11:45					tudes.
1+151			11:55					
1+228			12:05					
+286	\downarrow		13:30					
2+00	Transce &		13:30					•
2+41			13:45		1	1		
2+82			14:00		.		1	
2+124			14:16		7			
2+201	V		14:20		4		*	
Relinquishe	d by: (Signature)			ed by: (signor	urel	1	<u>_</u>	Date/Time
Relinquishe	d by: (Signature)		Receive	ed by: (signer	urel			Date/Time
0 - 1 1			•			<u> </u>		
Keiinquishe	d by: (Signatura)		Receive	ed by: (Signate	roj			Date/Time
Relinquishe	d by: (Signolure)		Receive analysi:	ed by Mobile S: (Signature)	labo	rator	y for field	Date/Time
Lete (by: signowed 5. Bazardy	Date/	Time 5:45	Received to	r Lab	ergtor	y by:	Date/Time 11/4/86 5:45
rethod of S	hipmens: Hand	dedine	red	1	ا ما		/	Same and the



O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY				,	RECORD		e e viger See di su
Wisher- Hard STATION	A / Ca.	** .		SAMPL	ERS: (Signar	urej	
STATION NUMBER STATION	LOCATION	•	Tille	Keti	Bayan 14PE	dus	
2,266 T		BIAO	TIME	Water Comp. Gra	Saus	EQ. NO. OF	ANALYSIS
3+00 Traver	4 -	11/4/86	14:30			Н	REQUIRED
3+42	2		14:60				
3+102	-		15:10				
3+146			16:10		ITT		
		4	15:25		V	1	
						+	
						+	
						 	i de la companya de l
							•
			1				
Religación			1	-			
Relinquished by: (signature)		Rec	aived b	Y: (Signature			
Relinquished by: (Signature)							Date/Time
		Reci	eived b	y: (\$1gnature)	-		1001/5
Relinquished by: (Signature)		Rece	ived by	: (Signature)			Date/Time
eilinquished by: (signowre)				,			Date/Time
		Recei	ived by isis: (sign	Mobile Lo	boratory	or field	
ched by: (Signature)	Dat	e/Time				•	Date/Time
ethod of Shipment:			Kecai	ved for La	boratory b	y:	Date/Time



CHAIN OF CUSTODY RECORD

1063

SURVEY				SAM	PLER	S: Sign	dlure)						•
Nuicon	Handgrane	Corleans	Luile	P	eti	<u>.</u> (-	, 1	Boo	æ	Sub	'	lank f	
NOITATE REMUN	STATION LOCATION	OATE	™€	SA Wo	MPLE IY Ier Grob.	Seil	SEQ. NO.	NO. CONTA	OF INERS		ANALYSE	<u></u>	nue_
4+00		11/5/86	9:00					4		5,,	Bod	- Ma	, r }.
4+27			9:10								س		,
4+78			4:20										,
4125			9130							Gu	~~~	0	
7+00			9135							Gy Ret	- R	- 0	~ /
7453			9 545									Swy	محس
<u></u>			9:55										
0.00			leim										
∂ #46			10:10										
8+66			10:15	!	Ť	+			_				
8+108			10:25			+		T	7 †	·			
8			10:30		i	V		<u>N</u>	\ \	· · · · · · · · · · · · · · · · · · ·			
Relinquished	d by: (Signature)		Receive	ed by:	(Signah	ure)					Date/	Time	
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Dispotched I	by: (Signatura)	Date/	Time	Receiv	ed to		protor	ry by:		11	Date/1	lime	
Mc of S	hipmens: Hand	delinere	0 +	10 K		\	VXAV	weg	 _	· /	2 1	13	



O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY				SAMP	PLERS	S: (Signe	itur o j			
STATION RESEMUN	STATION LOCATION	DATE	ĭIM€	SAM Wate Comp.		Se il	SEQ. NO.	NO. OF CONTAINERS	AMALYSI REQUIRE	is D
5+30		11 5 66	11720				-	4		
5+40			11:25					4		
5+108			11:35					4		
9+00			11545				·	4		
9+24			11:45					4		
9+46			1155	<u> </u>				4		
16+17			1:15			$\perp \parallel$		4		
6+50	<u> </u>		1:25					5.	· 	
6+78			1:35					4		
6+88			1:50					7		
64108			2:00					4		
64115		1.0	2:05	<u> </u>		4				
Relinquished	d by: (Signature)		Received by: (Signature)						Date	/Time
Relinquishe	d by: (Signature)		Receiv	ed by:	Date	/Time				
Relinquished by: (Signature)			Receiv	ed by:	Date	/Time				
Relinquished by: (Signature)		Receiv	red by 1 sis: (Signa	Mobil	le Lab	orato	ry for field	Date	/Time	
Dispatched	by: (Signature)	Date	/Time Received for Laboratory by:					Date	/Time	
)thod of S	ihipment:		<u> </u>	[······································		!



O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

SURVEY				SAMPLER:	S: (Sign	aturel		
NOITATE RESMUN	STATION LOCATION	DATE	ĭIM€	SAMPLE TY Water Comp. Grab.	Scil	5EQ. NO.	NO. OF	AMALYSIS REQUIRED
6+163		ulslac	2:15				5'	
6+188	· · · · · · · · · · · · · · · · · · ·		2120				4	
10+00			2:20				S,	
10+25			2:35				8	
10+54			3,00				4	
11+00			3110				41	-
14 20			3:20	1			4	
11+35	<u> </u>		3:25				4	
11+75	i		3130				4	
11+ 100			3:35				4	
Freed Be	ente methanol		3:45				1	
Fuel	aut Methinol Blank Water	4	3:45		V		1	
	ed by: (Signature)		Receiv	red by: (Signo	mure)		·	Date/Time
Relinquish	ed by: (Signature)		Receiv	red by: (sign	Date/Time			
Relinquished by: (Signature)		Receiv	ved by: (Sign	Date/Time				
Relinquished by: (Signature) Rece anal		Receiv	red by Mobi sis: (Signature)	ile Lat	porate	ory for field	Date/Time	
Dispatched	d by: (Signature)	Date	/Time	Received	Date/Time			
rhod.ot	Shipment:			1	· 			



CLIENT O'BRIEN & GERE ENG	INEERS, INC.	JOB	NO. 3435.001.100
DESCRIPTION Nixon-Hargrave	(2410.010.130), 5	CM Program, Site 1 + 50	
SAMPLE NO. D1349 DATE CO	LLECTED 11-4-86	DATE REC'D. 11-10-86 DAT	E ANALYZED 11-13-86
	ppb	•	ppb
Chloromethane	<100	t-1,3-Dichloropropene	<100.
Bromomethane	<100.	Trichloroethene	P21007
Vinyl chloride	1770 10	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	£ <1000.5
Chloroform	<1000	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane	<100.	Tetrachloroethene 17	
1.1. Trichloroethane		Toluene	
Carbon tetrachloride		Ghlorobenzene	
> 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%

Authorized: December 3, 1986



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. 11-10-8	6 DATE ANALYZED 11-13-86
PP	b	ppb
Chloromethane	t-1,3-Dichloroproper	ne <10.
Bromomethane	Trichloroethene	
Vinyl chloride	Benzene	
Chloroethane	Dibromochlorometh	ane
Methylene chloride	1,1,2-Trichloroethan	
1,1-Dichloroethene	c-1,3-Dichloroprope	ne
1,1-Dichloroethane	2-Chloroethylvinyl e	ther <100.
t-1,2-Dichloroethene	Bromoform -	₹100:
Chloroform	1,1,2,2-Tetrachloroe	thane <10.
1,2-Dichloroethane	Tetrachlordethéne	
1. 1 Frichioroethane	Toluene	
Carbon tetrachloride	Chiorobenzene	
Bromodichloromethane	Ethylbenzene	
1,2-Dichloropropane	Xylehea	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 95%

2-Bromo-1-chloropropane = 103%

Trifluorotoluene = 104%

Authorized: Authorized: Authorized:

OBG Laboratories, Inc.

Norombor 7 1086



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 11-4-8	5 DATE REC'D. 11-10-86 DATE ANALYZED 11-13-86
ррЬ	ррь
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
Chloroform	1,1,2,2-Tetrachloroethane <10.
1,2-Dichloroethane	letrachloroethene
ATTrichloroethanes	Toluene
Carbon tetrachloride	Chlorobenzene
Bromodichloromethane (1997)	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: December 3, 1986



CLIENT O'BRIEN & GERE ENGINEERS, INC.		JOB NO. <u>3435.001.100</u>	
DESCRIPTION Nixon-Hargrave (2410.01	0.130), S	CM Program, Site 2 +	- 00
SAMPLE NO. D1345 DATE COLLECTED	11-4-86	_DATE REC'D. 11-10-86	DATE ANALYZED 11-13-86
	ppb		ррь
Chloromethane	<10.	t-1,3-Dichloropropene	<10.
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane	ir da Villain, aliandan	Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	ing and the second s
1,1-Dichloroethene		c-1,3-Dichloropropene	
1,1-Dichloroethane		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene		Bromolorm + 7	
Chloroform		1,1,2,2-Tetrachloroethan	
1,2-Dichloroethane		Tetrachloroethene.	
113-Trichloroethane		Toluene	
Carbon tetrachloride		Chloropenzene	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane	J	Xylenes	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 85%

2-Bromo-1-chloropropane = 92%

Trifluorotoluene = 100%

Authorized: CNUTOUT

OBG Laboratories, Inc.
Roy 4942/1304 Buckley Bd /Syrocica NIV/13031//015\ 1571101

Necember 3. 1986



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 ANA ppb Chloromethane (100 t-1,3-Dichloropropene Bromomethane Trichloroethene Benzene Chloroethane Dibromochloromethane 1,1-Dichloroethene 1,1-2-Trichloroethane 1,1-Dichloropropene c-1,3-Dichloropropene	
Chloromethane C100 t-1,3-Dichloropropene Bromomethane Trichloroethene Vinyl chloride Benzene Chloroethane Dibromochloromethane Methylene chloride 1,1,2-Trichloroethane	
Chloromethane C100 t-1,3-Dichloropropene Bromomethane Trichloroethene Vinyl chloride Benzene Chloroethane Dibromochloromethane Methylene chloride 1,1,2-Trichloroethane	ALYZED 11-13-86
Bromomethane Vinyl chloride Chloroethane Methylene chloride Trichloroethene Benzene Dibromochloromethane 1,1,2-Trichloroethane	ppb
Vinyl chloride Benzene Chloroethane Dibromochloromethane Methylene chloride 1,1,2-Trichloroethane	<100.
Vinyl chloride Benzene Chloroethane Dibromochloromethane Methylene chloride 1,1,2-Trichloroethane	\$ 9 000
Methylene chloride 1,1,2-Trichloroethane	<100.
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 1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane Tetrachloroethene	
Toluene Toluene	
Carbon tetrachloride Chlorobenzene	
Bromodichioromethane 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: Control Authorized:

OBG Laboratories, Inc.



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	
Pi	ob .	ppb	
Chloromethane <	0 t-1,3-Dichloropropene	<10.	
Bromomethane	Trichloroethene		
Vinyl chloride	Benzene		
Chloroethane	Dibromochloromethane		
Methylene chloride	1,1,2-Trichloroethane		
1,1-Dichloroethene	ç-1,3-Dichloropropene		
1,1-Dichloroethane	2-Chloroethylvinyl ethe		
t-1,2-Dichloroethene	# Bromotorm = V = 100	\$2.55 (100°)	
Chloroform	1,1,2,2-Tetrachloroetha		
1,2-Dichloroethane	# Tetrachloroethene		
IN A Prichloroethane	Toluene		
Carbon tetrachloride	Chlorobenzene		
Bromodichloromethane	Ethylbenzene		
1,2-Dichloropropane	evlenes -		

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 88% 2-Bromo-1-chloropropane = 92%

Trifluorotoluene = 104%

Authorized: MUNA



CLIENT O'BRIEN & GERE ENGINEERS, INC.		јов no. <u>3435.0</u>	JOB NO. 3435.001.100	
DESCRIPTION Nixon-Hargrave (2410.010.130)), SCM Program, Si	te 3 + 102		
SAMPLE NO. D1354 DATE COLLECTED 11-5-	86 DATE REC'D. 11-1	0-86 DATE ANALYZED	11-14-86	
ррь		р	pb	
Chloromethane <1000	t-1,3-Dichloropro	opene <100	0.	
Bromomethane	Trichloroethene			
Vinyl chloride	Benzene		(((((((((((((((((((
Chloroethane	Dibromochlorom	ethane		
Methylene chloride	1,1,2-Trichloroet			
1,1-Dichloroethene	c-1,3-Dichloropr	pene		
1; 1-Dichloroethane	2-Chloroethylvin		Λ Π	
t-1,2-Dichloroethene	Bromoform	•		
Chloroform	1,1,2,2-Tetrachlo			
1,2-Dichloroethane	Tetrachloroather			
A An Arrichloroethane	Toluene			
Carbon tetrachloride	±			
Bromodichloromethane	Ethylbenzene			
1,2-Dichloropropane	Xylenes			
<u> </u>				

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 73%

2-Bromo-1-chloropropane = 69%

Trifluorotoluene = 85%

Authorized: December 3, 1986



CLIENT O'BRIEN & GERE ENGINE	ERS, INC.	JOB	NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2	410.010.130), SC	CM Program, Site 4 + 27	
SAMPLE NO. D1352 DATE COLLE	стер 11-5-86	DATE REC'D. 11-10-86 DAT	E ANALYZED 11-14-86
	ppb		ppb
Chloromethane	<1000	t-1,3-Dichloropropene	<10,000.
Bromomethane		Trichloroethene	TOTO TOTO
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.	Bromolo/n=15	
Chloroform	<1000	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		Tetrachloroethene	
Mi Errichioroethane		Toluene	
Carbon tetrachloride	CONTRACTOR AND ADDRESS OF THE PARTY OF THE P	Signotopenseine (1887)	
Bromodichloromethane (Ethylbenzene	
1,2-Dichloropropane	<10,000.	XVIenes	

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

Comments:

SURROGATE RECOVERIES:

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

Trifluorotoluene = 104%

Authorized: December 3, 1986



CLIENT O'BRIEN & GERE ENGINEERS, INC.	
DESCRIPTION Nixon-Hargrave (2410.010.130), S	CM Program, Site 5 + 108
SAMPLE NO. D1356 DATE COLLECTED 11-5-86	DATE REC'D. 11-10-86 DATE ANALYZED 11-14-86
ррь	ppb
#Onlognath notes and an area are realist to	t-1,3-Dichloropropene <10.
Bromomethane	Tricilopolitic (All Manuscript)
#A/ID/IE WOOD TO THE TOTAL TO T	Benzene
Chloroethane	ello/ojijoenlo/ojijejuane
*Malinian appoints ***	1,1,2-Trichloroethane
1,1-Dichloroethene	A SECTION OF THE SECT
海頂 OG Glob of Calling Page App and 	2-Chloroethylvinyl ether <100.
t-1,2-Dichloroethene	Conforming the second second second
Senting of the second of the s	1,1,2,2-Tetrachloroethane <10.
1,2-Dichloroethane	Tak production of the second s
#EHPARTIGNOTONICAL REPORT AND A SECOND OF THE SECOND OF TH	Toluene
Carbon tetrachloride	Configuration and the configuration of the configur
#indipolegonomiams and a second policy	Ethylbenzene
1,2-Dichloropropane	- Amonton

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 99% 2-Bromo-1-chloropropane = 98%

Trifluorotoluene = 103%

Authorized: Old 1986

OBG Laboratories, Inc.
Poy 4942/1304 Problem Dd / Surgering NIV/13031 //315 4574404



CLIENT O'BRIEN & GERE ENGINEERS, INC.		JOB NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.010.13)), SCM Program, Site 6	+ 163
SAMPLE NO. D1359 DATE COLLECTED 11-5	-86 DATE REC'D. 11-10-86	DATE ANALYZED
ppb		ррь
gendomentanes : * * * * * * * * * * * * * * * * * *	t-1,3-Dichloropropene	<10.
Bromomethane	a Menorentine	
Windingide - me get in the second	Benzene	
Chloroethane	#Diocoidencoine	
AND WILLIAM SECTION OF THE SECTION O	1,1,2-Trichloroethane	
1,1-Dichloroethene	्रिक्ट का प्रमुख्य के किल्का कर br>स्थानिक किल्का के कि	
And plenior centraries - A testing to the second	2-Chloroethylvinyl ethe	er <100.
t-1,2-Dichloroethene	AETFINTOLOGIC CONTRACTOR	
≠ © ilogionie+t +	1,1,2,2-Tetrachloroetha	ne <10.
1,2-Dichloroethane	ાં માં છે છે છે છે છે છે છે છે છે.	
TARGONO DINENCE EL CARROLLO DE	Toluene	
Carbon tetrachloride	And the property of	
THE SECOND OF TH	Ethylbenzene	
1,2-Dichloropropane	SAMOUT TO SEE	
		بالمتحددة والمتراب المتحدد والمتحدد

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 81%

2-Bromo-1-chloropropane = 77%

Trifluorotoluene = 92%

> Authorized: _ December 3, 1986



LIENT O'BRIEN & GERE ENGINEERS, INC.		јов но. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.010.1	30), SCM Program, Site 6	5 + 188
SAMPLE NO. D1357 DATE COLLECTED 11-	5-86 DATE REC'D. 11-10-86	DATE ANALYZED 11-14-86
ppt		ppb
rachioromethane	t-1,3-Dichloropropen	e <10.
Bromomethane	enerleoronius:	
Yinyi chloride	Benzene	
Chloroethane	Di bromochlorometha	president and the second
Methylene chloride	1,1,2-Trichloroethans	
1,1-Dichloroethene	SCAL SEDICTION DESCRIP	的第三字子是其一个不是
Le Epichioroethane	2-Chloroethylvinyl et	her <100.
t-1,2-Dichloroethene	Actomorphism to	
# Youooloid	1,1,2,2-Tetrachloroet	hane <10.
1,2-Dichloroethane	ALÉUPACHOPOLUCION	
ranstalendocale by	Toluene	
Carbon tetrachloride	eentooogran ≥ ⊃	
an invarient of the state of th	Ethylbenzene	
1,2-Dichloropropane	PAVEIET TO SELECT	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 105% 2-Bromo-1-chloropropane = 101%

= 107% Trifluorotoluene

Authorized: December 3, 1986 Date: _



CLIENT O'BRIEN & GERE ENGINEERS, INC.	JOB NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.010.130), SC	M Program, Site 8 + 00
SAMPLE NO. D1346 DATE COLLECTED 11-5-86	DATE REC'D. 11-10-86 DATE ANALYZED 11-13-86
ppb	ррь
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
1,2-Dichloroethane	Tetrachloroethene
MINI-Trichloroethane	Toluene
Carbon tetrachloride	Chlorobenzene
Bromodichloromethane	Ethylbenzene
1,2-Dichloropropane	Xylenes 4

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 92%

2-Bromo-1-chloropropane = 99%

Trifluorotoluene = 97%

> Authorized: December 3, 1986

Date:_



CLIENT O'BRIEN & GERE ENGINEERS, 1	INC.	J(DB NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.0)	10.130), SC	CM Program, Site 8 + 1	46
SAMPLE NO. D1353 DATE COLLECTED	11-5-86	DATE REC'D. 11-10-86 D.	ATE ANALYZED 11-14-86
	ppb	•	ррь
Chloromethane	1000	t-1,3-Dichloropropene	<1000.
Bromomethane		Trichloroethene	35 (000)
Vinyl chloride		Benzen e	<1000.
Chloroethane		Dibromochloromethane	
Methylene chloride;		1,1,2-Trichloroethane	
1,1-Dichloroethene		c-1,3-Dichloropropene	
1, [-Dichloroethane		2-Chloroethylvinyl ether	<10,000.
t-1,2-Dichloroethene		Bromoform	<10,000
Chlorolorm		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		ietrachioroethene	
Perichloroethane		Toluene	· · · · · · · · · · · · · · · · · · ·
Carbon tetrachloride		Chlorobenzenez s av c	
Bromodichloromethane		Ethylbenzene	
1,2-Dichloropropane		:Xyjenes	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 101% 2-Bromo-1-chloropropane = 94%

Trifluorotoluene = 100%



CLIENT O'BRIEN & GERE ENGINEERS, INC.		JOB NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.010.1	30), SCM Program, Site 9 +	46
		
SAMPLE NO. D1355 DATE COLLECTED 11-	5-86 DATE REC'D. 11-10-86	DATE ANALYZED 11-14-86
ppt		ppb
Chloromethane	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 -	(A)
Chloroform	1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane	Ar errachioroetnene	
1.1.1 Trichloroethane	Toluene	
Carbon tetrachloride	Chlorobanzane (7)	
Bromodichloromethane	Ethylbenzene	
1,2-Dichloropropane	©Xylenes = 247%	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 91% 2-Bromo-1-chloropropane = 99% Trifluorotoluene = 109%

Authorized: December 3, 1986



CLIENT O'BRIEN & GERE ENGINEERS,	INC.	JOB NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.	010.130), SCM Program, Sit	e 11 + 20
SAMPLE NO. D1358 DATE COLLECTED	11-5-86 DATE REC'D. 11-10	1-86 DATE ANALYZED 11-14-86
·	ppb	ppb
and the second state of the second se	t-1,3-Dichloropro	pene <10.
Bromomethane	# 1/10/nloroetnenes	2000年,1900年,1900年
Winy efforter and the second s	Benzene	<10.
Chloroethane	Dibromoentorom	liano:
Methylereconiondes	1,1,2-Trichloroeth	ane
1,1-Dichloroethene	20-1/9-Dignioropro	pene
Antelegio o jung para Pangaran	2-Chloroethylviny	lether <100.
t-1,2-Dichloroethene	# Bromojomin	-3.000
Andropological Section 1997	1,1,2,2-Tetrachlor	oethane <10.
1,2-Dichloroethane	⇒ e (achle)ce lien	
iğensiyaliğiğili merkeliye ili ili ili	Toluene	
Carbon tetrachloride	#ONIO/Objections	
selionoglendromalistics.	Ethylbenzene	
1,2-Dichloropropane	* XVIeties * * Ze	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 75% 2-Bromo-1-chloropropane = 73%

Trifluorotoluene = 83%

Authorized: ONATA

Date: December 3, 1986



PRIVILEGED & GENERAL PREPARED AT ATTORNEY'S REQUEST

Laboratory Report

CLIENT O'BRIEN & GERE ENGINEERS,	INC.		JOB N	io. <u>3435</u>	.001.100
DESCRIPTION Nixon-Hargrave, SCh	1 site, (2410.0	010)			
DATE COLLECTEDDATE	REC'D. 11-17-	-86	DATE ANALY	ZED	
Description	10 + 25	8 + 146	1 + 50 (Strong)		
Sample #	A5445	A5446	A5447		
LEA-ANTE MONYS	Secretary (Y 2 800 - 5 2	- £(022)		
ARSENIC	7.4	4.6	5.3		
BERYLLIUN		/ KY # **	141		
CADMIUM	<1.	5.9	<1.		
CHROM UA	Gerichaldung	STATE OF			
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	STATE OF THE PARTY	BURIUM	多的唯一		
CYANIDE	<2.	3.6	<2.		
SEPARTENOIS SE	teriotic i	e dain:	\$ - KOAOD		4.4
PERCENT TOTAL SOLIDS	95.3	93.0	95.4		

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

Units: mg// (ppm) unless otherwise noted

Comments:

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

Authorized: February 6, 1987



PAINTLEGES & COMPLEMITAL PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

ì					
CLIENT 0'BRI	EN & GERE ENGINEER	S, INC.		JOB NO	3435.001.100
DESCRIPTION	Nixon-Hargrave, S	CM site, 1	+ 50		
	(2410.010)				
SAMPLE NO. A544	7 DATE COLLECTED		_DATE REC'D	11-17-86 _{DATE A}	NALYZED 12-8-86
sentidionichi di s		સ્થાલિક:	t-1,3-Dichlor	opropene	<1000.
Bromomethane			Activatoje sin	in server of the same	。 《《《 》 ())。
ATOMESONOTHS			Benzene		<1000.
Chloroethane			alejjo (almochijo	entali u 🗲 🖼 🤫	
rationivity satisfies			1,1,2-Trichlor	oethane	
1,1-Dichloroethe	ene		/តុន្ធន៍ដូរស្រីប្រែ	bolod make kelaks	
Tan polenting	TREE 15 10 10 10 10 10 10 10 10 10 10 10 10 10		2-Chloroethy		<10000.
t-1,2-Dichloroeth	nene	18000.	Generality.		
្លេស្សល្រឹស្សល់ ដែកន	All the second second	3000	1,1,2,2-Tetrac	chloroethane	<1000.
1,2-Dichloroetha	ne		a foliachtoroel	mark to see	Section of
**************************************	itti kasaranga sarah		Toluene		<1000.
Carbon tetrachlo	oride		* Only to be real	ie de Vielo suso de	3 3 1000 25 4 5 2
Bromodichlorom	ethane		Ethylbenzene		<10000.
1,2-Dichloroprop		V	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%

Authorized: and 1997

Date: February 6, 1987



PREPARED AT ATTORNEY'S REQUEST

Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, IN	,	ЈОВ NO3435.001.100
DESCRIPTION Nixon-Hargrave, SCM site	1 + 50	
(2410.010)		
SAMPLE NO. A5447 DATE COLLECTED	DATE REC'D11-17-	86_DATE ANALYZED
рри)	ppb
\$55165 \ \frac{1}{2} \cdot \fr	4,4'-DDT	<400.
у-ВНС	ः ≣ेतं व्यक्ताता करूने वाही है के	
Walte Care Care Care Care Care Care Care Car	Endrin Aldehyde	
Heptachlor	-Venexical control	Section of the sectio
	Endrin Ketone	<400.
Aldrin	Fo ploring	English Company
Attorio (Grandickie se	Toxaphene	<5000.
Endosulfan I	**************************************	The second section of the section of
WREDDAY SERVED AND AND AND AND AND AND AND AND AND AN	PCB-1232	
Dieldrin	HEROLE OF MARKER	
#Filtram As a Second Se	PCB-1248	
) 4,4'-DDD	PREBRES :	
a Endosulian (Legisland)	PCB-1260	<u> </u>

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

Comments:

SURRGOATE RECOVERY

Dibutyl Chlorendate - 77%

Authorized: CMCT To Pate: February 6, 1987



PRIVILEGED & COMPSENTIAL Base/Neutral PREPARED AT ATTORNEY'S REQUESTIONITY Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC.	JOB NO	3435.001.100
DESCRIPTION Nixon Hargrave, SCM site, #1 + 150		
SAMPLE NO. A5447 DATE COLLECTEDDATE R	EC'D. 11-17-86 DATE ANA	LYZED 12-23-86
ррь		ppb
REPRINGRACIONATION CONTRACTOR Dieth	ylphthalate	<500.
1,4-Dichlorobenzene	ie gelfer dan kölit met die de	
irasignoroerzene. Hexa	chlorobenzene	
Hexachloroethane	digiplicity a pleas, collicis as a second	
Here is a second control of the second secon	anthrene	
Bis (2-chloroisopropyl) ether	nggira senda senda isang	
Pi-n-Di-n-Di-n-Di-n-Di-n-Di-n-Di-n-Di-n-	butyl phthalate	
Nitrobenzene Ja(to	eminoni palestavas atgas es	
A exacplorobulacienes as a second as Pyre	ne	
1,2,4-Trichlorobenzene	operative and the second	
Rety Proprietories 19	benzyl phthalate	
Naphthalene Stist	SOLVE STANDARD STANDA	
Bis (2-chloroethoxy) methane Chry	sene	<500.
Hexachlorocyclopentadiene Benz	o(a)anthracene	is as live
¿2-Chloronaphthalene	Dichlorobenzidine	<1000.
Acenaphthylene	octylphthalate	<500
Acenaphthene Benz	o(b)fluoranthene	
Commence of the contract of th	ON THE PROPERTY OF THE PROPERT	
# (CEDInitiological Benz	o(a)pyrene	
	CONTRACTOR CONTRACTOR	
	nzo(a,h)anthracene	
	e (C-tripe viene -2%)	
	trosodimethyl Amine	

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

Comments: ug/kg wet weight

Authorized: March 6, 1987





Acid Priority Pollutants

CLIENT O'BRIEN & GERE ENGIN DESCRIPTION NIXON Hargrave		1 + 150	_JOB NO.	3435.001.100
SAMPLE NO. A5447 DATE COLLE		DATE REC'D11-17-86	_DATE AN	ALYZED 12-23-86
	ррь			ррв
E TOUGHT TO THE	Temper *	2,4,6-Trichlorophenol	<u>.</u>	<500.
2-Nitrophenol		ាំដែលប្រកុខភាពប្រកុខភាពប្រការ	ومعور	A CATOL TURNS
azmiola i e caracia de la cara		2,4-Dinitrophenol		<2500.
2,4-Dimethylphenol		servenia Resimilaria	des e	
*KEOlenioropiano ***	STORY PROTEST	Pentachlorophenol		
		# ENitropheno		

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

Comments: ug/kg wet weight

Authorized: OMM

Date: March 6, 1987



PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

CLIENT O'BRIEN & G	ERE ENGINEERS, INC.	JOB N	ю3435.001.100
	-Hargrave, SCM, 8 + 14	16	
	.010)		
15116	DATE COLLECTED	DATE REC'D. 11-17-86DATE	ANALYZED 12-8-86
	ppb		ppb
well the continues of the	e e e cambie de	t-1,3-Dichloropropene	<1000.
Bromomethane		Authornie Carles Section	er seguinger in a se
#Ynyle-idolog ** : *		Benzene	<1000.
Chloroethane		্রকারিতা তিনি বিভাগ করিছে করিছে বিভাগ	Catalog Commence
Month and and the second		1,1,2-Trichløroethane	
1,1-Dichloroethene		ACSESPICATION OF THE LESS	
PARTION OF THE		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene		** TO TO THE PARTY OF THE PARTY	240000 F V
**Photomical and the second		1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		*Originostienes	
A A CONTRACTOR OF THE CONTRACT		Toluene	
Carbon tetrachloride		Chloropenzene	Verie La Verie Contra
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%

Authorized: Authorized:

e: February 6, 1987



PRIVILEGED & SIMPLE ENTIAL PREPARED AT ATTORNEY'S REQUEST

Pesticide/PCB Priority Pollutants

CLIENT 0'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'D11-17-86	_DATE ANA	LYZED
	ppb			ppb
as Siller	3. 1865年 · 1884年	4,4'-DDT		<400.
у-ВНС		a de la contracción de la cont		
ASTRUM TO THE STATE OF		Endrin Aldehyde		
Heptachlor		a Mentos Andre de Marco	* * * * * * * * * * * * * * * * * * *	assimilar to see
*//e:)[[e[]		Endrin Ketone		<400.
Aldrin	,	Chilorophic Action		rajijis karakar
Maria de la concesa de la conc		Toxaphene		<5000.
Endosulfan I	<u> </u>	PROPRIEST FOR		ACHIE STORY
W(VEODER COSTS)	\$ \$ \tag{\tau}	PCB-1232		
Dieldrin		ASSESSION AND SECOND		ALL STREET
Ganalitie.		PCB-1248		
4,4'-DDD		ALGERICAL TOPICS		
e suggiani (uni e se s	ti propini stalini	PCB-1260		V

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

Comments:

SURRGOATE RECOVERY

Dibutyl Chlorendate - 79%

Authorized: February 6, 1987



PRIVILEGED & COMPOSITION Base/Neutral PREPARED AT ATTORNEY'S REQUEST Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC.	јов no. <u>3435.001.100</u>
DESCRIPTION Nixon Hargrave, SCM site, #8 + 146	
SAMPLE NO. A5446 DATE COLLECTED DATE REC'D.	11-17-86 DATE ANALYZED 12-23-86
ррь	ррь
Section of the Diethylphtha	ate <20,000.
1,4-Dichlorobenzene	
Hexachlorob	enzene
Hexachloroethane & #Blomophe	varichye grane
Phenanthrend	
Bis (2-chloroisopropyl) ether Apinracenes	
ຢ່າວໄດ້ເຂົ້າເຂົ້າເຂົ້າເຂົ້າເຂົ້າເຂົ້າເຂົ້າເຂົ້	thalate
Nitrobenzene	
Pyrene Pyrene	
1,2,4-Trichlorobenzene Benzicline	
Butyl benzyl	phthalate
Naphthalene @BCIESelfy[fte	SULTODECESS. TO KIND SEE STATE
Bin (¿Coloroginos) Auchana (company) Chrysene	<20,000.
Hexachlorocyclopentadiene Agento(a) antib	
### 3,3-Dichlorob	
Acenaphthylene Sec Oarphi	<u> </u>
#Acetaphine(it) Benzo(b)fluor	
Dimethyl phthalate	unijojos avada ara
September 1997 Benzo(a)pyre	ne
Fluorene	E))TvO((state of the state of t
Pibenzo(a,h)a	
2,4-Dinitrotoluene	
N-Nitrosodim	
A STATE OF THE PROPERTY OF THE	· Y

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

ug/kg wet weight Comments:

Date: March 6, 1987



PRIVILEGED & CONFIDENTIAL ACID ACID PREPARED AT ATTORNEY'S REQUEST Priority Pollutants

CLIENT O'BRIEN & GERE	ENGINEERS, INC.		_JOB NO. <u>3435.001.100</u>
DESCRIPTION Ni xon Ha	rgrave, SCM site, #8	+ 146	
SAMPLE NO. A5446 DATI	E COLLECTED	_DATE REC'D11-17-86	_DATE ANALYZED12-23-86
*Achigonicacia	ppb	2,4,6-Trichlorophenol	ppb <20,000.
2-Nitrophenol		্ত রভা নতিই স্থান্য ্যান্ য	
2,4-Dimethylphenol		2,4-Dinitrophenol #dVeltivirs≋diritrophen	<100.000.
Kapionojojo		Pentachlorophenol	

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

Comments: ug/kg wet weight

Authorized: Colors

Date: March 6, 1987



PRIVILEGEE & CONFIDENTIAL PREPARED AT ATTERMEY'S REQUEST

Purgeable Priority Pollutants

CLIENT O'BRIEN & GERE ENGINE	ERS, INC.	JOB	NO. <u>3435.001.100</u>
DESCRIPTION Nixon-Hargrave, S (2410.010)	CM site, 10 +	25	
	TED	DATE REC'D. 11-17-86 DATE	E ANALYZED
	ppb		ppb
And Completing States	e entime e	t-1,3-Dichloropropene	<1000.
Bromomethane		្និញ្ញាញស្រាស្ត្រាក និងកំណាក់ ក	
*VONEDIO E	Service Service	Benzene	
Chloroethane		and the state of t	
a Mannylanevantorida (c. 1877)	10 PK	1,1,2-Trichloroethane	
1,1-Dichloroethene		achternentorogram	
் நக்றுவில்லியாம்		2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene	1700.	Asidiiddidiikaan saa	P = 25 (0000)
, centromer = 15 cm	- 0000	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		Paritini Compute Section	
anne denote indicate en est		Toluene	
Carbon tetrachloride		si Chilorobenzeni	
Bromodichloromethane		Ethylbenzene	<10000.
1,2-Dichloropropane		Xylenea	<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: CPUTTY 6, 1987



PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST

Pesticide/PCB Priority Pollutants

CLIENT O'BRIEN & GET	RE ENGINEERS, INC.		JOB NO	3435.001.100
DESCRIPTION Nix	on-Hargrave, SCM site,	10 + 25		
(24)	10.010)			
SAMPLE NO. A5445	DATE COLLECTED	DATE REC'D. 11-17-8	5 DATE AN	ALYZED 11-21-86
	ppb			ррь
#13:17(63) -4-W	and the second stations	4,4'-DDT		<400.
у-внс		adicional destrictions		
evilijas e		Endrin Aldehyde		
Heptachlor		Aliculia vinica de la companya de la		Promise Page
Water		Endrin Ketone		<400.
Aldrin		Acoustic Constitution of the Constitution of t		raimper a
Figure of the state of the	SALES FOR	Toxaphene		<5000.
Endosulfan I		AROJED PARING AND		\$2000 F-45
PARODO TO	de de la compa	PCB-1232		
Dieldrin		eatheamicary, a that		
语可[disa=200] (100)		PCB-1248		
4,4'-DDD		POECIPSU (C)	i di se	
Endosulfanille		PCB-1260		\downarrow

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

Comments:

SURROGATE RECOVERY

Dibutyl Chlorendate = 81%

Authorized: CMMH

Date: February 6, 1987



PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST

Base/Neutral Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS, INC.	JOB NO3435.001.100
DESCRIPTION Nixon Hargrave, SCM site, #10+ 25	
SAMPLE NO. A5445 DATE COLLECTED DATE REC'D. 11-17-86	DATE ANALYZED 12-23-86
ррь	ppb
CREANIGHO DE COMPANION DIETRO	<10,000.
1,4-Dichlorobenzene	
Age selfchiologic felicies and the sachlorobenzene	
Hexachloroethane ราง สุดเขาสาราชาวิทยาลาย	
¥3) Tetanio completio in the completion of the c	
Bis (2-chloroisopropyl) ether	14.7 3 B 24.1 1
判例(for collection) finds: 注。 Di-n-butyl phthalate	
Nitrobenzene	
a i de Sa conto colouria di en esta de la colouria di entre del colouria di entre del color de la color del color de	
1,2,4-Trichlorobenzene	
at consont. Butyl benzyl phthalate	
Naphthalene Sig(< un/peri) Pulles	West and the second
#ELCYC ENGOVOLOGY MICHIGAN	
Hexachlorocyclopentadiene	
3,3-Dichlorobenzidine	<20,000.
Acenaphthylene Existracyjichthalette	Zalogoda,
Benzo(b)fluoranthene	
Dimethyl phthalate	
表注:pain(it/picipital) Benzo(a)pyrene	Maria Ma
Fluorene appropriette	
្ត្រី ដូច្បើស្ត្រីព្រះស្រីស្ត្រីស្ត្រី ស្ត្រីស្ត្រី ប្រាក់ នេះ ប្	е
2,4-Dinitrotoluene	
N-Nitrosodimethyl Amin	ne

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

Comments: ug/kg wet weight

Authorized:

Date: March 6, 1987



PRIVILEGED & GOORNEY'S REQUEST

Acid Priority Pollutants

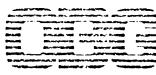
CLIENT O'BRIEN & GERE ENGINEERS, INC. DESCRIPTION Nixon Hargrave, SCM site, #10+25		OB NO	3534.001.100
SAMPLE NO. A5445 DATE COLLECTED	DATE REC'D. 11-17-86 p	ATE ANALY	ZED 12-23-86
	,		
ppb			ppb
Francount in the second	2,4,6-Trichlorophenol	<1	0,000.
2-Nitrophenol	STRAIGHT STROIGHTAN		
Wanter the control of	2,4-Dinitrophenol	<5	0,000.
2,4-Dimethylphenol	"Parising Calminos in C		in the second
De solido con Citares - Analysis	Pentachlorophenol		

THE PROPERTY OF THE PARTY.

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

Comments: ug/kg wet weight

Authorized: OMM Pate: March 6, 1987



PRIVILEGED & COMFIDENTIAL PREPARED AT ATTOMITEY'S REQUEST

LABORATORIES, INC.

URYEY				SAN	IPLER:	S: ¡Sign	ztviel		
SCM	- contiambuille	2410 011	υ			ودالرا	<i>‡</i>	Burna.	1
STATION NUMBER	STATION LOCATION	BIAO	TIME	' # c	MP(E I)	98 17 50, 1	SEQ.	NO. OF	! AMALYSIS
1	Dry Well	11/13/56				V	1	3	Ins Kui 1
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Relinquis	hed by: (Signatura)		Recai	ved by	/: [Sign	zh rei	·		Date/Time
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Relinquis	hed by: Isamurai	····		ved by		ile Lal	porate	ory for field	d Date/Time
Dispatch	ed by: (Signatural	Date	/Time	Rect	siyed	for La	bordi	gry by:	Date/Time
Melhod (ot Shipment:		1 _	150	Y	<u> </u>		WIND	V(/19V8/a//.



PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST Purgeable Prepared At Attorney's Request Priority Pollutants

CLIENT O'BRIEN & GERE ENGINEERS,	INC.		JOB NO. 3435.001.100
DESCRIPTION Nixon-Hargrave (2410.	010.130), s	CM Program, Dry Well	
SAMPLE NO. D5548 DATE COLLECTED	11-19-86	DATE REC'D. 11-19-86	DATE ANALYZED 11-19-86
	ррь	•	ppb
Chipromethane	21007	t-1,3-Dichloropropene	<100.
Bromomethane		L'Ilichioroethene:	18,000
VinyCollorden		Benzene	<100.
Chloroethane		MOIbromognioromelhane	
Methylane chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene		& c-1,3-Dichloropropener-	
(PDIchibroethane)		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	10,000	=Bromoformess	< 1000
Chlorolo m	Z 00 - S	1,1,2,2-Tetrachloroethan	
1,2-Dichloroethane		areliachoroanara	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Alancholomia &		Toluene	
Carbon tetrachloride		SC horocenienes 2002	
Actional and the second second		Ethylbenzene	
1,2-Dichloropropane		Average services	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 94%

2-Bromo-1-chloropropane = 9%

Trifluorotoluene = 88%

Authorized: Authorit

Docombon 5 1040

OBG Laboratories, Inc.

ATTACHMENT 2.02

Subsurface Soil Sampling



O'BRIEN & GERE

SURVEY				SAMPLES	RS: (Sign	arure)	
Nic	m - Houl grave:	Carlland	wis	Pat	<u> </u>	Beauly	
NOITATZ REBMUN	STATION LOCATION	DATE	IIME	SAMPLE Water Coma. Grab	Se.1	SEQ. NO. OF NO. CONTAINERS	AMALYSIS REQUIRED
B-6	0-21	11/10			1	2 Mos	e.
3 -6	2-4'					IVHO	- /
B-6	4-6'					4440	
B-6	(, - 8					4440	
B-6	8-10					4240	
B-6	13-15	11/1/66				4 440	•
B-6	23-25	11/1/86			V	4 V HO	
							- · · · · · · · · · · · · · · · · · · ·
SP.	Lagoon Vita	11/12/96				240.	
SP.	Lagran Vita	11/12/86			·	# VHO	
Relinquis	hed by: (Signoture)		Receiv	red by: (Sign	anrej		Date/Time
Relinquis	hed by: (Signature)		Receiv	red by: (Sign	aturel	•	Date/Time
Relinquis	hed by: (Signature)		Receiv	red by: (sign	alure)		Date/Time
Relinquis	hed by: (Signorura)			red by Mob sis: (Signature)	ile Lab	poratory for field	Date/Time
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SURVEY				SAN	APLER	S: (Sign	alurei			
STATION	STATION LOCATION	DATE	TIME		MPLE I'	YPE July	SEQ.	NO. OF	SEQUI	
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O'BRIEN & GERE

URVEY				SAMPLER					
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N July america	1 separate Mary Commence Commence			SAMPLE T	YPE	NO. OF	ANALYSIS		
HORATZ REMUN	STATION LOCATION	DATE	TIME	Water	-	5EQ. NO.	CONTAINERS	REQUIRED	
-				Come. Gras.			3	No m	
3.7	1) - 14	11 201/6						1 / / /	
3, -7	27.21/	11/10/10	ĺ		V		3	J. Metoc L.	
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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



OBRIEN 5 GERE

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CHAIN OF CUSTODY RECORD

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Div D	Mi: Nidon-Harmie B-6 4-6
DESCRIPTION SCM Contrario	Me: Nixon-Harryai2 B-6 4-6
SAMPLE NO. 9.5452 DATE COLLECTED	11-10-80 DATE REC'D. 11-17-80 DATE ANALYZED 12-5-86
	ррь
Chloromethane \angle	t-1.3-Dichloropropene ∠/C
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 $\angle /\hat{o}\hat{c}$.
t-1,2-Dichloroethene	Bromotorm $\angle / \hat{\mathcal{D}}_{\lambda}$
Chloroform	1.1,2,2-Tetrachloroethane
1,2-Dichloroethane	Tetrachloroethene
1,1,1-Trichloroethane	Toluene
arbon tetrachloride	Chlorobenzene
Bromodichloromethane	Ethylbenzene F
_1.2-Dichloropropane	Xylenes

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = /// %
2-Bromo-1-chloropropane = /// %
Trifluorotoluene = /// %

Authorized:	



JENT DW (D	JOB NO. 3435, 001, 100
DESCRIPTION SCM Cottlandor	le: Ripon-Hardgrand B-6 8-10'
	<u> </u>
SAMPLE NO. A 5453 DATE COLLECTED 1	10-86 DATE REC'D. 11-17-86 DATE ANALYZED 12-5-86
	ррь
Chioromethane $$	t-1,3-Dichloropropene
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
t-1.2-Dichloroethene	Bromoform
Chloroform	1,1.2.2-Tetrachloroethane
1.2-Dichloroethane	Tetrachloroethene
1,1,1-Trichloroethane	Toluene
arbon tetrachloride	Chlorobenzene
Bromodichloromethane 5	Ethylbenzene
1.2-Dichloropropane	Xylenes

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

Comments:

SURROGATE RECOVERIES:

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

Authorized:



PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

3435 001.100 DESCRIPTION LIVEN - Hardres - C SAMPLE NO. DOZZ 4Z DATE ANALYZED 12 DATE COLLECTED 1/1/17 ppb ppb Chloromethane t-1,3-Dichloropropene _210. L100. Bromomethane Trichloroethene Vinyl chloride Benzene L. 10. Chloroethane Dibromochloromethane 2.100. Methylene chloride 1.1.2-Trichloroethane 1,1-Dichloroethene c-1,3-Dichloropropene 1,1-Dichloroethane 2-Chloroethylvinyl ether ~ 100. t-1,2-Dichloroethene Bromoform £ 100. Chloroform 1,1,2,2-Tetrachloroethane 110. Z 10. 1.2-Dichloroethane Tetrachloroethene 1,1,1-Trichloroethane Toluene Sarbon tetrachloride Chlorobenzene Bromodichloromethane Ethylbenzene

Xylenes

100.

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

Comments:

1.2-Dichloropropane

SURROGATE RECOVERIES:

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

Authorized:	
Date:	



PRIVILEGED & COMPRENTIAL Purgeable PREPARED AT ATTURNEY'S REQUEST Priority Pollutants

DISTON DISTON - Handgener, Cortlandville PET 10' 100 NO. 3435.001.100

	ppb		ppb
Chloromethane	Z10.	t-1,3-Dichloropropene	210
Bromomethane		Trichloroethene	
Vinyl chloride		Benzene	Z10
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane)
1,1-Dichloroethene		c-1.3-Dichloropropene	/-
1,1-Dichloroethane		2-Chloroethylvinyl ether	Z100,
t-1,2-Dichloroethene	(Bromoform	< 100
Chloroform		1.1,2.2-Tetrachloroethane	2 10.
1,2-Dichloroethane		Tetrachloroethene	
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	,
Bromodichloromethane	1	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:	
Data	



PRIVILECES SACRESTIAL PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

	• • • •		_ 4	17
ွဲ့	LIENT DIV 10. 016	run and Men Engineers	Inc Top Not Se	45.001.100
D	ESCRIPTION Nixen - A	hun and Dev Engineers	U BOTTON	
_		J		
S	AMPLE NO. D2244	DATE COLLECTED 11/24/86	DATE REC'D. 12/4/84 DATE ANALY	ZED 12/12/86
		ррь	·	ррь
	Chloromethane	∠ 100.	t-1,3-Dichloropropene	Z100.
	Bromomethane		Trichloroethene	
	Vinyl chloride		Benzene	
	Chloroethane)	Dibromochloromethane	1
	Methylene chloride		1,1,2-Trichloroethane	
	1,1-Dichloroethene		c-1,3-Dichloropropene	\checkmark
	1,1-Dichloroethane		2-Chloroethylvinyl ether	/ 1000.
	t-1,2-Dichloroethene	7/0000	Bromoform	Z 100c.
	Chloroform	∠ 100.	1,1,2,2-Tetrachloroethane	Z 100.
	1.2-Dichloroethane	2700	Tetrachloroethene	2 / 50 /
	1,1,1-Trichloroethane		Toluene	}
	Carbon tetrachloride		Chlorobenzene	/
	Bromodichloromethane		Ethylbenzene	/

Xylenes

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

Comments:

1,2-Dichloropropane

Fuel Oil Pattern

SURROGATE RECOVERIES:

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

Authorized: _____

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



PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Pollutants

		. 1	Y
DIENT DIV 10 0'Buen a	and Here Enger	TOX TOX TO TO THE	3435.001.100
DESCRIPTION Nixon - Hardy	, (1	61-63	
Session non <u>February</u>	and, Carrier	DK	
SAMPLE NO. D2245 DATE CO	LLECTED 11/25/86		ALYZED 12/12/8
	ppb		· ppb
Chloromethane	Z 100,	t-1,3-Dichloropropene	2100.
Bromomethane	2,50.	Trichloroethene	
Vinyl chloride		Benzene	
Chloroethane		Dibromochloromethane)
Methylene chloride		/ 1,1,2-Trichloroethane	
1,1-Dichloroethene	1/	c-1,3-Dichloropropene	\checkmark
1,1-Dichloroethane		2-Chloroethylvinyl ether	21000.
t-1,2-Dichloroethene		Bromoform	Z1000.
Chloroform		1,1,2,2-Tetrachloroethane	2100.
1,2-Dichloroethane		Tetrachloroethene	2/00
1,1,1-Trichloroethane		Toluene)
Carbon tetrachloride		Chlorobenzene	/
Bromodichloromethane		Ethylbenzene	/
1,2-Dichloropropane	\mathcal{J}	Xylenes	\checkmark

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 98% % 2-Bromo-1-chloropropane = 94% % Trifluorotoluene = 162%

Authorized:	
Data	



PRIVILEGED & CONFIDENTIAL PREPARED AT ATTORNEY'S REQUEST

Purgeable Priority Collutants

LIENT DIN 10, O'Buen and	Lieve Engineer	Jos No.	3435.001.102
DESCRIPTION NIXON . Handgare	", Cotlander	O -2'	
SAMPLE NO. DAZE COLL	ECTED	DATE REC'D. 12/4/86 DATE ANAL	YZED 12/11/86
	ррь		ppb
Chloromethane	2100.	t-1,3-Dichloropropene	2100,
Bromomethane		Trichloroethene	2 /00
Vinyl chloride		Benzene	. 100
Chloroethane	·	Dibromochloromethane	Z100·
Methylene chloride		1,1,2-Trichloroethane)
1,1-Dichloroethene	/	c-1,3-Dichloropropene	./.
1,1-Dichloroethane	\downarrow	2-Chloroethylvinyl ether	V /
t-1,2-Dichloroethene	*	Bromoform	21000.
Chloroform	2 100.	1,1,2,2-Tetrachloroethane	21000.
1,2-Dichloroethane	2700	Tetrachloroethene	2 100.
1,1,1-Trichloroethane		Toluene	
Carbon tetrachloride		Chlorobenzene	2100
Bromodichloromethane	/	Ethylbenzene	
1.2-Dichloropropane	1	Xylenes	\checkmark

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 10%% 2-Bromo-1-chloropropane = 10%% Trifluorotoluene = 10%%

Authorized:	 	
0-4		



PRIVILEGED & COMFIDENTIAL Purgeable PREPARED AT ATTORNEY'S REQUEST Priority Pollutants

DIENT DIV 10, O'Brien and Sen DESCRIPTION NIXON- Handgraver, C		DB NO. <u>3435. 001. 100</u>
SAMPLE NO. D2247 DATE COLLECTED	11/18/86 DATE REC'D. 12/4/86 DA	ATE ANALYZED 12/10/86
Chloromethane Bromomethane	t-1,3-Dichloropropene Trichloroethene	ppb
Vinyl chloride Chloroethane	Benzene Dibromochloromethane	L. 101
Methylene chloride 1,1-Dichloroethene	1.1.2-Trichloroethane c-1,3-Dichloropropene	
1,1-Dichloroethane t-1,2-Dichloroethene	2-Chloroethylvinyl ether Bromoform	Z 100.
Chloroform 1.2-Dichloroethane	1.1.2.2-Tetrachloroethane Tetrachloroethene	2100. 210
1,1.1-Trichloroethane Carbon tetrachloride	Toluene Chlorobenzene	
Bromodichloromethane 1.2-Dichloropropane	Ethylbenzene Xylenes	

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

Comments:

SURROGATE RECOVERIES:

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

Authorized: _	
Date: _	



PRIVILEGED AT ATTUMBENTIAL POPULATION POPULA

CLIENT DIV 10, O'Buin and DESCRIPTION NIXM- Handge		PRIVILED AT ATTURNOOMLY	Pollutants
CLIENT DIV 10, 0' Builly and	1 Du Enne	PREPAR.	3435 001.100
DESCRIPTION Nixon - Hardge	eve, Cotice	du 18 37-39	,
SAMPLE NO. D2248 DATE COLLE	1 1		LYZED 12/10/86
	ppb	,	ppb
Chloromethane	410.	t-1,3-Dichloropropene	2.10,
Bromomethane	`	Trichloroethene 746.	4.7
Vinyl chloride		Benzene	. 1/1
Chloroethane		Dibromochloromethane	210.
Methylene chloride		1,1.2-Trichloroethane	-
1,1-Dichloroethene	1	c-1,3-Dichloropropene	
1,1-Dichloroethane	/	2-Chloroethylvinyl ether	· 140
t-1,2-Dichloroethene		Bromoform	Z100,
Chloroform	;	1,1,2,2-Tetrachloroethane	21.00,
1,2-Dichloroethane	4	Tetrachloroethene	Z10.
1,1,1-Trichloroethane	•	Toluene)
Carbon tetrachloride	210	Chlorobenzene	}
Bromodichloromethane	2 / 6"	Ethylbenzene	/
1,2-Dichloropropane	1	Xylenes	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = /0/%
2-Bromo-1-chloropropane = /00%
Trifluorotoluene = 98%

Authorized: _	 	 	

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* ABORATORIES, INC.	icu Hi	K I
DESCRIPTION Nixon- Honograms, Contlande	200 Total 1 100 NO. 30	435.001.100
DESCRIPTION Nixon- Honograves, Contlande	Mb - 8 - 9 - 0 - 2'	
	1	
SAMPLE NO. <u>D2249</u> DATE COLLECTED <u>121,186</u>	DATE REC'D. 12/4/86DATE ANALY	7ZED <u>1-2/11/84-</u>
Chloromethane	t-1,3-Dichloropropene	
Bromomethane	Trichloroethene	2.10.
Vinyl chloride	Benzene	
Chloroethane	Dibromochloromethane	210.
Methylene chloride	1,1,2-Trichloroethane	· · · · · · ·
1,1-Dichloroethene	c-1,3-Dichloropropene	
1,1-Dichloroethane	2-Chloroethylvinyl ether	Z 100.
t-1.2-Dichloroethene	Bromoform	2 100.
Chloroform ∠ 10,	1,1,2,2-Tetrachloroethane	
1.2-Dichloroethane	Tetrachloroethene	Z 10.
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 = 100 %2-Bromo-1-chloropropane = 99 %Trifluorotoluene = 105 %

Authorized:			

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



PRIVILEGED & COMPRIDENTIAL EPAPED AT ATTO HEVEST

CLIENT DIVIO, O'Bur and DESCRIPTION NIXON- Hardgen	Ser Engineer	lic B-9, 8-10'	35.001.100
SAMPLE NO. D225/ DATE COLLI	ECTED 42/1/56	DATE REC'D. 12/4/86 DATE ANALYZE	PD 12/11/86
Chloromethane	∠/O.	t-1,3-Dichloropropene	210.
Bromomethane		Trichloroethene 98	er en andere Prof. Education
Vinyl chloride		Benzene	c 10.
Chloroethane		Dibromochloromethane	rammann sa tanka ta a a
Methylene chloride	7-	1,1.2-Trichloroethane	
1.1-Dichloroethene		c-1,3-Dichloropropene	7
1,1-Dichloroethane		2-Chloroethylvinyl ether	
t-1,2-Dichloroethene	•	Bromoform	£ 100·
Chloroform	410.	1,1,2,2-Tetrachloroethane	210,
1.2-Dichloroethane	2/0,	Tetrachloroethene	2 101
1,1,1-Trichloroethane		Toluene .	
Carbon tetrachloride •		Chlorobenzene	-
Bromodichloromethane	/	Ethylbenzene	· · /
1,2-Dichloropropane	J.	Xylenes	J

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

Comments:

SURROGATE RECOVERIES:

100% Bromochloromethane 100% 2-Bromo-1-chloropropane = 96 % Trifluorotoluene

Authorized:	

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PREPARED AT ATTOMET'S REQUEST

Purgeable Priority Pollutants

PLE NO. D2260 DATE COLLECTED	12/1/86	DATE REC'D. 12/4/	DATE ANALYZ	ED 12/11/8
	ppb	P		ppb
hloromethane	210.	t-1,3-Dichloroproper	ne	210
romomethane	1	Trichloroethene	4600.	, · ·
inyl chloride		Benzene		210
Chloroethane	-	Dibromochlorometh	ane	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
fethylene chloride .		1,1.2-Trichloroethan	e	$\sum_{i=1}^{n} x_i = \sum_{i=1}^{n} x_i$
,1-Dichloroethene		c-1,3-Dichloroprope	ne	1
,1-Dichloroethane		2-Chloroethylvinyl e	ther	< 100
1,2-Dichloroethene	•	Bromoform		2100 2100
Chloroform	: 10	1,1,2,2-Tetrachloroe	thane	210
,2-Dichloroethane	210.	Tetrachloroethene	Ti Gr	210
1,1-Trichloroethane		Toluene	_	
arbon tetrachloride		Chlorobenzene	<i>50.</i>	z 10.
dromodichloromethane	1	Ethylbenzene	d9)	2, 10.
,2-Dichloropropane	\sim	Xylenes	71.	

Comments: Full Cil Pattern

SURROGATE RECOVERIES:

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

Authorized:	
Date:	

ABORATORIES, INC.
ARIBAIO

Purgeable

Den PREPARED AT ATTOMILEY'S 3435.001 100 12/4/86 DATE ANALYZED 12/11/86. SAMPLE NO. <u>D2250</u> __DATE COLLECTED 12/2/86 __DATE REC'D. ppb Chloromethane t-1.3-Dichloropropene 2 100. L 1001 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 Z1000. t-1,2-Dichloroethene **Bromoform** 1700. Z 1000. Chloroform 1.1.2.2-Tetrachloroethane Z100. 2100. 1,2-Dichloroethane Tetrachloroethene 1,1,1-Trichloroethane Toluene Sarbon tetrachloride Chlorobenzene Bromodichloromethane Ethylbenzene

Xylenes

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

Comments:

1.2-Dichloropropane

Fuel Oil Pattern

SURROGATE RECOVERIES:

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

Authorized:	
Date:	



AMPLE NO. A6892 DATE COLLECTED 7	DATE REC'D. 12/24/86 DATE ANALYZED 1/6/8
Chloromethane	
Bromomethane ∠10.	t-1,3-Dichloropropene
Vinyl chloride	Trichloroethene
Chloroethane	Benzene
Methylene chloride	Dibromochloromethane
1,1-Dichloroethene	1,1,2-Trichloroethane
1,1-Dichloroethane	c-1,3-Dichloropropene
1-1,2-Dichloroethene	2-Chloroethylvinyl ether
Chloroform	Bromoform ∠100
.2-Dichloroethane	1.1,2,2-Tetrachloroethane
,1,1-Trichloroethane	Tetrachloroethene
Carbon tetrachloride	Toluene
- The state of the	Chlorobenzene
romodichloromethane	Ethylbenzene
2-Dichloropropane	Xylenes

SURROGATE RECOVERIES:

Comments:

Bromochloromethane 2-Bromo-1-chloropropane = /6/ % Trifluorotoluene 91 %



SAMPLE NO. A6893 DATE COL	LECTED 7	DATE REC'D. 12/24/86 DATE AN	ALYZED 1/6/87
	ppb		ррь
Chloromethane	- LIO.	t-1,3-Dichloropropene	410.
Bromomethane	and the second s	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	. V
t-1,2-Dichloroethene	1 1 1	Bromoform	Z 100.
Chloroform	(.	1,1,2,2-Tetrachloroethane	2100.
1,2-Dichloroethane		Tetrachloroethene	Z10.
,1,1-Trichloroethane		Toluene	
Carbon tetrachloride	1	Chlorobenzene	
Bromodichloromethane		and the second s	<u> -</u>
	1	Ethylbenzene	1

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

SURROGATE RECOVERIES:

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





SAMPLE NO. A6894 DATE COLLECT	ED 7	_DATE REC'D. 12/24/86_DATE ANAL	YZED 1/6/87
	ppb		ppb
Chloromethane	Z10.	t-1,3-Dichloropropene	Z10.
Bromomethane	`	Trichloroethene 330.	
Vinyl chloride]	Benzene	Z10.
Chloroethane		Dibromochloromethane	
Methylene chloride		1,1,2-Trichloroethane	
1,1-Dichloroethene	·)	c-1,3-Dichloropropene	\checkmark
1,1-Dichloroethane		2-Chloroethylvinyl ether	Z100.
t-1,2-Dichloroethene 87.	•	Bromoform	Z100.
Chloroform	Z 10.	1,1,2,2-Tetrachloroethane	L 10.
1,2-Dichloroethane		Tetrachloroethene	2,0
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 = 9/%

2-Bromo-1-chloropropane = 9/ %

Trifluorotoluene = 9/%

Date:

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ATTACHMENT 2.02

Ground Water and Facilities Discharge



CHAIN OF CUSTODY RECORD

SURVEY Smith Cooper Coregorbaille			SAMPLERS: (Signature)							
			Peter 6 Buzulus							
NONATZ R38MUH	STATION LOCATION	BIAG	TIME	SA.	MPLE TY	PE	SEQ. NO.	NO. OF CONTAINERS		AMALYSIS REQUIRED
hw-3	Upqualient	ग्वासि	21100		1			2	VH) · BTX
M·2	Drangadent Drangadent Down gadens	10/15/84	4:30		J			2		602.
Mw-	Down graduat	10/15/86	bin		1			2	Au	questions
	•								ł,	questions Buy Soundon. Boo martin.
									a i	Bob matin.
										•
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) 	•						,			
			İ							
						 				"" "L. "" - " - " - " - " - " - " - " - " - "
										
Relinguis	had by: 1signown		Receiv	red by	: (Signa	iturej	i	·		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			
			Sign	Time Received loctoberatory by: 8:000 Varbara V. Towking				Date/Time 10-16-86 8:0		
Jathod.	of Shipment:	& dow	a de	ά,	244			· 	~	

GROUND WATER SAMPLING FIELD LOG

Samble	Location South Corona Corilordoi	11.	Well No	M W -
Sambled	1 3v Det. Regular	Date Idis	/g, Time _	6:10 pm
Weather	50°F Overest	Sampled wi	th Bailer 🗸	Pump
A. WA	ATER TABLE:			
H:	ell depth: below top of casing) Zaww 45 ft.	h (Well elevation: (top of casing)	ft.
<i>(</i>)	epth to water table:	Water ta	able elevation:	ft.
(below top of casing) 23.65 ft.			
	ength of water column (LWC) $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$ $\underline{\hspace{1cm}}$		ft.	
V	olume of water in well:			
	2" diameter wells = 0.163 4" diameter wells = 0.653	\times (LWC) =	a	allons allons
	6" diameter wells = 1.469	X (LMC) =	g	allons
B P	PHYSICAL APPEARANCE AT START:			
(Color <u>Court</u> Odor	na	Turbidity	light
¥	das an oil film or layer apparent?	_kr_1	no	
	PREPARATION OF WELL FOR SAMPLING:	1		
	Amount of water removed before samp	oling		gallons.
	Did well go dry?			
	PHYSICAL APPEARANCE DURING SAMPLING			
υ.	Color Com Odor N	0	Turbidity	Very Wills
	Was an oil film or layer apparent?			
	CONDUCTIVITY 10 umbay			
			•	
F.	рН			
G.	TEMPERATURE			
н.	WELL SAMPLING NOTES:	A //		
	Sample split will	Kin Kraft		
`				

GROUND WATER SAMPLING FIELD LOG

Sams's Location Swar - Comme	Well No. mw-Z
Sampled By Pate 6. Buyunda	Date p15/86 Time
Weather ~60 (Rouse)	
3	
A. WATER TABLE:	
Well depth:	<pre>ft. Well elevation: (top of casing) ft.</pre>
Depth to water table:	Water table elevation: ft.
(below top of casing) 50.35	ft.
Length of water column (LWC)	9.65 ft.
Volume of water in well:	
<pre>2" diameter wells = 0 4" diameter wells = 0 6" diameter wells = 1</pre>	.163 x (LWC) = gallons .653 X (LWC) = gallons .469 X (LWC) = gallons
B. PHYSICAL APPEARANCE AT START:	
Color thus Odor	No Turbidity 412
Was an oil film or layer appare	
C. PREPARATION OF WELL FOR SAMPLIN	IG:
Amount of water removed before	sampling gallons.
Did well go dry?	
D. PHYSICAL APPEARANCE DURING SAMP	PLING:
Color Couch Odor	no Turbidity yu
Was an oil film or layer appare	
E. CONDUCTIVITY O ? if marke	the six werken
F. pH	• •
G. TEMPERATURE 10°C	
•	
H. WELL SAMPLING NOTES:	
	1/86 11-17 man
Will teacher 10114	114 11 -16-14600

GROUND WATER SAMPLING FIELD LOG

Sample Location Smit Comme	Well No. <u>mw-</u>
Sampled By Pata Boyanda	Date tols Time Zis
Weather ~ 55 Claudy	Sampled with Bailer _ Pump
A. WATER TABLE:	
Well depth: (below top of casing) <u>&</u>	Well elevation: t. (top of casing) ft.
Depth to water table: (below top of casing)f	Water table elevation: ft. t.
Length of water column (LWC)	20 ft.
Volume of water in well:	
2" diameter wells = 0.1 4" diameter wells = 0.6 6" diameter wells = 1.4	53 X (LWC) = gallons
B. PHYSICAL APPEARANCE AT START:	
Color Sunt Room Odor	Turbidity yes
Was an oil film or layer apparent	
C. PREPARATION OF WELL FOR SAMPLING:	
Amount of water removed before sa	ampling <u>le</u> gallons.
Did well go dry?	·
D. PHYSICAL APPEARANCE DURING SAMPLE	ING:
Color the Brown Odor	none Turbidity
Was an oil film or layer apparen	· · · · · · · · · · · · · · · · · · ·
E. CONDUCTIVITY O ? 4	machine is working.
F. pH	· ,
G. TEMPERATURE NOC	
H. WELL SAMPLING NOTES:	
163	
Well developed	10/14/86 at 1:00 p.m
- by pumping.	
1	



CLIENT O'BRIEN	& GERE ENGINEERS,	INC.		OB NO. 3435.001.100	
DESCRIPTIONM	W #1, Smith Corona				
SAMPLE NO. A4316	DATE COLLECTED	10-15-86	DATE REC'D. 10-16-86	DATE ANALYZED 10-16-86	
		ppb		ррь	
Early Barrie			t-1,3-Dichloropropene	<1.	
Bromomethane			Statement Statement		
			Benzene	<1.	
Chloroethane					100
Statement of the State of the S			1,1,2-Trichloroethane		
1,1-Dichloroethene)		especial description of the second		
Service Commence of the Commen			2-Chloroethylvinyl ether	<10.	
t-1,2-Dichloroether	16		38.185.400.766.777.23		
Serial Country (1997)			1,1,2,2-Tetrachloroethane	<1.	
1,2-Dichloroethane			og Konferencija iz		
"是我们不知识 "			Toluene		
Carbon tetrachloric	je		Section of appropriate to the section of		
Agricultural tentra			Ethylbenzene		
1,2-Dichloropropar	ne	T.			
		* · <u>-</u>	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: October 23, 1986

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CLIENT O'BRIEN &	GERE ENGINEERS,	INC.	· · · · · · · · · · · · · · · · · · ·	JOB NO	3435.001.100
DESCRIPTION MW #2	2. Smith Corona		······································		
				——————————————————————————————————————	
SAMPLE NO. A4317	_DATE COLLECTED _	10-15-86	DATE REC'D. 10-16-86	DATE ANA	LYZED 10-16-86
		ppb			ppb
No miles			t-1,3-Dichloropropene		<1.
Bromomethane	•		30 TO 10		
			Benzene	· .	<1.
Chloroethane			· Paring a very missing		
			1,1,2-Trichloroethane		200 200 200 200 200 200 200 200 200 200
1,1-Dichloroethene			ะ เรื่อง เปรียบกับกลับสภา		
Contract Company			2-Chloroethylvinyl ethe	r	<10.
t-1,2-Dichloroethene		3.	Para de Caracteria de La Caracteria de La Caracteria de Caracteria de Caracteria de Caracteria de Caracteria d		
CENTRAL CONTROL OF THE SECOND			1,1,2,2-Tetrachloroetha	ne	<1.
1,2-Dichloroethane					
AND THE PROPERTY OF			Toluene		
Carbon tetrachloride					•
estimation and children			Ethylbenzene	多个公式 60g 10g 15g 15g 15g	· 1000年代的基本的基本的基本的基本的
1,2-Dichloropropane					
		Y	Freon 113	or early of House, and	<1 .

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 76%

2-Bromo-1-chloropropane = 95%

Trifluorotoluene = 95%

Authorized: ANT Date: October 23, 1986



CLIENT O'BRIEN & GER	RE ENGINEERS, INC.	JOB NO	3435.001.100
DESCRIPTION MW #3, S	Smith Corona		
SAMPLE NO. A4318 DA	TE COLLECTED 10-15-86	DATE REC'D. 10-16-86 DATE A	NALYZED 10-16-86
	ррь		ppb
		t-1,3-Dichloropropene	<1.
Bromomethane			
And interest in		Benzene	
Chloroethane			
All Management Cons		1,1,2-Trichloroethane	3 C C C C C C C C C C C C C C C C C C C
1,1-Dichloroethene			
		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene			
		1,1,2,2-Tetrachloroethane	<1.
1,2-Dichloroethane			
Parent Survey		Toluene	A CONTRACTOR OF THE CONTRACTOR
Carbon tetrachloride			
A: Progression of the		Ethylbenzene	का प्रकार के प्रतिकास का प्रियम है है से प्राप्त की कर है है है है है
1,2-Dichloropropane		Maria Santa Sa	
		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%

Authorized: October 23, 1986

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

Received by: (Signature) Received by: (Signature) \$15 - E1008665 Remarks Billinct Results To LAWYERS ASAB REMARKS Date/Time Date/Time Relinquished by: (Signature) Relinquished by: (Signature) CHAIN OF CUSTODY RECORD 100 m Received for Laboratory by: (Signature) that. Receifed by: (Signature) TAINERS S 8 $\langle \langle \rangle$ BLANK OKS FREE FlumE DISHARGE OUTEAL LAKOUN peocess arell Regelyed by: * 2 peocess uell MA TO LAGOOW STATION LOCATION COPTIAND 1023 1500 1023 1100 Date/Time Date/Time Date/Time # SCA X PSTATE LOORATORIES, INC. X 84,93 CCMP. Relinquished by: (Signature) : (Signature) Religuished MM (Signature) 899 1030 PROJECT NAME 045 7012 80)/ 포 DATE PROJECT NO. STA. NO. 4

Analysis Results Report Number 102486032 Date: October 24, 1986

EPA 601/602:

EPA 601/602:				T
CLIENT I.D Nixon, Hargrave,	Field Blank	#2 Process Well	MH to Lagoon	Outfall to Lagoon
Devans & Doyle	İ		ł	
•				
ULI I.D.	29586013	29586014	29586015	29586016
EPA 601:	<1	<1	<1	\(1
Chloromethane	\di	lä	<1	<1
Bromomethane	र्वे	तं	<1	<1
Dichlorodifluoromethane	र्वे	\alpha i	<1	<1
Vinyl Chloride	ki	1 (1	<1	<1
Chloroethane	1 41	र्व	<1	<1
Methylene Chloride Trichlorofluoromethane	lä	वि	<1	₹1
	िं	à	⟨1	(1
1,1-Dichloroethylene	िं	तं	1 (1	<1
1,1-Dichloroethane	\di	र्वे	\di	<1
t-1,2-Dichloroethylene	l di	र्व	1 (1	⟨1
Chloroform	1 41	र्व	िं	41
1,2-Dichloroethane	(1	र्व	र्व	\(\frac{1}{1}\)
1,1,1-Trichloroethane	र्व	रिं	l či	\(\bar{1}\)
Carbon Tetrachloride	र्व	तं	(1	<1
Bromodichloromethane	1	िरंग	(र्व	<1
1,2-Dichloropropane	1 41	िं	l ä	<1
t-1,3-Dichloropropylene			213	10
Trichloroethylene	<1	6	1 1	(1
Dibromochloromethane	(1	(1	1 31	तं
1,1,2-Trichloroethane	<1	(1	िर्दे	l à
c-1,3-Dichloropropylene	\{1	(1	1 41	र्वे
1,1,2,2-Tetrachloroethane	<1	<1		1 41
Tetrachloroethylene	(1	<1	<1	1 41
Bromoform	(1	<1	(1	1 1
2-Chloroethylvinyl ether	\ <u> </u>	<1	<1	1 1
EPA 602 (including Xylen	es):		1,1	<1
Benzene	$ \zeta $	(1	(1	1 41
Toluene	(1	<1	<1	1
Ethylbenzene	<1	(1	(1	\(\frac{1}{1}\)
Virlance	(1	<1	<1	1,7
Halogenated Aromatics (601/602):		1,,	/1
Chlorobenzene	171	<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: <u>Approved</u>: <u>C.</u>

Date: 10/24/86

Disciaimer: 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.

Analysis Results Report Number 102486032 Date: October 24, 1986

CLIENT I.D Nixon,	Flume	#1 Process	1	
Hargrave,	Discharge	Well	1	
Devans & Doyl	, –			
,				
ULI I.D.	29586017	29586018		
EPA 601:				,
Chloromethane	<1	<1		•••
Bromomethane	(1	 <1		
Dichlorodifluoromethane	(1	<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	i	
1,2-Dichloropropane	⟨1	(1		
t-1,3-Dichloropropylene	<1	\ \1		
Trichloroethylene	187	13		•
Dibromochloromethane	(1	(1		
1,1,2-Trichloroethane	(1	(1		•
c-1,3-Dichloropropylene	<1	(1		
1,1,2,2-Tetrachloroethane	(1	$ \langle 1 \rangle $		
Tetrachloroethylene	<1	<1		
Bromoform	(1	(1		
2-Chloroethylvinyl ether	1.41	<1		
EPA 602 (including Xyler	nes):	4.0		
Benzene	$\langle 1 \rangle$	<1		
Toluene	(1	<1		
Ethylbenzene	<1	(1		
Xylenes	(1)	<1		
Halogenated Aromatics (601/602):			
Chlorobenzene	<1	(1	1	
1,2-Dichlorobenzene	<1	(1	1	
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	 <1	<1		

All results are expressed as ppb.

10/24/86 Date:

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

Jue 11- 3068600(13)

			REMARKS											-		L.		Received by: (Signature)	Deceived by: (Signature)		7000	(4.15)	
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RECORD	" Court	/// Kay	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1 / / / / / / / / / / / / / / / / / / /								-						Relinquished by: (Signature)		Relinquished by: (Signature)	Date/Time Remarks	ञ्	
OF CHETODY	2031001			TAINERS	2			7	75	1 43	(Acon 2		О.К.					(Signature)		(Signature)	Laboratory by:	00	}
	5	(M)	Ora Ve	STATION LOCATION	/HU) - 45'well	/MW 2- 711	/MW3- 8'	LAGOON SURFACE	\	LAGOON BOTTON DUE			ORL FPAZ BIA	•				Date/Time Received by:	10/31 1400	$\frac{1}{10}$ Received by:	Date/Time Received for (Signature)	ンベー	0
RATORIES, INC.		PROJECT NAME C	Uixen Har	COMP	+-	1230	00/5/		2 040									(S/gnature)		1			
UPSTATE ABORATORIES,		PROJECT NO. P	<u>≺</u>	STA. NO. DATE		2	100	7	8	9	7							Relinquished by		Reignaulished by: (Signature)	Relinquished by: (Signature)	-	

Page 1

Analysis Results
Report Number 110786002
Date: November 7, 1986

EPA 601/602:

EFA 001/002.		1	T	
CLIENT I.D Nixon, Hargrave,	MW-1 45' Well	MW-2 71' Well	MW-3 85' Well	Lagoon Surface
Devans & Doyle	1	10/31/86	10/31/86	Water
			<u> </u>	10/31/86
ULI I.D.	30686007	30686008	30686009	30686010
EPA 601:	1		1	
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	<1
t-1,2-Dichloroethylene	(1 (15)	 <1	<1	<1
Chloroform	15	<1	<1	<1
1,2-Dichloroethane	<1	<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		(3T)	<1	42
Dibromochloromethane	<1	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	<1
EPA 602 (including Xylene	es):			
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	₹1	<1	<1
Xvlenes	1 <1	<1	<1	<1
Halogenated Aromatics (60	01/602):	i		
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: my fartiff
Date: 11/7/86

Disciaimer: 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

Page 2

Analysis Results
Report Number 110786002
Date: November 7, 1986

EPA 601/602:

EPA 6017602:				
CLIENT I.DNixon, 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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,2,2-Tetrachloroethane trachloroethylene moform Aloroethylvinyl ether PA 602 (including Xylene	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
day Libenzene	<1	(1 (1	<1 <1	
logenated Aromatics (60 coopenzene coopenzene coopenzene coopenzene coopenzene coopenzene	1/602): <1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1	
27 (1997) 1997 1997 1	<u> </u>	<u> </u>	<u> </u>	<u> </u>

milts are expressed as ppb.

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Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by UL! as contained in this report are believed by UL! 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 UL! for the services performed shall be equal to the fee charged to the customer for the services

~ \() - h0098e0E	REMARKS				Date/Time Received by: (Signature)	As Skin Steel As Signature) Show the Time Association of the Associat
CHAIN OF CUST	DATE TIME & SE	- 10/30/86 0900 #2PROCESS WELL 2) - 09/5 WH. TO LAGGON (2) - 09/50 OUT FAIL TO (2)	5 1015 LACON WITHER 22 1 6 1030 SAWAR DISCHARGE (2) 1 7 1100 #1 process well (2) 1	* ORG FROTE BLANK	Red April Signature) Date/Time Received by: (Signature) Relinquished by: (Signature)	Relinquished by: (Signature) Date/Time Received by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Date/Time Remarks Standard Company

Page 1

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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene t-1,2-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloromethane 1,2-Dichloromethane 1,2-Dichloromethane	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 ((1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 ((1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1
t-1,3-Dichloropropylene Trichloroethylene	<1 8∃	〈1 【19	<1 28	⟨1 3 ′
Dibromochloromethane	8. <1	₹1	28 <1	 <1
1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylenes	(1 (1 (1 (1 (1 (1 (2):	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	 (1) (1) (1) (1) (1) 	(1 (1 (1 (1 (1 (1
Benzene Toluene Ethylbenzene Xylenes	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1
Halogenated Aromatics (601 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	⟨1 ⟨1 ⟨1 ⟨1 ⟨1 ⟨1	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1

All results are expressed as ppb.

Approved:

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 as liquidated damages.

Page 2

UPSTATE LABORATORIES, INC.

Analysis Results Report Number 110786001 Date: November 7, 1986

EPA 601/602:

EPA 601/602:	0.463	Outfall	M.H.	Organic
CLIENT I.D Nixon,	Outflow	to	to	Free
Hargrave,	from		Lagoon	Blank
Devans & Doyle	Lagoon	Lagoon 10/30/86	10/30/86	10/30/86
	10/30/86			
ULI I.D.	30386008	30386009	30386010	30386011
EPA 601:	′			<1
Chloromethane	\ \1	<1	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Bromomethane	<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
ITICHIOIOITUUI OHEIHAHE	र्वे	<1	<1	<1
1,1-Dichloroethylene	lä	〈1	<1	<1
1,1-Dichloroethane	िरं	〈1	<1	<1 <1
t-1,2-Dichloroethylene	1 41	ki	<1	<1
Chloroform	(1	\di	<1	∫ <1
1,2-Dichloroethane		र्व	<1	<1
1,1,1-Trichloroethane	<1	र्व	⟨1	<1
Carbon Tetrachloride	<1	1 41	< 1	<1
Bromodichloromethane	<1	<1	\(\lambda\)	<1
1,2-Dichloropropane	<1	1 1	\ <u>{1</u>	<1
t-1,3-Dichloropropylene	1		5	<1
Trichloroethylene		4	- f<1	\(\bar{1}
Dibromochloromethane	<1	ζ1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
1.1.2-Trichloroethane	<1	<1		रा
c-1 3-Dichloropropylene	<1	<1	<1	र्व
1,1,2,2-Tetrachloroethane	 <1	<1	<1	\di
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	⟨1	<1	(1	1 1
2-Chloroethylvinyl ether	<1	<1	<1	1 1
EPA 602 (including Xyle	nes):		1,1	<1
Benzene	1 (1	<1	<1	(1)
Toluene	⟨1	<1	<1	(1
Ethylbenzene	<1	<1	\ \1	(1
37 . 1	1 <1	 <1	 <1	1 1
Halogenated Aromatics (601/602):			/1
Ohlambongone	<1	<1	 <1	<1
Chlorobenzene	र्व	<1	 <1	<1
1,2-Dichlorobenzene	र्व	<1	<1	<1
1,3-Dichlorobenzene	(1	⟨1	<1	<1
1,4-Dichlorobenzene	\ *	'		

All results are expressed as ppb.

Approved:

Date: 11/7/86

Disciaimer: 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

Iman @ \$30.00 hk x 5 hks. = 15000 Received by: (Signature) Received by: (Signature) well bailed for 18 gallons 3108pb37-REMARKS 3 pain gloves 120ga Sampling chunge Date/Time Date/Time Remarks Relinquished by: (Signature) Relinquished by: (Signature) CHAIN OF CUSTODY RECORD Czy Collegy Received for Laboratory by: (Signatyre) TAINERS **100** Received by: (Signature) CON-7 Received by: (Signature) Å BANK Sufferelayonnater X / SEWER DISCHARGE FLUME X 00+ Part 70 60,000 Asif bus Gran Lagor Process Well # X1 m. 12 609080 NIXCN, HARBARDE Y Processwell # 2 STATION LOCATION DRG FREE mw# 1 Date/Time Date/Time DRATORIES, INC. ลงภอ (scm) COMP Relinquished by: (Signature) (Signature) (Signature) 1.45 2,20 PROJECT NAME 11:55 30.21 2:00 2:16 TIME 1.35 Sh.11 98-6-11 S. Completo Retinguisment by: DATE PROJECT NO. UPSTATE \ STA. NO. 400 N ৩ 4-1 3

Page 1

Analysis Results
Report Number 111186011 Date: November 11, 1986

EPA 601/602:

				
CLIENT I.D Nixon, Hargrave,	Lagoon Water	Outflow from	Sewer Discharge	MW1 11/7/86
Devans & Doyle	11/7/86	Lagoon 11/7/86	Flume 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	k 1	\(\bar{1}\)	\di	<1
1,2-Dichloroethane	\(\bar{1}\)	<1	\(1	<1
1,1,1-Trichloroethane	<1	⟨1	\ <1	<1
Carbon Tetrachloride	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\alpha i	\di
Bromodichloromethane	ki	\(\lambda\)	(1	र्व
1,2-Dichloropropane	(1	⟨1	\di	\di
t-1,3-Dichloropropylene	 <1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	a	
Trichloroethylene	र्व	⟨1	25:	⟨1 2
Dibromochloromethane	ki	रंग	(1	₹1
1,1,2-Trichloroethane	र्वे	ki	र्व	\(\frac{1}{1}\)
c-1,3-Dichloropropylene	र्वे	रंग	ki	ki
1,1,2,2-Tetrachloroethane	र्वे	रंग	र्व	र्व
Tetrachloroethylene	ki	र्वे	र्व	र्वे
Bromoform	तं	र्वे	र्व	र्वे
2-Chloroethylvinyl ether	ki	₹1	(1	₹1
EPA 602 (including Xylend		``	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1
Benzene	\langle 1	<1	<1	<1
Toluene	\di	1 41	र्व	\di
Ethylbenzene	1	1 41	\(\dil\)	\\di
Xylenes		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	र्व	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Halogenated Aromatics (6		``	``	``
Chlorobenzene	 	<1	<1	<1
1,2-Dichlorobenzene	1	1 41	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	र्व
1,3-Dichlorobenzene	1	1 41	\di	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
1,4-Dichlorobenzene	<1	(1	\(\dag{1}	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
1,4 DICHIOLOGENZENE	\ <u>`</u>		1 11	

All results are expressed as ppb.

Approved:

Pate: 11/11/86

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Page 2

Analysis Results
Report Number 111186011
Date: November 11, 1986

EPA 601/602:

EPA 001/002.				
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
ULI I.D. EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 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 Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylenes		31086032 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	31086033 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	31086034 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
Benzene Toluene	<1 <1	(1 (1	<1 <1	(1)
Ethylbenzene Xylenes Halogenated Aromatics (60) Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1 1/602): <1 <1 <1 <1	<1 <1 <1 <1 <1	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	(1 (1 (1 (1 (1

All results are expressed as ppb.

Date: 11/11/86

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Page 3

Analysis Results Report Number 111186011 Date: November 11, 1986

EPA 601/602:

CLIENT I.D Nixon, Hargrave, Devans & Doyle Blank 11/7/86	EPA 601/602:		<u> </u>	·	
Chloromethane	Hargrave,	Free Blank			
Chloromethane	ULI I.D.				
	Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (

All results are expressed as ppb.

Approved:

ate: 11/11/86

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3-7984C2 UPS TE LABORATORIES, INC.

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11:36 1:36 1:36 1:36 1:36 1:36 1:36 1:36 1:36 1:45					3	to lagoon	-T	×	712	7	2
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#010 E25

JET MORITSTEEREROOD 245

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IDA DORNONEN KIDVIKLITI - DOLLE

Analysis Results Report Number 112686001 Date: November 26, 1986

EPA 601/602:

EPA 601/602:				
CLIENT I.D Nixon,	Outfall	Process	MH to	Outfall
Hargrave,	from	Well #2	Lagoon	to
Devans and	Lagoon	11/20/86	11720/86	Lagoon 11/20/86
Doyle	11/20/86			11/20/00
ULI I.D.	32486002	32486003	32486004	32486005
EPA 601:				
Chloromethane	<1	<1	∤<1	<1
Bromomethane	<1	<1	<1	<1
Dichlorodifluoromethane	<1	1 1	 <1	<1
Vinyl Chloride	〈1	1 <1	\<1	<1
Chloroethane	<1	<1	<1	√1
Methylene Chloride	<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
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	্ব
Trichloroethylene	4	7	3	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	\ <u>(1</u>	(1
Bromoform	<1	<1	(1	<1
2-Chloroethylvinyl ether	1 <1	<1	 <1	<1
EPA 602 (including Xylen	es):			
Benzene	j <1	<1	<1	<1
Toluene	(1	<1	<1	<1
Ethylbenzene	<1	 <1	(1	<u>(1</u>
Xvlenes	l <1	 <1	<1	(1
Halogenated Aromatics (6	01/602):	1		
Chlorobenzene	< 1	<1	<1	(1
1,2-Dichlorobenzene	<1	<1	<1	্ব
1,3-Dichlorobenzene	<1	<1	<1	(1
1,4-Dichlorobenzene	 <1	<1	<1	<1

All results are expressed as ppb.

Approved: Date: 11/25/86

Discialment: The test results and procedures utilized, and laboratory interpretations of data obtained by ULI as contained in this report are balleved 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.

Page 2

Analysis Results
Report Number 112686001
Date: November 26, 1986

EPA 601/602:

) <u>BFR 0017002</u> .	•			
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 Bromomethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 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 Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene: Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60)	4 4 <t< td=""><td>32486007 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</td><td>32486008 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</td><td>32486009 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</td></t<>	32486007 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	32486008 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	32486009 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	(1 (1 (1 (1	(1 (1 (1 (1	(1 (1 (1 (1	<1 <1 <1 <1 <1

All results are expressed as ppb.

Approved Daniel Hart

Date: 11/25/86

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Page 3

Analysis Results
Report Number 112686001
Date: November 26, 1986

EPA 601/602:

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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethane t-1,2-Dichloroethane t-1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane t-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	(1 (1 (1 (1		· ·

All results are expressed as ppb.

Approved:

Date: 11/25/86

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UPSTATE LABORATORIES, INC.

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Due 12.3-86

CHAIN	OF CUST
PROJECT NO. PROJECT NAME NIXON HARGAAN	1 / / ROT ON .ON
(rcm)	
STA. NO. DATE TIME S STATION LOCATION	TAINERS (87)
11-26-36 1:00 / PROCESS wat #2	00
V ₩4. 70	0
7	
Process well #1	
2	
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1200 × WW * (
11:50 / MW #2	
Ova. Free Blowle	
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UPSTATE LABORATORIES, INC.

Page 2

Analysis Results
Report Number 120986008
Date: December 9, 1986

EPA 601/602:

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
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 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 Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene	00000000000000000000000000000000000000		<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<
Toluene Ethylbenzene Xylenes	<1 <1	<1 <1	<1 <1	\\ \langle 1 \\ \l
Halogenated Aromatics (60		<1	(1	(1
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1 <1 <1	<1 <1 <1	<1 <1 <1	<1 <1 <1
* * DICHIOLODCHSeile	<1	<1	<1	<1

All results are expressed as ppb.

Approved: Daniel Fashiel

Date: 12/09/86

Discisiment: 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 implifity for actual and consequential damages of ULF for the services performed shall be equal to the fee charged to the customer for the services

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Analysis Results Report Number 120986008 Date: December 9, 1986

EPA 601/602:

	1			
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	†
EPA 601:			33100003	33186004
Chloromethane	<1	<1	4.	
Bromomethane	< 1	ki	<1	 <1
Dichlorodifluoromethane	ki		<1	 <1
Vinyl Chloride	ki	<1	<1	1 <1
Chloroethane	ζi	 <1	<1	<1
Methylene Chloride	1 2 5	<1	<1	<1
Trichlorofluoromethane /	· ·	<5	<5	<5
1,1-Dichloroethylene	<1	 <1	< 1	⟨1
1,1-Dichloroethane	<1	 <1	<1	ζî
t-1,2-Dichloroethylene	<1	 < 1	₹1	₹i
Chloroform	<1	<1	₹1	₹1
1,2-Dichloroethane	<5	 <5	< 5	45
1,1,1-Trichloroethane	 <1	<1	- <ì	
Carbon Tetrachloride	 <1	<1	₹1	<1
	 <1	<1	₹1	<1
Bromodichloromethane	 <1	⟨i		<1
1,2-Dichloropropane	<1	ki	<1	<1
t-1,3-Dichloropropylene	<1	<1	<1	<1
Trichloroethylene	3	2	<1	<1
Dibromochloromethane	K1	< 1	2	2 <1
1,1,2-Trichloroethane	<1	रा	<1	
c-1,3-Dichloropropylene	kī l		<1	<1
1,1,2,2-Tetrachloroethane	1 1	<1	<1	<1
Tetrachloroethylene	ا مدا	<1	<1	<1
Bromoform	الما	<1	<1	<1
2-Chloroethylvinyl ether	1 4 4	<1	<1	<1
EPA 602 (including Xylenes		<1	<1	<1
Benzene	7.		in.	
Toluene		<1	<1	<1
Ethylbenzen e	<1	<1	<1	⟨1
Xylenes		<1	<1	₹1
Halogenated Aromatics (601	(1)	<1	ζī	₹1
Chlorobenzene	7.7	1	_	•
	<1	<1	<1	<1
1,2-Dichlorobenzene	<1		ζi	<1 <1
1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1			
i.4~Dichiorobenzene i		ا	\\ 1	<1

All results are expressed as ppb.

Approved:

Date: 12/09/86

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UPSTATE LABORATORIES, INC.

Page 3

Analysis Results
Report Number 120986008
Date: December 9, 1986

EPA 601/602:

CLIENT I.D Nixon,	MW #1	MW #2	Organic	
Hargrave,	11/26/86	11/26/86	Free	
Devans and	,,,	1 22,20,00	Blank	*
Doyle			11/26/86	
ULĪ I.D.	33186009	33186010	33186011	
EPA 601:				
Chloromethane	<1	<1	< 1	
Bromomethane	<1	\di	₹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	ļ
1,1-Dichloroethane	1 <1	<1	<1	
t-1,2-Dichloroethylene	<1	<1	\ \i	
Chloroform	< 5	<5	<5	
1,2-Dichloroethane	1 < 1	<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	\(\lambda\)	<1	•
1,1,2-Trichloroethane	<1	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	\ <u>{1</u>	<1	 <1	
EPA 602 (including Xylen	<u>es)</u> :	1	1	1
Benzene	 <1	 <1	 <1	
Toluene	 <1	<1	<1	
Ethylbenzene	 <1	<1	<1	
Xylenes Halogenated Aromatics (6	2,51	<1	<1	
Halogenated Aromatics (6				
Chlorobenzene	<1	<1	<1	1
1,2-Dichlorobenzene	<1	<1	<1	
1,3-Dichlorobenzene	<1	<1	<1	
1,4-Dichlorobenzene	<1	K1	<1	

All results are expressed as ppb.

Approved:

12/09/86

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O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

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

CHAIN OF CUSTODY RECORD

SURVEY				SAM	PLER	S: (Sign	atural	Fish.	10-103-10
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HORATE ESSMUM	STATION LOCATION	DATE	TIME		MPLE TY		SEQ. NO.	NO. OF	AMALTSIS REQUIRED
w-45	Downgradient	12/3/86	0945		V				Cyonide
	Down gradient	12/3/86	0945		V				{
	Down gradient	12/3/86	1200		/				
	Downgradient	12/3/86	1200		~			1	
nw -55	Dangredient	12/3/86	1500		/			1	(
MW-517	Doungradient Doungradient	12/3/86	1500						7
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	Samples	are	pres	eruc	9 4	> r Y	eto	£65	
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	hed by: Isignature!		Receiv	ed by	: ¡Signe	no.		<u> </u>	Date/Time
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CHAIN OF CUSTODY RECORD

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1\3	Marie - Marie Marie Control	- LERICICIA	<u> </u>	SAA	PLE TY	PE	1	The second second			
NONATE	STATION LOCATION	STAC	3MIT	Wat		Air	SEQ.	HO. OF	AHALYSIS REQUIRED		
				Come.	Grab.						
Mar. 1	dominion	17/3/8	1:00		J			2	VAG - 157.		
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CHAIN OF CUSTODY RECORD

SURVEY	1/ 0 - 1/			SAMPLER	5: /Sign	eneral (Mark 5	ALTELDA
HOUNTS RESEMBLE	- Handgrave: Cort	DATE	PIME	SAMPLE IN Wester Come. Groe.		SEQ.	MO. OF	AMALTSIS BEOUWED
45	Doungradient	12/3/86	0945	1			Z	UHO - BTX
40	Down gradient	12/3/86	0945	1			Z	\(\frac{\zeta}{2}\)
25	Dam gradient	12/3/86	1200				2	ξ
- 2D	Dan gradient	12/3/06	1200	1			Z	{
	Down gradient	12/3/86	1500	1			2	5
J-50	Downgadient	12/3/86	1500	V			Z	
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Sample Location <u>S.c.m</u>	Well Nomw-1
Sampled By Peter Bonnilles	Date 12/3/64 Time 1:00 0
Weather Parmy ~ 35°F	Sampled with Bailer Pump
A. WATER TABLE:	11.22
Well depth: (below top of casing) <u>це.с</u> ft.	Well elevation: (top of casing) ft.
Depth to water table: (below top of casing) ZZ.\Z ft	
Length of water column (LWC)	<u>5.88</u> ft.
Volume of water in well:	(1) H 7 (1) 13 1 2 1
2" diameter wells = 0.16 4" diameter wells = 0.65 6" diameter wells = 1.46	3 x (LWC) = 4.21 gallons 3 X (LWC) = gallons 9 X (LWC) = gallons
B. PHYSICAL APPEARANCE AT START:	•
Color Clean Odor	none Turbidity None
Was an oil film or layer apparent?	
C. PREPARATION OF WELL FOR SAMPLING: Amount of water removed before sar	mpling <u>~ 1Z</u> gallons.
Did well go dry?	
D. PHYSICAL APPEARANCE DURING SAMPLI	NG:
Color (Qaa Odor	no Turbidity Shift
Was an oil film or layer apparent	?
E. CONDUCTIVITY NA .	
nia.	
NA.	•
G. TEMPERATURE NA	
H. WELL SAMPLING NOTES:	•
Speit we	al D.E.C
	- A223.
	· Committee of the comm
	The second secon

Samp	Te Location - Smith Corona Well No. 2-5
- Samp	Ted By _ D.T. Bussey Date 12/3/86 _ Time 1200 pm
Weat	her Cool light rain \$40° Sampled with Bailer Y Pump
Α.	WATER TABLE:
	Well depth: (below top of casing) 72.0 ft. Well elevation: (top of casing) ft.
	Depth to water table: Water table elevation: $\frac{47.39}{}$ ft.
	Length of water column (LWC) 24.61 ft.
	Volume of water in well:
	2" diameter wells = 0.163 x (LWC) = $\frac{4.0}{}$ gallons 4" diameter wells = 0.653 X (LWC) = $\frac{9.0}{}$ gallons 6" diameter wells = 1.469 X (LWC) = $\frac{9.0}{}$ gallons
В.	PHYSICAL APPEARANCE AT START:
	Color <u>Clear</u> Odor <u>no</u> Turbidity low
	Was an oil film or layer apparent?
С.	PREPARATION OF WELL FOR SAMPLING:
	Amount of water removed before sampling
	Did well go dry?
D.	PHYSICAL APPEARANCE DURING SAMPLING:
	Color cloudy Odor no Turbidity high
	Was an oil film or layer apparent?
Ε.	CONDUCTIVITY PA
F.	pH
G.	TEMPERATURE / A
н.	WELL SAMPLING NOTES:
•••	Spect were D.E.C.
	- Diki

Samp	ole Location Smith Coconu	Wel.	1 No. 2-D
Samp	oled By D.T. Bussey	Date 12/3/86 -	Time 1200 pm
Weat	her Gool light rain = 40°F	sampled with Baile	r Pump
Α.	WATER TABLE:		
	Well depth: (below top of casing) 104 ft. Depth to water table: (below top of casing) 48.74 ft.	Well elev	ation: asing) ft.
	Depth to water table: (below top of casing) 48.24 ft.	Water table elev	ation: ft.
	Length of water column (LWC) 55	.76 ft.	
	Volume of water in well:		
	2" diameter wells = 0.163 4" diameter wells = 0.653 6" diameter wells = 1.469	$\begin{array}{c} (LWC) = 9,0 \\ (LWC) = \\ (LWC) = \\ \end{array}$	gallons gallons gallons
В.	PHYSICAL APPEARANCE AT START:		
	Color <u>clear</u> Odor	<u>^0</u> Tur	bidity low
	Was an oil film or layer apparent? _		
С.	PREPARATION OF WELL FOR SAMPLING:	ina 30.0	
	Amount of water removed before sampl Did well go dry?	- 30.0	gallons.
D.	PHYSICAL APPEARANCE DURING SAMPLING:		ì
	Color <u>clear</u> Odor		idity 10W
	Was an oil film or layer apparent? _	NO	
Ε.	CONDUCTIVITY PA	_	
F.	pH νΑ	_	
G.	TEMPERATURE MA	_	
н.	WELL SAMPLING NOTES:		
	Spect words D.Ec.		

ng le	e Location <u>5, C. m</u>	Well No. mw-3
•	ed By P. G.B	Date 12/3/86 Time 2:30
	er Durant, Cool	Sampled with Bailer Pump
	WATER TABLE:	11 33 - 3 - 21 2 - 22
	Well depth: (below top of casing) 85 00 ft.	Well elevation: (top of casing)ft
	Penth to water table:	Water table elevation: ft
	(below top of casing) 59.74 ft.	•
	Length of water column (LWC)	25.76 ft.
	Volume of water in well:	o (INC) - III a gallons
	4" diameter wells = 0.65	$3 \times (LWC) = $
	6" diameter wells = 1.46	9 X (LWC) = gallons
	PHYSICAL APPEARANCE AT START:	
		none Turbidity Slight.
	Was an oil film or layer apparent?	<u> </u>
•	PREPARATION OF WELL FOR SAMPLING:	
	_	mpling <u>IZ</u> gallons.
	Did well go dry?	
).	PHYSICAL APPEARANCE DURING SAMPLING	
	Color Con Odor	<u> </u>
	Was an oil film or layer apparent	?
	CONDUCTIVITY NA .	
= .	рН V. д	2
G.	TEMPERATURE NA	
Н.	WELL SAMPLING NOTES:	
	·	

	Sampled with Bailer V Pump
	WATER TABLE: Well elevation:
j I	(below top of casing) 72.00 ft. (top of casing) ft.
	Depth to water table: Water table elevation: ft. (below top of casing) <u>40.07</u> ft.
	Length of water column (LWC)ft.
	Volume of water in well:
	2" diameter wells = $0.163 \times (LWC) = 4.22$ gallons 4" diameter wells = $0.653 \times (LWC) = gallons$ 6" diameter wells = $1.469 \times (LWC) = gallons$
	PHYSICAL APPEARANCE AT START:
	Color Odor No Turbidity No
	Was an oil film or layer apparent?
2.	PREPARATION OF WELL FOR SAMPLING:
	Amount of water removed before sampling gallons.
	Did well go dry?
D.	PHYSICAL APPEARANCE DURING SAMPLING:
	Color Clark (la Braun) Odor No Turbidity Low
	Was an oil film or layer apparent?
Ε.	CONDUCTIVITY NA
	Al n
F.	A1 .
G.	TEMPERATURE NA
н.	WELL SAMPLING NOTES:
	wee became slightly sitty while
	baily. Sample taken for D.E.C

Samp	ple Location Smith Coronia	Well No 4-D
Şamp	pled By Dit. Bissey Date	e 12/3/86 Time 0945
Weat	ther cool light rain & 40°F Sam	pled with Bailer Pump
Α.	WATER TABLE:	, =
	Well depth: (below top of casing) 109 ft.	Well elevation: (top of casing) ft.
		ater table elevation: ft.
	Length of water column (LWC) 57.0	<u>9</u> ft.
	Volume of water in well:	
	2" diameter wells = 0.163 x () 4" diameter wells = 0.653 X () 6" diameter wells = 1.469 X ()	
В.	PHYSICAL APPEARANCE AT START: Color Odor Odor	2 Turbidity /al.
	Was an oil film or layer apparent?	
c.	PREPARATION OF WELL FOR SAMPLING:	
	Amount of water removed before sampling Did well go dry?	gallons.
D.	PHYSICAL APPEARANCE DURING SAMPLING:	,
	Color <u>clear</u> Odor <u>no</u>	
	Was an oil film or layer apparent?	<u>ی</u>
Ε.	CONDUCTIVITY PA	
F.	pH NA	
G.	TEMPERATURE NA	
н.	WELL SAMPLING NOTES:	
		<u></u>

Samp	le Location Smith Corona Well-No 5-5-
Samp	led By Don Bussey - Date 10/3/86 Time 315 pm
Weat	her cloudy Cool = 40° = Sampled with Bailer X Pump
Α.	WATER TABLE:
	Well depth: Well elevation: (below top of casing) 38.0 ft. (top of casing) ft.
	Depth to water table: 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) = 9 gallons 6" diameter wells = 1.469 X (LWC) = 9 gallons
В.	PHYSICAL APPEARANCE AT START:
	Color clear Odor no Turbidity low
	Was an oil film or layer apparent?
c.	PREPARATION OF WELL FOR SAMPLING:
	Amount of water removed before sampling / O,O gallons.
	Did well go dry?
D.	PHYSICAL APPEARANCE DURING SAMPLING:
	Color cloudy Odor no Turbidity high
	Was an oil film or layer apparent?
Ε.	CONDUCTIVITY PA
F.	рН <u></u>
G.	TEMPERATURE PA
н.	WELL SAMPLING NOTES:
	Solut week D.E.C

Samp	le Location Smith Corona Well No. 5-D-
-Samp	led By Don Bussey - Date 12/3/86 Time 3100 Pm
Weat	her Cloudy, Cool ~ 40° F Sampled with Bailer X Pump
Α.	WATER TABLE:
	Well depth: Well elevation: (below top of casing) 70.0 ft. (top of casing) ft.
	Depth to water table: Water table elevation: ft. (below top of casing) $\frac{ b, b }{ b }$ ft.
	Length of water column (LWC) <u>53.6</u> ft.
	Volume of water in well:
	2" diameter wells = 0.163 x (LWC) = $\frac{8.7\%}{}$ gallons 4" diameter wells = 0.653 X (LWC) = ${}$ gallons gallons
В.	PHYSICAL APPEARANCE AT START:
	Color clear Odor no Turbidity low
	Was an oil film or layer apparent? _ n o
c.	PREPARATION OF WELL FOR SAMPLING:
,	Amount of water removed before sampling
	Did well go dry?
D.	PHYSICAL APPEARANCE DURING SAMPLING:
	Color clear Odor 10 Turbidity /ow
	Was an oil film or layer apparent? Po
Ε.	CONDUCTIVITY PA
F.	рН <u>РА</u>
G.	TEMPERATURE NA
н.	WELL SAMPLING NOTES:
,,,,	Solut wice D.E.C



CLIENT	O'Brien	& Gere Engi	neers, Inc.		JOB NO	3435.001.100
DESCRIPTION	Nixon H	argrave, SCM	Site			
	MW#1					
SAMPLE NO. A6	5012	_DATE COLLECTE	D12/3/86	DATE REC'D. 12/4/86	DATE ANAL	YZED 12/4/86
			ppb			ppb
्रेशिए वि ग्रहा)/#'# * **		Fire Property	t-1,3-Dichloropropene		<1.
Bromometha	ane			នេះស្រីស្រែក្រៅពីសេ _ន ្តិ	*	
Attylitesticut	(4. 22 PA			Benzene		
Chloroethan	e	<u> </u>		ागीम्प्राचित्रकाना व्यापनी हिल्ल		
atalwer in	acializada	Section 30		1,1,2-Trichloroethane		
1,1-Dichloro	ethene			अन्द्रके देशीयां (तर्का (वृक्षा)		TO NOTE OF SERVICE
of pugitors	ilir pita	er en gren i e	30 3	2-Chloroethylvinyl ethe	٢	<10.
t-1,2-Dichlor	roethene			Emmodada Artis		2417 TE
Zeniomic			**************************************	1,1,2,2-Tetrachloroetha	ne	<1.
1,2-Dichloro	ethane			- Verteralistic planes.		or the programme
未 katinghi	mention in the		2.3	Toluene		
Carbon tetra	achloride			Foliotopicki * rese	1.	
e d'indicai	opine) in the	History CA		Ethylbenzene		
1,2-Dichloro	propane		1	Angerty -	HE WEST	CAN CHANGE WE

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 80 %

2-Bromo-1-chloropropane = 79 %

Trifluorotoluene = 77 %

Authorized: 2.2-8.7

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CLIENT	O'Brien & Gere	Engineers, Inc.		ов но	3435.001.100
DESCRIPTION _	Nixon Hargrave	SCM Site			
	Well #2-S				
SAMPLE NO. A	6007 DATE COL	LECTED 12/3/86	DATE REC'D. 12/4/86	DATE ANAL	YZED 12/4/86
		ррь			ррв
ed oratio	profession of the		t-1,3-Dichloropropene	,	<1.
Bromometha	ane		arjents and a second		
Spirit Store		14 (18 20)	Benzene		<1.
Chloroethar	16		a description of the first		
CONTRACT A	的可能的表生的重要等		1,1,2-Trichloroethane		·
1,1-Dichlord	pethene		esember in more than	Activities	是2006年2月15
Bus Cherry		e aire	2-Chloroethylvinyl ethe	r	<10.
t-1,2-Dichlo	roethene	3.	graduotria est alle		A PROPERTY OF STREET
e Mingridain			1,1,2,2-Tetrachloroetha	ne	<1.
1,2-Dichlor	pethane	<1.	dingular server		artellor de l
and the second	oranling for the service	到底, 在 是是一个。	Toluene		
Carbon tetr	achloride		ing in (16) in the Chapter of		
ां शिक्त देव विश	opopoplopiča da ista		Ethylbenzene		
1,2-Dichlore	opropane	$\overline{}$	POLICE SERVICES		Single resident

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 99 %
2-Bromo-1-chloropropane = 94 %
Trifluorotoluene = 99 %

Authorized: 2-2-87

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



CLIENT	O'Brien &	Gere Engin	eers, Inc.		JOB NO	3435.001.100
DESCRIPTION _	Nixon Hard Well #2-D	grave, SCM	Site			
SAMPLE NO. A	6006 DA	TE COLLECTED .	12/3/86	DATE REC'D. 12/4/86	DATE ANA	LYZED 12/4/86
			ppb			ррь
asignion the		4.62 5 4 5		t-1,3-Dichloropropene		<1.
Bromometha	ane			्रहास ीठाठा ॥ स्टब्स		18 1 (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
g englendere				Benzene		<1.
Chloroethan	е					
d felloyienexe	dolor service			1,1,2-Trichloroethane		
1,1-Dichloro	ethene			्रस्य स्थानम् । । । । । । । । । । । । । । । । । । ।		To the second
្តមក្សិត្តិកំពង់	oligi z	-42 32 22	44	2-Chloroethylvinyl ethe	er	<10.
t-1,2-Dichlor	roethene		7	re-licensporter-comme		and the same
.3 e 110/0/672g				1,1,2,2-Tetrachloroetha	ine	<1.
1,2-Dichloro	ethan e			Samplifore of the second	17	
6.19.4517.110	M-Aldin See			Toluene		
Carbon tetra	achloride			te de la constituir de la constituir de la constituir de la constituir de la constituir de la constituir de la		
	IO MBIANDES			Ethylbenzene		
1,2-Dichloro	2 2 10 Car 10 Ca		J	and the second		AND RESERVE

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 92 %
2-Bromo-1-chloropropane = 98 %
Trifluorotoluene = 101 %

Authorized: ONNOT

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CLIENT	0'Bri	en & Gere	Enginee	rs, Inc.		JOB NO	3435.001.100
DESCRIPTION _	Nixon	Hargrave	SCM Si	te			
	MW #3						
SAMPLE NO. A	6013	DATE COL	LECTED	12/3/86	DATE REC'012/4/86	DATE ANA	LYZED 12/4/86
				ррь			ррб
edio onen	mest av		(Tring)		t-1,3-Dichloropropend)	<1.
Bromometh	ane			1	7 mendicilities 1		
industrion.	ite is				Benzene		
Chloroethar	ne		-		ં <u>શ્રી</u> ક ભૂતાનું ના ભૂતાના સ્થા	iren de la companya de la companya de la companya de la companya de la companya de la companya de la companya d	
AMMINISTRA	indict.		Sec. 22.73		1,1,2-Trichloroethane		
1,1-Dichlord	oethene				. เราะบรางสุดกัดสัญกาก		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
ल हे देश देश	ethtige.		and the	4	2-Chloroethylvinyl eth	ner	<10.
t-1,2-Dichlo	roethene				Asion bottons assets		gradice single sign
ringitation	- 10.1	S			1,1,2,2-Tetrachloroeth	nane	<1.
1,2-Dichloro	oethane					4.00 34 55 4	
Bank Banka	ip Gutiu e		14.34.34		Toluene		
Carbon tetr	achloride				wateroperarchitisms		
risto politici	iden in the second		r Fortes	Harake.	Ethylbenzene		
1,2-Dichlord	opropane			V	Antique de la company		

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 90 %

2-Bromo-1-chloropropane = 86 %

Trifluorotoluene = 77 %

Authorized: ONUTOT

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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 ANA	LYZED 12/4/86
ppb		ррь
t-1,3-Dichloropropene		<1.
Bromomethane - Lijenicites (min.t.)		
Willy consider a second Benzene		
Chloroethane SERVE Constitute of the Chloroethane		
**AM:NV line #dn(longing = 1,1,2-Trichloroethane		
1,1-Dichloroethene	7 3	
#Epiledicidations 2-Chloroethylvinyl ether	•	<10.
t-1,2-Dichloroethene		
Chlerototic St. 1,1,2,2-Tetrachloroethan		<1.
1,2-Dichloroethane	40.00	The ex
Toluene Toluene		
Carbon tetrachloride		
4-Oncompliation to Ethylbenzene		
1,2-Dichloropropane		

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 99 %

2-Bromo-1-chloropropane = 99 %

Trifluorotoluene = 98 %

Authorized: 2-2-87



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 AN	ALYZED12/4/86
Р	ьь		ррь
્યાર્થિતા માર્પા કે જ કરવા માર્પા માં પ્રોથમિક	t-1,3-Dichloropropene		<1.
Bromomethane	with Occurrent	÷	
winy collois and the second of	Benzene		
Chloroethane	:42)(ઇંડાઇસ્ટ્રોઇડિક) કરો	(4 -2)	
Melinvieneration@www.sacrastrastrastrastrastrastrastrastrastrast	1,1,2-Trichloroethane		
1,1-Dichloroethene	्र अस्तर वृत्ति विवास स्टब्स	e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	Law in particular
ৼ৾য়৾৾ৼ৾ঀ৾য়৸ঢ়ড়৸য়য়৻ড়ৼৼৼৼৼৼ৾৻ৼঢ়ঢ়৸	2-Chloroethylvinyl etho	er	<10.
t-1,2-Dichloroethene	Selection of the select	e univers	大学·邓D基础设置
gaporojomes	1,1,2,2-Tetrachloroeth	ane	<1.
1,2-Dichloroethane	ZATERNO ACHERSA		
FAMOROGODISH	Toluene		
Carbon tetrachloride	្រុំ ម្នាំស្រ ាស់ពេលស្រួ _{ងប្រ} សេ		2.73.12.13.2
Company of the second of the s	Ethylbenzene		
1,2-Dichloropropane	Pariotics of the Co	i - i ki si	The state of the s

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 95 %

2-Bromo-1-chloropropane = 98 %

Trifluorotoluene = 103 %

Authorized: CIMINA

2-2-8-7

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



CLIENT O'Brien & Gere Engine	ers, Inc.	JOE	343	35.001.100
DESCRIPTION Nixon Hargrave, SCM S	ite			
Well 5-D			· · · · · · · · · · · · · · · · · · ·	
SAMPLE NO. A6010 DATE COLLECTED	12/3/86	DATE REC'D. 12/4/86 DA	TE ANALYZED	12/4/86
	ppb			рръ
acillogidence - 200	VILLE HE	t-1,3-Dichloropropene		<1.
Bromomethane		File ion of the constant	10.00	Property.
LAVIONE SHIPPING THE SECOND SHIPPING		Benzene		<1.
Chloroethane		क्ष्यान काला को स्टब्स्ट स्थान है।		第二条字数
scomed senting the second senting		1,1,2-Trichloroethane		
1,1-Dichloroethene		aracantiformular activity	200	
្នេងម៉ាកាស្ត្រស្រែក នេះ អ៊ីន៉ូនេ អ៊ូន		2-Chloroethylvinyl ether		<10.
t-1,2-Dichloroethene		stroidactics, et al., et al.		THE ACTOR
Thiographs.		1,1,2,2-Tetrachloroethane		<1.
1,2-Dichloroethane		Calcarding (A) Decrees Light		
THE RESERVE OF THE PARTY OF THE		Toluene		
Carbon tetrachloride		Constant Control		Server - The
ារីពិញ្ញារីកាការប្រជាពិធីក្រុងក្នុងក្នុងក្នុងក្នុងក្នុងក្នុងក្នុងក្ន	74 22 23	Ethylbenzene		
1,2-Dichloropropane		FIGURE AND SERVICE		

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 84 %
2-Bromo-1-chloropropane = 83 %
Trifluorotoluene = 80 %

Authorized: 2-2-87

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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
ррь	
Outgoing the telegraphic teleg	
Bromomethane *ffkiloeninative * * * * * * * * * * * * * * * * * * *	
Nunvielloriet Benzene	
Chloroethane	1.1.1
Mative in the second of the se	
1,1-Dichloroethene	
2-Chloroethylvinyl ether <10.	
t-1,2-Dichloroethene	
Schlower 1,1,2,2-Tetrachloroethane <1.	
1,2-Dichloroethane	
Toluene Toluene	
Carbon tetrachloride	
Secundation of the Control of the Co	
1,2-Dichloropropane	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 70 %

2-Bromo-1-chloropropane = 72 %

Trifluorotoluene = 81 %

Authorized: 2.2-8.7



PREPARED AT ATTIGRACY'S REQUEST

Laboratory Report

CLIENT O'BRIEN & GERE ENGINEERS, IN	(C	· · · · · · · · · · · · · · · · · · ·	JOB N	io. <u>2114.</u> 0	003.517
DESCRIPTION Nixon-Hargrave, SCM site	Nixon-Hargrave, SCM site, Cortlandville 12-3-86 DATE RECD. 12-4-86 Sample # CYANIDE A6006				
DATE COLLECTED 12-3-86 DATE REC'D	12-4-8	36	DATE ANALY	ZED	
	Sample #	CYANIDE	,		
ATATECO AND PARTY.	A6006	20.05		KING SE	~ # # # # # # # # # # # # # # # # # # #
Well 2-S		<0.05			
- Wall Made	A6008	KO 05			
Well 4-S	A6009	<0.05			<u></u>
We11 5=D	A6010	KO 1 05	5年37年	Project (1)	
Well 5-S	A6011	<0.05			
MW#1	A6012	<0.05			
MW#3	A6013	<0.05			The state of the second
the construction of the second contraction of the c					A STATE OF S
and the second s					

Comments:

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

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

Authorized: Online

Units: mg/t (ppm) unless otherwise noted

Date: February 9, 1987

INC,
LABORATORIES,
UPST

UPST	LABORATORIES,	TORIE	S,	INC,	CHAIN	OF CUS	CUSTODY RECORD		3886	6003-070
PROJECT NO.		PROJECT NAME NINDN	E NIXON	36	HAICGRAUE	. O. P.	NOTE OF THE PROPERTY OF THE PR			REMARKS
STA. NO.	DATE	TINE	come.	8∧ <i></i> 79	STATION LOCATION	CON- TAINERS	The same			
	05/1/98-4-21	133		7	Process well #2	0	7			1
	12-450	1/40		2	3		2			
	125-186 1150	1150		7	PROOFS well"	Y)	7			
	12-4-56	7-4-81155		7	CUTEAU TO LAGORA	M	7			
	12-2-841200	1200		7	SELLER DIXHARCAE FLUME	N	7			
	12-4-56	1215		7	LAGOON WATER		7			
	12.4.51			7	DITTELL FROM LAGOON	E	7			
	1			7	OPA FREE RANK	+	\ \frac{1}{3}	•		
					٠					
South Pd by	V: Signeture	(Lec		16 2	771me Received by:	(Signature)	Relinquished by: (Signature)	nature)	Date/Time	Received by: (Signature)
Relinguls	Relingulshed by: (Signature)	ignature		Dot to	/Time Received by:	(Signature)	Relinquished by: (Signature)	na_ure)	Dote/Time	Received by: (Signature)
Relinguished	100	Signature		Date 24	Date Time Received for Labor 124 1530 (Signature)	Laboratory by:	12-4 1530	Renorks	3 hes sa	3 has snown le x300-4900
					ì					1000

UPSTATE LABORATORIES, INC.

Page 1

Analysis Results Report Number 120986009

December 9, 1986 Date:

EPA 601/602:

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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	33886004 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	33886005 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	33886006 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
Xylenes Halogenated Aromatics (60 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	01/602): <1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1

All results are expressed as ppb.

Approved:

12/09/86

Discisimer: 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 UL1 for the services performed shall be equal to the fee charged to the customer for the services as ilquidated damages.

UPSTATE LABORATORIES, INC.

Page 2

Analysis Results
Report Number 120986009
Date: December 9, 1986

EPA 601/602:

CITENT I D Marco		•	0 . 6	
CLIENT I.D Nixon, Hargrave,	Flume Sewer	Lagoon Water	Outfall	Organic
Devans and	Discharge	12/4/86	from Lagoon	Free Blank
Doyle	12/4/86	12/4/00	12/4/86	12/4/86
ULI I.D.	33886007	33886008	33886009	33886010
EPA 601:				
Chloromethane	<1	<1	< 1	<1
Bromomethane	₹1	₹i	ζî	\ \di
Dichlorodifluoromethane	\ \lambda{1}	₹1	₹1	\ \i
Vinyl Chloride	<1	₹î	ζī	ki
Chloroethane	1 <1	₹î	\{\bar{1}	₹1
Methylene Chloride	₹5	₹5	₹5	₹5
Trichlorofluoromethane	<1	₹1	₹1	ki
1,1-Dichloroethylene	<1	₹1	⟨1	< 1
1,1-Dichloroethane	<1	<1	<1	<1
t-1,2-Dichloroethylene	<1	ίί	(1	<1
Chloroform	1 45	₹5	\ \ \ \ 5	₹5
1,2-Dichloroethane	<1	\ \di	\ 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	<1
Tetrachloroethylene	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	¹ ,<1	<1	<1	<1
EPA 602 (including Xylene	<u>es)</u> :			
Benzene	<1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	\ \1 21 \(\frac{1}{2}\)	<1	<1	 <1
Halogenated Aromatics (60				
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

Discialmer: The text 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.

O'BRIEN & GERE

CHAIN OF CUSTODY RECORD

NIXON-HAPLRAVE	•		SAMPLER	S: (Signature)			
CORTLAND VILLE.			law	D Me	zer /	ite. C	Brank.
STATION LOCATION	DATE	™€	SAMPLE TO Water Comp. Grob.	560	NO. 0#	ļ	ANALYSIS REQUIRED
Mw-6	12/11/86	10:50	X		2	601	,602
MW-8		11:13			2		
M W-7		12:05			ス		
MW-1		12:30			2		
M W -3		2:30			2	١	(
							·
							i de es
						<u> </u>	
had by: Isignamore OBRIEN SMEIN	! LIFE VEERS, INC	Receiv	red by: (Signi	rive)			Date/Time
shed by: (Signature)		Receiv	red by: (sign	ef urei			Date/Time
shed by: (Signerus)		Receiv	red by: (sign	store)			Date/Time
shed by: (Signeture)		Receive	red by Mobi sis: (Signature)	ile Laborai	ory for field	1	Date/Time
ed by: (Signature)	Date	/Time	Received	for Labora	tory by:		Date/Time
	STATION LOCATION MW-6 MW-8 MW-7 MW-1 MW-3 MW-3 MW-3 MW-3 MW-3 MW-3 MW-3 MW-3 MW-1 MW-3 MW-1 MW-3 MW-1 MW-1 MW-1 MW-1 MW-3 MW-1 MW-3 MW-1 MW-3 MW-1	STATION LOCATION STATION LOCATION MW-6 MW-8 MW-7 MW-1 MW-3 MW-3 FAMILIEERS, THE SHED by: (Signature) Shed by: (Signature)	STATION LOCATION STATION LOCATION MW-6 IAILISE 10:50 MW-7 IAILISE 10:50 MW-7 IAILISE 10:50 IAILISE 10:5	STATION LOCATION STATION LOCATION MALE MOTO Coma. Grob. MW-8 MW-7 MW-7 MW-1 12:30 X MW-1 12:30 X MW-3 12:30 X MW-3 PARTE ENLINEERS, TAL Received by: (Signature) shed by: (Signature) Received by: (Signature) Received by: (Signature) Received by: (Signature)	SIATION LOCATION STATION LOCATION MW-6 INTERMEDIATE TIME Water Coma Grob. AV MW-8 INTERMEDIATE TOTAL MW-1 INTERMEDIATE TOTAL MW-1 INTERMEDIATE TOTAL Received by: (Signature) The dby: (Signature) Received by: (Signature) Received by: (Signature) Received by: (Signature) Received by: (Signature) Received by: (Signature)	STATION LOCATION STATION LOCATION DATE TIME Mater Aut. State No. Of Containess Mw-6 12/11/86 10/120 X 2	STATION LOCATION STATION LOCATION STATION LOCATION DATE TIME SAMPLE TYPE SEC. NO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS MO. OF CONTAINESS A. A. A. A. A. A. A. A. A. A. A. A. A. A

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

\$355	le Location S.C.M Well No. Mw-1
ا مراناعد Camp	led By P.G.B : 5.D.M Date 12/11/86 Time 12:30
Weati	her Sof overcast Sampled with Bailer V Pump
Α.	WATER TABLE:
	Well depth: (below top of casing) 44.30 ft. Well elevation: (top of casing) ft.
	(below top of casing) <u>UL.30</u> ft. (top of casing) ft. Depth to water table: Water table elevation: ft.
	(below top of casing) ft.
	Length of water column (LWC) ft.
	Volume of water in well:
	2" diameter wells = $0.163 \times (LWC) = \frac{4.03}{9}$ gallons gallons
	4" diameter wells = 0.103 X (LWC) = gallons 6" diameter wells = 1.469 X (LWC) = gallons
В.	PHYSICAL APPEARANCE AT START:
J .	Color Cean Odor he Turbidity ha
	Was an oil film or layer apparent?
\bigcirc \mathfrak{c}	PREPARATION OF WELL FOR SAMPLING:
•	Amount of water removed before sampling \(\sigma \frac{12}{2} \) gallons.
	Did well go dry?
D.	PHYSICAL APPEARANCE DURING SAMPLING:
υ.	Color Cean Odor No Turbidity No
	Was an oil film or layer apparent?
Ε.	CONDUCTIVITY WAR.
	N 1 A
F.	
G.	TEMPERATURE
н.	WELL SAMPLING NOTES:
	Sampled with dedicated bruke
,	
ľ	
1	

) Samo	ie Location S.C.M Well No. MW-ZS
•	led By P.G.B; 5, D.m Date 12/12 Time 12; 2.0
	her Flumes, 250 F Sampled with Bailer J Pump
Α.	WATER TABLE:
	Well depth: (below top of casing) 71 ft. Well elevation: (top of casing) ft.
	Depth to water table: Water table elevation: ft.
	(below top of casing) 46.73 ft.
	Length of water column (LWC) <u>국식, 27</u> ft.
	Volume of water in well: 2" diameter wells = 0.163 x (LWC) = 3.9 gallons
	2" diameter wells = $0.163 \times (LWC) = 3.9$ gallons 4" diameter wells = $0.653 \times (LWC) = $ gallons 6" diameter wells = $1.469 \times (LWC) = $ gallons
В.	PHYSICAL APPEARANCE AT START:
٥.	Color Coan Odor Mone Turbidity Mone
	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 Claudy Odor Turbidityslight
	Was an oil film or layer apparent?
Ε.	CONDUCTIVITY NA
F.	pH
G.	4.11
	THE MOTES .
н.	WELL SAMPLING NOTES:
)	

) Sama	ie Location S.C.m Well No. mw-ZD
	oled By P.G. B' S.D.M Date 12/12/80 Time 12:30
	ther <u>~750</u> Flurries Sampled with Bailer J Pump
nea :	
Α.	WATER TABLE:
***	Well denth: Well elevation:
	(below top of casing) 104 ft. (top of casing) ft. Depth to water table: Water table elevation: ft.
	Depth to water table: Water table elevation:ft. (below top of casing)ft.
	Length of water column (LWC) $= 56.64$ ft.
	Volume of water in well:
	2" diameter wells = $0.163 \times (LWC) = 9.13$ gallons
	4" diameter wells = 0.653 X (LWC) = gallons 6" diameter wells = 1.469 X (LWC) = gallons
В.	PHYSICAL APPEARANCE AT START:
	Color Ocas Odor No Turbidity None
	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 Que Odor Turbidity No
	Was an oil film or layer apparent?
E.	. CONDUCTIVITY
F	. pH
·	
G	•
Н	. WELL SAMPLING NOTES:
	Evacuated with Pump
ノ	

Jama	ple Location <u>S.C.m.</u>	Well No.	MW-3
	pled By P.G.B. S.D.M	Date 12/11/06 Time	2130 p.m
Wea	ther 430 overcatt s	Sampled with Bailer	Pump
Α.	WATER TABLE:	Well elevation:	
	Well depth: (below top of casing) <u>\$3.4</u> ft.	· · · · · · · · · · · · · · · · · · ·	
	Depth to water table: (below top of casing) 58.07 ft.	Water table elevation:	ft.
	Length of water column (LWC) <u>25,</u>	30 ft.	
	Volume of water in well:		
	2" diameter wells = 0.163 4" diameter wells = 0.653 6" diameter wells = 1.469	X (LWC) =	gallons gallons gallons
В.	PHYSICAL APPEARANCE AT START:	•	,
	Color (Qear Odor	Turbidit	y <u>No</u>
	Was an oil film or layer apparent?	The .	
\bigcirc c.	PREPARATION OF WELL FOR SAMPLING:		
	Amount of water removed before samp	ling <u>~IZ</u>	gallons.
	Did well go dry?		
D.			
	Color Com Brown Odor		1 ho
	Was an oil film or layer apparent?	The	
Ε.	. CONDUCTIVITY . NA .	_ `.	
F.	. pH		
G	. TEMPERATURE WA		
Н			
n	. RELL STATE LITTLE TO THE STATE OF THE STAT		
	•		
(
		·	7833 A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

amp l	e Location S.C.m Well No. mw-45
	ed By P.G.B: S.D.m Date 12/12 Time 10:30
•	ner Flume; 75 0F Sampled with Bailer _ / Pump
•	WATER TABLE: Well elevation:
	Well depth: (below top of casing) 74.40 ft. (top of casing) ft
	Depth to water table: Water table elevation: ft (below top of casing) 45,43 ft.
	Length of water column (LWC) Z8 .97 ft.
	Volume of water in well:
	2" diameter wells = $0.163 \times (LWC) = 4$ gallons gallons diameter wells = $0.653 \times (LWC) = 6$ gallons gallons
В.	PHYSICAL APPEARANCE AT START:
	Color Clean Odor no Turbidity No
	Was an oil film or layer apparent?
С.	PREPARATION OF WELL FOR SAMPLING:
	Amount of water removed before sampling ~ 15 gallons.
	Did well go dry?
D.	PHYSICAL APPEARANCE DURING SAMPLING:
	Color Clear Odor No Turbidity No
	Was an oil film or layer apparent?
Ε.	CONDUCTIVITY NA
F.	рН <u> </u>
G.	TEMPERATURE NA
н.	Evacuated with Bailes.

Sample Location S.C.m	Well No. MW-4D
Sampled By P.G.B	Date 12/12/86 Time 10:45
Weather 75°F; Snowy	Sampled with Bailer Pump
A. WATER TABLE:	
Well depth: (below top of casing) 104 f	
Depth to water table: (below top of casing) <u>He.36</u> f	Water table elevation: ft. t.
Length of water column (LWC)	57.7 ft.
Volume of water in well:	
2" diameter wells = 0.1 4" diameter wells = 0.6 6" diameter wells = 1.4	$63 \times (LWC) = 9.4 \qquad gallons$ $53 \times (LWC) = gallons$ $69 \times (LWC) = gallons$
B. PHYSICAL APPEARANCE AT START:	
Color Cocce : Odor	no Turbidity ho
Was an oil film or layer apparent	
C. PREPARATION OF WELL FOR SAMPLING	:
Amount of water removed before s	ampling \sim 30 gallons.
Did well go dry?	· · · · · · · · · · · · · · · · · · ·
D. PHYSICAL APPEARANCE DURING SAMPL	
Color (Cran Odor _	
Was an oil film or layer apparen	t?
E. CONDUCTIVITY	· · · · · · · · · · · · · · · · · · ·
F. pH	
G. TEMPERATURENA	
H. WELL SAMPLING NOTES:	١
Evacuate	D with Keck Pump
	1

)	Sampl	e Location S.c.m	Well No. Mw-5D
		ed By P.G.B , S.D.M	Date 17/12/QL Time 140
		er Z50 F; Flurries	Sampled with Bailer Pump
	Α.	WATER TABLE:	
		Well depth: (below top of casing) 71, 9 ft.	Well elevation: (top of casing) ft.
		(below top of casing) 14.86 Tt	
		Length of water column (LWC)S Volume of water in well:	7.04 11.
			$3 \times (LWC) = 9.29$ gallons $3 \times (LWC) = gallons$ $9 \times (LWC) = gallons$
	В.	PHYSICAL APPEARANCE AT START:	<u></u>
_		Color <u>Clea</u> Odor Odor	Turbidity No
(ر	С.	PREPARATION OF WELL FOR SAMPLING: Amount of water removed before sar Did well go dry?	
	D.	PHYSICAL APPEARANCE DURING SAMPLI Color <u>Coo</u> Odor Was an oil film or layer apparent	Turbidity
	Ε.		
	F.	рН	
	G.	TEMPERATURE N.A	
	н.	WELL SAMPLING NOTES:	
		Evanuated u	was Keck pump:
- \			
_)		

	•	·
amp	mple Location <u>S.C.M</u>	Well No. MW-55
	mpled By P. G.B ', S.D.M Date	12/12/86 Time 1:30
Wear	ather <u>25 Flumies</u> Samp	led with Bailer Pump
Α.		Well elevation:
	Well depth: (below top of casing) <u>34.7</u> ft.	(top of casing) ft.
	Depth to water table: Wa (below top of casing) 14.20 ft.	ter table elevation: ft.
	Length of water column (LWC)	<u> </u>
	Volume of water in well:	uo)
	2" diameter wells = 0.163 x (L 4" diameter wells = 0.653 X (L 6" diameter wells = 1.469 X (L	_WC) = gallons
В.	. PHYSICAL APPEARANCE AT START:	
	Color Clean Odor	No Turbidity
	Was an oil film or layer apparent?	No
\bigcirc c.	PREPARATION OF WELL FOR SAMPLING:	
,	Amount of water removed before sampling	$\frac{\sqrt{3}}{\sqrt{3}}$ gallons.
	Did well go dry?	
D.		Touch & J. Sanson D. Carl
	Color Oea Odor	Turbidity
	Was an oil film or layer apparent?	M
Ε.	E. CONDUCTIVITY NA	•
F.	F. pH	
G	G. TEMPERATURE W.A	
н	H. WELL SAMPLING NOTES:	
	·	
\bigcup		

Jamp	mple Location <u>S.C.M</u>	Well No. MW-6
Samp	mp red by	12/11/84 Time 10:50A
Weat	ather So Cooking Samples	d with Bailer $\sqrt{}$ Pump
Α.	WATER TABLE:	
	Well depth: (below top of casing) \(\lambda \bar{Z} \) ft.	Well elevation: (top of casing) ft.
	Depth to water table: Wate (below top of casing) <u> </u>	
	Length of water column (LWC) 는 1년, 니	ft.
	Volume of water in well:	o) / Do millons
	2" diameter wells = 0.163 x (LWC 4" diameter wells = 0.653 X (LWC 6" diameter wells = 1.469 X (LWC	C) = gailons
В.	. PHYSICAL APPEARANCE AT START:	
	Color Oca Odor Non	Turbidity SQUT
	Was an oil film or layer apparent?	
$\bigcirc_{c.}$	PREPARATION OF WELL FOR SAMPLING:	
	Amount of water removed before sampling _	gallons.
	Did well go dry?	٠.
D.	D. PHYSICAL APPEARANCE DURING SAMPLING: Color beare Odor Tone	Turbidity morles ate
	Was an oil film or layer apparent?	
F.	E. CONDUCTIVITY	
	F. pH	
	G. TEMPERATURE	
	NATES	
រា.	H. WELL SAMPLING NOTES:	
(
\bigcirc		

·		Well No. Mw-7
	led By SDM / PAB	Date 12/11/86 Time 12:05
	her >30°F cloudy	Sampled with Bailer Pump
	_	
Α.	WATER TABLE:	Well elevation:
	Well depth: (below top of casing) <u>60.05</u> ft	(top of casing) ft.
	Depth to water table: (below top of casing) 48.67 ft	
	Length of water column (LWC) 11	.38 ft.
	Volume of water in well:	(a)
	A" diamotor Wells = U.D.	53 x (LWC) = 1.85 gallons x 3 5.56 53 X (LWC) = gallons 69 X (LWC) = gallons
В.	PHYSICAL APPEARANCE AT START:	.
	Color day Odor	Slight Turbidity None
	Was an oil film or layer apparent	? YES
\bigcup c.	PREPARATION OF WELL FOR SAMPLING:	
	Amount of water removed before sa	ampling ~ 6 gallons.
	Did well go dry?NO	
D.	PHYSICAL APPEARANCE DURING SAMPL	ING:
	Color gregish Odor 3	Slight Turbidity slight
	Was an oil film or layer apparen	t? YES
	CONDUCTIVITY	
F.	рН	
	TEMPERATURE	
н.	WELL SAMPLING NOTES:	
	* it was difficult to	smell other odors due to new by
	Plant discharge to a	tmosphere & wind direction comin
	towards MW-7.	
	SAMPLED BOHOM VALVE	BAILER
\bigcup		

Sampi	e Location S.C.M Well No. MW-8
Sampl	ed By P.G.B ; S.D.M Date 12/1/86 Time 11:13
	er
Α.	WATER TABLE:
	Well depth: Well elevation: (top of casing) ft.
•	Depth to water table: Water table elevation: ft. (below top of casing) <u>H8.07</u> ft.
	Length of water column (LWC) 13.93 ft.
	Volume of water in well: Z.Z7
	2" diameter wells = $0.163 \times (LWC) = \frac{7.00}{1.000}$ gallons 4" diameter wells = $0.653 \times (LWC) = \frac{1.000}{1.000}$ gallons 6" diameter wells = $1.469 \times (LWC) = \frac{1.000}{1.000}$ gallons
В.	PHYSICAL APPEARANCE AT START:
_	Color Oca Odor Turbidity No
	Was an oil film or layer apparent?
\bigcirc c.	PREPARATION OF WELL FOR SAMPLING:
0.	Amount of water removed before sampling ~ 7.0 gallons.
*	Did well go dry?
D.	PHYSICAL APPEARANCE DURING SAMPLING:
υ.	color Sent Brown Odor No Turbidity No
	Was an oil film or layer apparent?
Ε.	CONDUCTIVITY WIA
	N. I.
F.	pH
G.	TEMPERATURE
н.	WELL SAMPLING NOTES:
	Sampled with top leading bouter.
\bigcup	

) Samo	le location S.C.m	Well No. mw-q
	led By P. G. B ' S.D. M	Time Time
	her 35°F Fluxues	Sampled with Bailer Pump
Α.	WATER TABLE:	
	Well depth: (below top of casing) ft	Well elevation: (top of casing) ft.
	Depth to water table: (below top of casing) 4836 ft	Water table elevation: ft.
	Length of water column (LWC)	<u>51.64</u> ft.
	Volume of water in well:	23
	2" diameter wells = 0.16 4" diameter wells = 0.65 6" diameter wells = 1.46	$3 \times (LWC) = $
В.	PHYSICAL APPEARANCE AT START:	
	Color Coa Odor	Turbidity
	Was an oil film or layer apparent?	?
C.	PREPARATION OF WELL FOR SAMPLING:	
	Amount of water removed before san Did well go dry?	mpling <u>as</u> gallons.
D.		Turbidity
	Was an oil film or layer apparent	
Ε.	CONDUCTIVITY NA	
F.	W.A	
	W.A	
G.	•	
н.	WELL SAMPLING NOTES:	. v. P
	- Waruntel w	ite Keck-Pump
	·	
-~		
 -		
		



CLIENTDiv. 1	0	,	_JOB NO. 3435.00	1.100
DESCRIPTION SCM	Cortlandville, Nixon Hargra	ve, MW-1		
SAMPLE NO. A6340	DATE COLLECTED 12-11-86	DATE REC'D. 12-11-86	DATE ANALYZED _	12-12-86
	ррь		Р	pb
Ashonominants some	in the specimens	t-1,3-Dichloropropene	<1.	
Bromomethane	<1.	Acientifonici.		
*VIñvienjorion	3/20/2017/2019	Benzene	<1.	
Chloroethane	<1.	ลอโคเดยให้เอเลียกร ู้	¥\$ - 45 post	
** Velityleus eullouge	tite for the contraction	1,1,2-Trichloroethane	<1.	A CONTRACTOR OF THE STATE OF TH
1,1-Dichloroethene	<1.	#carcapionoropena		7.7
= HEDichloroethane -v-		2-Chloroethylvinyl ethe	r <10.	are some a some season
t-1,2-Dichloroethene	<1.	Aliromolomics	/// (
Chlorotom		1,1,2,2-Tetrachloroetha	ne <1.	. 7
1,2-Dichloroethane	<1.	A Citaciloroalitent -	7 × 10	
J.i.1-Trichloroethane		Toluene	<1.	
Carbon tetrachloride	<1.	Chlorobenzene		
Bromodichloromethane	·	Ethylbenzene	<1.	
1,2-Dichloropropane	<1.	Xylenes	<1.	
		The second of th		tion is a series in the

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

Comments:

SURROGATE RECOVERIES

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

Authorized: CIMTH
Date: 1-12-87



CLIENT 0'Brie	en & Gere Engine	ers, Inc.		JOB NO	3435.001.100
DESCRIPTION Nixon	Hargrave, SCM S	i te			
MW#2-9	5				
SAMPLE NO. A6413	DATE COLLECTED _	12/12/86	_DATE REC'D.12/12/86	DATE ANALY	ZED 12/15/86
		ppb			ppb
eale on that we		April 1965	t-1,3-Dichloropropene		<1.
Bromomethane			-inchlorostiene		
Anny and the con-			Benzene		<1.
Chloroethane			an displication solution		
Avenation of the		ris, Wis	1,1,2-Trichloroethane		
1,1-Dichloroethene			calka vichioropropena		
#IFDIchloroethane	u de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		2-Chloroethylvinyl ether	rgere and an exemple of	<10.
t-1,2-Dichloroethene		2.	A COMODINA A LA COMODIA		2410
Chloroform :			1,1,2,2-Tetrachloroethar	ne	<1.
1,2-Dichtoroethane			Aretracilorocthenes.		
SAMATrichloroethane			Toluene	er in brakenski om britistike	
Carbon tetrachloride			Chlorobenzene	4.5	
Bromodichloromethan	le .		Ethylbenzene		
1,2-Dichloropropane	anako ve si in sasunika ki inserbiki ini si si sasis i si si	The sales of the sales	Xylenes		

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

Comments:

SURROGATE RECOVERIES:

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

Authorized: 2-2:87

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



CLIENT O'Brien & Gere Enginee	ers, Inc.		_JOB NO	3435.001.100
DESCRIPTION Nixon Hargrave, SCM Si	ite			
MW #2-D				
SAMPLE NO. A6412 DATE COLLECTED	12/12/86	DATE REC'D. 12/12/86	_DATE ANA	ALYZED 12/15/86
	ppb			ррь
agendorgianic essential as a second second		t-1,3-Dichloropropene		<1.
Bromomethane		Faredoresiant we	*	34-471=553-7 4 733
AND CONTRACTORS AND AND AND AND AND AND AND AND AND AND		Benzene		<1.
Chloroethane		altifemolejjeonordig		
awminitacyforum a tea a training		1,1,2-Trichloroethane		
1,1-Dichloroethene		*CANCEDIONOTOPENED	ris de .	的对象的数据。
#APPENDICTION STORY	17.55	2-Chloroethylvinyl ether		<10.
t-1,2-Dichloroethene	9.	Bromolorm : *		\$ - \$ 10 ° 3 ° \$ 15
Chloroform		1,1,2,2-Tetrachloroethan	е	<1.
1,2-Dichloroethane		Tetrachloroethene		
**************************************		Toluen e		
Carbon tetrachloride		Chlorobenzene		
Bromodichloromethane		Ethylbenzene		
1,2-Dichloropropane	\int	Xylenes		V

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

Comments:

SURROGATE RECOVERIES:

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

Authorized: 2:2:87



CLIENT Div. 10		J	OB NO. 3435.001.100
DESCRIPTION Nixon Hargrave, C	Cortlandville, MW	7-3	
SAMPLE NO. A6341 DATE COLLE	CTED 12-11-86	_DATE REC'D. 12-11-86D	ATE ANALYZED 12-12-86
	ррь	•	ppb
ាស្ត្រាស្ត្រាស្ត្រាស្ត្រាស្ត្រាស្ត្រាស្ត្រ	or the second	t-1,3-Dichloropropene	<1.
Bromomethane	<1.	i riendronii ii e w et i.	
Winylcholde E.	ung Kire	Benzene	<1.
Chloroethane	<1.		
.aVertuale en tonje en	Market Section	1,1,2-Trichloroethane	<1.
1,1-Dichloroethene	<1.	कर शुक्राकार्यायायाच्या स्टब्स	
Carloroethane.		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	<1.	description of the second	
Chloroform		1,1,2,2-Tetrachioroethane	<1.
1,2-Dichloroethane	<1.	are trachloroethener design	
First richloroethane	# 17 (14 ()	Toluene	<1.
Carbon tetrachloride	<1.	Chlorobenzene இந்திர்	
Bromodichloromethane	্ব.	Ethylbenzene	<1.
1,2-Dichloropropane	<1.	Xylenes	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 91% 2-Bromo-l-chloropropane = 98% Trifluorotoluene = 88%

Authorized: 1-12-87



Brien & Gere Engineer	s, Inc.		JOB NO	3435.001.100
xon Hargrave, SCM Sit	te			
1#4-S				
DATE COLLECTED	12/12/86 _E	DATE REC'D. 12/12/86	DATE ANA	12/15/86
	ррь			ppb
	456714	t-1,3-Dichloropropene		<1.
		Fildingtenions 7.78		Denie General
		Benzene		
		a libromocaloromethane		
and a second of		1,1,2-Trichloroethane		
ne		*Englosistations		
nen er er er er er er er er er er er er er		2-Chloroethylvinyl ether		<10.
		⊈Bromolo7π¥⊱¤	10	×100 0
)	<1.
		en etrachloroethene >,		
hane state of the		Toluene		
		Chlorobenzene		
nethane		Ethylbenzene	tota on a Pile in Bind Initial	eks destinan telebil üldiridi iste Aria - Vilhetti, dili inimae Ara:
oane	1	Xylenes	ANGELIA SE	W. Carlotte
	xon Hargrave, SCM Sit	DATE COLLECTED 12/12/86 ppb de ane ane ane ane ane ane ane ane ane an	xon Hargrave, SCM Site #44-S DATE COLLECTED 12/12/86 DATE REC'D. 12/12/86 ppb t-1,3-Dichloropropene Tilchloroethene Benzene Dibromoentoromethane ane C-13-Dichloropropena ane Bromoform 1,1,2-Trichloroethane ane Bromoform 1,1,2-Tetrachloroethane ane C-13-Dichloropropena Tetrachloroethene Toluene Chlorobenzene Ethylbenzene	xon Hargrave, SCM Site #4-S DATE COLLECTED 12/12/86 DATE REC'D. 12/12/86 DATE ANALY ppb t-1,3-Dichloropropene Trichloroethere. Benzene Dibromochloromethane da 1,1,2-Trichloroethane che 2-Chloroethylvinyl ether Bromoform 1,1,2-Tetrachloroethane Tetrachloroethane Tetrachloroethere Toluene Chlorobenzene Ethylbenzene

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 103 %

2-Bromo-1-chloropropane = 111 %

Trifluorotoluene = 95 %

Authorized: 27-87

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



/ CLIENT	O'Brien 8	& Gere Enginee	rs, Inc.		JOB NO	3435.001.100
DESCRIPTION _	Nixon Ha	rgrave, SCM Si	te			-
	MW#4-D					
SAMPLE NO. A6	5414	DATE COLLECTED	12/12/86	DATE REC'D. 12/12/86	DATE ANA	LYZED 12/15/86
			ppb			ррв
And conditi	illo viera	we will be the Wight		t-1,3-Dichloropropene		<1.
Bromometha	ane			Line (Granifold)		* (1)
Windless				Benzene		
Chloroethan	ne			and the following in the		
A VOIDVIOTE VE	noicora e la	ing contraction in		1,1,2-Trichloroethane		
1,1-Dichloro	ethene			्राङ्क्ष्याना । इत्यान	44.3	
MAR PONDING	eume		Parks	2-Chloroethylvinyl ether		<10.
t-1,2-Dichlor				aBlomolom" = .		3.000
Chloroform		Warran S	7 27 27	1,1,2,2-Tetrachloroethar	ne	<1.
1,2-Dichloro	ethane			Tetrachloroethene		
MARKET	roethane:	eranie and		Toluene	•	
Carbon tetra	achloride			Chlorobenzene		
Bromodichic	oromethane			Ethylbenzene		
1,2-Dichloro	propane	THE THE PROPERTY OF STREET, SACRED BY THE	1	Xylenes		

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 97 %

2-Bromo-1-chloropropane = 109 %

Trifluorotoluene = 98 %

Authorized: 2-2-87

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



CLIENT O'BRIEN & GERE ENGINEERS, INC.		1.100
DESCRIPTION Nixon Hargraye, SCM site, MW#5	S	
SAMPLE NO. A6417 DATE COLLECTED 12-12-86	DATE REC'D. 12-12-86 DATE ANALYZED 12	2-15-86
ррь	ррь	
Side could be a secret of the second	t-1,3-Dichloropropene <1.	
Bromomethane	⊈a frichlorcettende	
AND ACTION OF THE PARTY OF THE	Benzene <1.	
Chloroethane	Molofornosidoromentes	
-Meniverorationers	1,1,2-Trichloroethane	A CONTRACTOR OF STREET STATES
1,1-Dichloroethene	©C±PS≦Pichloropropene	
at Epichlordetriane	2-Chloroethylvinyl ether <10.	
t-1,2-Dichloroethene 2.	SELECTION AND AND AND AND AND AND AND AND AND AN	
(Chlorotom)	1,1,2,2-Tetrachloroethane	
1,2-Dichloroethane	a fetrachioroethene it is the second of the second or se	
3.) As trichloroetharies	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%

Authorized:

Date:_

March 6, 1987



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
ррь	ррь
Asign that the second s	t-1,3-Dichloropropene <1.
Bromomethane	regioteliene was a second
Winding of the second of the s	Benzene <1.
Chloroethane	ADDIOMOCHIOCOMULE IN SECTION OF THE PROPERTY O
AVQIVALUE EUROPELES SE SE SE SE SE SE SE SE SE SE SE SE S	1,1,2-Trichloroethane
1,1-Dichloroethene	Aca Manichioropiopene
* S NEDIGNOTOS LINE - SERVICE - TO FORES	2-Chloroethylvinyl ether <10.
t-1,2-Dichloroethene 3.	Bromolorm (10)
Chloroform	1,1,2,2-Tetrachloroethane <1.
1,2-Dichloroethane	refrachloroethene
** TAPTIC DOCUMENT COLOR	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 %

Authorized: 2-2-87

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CLIENT O'Brien & Gere			JOB NO. 3435.001.100
DESCRIPTION Nixon-Harg	rave, SCM Site, MW-6		
SAMPLE NO. A6337 DATE	COLLECTED 12-11-86 DA	ATE REC'D. 12-11-86	DATE ANALYZED12-12-86
	ppb		ррв
		t-1,3-Dichloropropene	<10.
Bromomethane	<1.	and do point and a	Francisco (Control of Control of
*annieriores * ******		Benzene	<1.
Chloroethane	<1.	ૡ૱ૢ૽ઌૺઌૢઌ૽ૡ૽૱ૡ૽ૡઌઌ૽ૡ૽ઌઌૡ <u>ૺ</u>	
avalivance in the	And the second second	1,1,2-Trichloroethane	<10.
1,1-Dichloroethene	<1.	इन्दर्भ देशकारीका विकास	
VALUGIO O PINATE CONTRACTOR		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	6.	aarondomis saat leest	\$40 6 .57.75.12
Chlorolom :		1,1,2,2-Tetrachloroethan	
1,2-Dichloroethane	<1.	Occupations	
* / Crichloroemane		Toluene	1.
Carbon tetrachloride	<1.	(Chlorobenzene : : : : :	
Bromodichloromethane		Ethylbenzene	<1.
1,2-Dichloropropane	<10.	Xylenes	

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

Comments:

SURROGATE RECOVERIES

Bromochloromethane = 104% 2-Bromo-l-chloropropane = 106% Trifluorotoluene = 98%

Authorized: CILLT T



CLIENT Div. 10		JOB N	io. <u>3435.001.100</u>
ESCRIPTION Nixon Harg	rave Cortlandville, M	∆W-7	
AMPLE NO. A6338 DATE CO	DLLECTED12-11-86	DATE REC'D. 12-11-86 DATE	ANALYZED 12-12-86
	ppb		ppb
Kondidan in Marketin de de		t-1,3-Dichloropropene	<10.
Bromomethane	<10.	and an included the state of th	The Sales Sales Sales
Wightenschaften weiter		Benzene	<10.
Chloroethane	<10.	elelen medicine di alla delle esta delle esta delle esta delle esta delle esta delle esta delle esta delle est	
A NOTAY Engrenome (a		1,1,2-Trichloroethane	<10.
1,1-Dichloroethene	<10.	#c5FEFIGIOODOOFIG	
KK EDIGNO (GINAN YARA 🕮		2-Chloroethylvinyl ether	<100.
t-1,2-Dichloroethene	1200.	*#ETOJIOJOJOJU ** ; ** ; ** ; ** ; ** ; ** ; ** ; **	er en en en en en en en en en en en en en
C illorolom (1995)	e e agrup wêr.	1,1,2,2-Tetrachloroethane	<10.
1,2-Dichloroethane	<10.	retracifició ethene	Court Stuff on the Co
ia fairichloroethana	and the state of t	Toluene	<10.
Carbon tetrachloride	<10.	Chlorobenzene	
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-l-chloropropane = 94% Trifluorotoluene = 93%

Petroleum Detected

Authorized: UIUTT T



CLIENT Div. 10		gg	JOB NO. 3435:001.100
DESCRIPTION SCM Cort	landville: Nixon-Hargrave, N	M.W-8	
SAMPLE NO. A6339	DATE COLLECTED 12-11-86	DATE REC'D. 12-11-86	DATE ANALYZED 12-12-86
	ppb		ppb
Mandamin nos		t-1,3-Dichloropropene	<10.
Bromomethane	<1.	Specialism (**)	and the second second
aVipvieadouden/	* (3	Benzene	<1.
Chloroethane	<1.	់ទ ាង ល ប់ស្នាក់ពេញពេញសេវ	
Andlavient endur Esse		1,1,2-Trichloroethane	<10.
1,1-Dichloroethene	<1.	৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽৽	Paul State
was enjoyon or manager		2-Chloroethylvinyl ether	<10.
t-1,2-Dichloroethene	30.	egionologne estado	\$\circ\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Chloroloin	7/10 · 1	1,1,2,2-Tetrachloroethan	e <1.
1,2-Dichloroethane	<1.	# (elrachioroethene	
AND TICHOTOGINATES		Toluene	<1.
Carbon tetrachloride	<1.	Chlorobenzene	Will be a Charles
Bromodichloromethane		Ethylbenzene	<1.
1,2-Dichloropropane	<10.	Xylenes	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 107% 2-Bromo-l-chloropropane = 114% Trifluorotoluene = 100%

Authorized: Classification Authorized: Classific

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CLIENT O'BRIEN & GERE ENGINEERS, INC.	
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
ррь	ррь
Menidough has seen as a seen as a seen	t-1,3-Dichloropropene <1.
Bromomethane	recipiocolumno
Viovignigacis = _76_ ss_se_ as se_f.	Benzene <1.
Chloroethane	AND COUCHION TO THE SECOND OF
AMeliy/life conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conjoide and the conj	1,1,2-Trichloroethane
1,1-Dichloroethene	*KARADIANGIOGIONIE A *
SPERIGHO/OFINATE >	2-Chloroethylvinyl ether <10.
t-1,2-Dichloroethene	efloudous and the second of the second
Chloroform	1,1,2,2-Tetrachioroethane <1.
1,2-Dichloroethane	ejrechloroethene
V=14 € I (chloroethane	Toluene
Carbon tetrachloride	Cnloropenzener ***
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: March 6, 1987

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

. UPSTATE LABORATORIES, INC.

34486015-6

Received by: (Signature) Received by: (Signature) Romarks Done ordensety All by uptally the I man @ 30.04 Aoun X Zhis - 1 gloves REMARKS Date/Ilme Dete/Time Rolinquished by: (Signature) Relinquished by: (Signature) 19/16/11 13co CHAIN OF CUSTODY RECORD 303/10 (47) Received for Laboratory by: (Signature) TAINERS 8 Received by: (Signature) Recisived by: (Signature) 8 0 out flow from Lawa المسر طرودالا يعود فراسه X putpon to Cajora X M. H. To Lagan Lagoor wetty Praces well # 1 STATION LOCATION Peucess orly # 2 Organicatures 14 11:15 Dote/Time NIXON HAR GRAVE Date/Time Date/Time X ev ye COME. Relinquished by: (Signature) John Dolalles (Signature) 14:70 05.0 PROJECT NAME 41:00 16:30 24:01 10:55 10:55 I M Sempled by: (Signature) 13-11-21 DATE: PROJECT NO. STA. NO. S 4

MAINTENERN WAR COMPLIENTIAL' LYFLAKEN HI THE REGUEST OF COLLANT COMPET

UPSTATE LABORATORIES, INC.

Page 1

Analysis Results
Report Number 121986001
Date: December 19, 1986

EPA 601/602:

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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylenes Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60) Chlorobenzene 1,2-Dichlorobenzene	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <		<pre> 34486017 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</pre>	
1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1 <1	<1 <1	<1 <1	<1 <1

All results are expressed as ppb.

Approved:

Date:

12/1/9/86

Discisimer: The test results and procedures utilized, and isboratory 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.

Page 2

Analysis Results
Report Number: 121986001
Date: December 19, 1986

EPA 601/602:

	·		γ	
CLIENT I.D Nixon, Hargrave, Devans and Doyle	Outfall from Lagoon 12/11/86	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	<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	<pre><1 Trace</pre>	<1 Trace	4.	 <1
Dibromochloromethane	1 <1	<1	<1	<1
1,1,2-Trichloroethane	1 <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	<1
EPA 602 (including Xylen	<u>es)</u> :			
Benzene	 <1	<1	 <1	 <1
Toluene	 <1	 <1	<1	 <1
Ethylbenzene	<1	<1	 <1	<1
Xylenes	1 <1	<1	<1	<1
Halogenated Aromatics (6				
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.

110:55 AM 211:00 AM
Approved: 12/19/86

Discisimer: The test results and procedures utilized, and laboratory interpretations of data obtained by UL1 as contained in this report are believed by UL1 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 UL1 for the services performed shall be equal to the fee charged to the customer for the services

UPSTATE LABORATORIES, INC.

Page 3

Analysis Results
Report Number 121986001
Date: December 19, 1986

EPA 601/602:

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	l
1,1,1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1,2-Dichloropropane	
t-1,3-Dichloropropylene	
Trichloroethylene	93%
Dibromochloromethane	1
1,1,2-Trichloroethane	
c-1,3-Dichloropropylene	
1,1,2,2-Tetrachloroethane	
Tetrachloroethylene	
Bromoform	
2-Chloroethylvinyl ether	
EPA 602 (including Xylene	
Benzen e	91%
Toluene	103%
Ethylbenzene	
Xylenes (60	11 (602)
Halogenated Aromatics (60	11059
Chlorobenzene	105%
1,2-Dichlorobenzene	1
1,3-Dichlorobenzene	
1,4-Dichlorobenzene	

All results are expressed as ppb unless otherwise stated.

Discisimen: 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 at liquidated damages.

INC.
LABORATORIES,
TATE 1

TATE LABORATORIES, INC.	IES,	INC.	CHAIN	OF CUSTODY	ODY RECORD	362	3628600)
PROJECT NO. PROJECT NAME SCAL	₹ V	3		NO.	1 16	\ \ \		
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STA. NO. DATE. TIME	COMP.	 8√ <i>∩</i> ⊅	STATION LOCATION	TAINERS	Segn /			
. 7221		1	Process Well 1	21			pates w/Ha	> 77
		\	- PROCESS WELL #2	E				
		7	VH.H. TO LAGOOL	(2)	•			
		1	COUTFALL TO LAGOON	(3)				
		7	LAGOON WATER	\mathfrak{g}				
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		1	SULTER DISCHARGE HILL	7		-		
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Red figureshed by: (3 gnathre)		\$5.5 \$2.5	Date/Time Received for Labore (Signature)	Laboratory by:	Detertine Res	Renorks MAA	MAN TIWE ZHRY308	3000
and for a								

IVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL UPSTATE LABORATORIES, INC. Page 1

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:				30200007
Chloromethane	<1	<1	/1	
Bromomethane	ki	\di	1	<1
Dichlorodifluoromethane	ki	λί (i	<1	\ \1
Vinyl Chloride	ki	ki	<1	\ <u> </u>
Chloroethane	ki	ki	<1 <1	(1
Methylene Chloride	<10	<10		₹1
Trichlorofluoromethane	₹1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<10	<10
1,1-Dichloroethylene	ki	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
1,1-Dichloroethane	ki	\{\frac{1}{1}	<1 <1	<1
t-1,2-Dichloroethylene	₹î	₹1	<1	<1
Chloroform	₹1	₹1	<1	<1
1,2-Dichloroethane	₹i	₹1	<1	<1
1,1,1-Trichloroethane	ki	₹1	<1	<1
Carbon Tetrachloride	₹1	₹1	<1	<1
Bromodichloromethane	₹1	\(\dag{1}	<1	<1
1,2-Dichloropropane	<1	₹1	<1	<1
t-1,3-Dichloropropylene	ζi	ki	<1	<1
Trichloroethylene	6	ζi	<1	<1
Dibromochloromethane	<1	₹1	2	1
1,1,2-Trichloroethane	₹1	<1	<1	<1
c-1,3-Dichloropropylene	₹1		<1	<1
1,1,2,2-Tetrachloroethane	ζî	<1	<1	<1
Tetrachloroethylene	₹1	<1	(1	<1
Bromoform	रें	<1	<1	<1
2-Chloroethylvinyl ether	₹1	<1 <1	<1	<1
EPA 602 (including Xylenes	S:	1	<1	<1
Benzene	ίί l	<1	,,	
Toluene	₹1	₹1 ₹1	<1	<1
Ethylbenzene	\(1	<1	<1	<1
Xylenes	₹1	<1	<1	<1
Halogenated Aromatics (601	76021	` '	<1	<1
Chlorobenzene	<u> </u>	,, l		4.4
1,2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	₹1	(1	<1	<1
1,4-Dichlorobenzene		<1 <1	<1 <1	<1 <1

All results are expressed as ug/l unless otherwise stated.

Approved:_	Alesla	nf
	1/13/87	· ·

Discisimer: The test results and procedures utilized, and laboratory interpretations of data obtained by UL1 as contained in this report are believed by UL1 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 UL1 for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

RIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Page 2

Analysis Results
Report Number 011387007
Date: January 13, 1987

EPA 601/602:

CLIENT I.D Nixon, Hargrave, Devans & Devans & Doyle					
Chloromethane	Hargrave, Devans &	Water	from Lagoon	Discharge Flume	Free Blank
Chloromethane	ULI I.D.	36286006	36286007	36286008	36286009
Halogenated Aromatics (601/602): Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene	EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane t-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene: Benzene Toluene Ethylbenzene Xylenes	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Chlorobenzene 1,2-Dichlorobenzene	<1 <1	< 1	<1 <1	<1 <1

All results are expressed as ug/1 unless otherwise stated.

Discialmer: 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 Hability 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.

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 UPS1	LABORATORIES, INC.	ATORIE	s, II	ပ္		CHAIN	OF CUSTO	DY R	ECORI					
PROJECT NO.	-	PROJECT NAME	1	SCM			-QV		- A		<u> </u>	\		
		NOX IC	HA	9 N	HARGRADE			\	X X	\		\	REMARKS	
STA. NO.	OATE	Դ ա	.ah(0	8A√71	STATION LOCATION	ATION	TAINERS	(%)						
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	1				PROCESS WELL	1.4/182	<u></u>	\dashv			 			
				2	M.H. TO	14500H	D	+			-			
				7	OUTER LAGOR	14500A		-	-	-	-			
	-			1	1AGOON LIATER	WATER		-	-		+			
	-			1	OUTFALL PRODUCTION	PROMIKS		+	+	+	+-			
				7	SENOR DISCHARGE HONE	chroset	JONE S	+	+	1	1		•	
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<i>>-4</i>	Mex	7		1-28	1-28/1200 (1	Tralo		0		3	selle	A STAN		
}										٢				

UPSTATE LABORATORIES, INC.

Page

Analysis Results Report Number 011387008 Date: January 13, 1987

EPA 601/602:

EFA UUI/UUZ.			<u></u>	
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
ULI I.D. EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xy) Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics	<pre> <1</pre>	00387002 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	41 41 41 41 41 41 41 41 41 41 41 41 41 4
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	(1 (1 (1 (1	<1 <1 <1 <1	<1 <1 <1 <1	

All results are expressed as ug/l unless otherwise stated.

Approved: 113/87

Discialment The test results and ; utilized, and laboratory interpret: obtained by UL1 as contained in the believed by UL1 to be accurate and sample(s) tested. In accepting the customer agrees that the full extend liberary in accustomer agrees that the full extend liberary in accustomer agrees that the full extend liberary for actual and consect of UL1 for the services performed to the fee charged to the customer as liquidated damages.

RIVILEGED AND CONFIDENTIAL.

UPSIALE LABORATORIES, INC.

Analysis Results

neport Number 011387008 January 13, 1987

Page 2

601/602

CLIENT I.D Nixon, Hargrave, Devans & Doyle ULI I.D. EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichloroethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Trichloroethane 1,2-Dichloromethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloropropylene 1,1,2-Dichloromethane 1,1,1-Trichloropropylene 1,1,2-Trichloropropylene 1,1,2-Trichloropro		
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,2-Dichloroethane 1,1,1-Trichloroethane 1,2-Dichloromethane 1,1,1-Trichloroethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,2-Dichloropropylene Trichloroethylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloropropylene Trichloroethylene Dibromochloromethane Tl,1,2-Tetrachloroethane Tl,1,2-Tetrachloropropylene Trichloroethylene Dibromochloromethylene Trichloroethylene Tr	Sewer Flume Discharge 1/2/87	Organic Free Blank 1/2/87
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene 1,2-Dichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,1,2-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethylene 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethylene 1,1,2-Trichloroethylene 1,1,2-Tichloroethylene 1,1,2-Tichloroethylene 1,1,2-Tetrachloroethylene 1,1,2-Tetrachloroethylene 1,1,2-Tichloroethylene 1,1,2-Tichloroethylene 1,1,2-Tichloroethylene 1,1,2-Tetrachloroethylene 1,1,2-Tetrachloroethylene 1,1,2-Tetrachloroethylene 1,1,2-Tichloroethylene 1,1,2-Tichlor	00387007	00387008
Halogenated Aromatics (**1/602): Chlorobenzene	<pre></pre>	<pre> <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</pre>
1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1 <1 <1 <1	<1 <1 <1 <1

All results are expressed $n^{n-1}Q/1$ unless otherwise stated.

Approved:

1/13/8 Date:

Discialmen: The test results and procedures utilized, and laboratory interpretations of data obtained by UL1 as contained in this report are believed by UL1 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 UL1 for the services performed shall be agual of UL1 for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

Analysis Results
Report Number 020987001
Date: February 9, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans	Process	Process	Manhole	Outfall
		1		
& Doyle	Well #1 1/15/87	Well #2 1/15/87	to Lagoon 1/15/87	to Lagoon 1/15/87
ULI I.D.	01687001	01687002	01687003	01687004
EPA 601:				
Chloromethane	<1	<1	/1	,,
Bromomethane	λi	\<1	<1	<1
Dichlorodifluoromethane	₹i	(1	<1	<1
Vinyl Chloride	ζî	1	<1	<1
Chloroethane	\{\bar{1}	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
Methylene Chloride	₹10	<10	<1	ζ1
Trichlorofluoromethane	\{\bar{1}	ki l	<10	<10
1,1-Dichloroethylene	ki	ki ·	<1 <1	<1
1,1-Dichloroethane	λi	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
t-1,2-Dichloroethylene	₹1	ki		<1
Chloroform	25	<5	<1	<1
1,2-Dichloroethane	ζí	ki	<5 <1	< 5
1,1,1-Trichloroethane	₹1	(1 Trace	<1	<1 <1
Carbon Tetrachloride	₹1	ki Hace	₹1	<1
Bromodichloromethane	k î	₹i	<1	<1
1,2-Dichloropropane	ζī	λί l	₹1	<1
t-1,3-Dichloropropylene	λî	₹1	1	<1
Trichloroethylene	5	<1 Trace	4	2
Dibromochloromethane	< 1	\1 11ace	₹1	
1,1,2-Trichloroethane	₹1	λi	₹1	<1
c-1,3-Dichloropropylene	₹1	λî	₹1	<1
1,1,2,2-Tetrachloroethane	₹1	ζi	₹1	<1 <1
Tetrachloroethylene	< 1	ζi	₹1	<1
Bromoform	< 1	λi	1	<1
2-Chloroethylvinyl ether	₹1	₹1	₹1	₹1
EPA 602 (including Xylenes		`	\ <u>'</u>	\1
Benzene	ζi	<1	<1	<1
Toluene	<1	λi	₹i	₹1
Ethylbenzene	<1	λî	₹i	₹1
	< 1	< 1	₹1	₹1
Halogenated Aromatics (601	/602):	`-	``	`
Chlorobenzene	(1	<1	<1	<1
1,2-Dichlorobenzene	ζī	ί	1	<1 <1
		λi	\(\) 1	<1 <1
1,3-Dichlorobenzene	\	()	<i>(</i>	

All results are expressed as ug/1.

Approved:

Date: 2/09/8

Discialment: 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 demages of ULI for the services performed shall be equal to the fee charged to the customer for the services

ALERGED AND CONFIDENTIAL, FREMARED AT THE REQUEST OF COMMANT COUNSEL

UPSTATE LABORATORIES, INC.

Page 2

Analysis Results
Report Number 020987001
Date: February 9, 1987

EPA 601/602:

) EPA 601/602:				
CLIENT I.D. Nixon, Hargrave, Devans	from Lagoon	Lagoon Water 1/15/87	Sewer Discharge Flume	Organic Free Blank
& Doyle	1/15/87	ļ	1/15/87	1/15/87
ULI I.D.	01687005	01687006	01687007	01687008
ULI I.D. EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 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 Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	01687006 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	01687007 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	01687008 <1
Xylenes Halogenated Aromatics (60	1<1	K 1	<1	<1
Chlorobenzene 1,2-Dichlorobenzene	<1 <1	<1 <1	<1 <1	<1 <1
1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1 <1	<1 <1	<1 <1	<1 <1

All results are expressed as ug/1.

Approved:

Date: 2/09/8

Disclaimer: The test results and procedures utilized, and leboratory interpretations of data obtained by ULI as contained in this report are balleved 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.

UPSTATA ABORATORIES, INC.

CHAIN OF CUSTODY RECORD

02387005

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2	৳ ;	TAINERS	(2)		6			2	200						(Signature)	(Signature)	Laboratory by:
	ANE	STATION LOCATION	PROCESS WORD #1	PEACOSS WILL #2	M.H. TO LAGOON	Voort-All 70 4600N	COUTEAL FROM LAKER	~ [AGOON WATUR	V SAUTE DISCHARGE TURN		apa sons Rlank				Received by:	Received by:	(Signature)
SCM	HARGRANE	BARD S	2 Peo	2	7	2	7007	V 1.460	1 can	-	7			-	0816/Time	Doto/Time	Date Time Date Time
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PROJECT NO.		STA. NO.													Yd No laws	Rollhquist	Rochhuish

UPSTATE LABORATORIES, INC.

Analysis Results
Report Number 020987018
Date: February 9, 1987

RDA	601	/602:
LPA	0.01	/ • • •

EPA 601/602:				
CLIENT I.D. Nixon, Hargrave,	Process Well #1 1/22/87	Process Well #2 1/22/87	Manhole to Lagoon 1/22/87	Outfa to La 1/22
Devans & Doyle				
ULI I.D.	02387005	02387006	02387007	0238
EPA 601:			<1	<1
Chloromethane	<1	<1	1	\ \di
Bromomethane	\ 	\ \1	₹1	1 41
Dichlorodifluoromethane	\ <1	<1	1	\ \lambda_1
Vinyl Chloride	<1	\ <1	\ \\ \\ \\ \	\ \lambda{i}
Chloroethane	<1	⟨1	₹10	1 710
Methylene Chloride	<10	<10		1 (1
Trichlorofluoromethane	<1	₹1	1 1	\ <1
1,1-Dichloroethylene	<1	\ <1	\ \1	1 31
1,1-Dichloroethane	<1	<1	<1	1 31
t-1,2-Dichloroethylene	<1	<1	<1	1 31
Chloroform	<1	<1	1 1	\ \dag{1}
1,2-Dichloroethane	<1	<1	<1 <1	1 41
1,1,1-Trichloroethane	<1	<1		\ \lambda i
Carbon Tetrachloride	<1	₹1	<1	1 41
Bromodichloromethane	<1	<1	<1	\ \dag{i}
1,2-Dichloropropane	<1	<1	<1	\ \di
t-1,3-Dichloropropylene	\ \1	<1	<1	3
Trichloroethylene	5	<1 Trace		1 1
Dibromochloromethane	<1	<1	\ \1 1	\ \di
1,1,2-Trichloroethane	\ <1	<1	<1	1 (1
c-1,3-Dichloropropylene	<1	 <1	<1	\ \lambda{i}
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	1 21
Bromoform	<1	<1	<1	1 21
2-Chloroethylvinyl ether	1 <1	<1	<1	
EPA 602 (including Xyle	nes):		1 .	<1
Benzene	 <1	\ <1	\ <1	\ \lambda1
	<1	<1	<1	\ \di
Toluene Ethylbenzene	<1	<1	<1	1 31
V-1	 <1	<1	<1	1 1
Halogenated Aromatics ((601/602):	1		1 /1
Chlorobenzene	<1	<1	<1	(1
1,2-Dichlorobenzene	₹1	<1	<1	<1
1,3-Dichlorobenzene	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1	<1	<1
1,4-Dichlorobenzene	\ \1	<1	<1	<1
1,4-Dichioropenzene				

All results are expressed as ug/1.

Approved:

Date: 2/09/8/1

Discisiment: The test results and proce utilized, and laboratory interpretation obtained by ULI as contained in this rebelieved by ULI to be accurate and releasing to tested. In accepting this resultance agrees that the full extent of all liability for actual and consequent of ULI for the services performed shall to the fee charged to the customer for as liquidated damages.

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CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL UPSTATE LABORATORIES, INC. Page 2

Analysis Results
Report Number 020987018
Date: February 9, 1987

'A 601/6:1

<u>A 601/6:1</u>				
Nixon, Harana & Devans & Day	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: Chloromethans Brombomethans Dichlorodif Vinyl Chlor Chloroethans Methylene Commane 1,1-Dichlor 1,1-Dichlor Chloroform 1,2-Dichlor Chloroform 1,2-Dichlor Carbon Tet see Bromblichic see 1,2-Dichlor Chloroe Dibromoch see 1,1,2-Trick	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <
Tolucia Ethyltenzae Xylenes	(1 (1 (1	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1
Chlorologies (601 1,2-Pich: e	(1) (1) (1) (1)	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1

All results expressed as ug/1.

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Discisimer: 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.

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UPSTATE LABORATORIES, INC.

Page 1

Analysis Results
Report Number 021387008
Date: February 13, 1987

EPA 601/602:

EFA 001/002:				
CLIENT I.D.	Process	Process	Manhole	Outfall
Nixon, Hargrave, Devans & Doyle	Well #1 1/29/87	Well #2 1/29/87	to Lagoon 1/29/87	
ULI I.D.	02987030	02987031	02987032	02987033
EPA 601:			1	02907033
Chloromethane	<1	<1	<1	٠,
Bromomethane	ki	रिंग	₹i	<1
Dichlorodifluoromethane	ki	ki	₹1	ξ1
Vinyl Chloride	ki	ki	\ \di	<1
Chloroethane	ki	λi	<1	<1
Methylene Chloride	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1210	I .	<1
Trichlorofluoromethane/	ki	\<1	<10	<10
1,1-Dichloroethylene	ki	\<1	<1	<1
1,1-Dichloroethane	ki	रिं	<1	<1
t-1,2-Dichloroethylene	ki	ki	<1	<1
Chloroform	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		<1	<1
1,2-Dichloroethane	ki	(1	<1	<1
1,1,1-Trichloroethane	ki	K1	<1	<1
Carbon Tetrachloride	ki	(1	<1	<1
Bromodichloromethane	ki	₹1 ₹1	<1	<1
1,2-Dichloropropane	ki		<1	<1
t-1,3-Dichloropropylene	ki	<1	<1	<1
Trichloroethylene	6	(1 Tmans	<1	<1
Dibromochloromethane	K 1	1 Trace	1	<1
1,1,2-Trichloroethane	₹1	⟨1 ⟨1	<1	<1
c-1,3-Dichloropropylene	ki	1	<1	<1
1,1,2,2-Tetrachloroethane	λî	<1	<1	<1
Tetrachloroethylene	रेंग		<1	<1
Bromoform	₹1	<1	<1	<1
2-Chloroethylvinyl ether	121	<1 <1	<1	<1
EPA 602 (including Xylene	e)•	<1	<1	<1
Benzene	īίί	/,		
Toluene	ki	<1 /1	<1	<1
Ethylbenzene	1 1	<1	<1	<1
Xylenes	/1	<1	(1	<1
Halogenated Aromatics (60)	1/6021.	<1	<1	<1
uniorobenzene	1<1	<1	,	4.4
l,2-Dichlorobenzene	₹1	<1	<1	<1
1,3-Dichlorobenzene	₹1		<1	<1
1,4-Dichlorobenzene	₹1	<1	<1	<1
		<1	<1	<1

All results are expressed as ug/1.

Date: 2/13/8;

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 021387008
Date: February 13, 1987

Page 2

EPA 601/602:

DIA 001/002.			,	
CLIENT I.D.	Lagoon	Sewer	Organic	
N	Water	Discharge	Free	
Nixon, Hargrave, Devans	1/29/87	Flume	Blank	į
& Doyle	İ	1/29/87	1/29/87	
ULI I.D.	02987034	02987035	02987036	
EPA 601:				
Chloromethane	<1	<1	/1]
Bromomethane	ki	ki	<1 <1]
Dichlorodifluoromethane	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\{i	\ \dag{1}	
Vinyl Chloride	Κī	\<1	\ \dag{1}	ĺ
Chloroethane	ki	₹î	₹1 1	
Methylene Chloride	kio	₹10	<10	
Trichlorofluoromethane	\\ \di	<1 <1		
1,1-Dichloroethylene	ki	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1	
1,1-Dichloroethane	1 1	₹1	<1	
t-1,2-Dichloroethylene	ζi	<1	<1	
Chloroform	ki	<1	<1	
1,2-Dichloroethane	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1	<1	
1,1,1-Trichloroethane	λî	₹1	<1	
Carbon Tetrachloride	ki	₹1	<1	<u> </u>
Bromodichloromethane	kî	₹1	<1	
1,2-Dichloropropane	ki	ζi	<1	1
t-1,3-Dichloropropylene	\(\lambda\)	₹1	<1 <1	
Trichloroethylene	ì	7	⟨1	
Dibromochloromethane	₹1	<1	₹1	
1,1,2-Trichloroethane	k 1	₹1	₹1	
c-1,3-Dichloropropylene	k 1	ζi	₹1	4
1,1,2,2-Tetrachloroethane	₹1	< 1	₹1	
Tetrachloroethylene	(i	λi	₹1	ļ
Bromoform	ki l	₹1	₹1	Í
2-Chloroethylvinyl ether	\	λί l	₹1	
EPA 602 (including Xylenes	3):	`	, , ,	
Benzene	₹1	<1	<1	
Toluene	<1	\(\frac{1}{1} \)	₹1	
Ethylbenzene	<1	₹î	₹1	
Xylenes	(1	λī l	\(\frac{1}{1}\)	
Halogenated Aromatics (601	1/602):	'-	`*	
Chlorobenzene		<1	<1	
1,2-Dichlorobenzene		λi l	₹1	
1,3-Dichlorobenzene		\(\frac{1}{1} \)	₹1	
1,4-Dichlorobenzene	1 . <u>.</u>	\(i	<1	
		`*	/T	i

All results are expressed as ug/l.

Approved:

Date: 2/13/8

Discialmer: 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 end consequential damages of ULI for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

11-8:4-11

03687035-09

JPSTATE CORATORIES, INC.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME SCYM	ME CL	K		NO.	Re y		
	NIXON HAITGERANG	HART	(A)	36	8	200		REMARKS
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Analysis Results Report Number 022087002 Date: February 20, 1987

EPA 601/602:		·		
CLIENT I.D.	Process Well #1	Process Well #2	Manhole to Lagoon	Outfall to Lagoon
Nixon, Hargrave, Devans & Doyle	2/5/87	2/5/87	2/5/87	2/5/87
ULI I.D.	03687035	03687036	03687037	03687038
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,2-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylen Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (6 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene	<pre></pre>		<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	
1,4-Dichlorobenzene	<1	(1		

All results are nexpressed as ug/1.

Approved:

2/20/87

Discialment: The test results and procedures uiscialment 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 semple(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of its for the services performed shall be equal of ULI for the services performed shall be equal to the fee charged to the customer for the services . # 11mildatad damages.

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JPSTATE LARTORIES, INC.

CHAIN OF CUSTODY RECORD

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		STATION LOCATION	PROCESS WELL #1	Process Well + 2	WH. TO LAGOOD	DUTTAIL TO LAGOON	LAGON WATOR	seven become all	•	ORGE FREST APAUX					Received by: (Signature)	Received by: (Signature)	Received for Labor
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PROJECT NO.		STA. NO.	2		`										Samples	Relinquished by:	Re- Chapter State by

Analysis Results Report Number 022087002 Date: February 20, 1987

EPA 601/602:		·	·	
CLIENT I.D.	Process Well #1	Process Well #2	Manhole to Lagoon	Outfall to Lagoon
Nixon, Hargrave, Devans & Doyle	2/5/87	2/5/87	2/5/87	2/5/87
ULI I.D.	03687035	03687036	03687037	03687038
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xyler Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (ethorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene	<pre> <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</pre>			
1,4-Dichlorobenzene	<1	<1	<1	<1

All results are nexpressed as ug/1.

Approved:

Date:___

Analysis Results Report Number 022087002 Date: February 20, 1987

EPA 601/602:				
CLIENT I.D. Nixon, Hargrave, Devans	Lagoon Water 2/5/87	Sewer Discharge Flume	Organic Free Blank	
& Doyle		2/5/87	5/2/87 03687041	
ULI I.D.	03687039	03687040	03007041	
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethane t-1,2-Dichloroethane 1,1-Trichloroethane 1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (Chlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)		

All results are expressed as ug/1.

Approved:

2/20/87 Date:

Discisimer: The test results and procedures utilized, and isborstory interpretations of data obtained by ULI as contained in this report are believed by ULI to be accurate and reliable for 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 zervices performed shall be equal of UL1 for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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SORATORIES, INC.

UPSTATE

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Page 1

Analysis Results Report Number 022087003 February 20, 1987 Date:

EPA 601/602:				
CLIENT I.D.	Process Well #1 2/12/87	Process Well #2 2/12/87	Sewer Discharge Flume	Outfall to Lagoon 2/12/87
Nixon, Hargrave, Devans & Doyle	2/12/07		2/12/87	21007000
ULI I.D.	04387026	04387027	04387028	04387029
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylen Benzene Toluene Ethylbenzene Xylenes	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	04387027 (1 (1 (1 (1) (1) (1 (1) (1 (1) (1 (1) (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	C1 C1<	<pre> <1</pre>
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene	601/602): <1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1
1,4-Dichlorobenzene		`		

All results are expressed as ug/1.

Approved:

2/20/8/7 Date:

Analysis Results Report Number 022087003 Date: February 20, 1987

EPA 601/602:

EPA 601/602:				
CLIENT I.D.	Lagoon Water	Manhole to Lagoon	Organic Free	
Nixon, Hargrave, Devans	2/12/87	2/12/87	Blank	
& Doyle			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	K1	 <1	\ \1	
1.1-Dichloroethylene	·[<1	<1	<1	ı
1,1-Dichloroethane	 <1	 <1	<1	
t-1,2-Dichloroethylene	<1	 <1	<1	1
Chloroform	<10	<10	<10 ∣	
1,2-Dichloroethane	⟨1	<1	<1	
1,1,1-Trichloroethane	<1	 <1	<1	
Carbon Tetrachloride	 <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 <1]
c-1,3-Dichloropropylene	 <1	 <1	\{1	
1,1,2,2-Tetrachloroethane	 <1	<1	11	}
Tetrachloroethylene	 <1	<1	\ \land{1}	İ
Bromoform	 <1	<1	\{1	
2-Chloroethylvinyl ether	K1	<1	<1	
EPA 602 (including Xyler	nes <u>)</u> :		_	
Benzene	<u> {</u> 1	 <1	<1	
Toluene	<1	<1	<1	
Ethylbenzene	K1	<1	<1	1
Yvlenes	l <1	<1	<1	1
Halogenated Aromatics (601/602):	1	1	}
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:_

Date: 2/20/8

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MITTHEN AND CONTINUATION FULL SECTION OF THE SECOND OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Page 1

Analysis Results Report Number 032487005 Date: March 24, 1987

A 601/602:

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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,3-Dichloropropylene -ichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (07207031 01 01 01 01 01 01 01 01 01 01 01 01 01	07287032 01 01 01 01 01 01 01 01 01 01 01 01 01	07287033
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1 <1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1	<1 <1 <1 <1

A11	${\tt results}$	are	expressed	as	ug/l
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*Corrected\Blank.

Approved: _

3/24/87

LEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNCIL

UPSTATE LABORATORIES, INC.

Page 4

Analysis Results
Report Number 032487006
Date: March 24, 1987

01/602:

Nixon, Hargrave, Devans	<u>017602</u> :		 1	
Chloromethane	CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Free Blank	·	
Chloromethane	ULI I.D.	07287029		
	Methylene Chloride * Trichlorofluoromethane I,1-Dichloroethylene I,1-Dichloroethylene I,1-Dichloroethylene Chloroform I,2-Dichloroethane I,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane I,2-Dichloropropane t-Dichloropropylene Trichloroethylene Dibromochloromethane I,1,2-Trichloroethane I,1,2-Trichloroethane I,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylenes Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60) Chlorobenzene I,2-Dichlorobenzene	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		

All results are expressed as ug/l. *Blank Corrected.

Analysis Results Report Number 032487006 Date: March 24, 1987

RA 601/602:

A 601/602:	187.1 ++	M1 2C	MU 2D	MW 3
CLIENT I.D.	MW 1 ** 3/12/.87	MW 2S 3/12/87	MW 2D 3/12/87	3/13/87
Nixon, Hargrave, Devans				1
& Doyle				<u> </u>
ULI I.D.	07287020	07287021	07287022	07287035
EPA 601:				
Chloromethane	<1	<1	<1	a
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
Trichlorofluoromethane	 <1	\ \d1 \ \mathre{\beta}	 <1	<1
1.1-Dichloroethylene	<1	(1 /	<1	(1
1,1-Dichloroethane	<1	(1	<1	<1
t-1,2-Dichloroethylene	K1	<1	<1	<1
Chloroform	<1	(1	〈1 .	\<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	K1	<1	<1	<1
Carbon Tetrachloride	K1 · · ·	<1	<1	< 1
Bromodichloromethane	<1	<1	<1	\<1
1,2-Dichloropropane	<1	<1	<1	<1
-1,3-Dichloropropylene	<1	<1	<1	<1
richloroethylene	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
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	ki	\alpha i	〈1	<1
Bromoform	ki	<1	<1	<1
2-Chloroethylvinyl ether	13	<1	<1	<1
EPA 602 (including Xyle	<u>nes)</u> :	1		
Benzene	 <1	<1	<1	<1
Toluene	K1	<1	<1	<1
Ethylbenzene	K1	<1	<1	<1
Xvlenes	\d1	<1	<1	<1
Xylenes Halogenated Aromatics (<u>601/602)</u> :		1	1
Chlorobenzene	<1	<1	<1	<1
1.2-Dichlorobenzene	<1	<1	<1	<1
1,3-Dichlorobenzene	< 1	<1	<1	<1
1,4-Dichlorobenzene	kī	<1	<1	<1

A11	results	are	expressed	as	ug/1	
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* Blank Corrected.

** Sample Dilution

Approved:

Date: 3/24/8

LEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNCIL

UPSTATE LABORATORIES, INC.

Page 2

Analysis Results
Report Number 032487006

Date: March 24, 1987

601/602:

10017002.	<u></u>			
CLIENT I.D.	MW4S 3/12/87	MW4D 3/12/87	MW5S 3/12/87	MW5D 3/12/87
Nixon, Hargrave, Devans & Doyle	-			
ULI I.D.	07287023	07287024	07287025	07287026
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethane t-1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 3-Dichloropropane 1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylengene Toluene	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0/28/024 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (07207023
Ethylbenzene Xylenes Halogenated Aromatics (6	1 (1	(1	<1	<1
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	(1) (1) (1) (1)	<1 <1 <1 <1	<1 <1 <1 <1	(1 (1 (1 (1

All results are expressed as ug/1.

* Blank Corrected.

Approved:		<u>n</u>
Dace:	3/24/87	
		

Analysis Results Report Number 032487006 Date: March 24, 1987

601/602:

			,	
CLIENT I.D.	MW6 ** 3/13/87	MW7 ** 3/12/87	MW8 ** 3/13/87	MW9 3/12/87
Nixon, Hargrave, Devans & Doyle				
ULI I.D.	07287036	07287027	07287037	07287028
ULI I.D. EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethane t-1,2-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t 3-Dichloropropane t 3-Dichloropropylene hloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylen Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (6 Chlorobenzene	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 ((1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	(1) (2) (2) (2) (2) (2) (2) (2) (2) (3) (4) (2) (3) (4) (2) (3) (4) (1) (2) (3) (4) (1) (2) (2) (3) (4) (4) (
1,2-Dichlorobenzene 1,3-Dichlorobenzene	(1)	(1)	<1 <1	(1)
1,4-Dichlorobenzene	<1	<1	<1	<1

A11	results	are	expressed	as	ug/1

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** Sample Dilution
Approved:

3/24/87

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RIES, INC.	JECT NAME ANG TAVE		
UPSTATE LABORATORIES,	O. PROJECT NAME		Relinquished by: 151gh Rednapished by: 151gh
UPSTATE	PROJECT NO.	Samoled by:	Re 1 inqu

Analysis Results Report Number 050587002 Date: May 5, 1987

CLIENT T.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 Sulfate Total Chloride Alkalinity * Field pH ** Field Temperature Field Conductivity *** Total Calcium Total Iron Total Magnesium Total Manganese Total Potassium Total Sodium	3.3 23 18 190 7 13.5°C 250 530 21 110 5.2 2.8 17	2.9 16 33 160 7 15°C 300 200 0.52 15 0.05 1.4 25	6.9 19 27 270 7 16.5°C 440 310 13 25 0.21 2.2

All results are expressed as mg/1 unless otherwise stated. *Results are expressed as mg/1 CaCO3.
**Results are expressed as Standard Units.

Apph/s/cm @ Field Temperature. ***Results are express Disclaimer: The test results and procedures

Approved:

NATURE VALUE

5/5**/**87 Date:

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 UL1 for the services performed shall be equal to the fee charged to the customer for the services

as liquidated damages.

Analysis Results Report Number 050587002 Date: May 5, 1987

CLIENT T.D. Nixon, Hargrave, Devans & Doyle	MW 5D 4/16/87	MW 8 4/16/87	
ULI I.D.	11087047	11087050	
Nitrate-Nitrogen Sulfate Total Chloride Alkalinity * Field pH ** Field Temperature Field Conductivity *** Total Calcium Total Iron Total Magnesium Total Manganese Total Potassium Total Sodium	4.4 16 22 200 7 15°C 280 76 0.69 13 0.12 1.1	4.3 28 54 200 7 13.5°C 330 630 50 310 2.6 3.9 30	

All results are expressed as mg/l unless otherwise stated.

*Results are expressed as mg/l CaCO3.

**Results are expressed as Standard Units.

***Results are expressed as Units.

Approved:

Date:

8 / 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 flability for actual and consequential damages of UL for the services performed shall be equal to the fee charged to the customer for the services

as liquidated damages.

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UPSTATE LABORATORIES, INC.

Page 3

Analysis Results Report Number 050587002 Date: May 5, 1987

EPA 601/602:

Nixon, Hargrave, Devans & Doyle	EPA 601/602:				
Doyle	CLIENT I.D.				
### PA 601: Chloromethane					
Chloromethane	ULI I.D.	11087040	11087041	11087042	11087043
Stromomethane	EPA 601:				44
Strick S	Chloromethane				
Vinyl Chloride (1	Bromomethane				
Methylene Chloride	Dichlorodifluoromethane				
Chloroethane	Vinyl Chloride				
Trichlorofluoromethane					
Trichlorofluoromethane	Methylene Chloride	<5			
1,1-Dichloroethane		<1			
1,1-Dichloroethane	1,1-Dichloroethylene	 <1			
Chloroform		(1			
Chloroform	t-1,2-Dichloroethylene	<1			
1,1,1-Trichloroethane		\ 			
1,1,1-Trichloroethane	1,2-Dichloroethane	<1			
Carbon Tetrachloride	1,1,1-Trichloroethane	<1			
1,2-Dichloropropane	Carbon Tetrachloride	<1			
t-1,3-Dichloropropylene	Bromodichloromethane	<1	 <1		
Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropylene 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethylene 1,1,2-Trichloroethane 1,1,2-Tetrachloroethane 1,1,2-	1,2-Dichloropropane	<1			
Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloropropylene 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Tetrachloroethane 1,1,2-Tetrachlor			<1		
Dibromochloromethane			100	£6	
c-1,3-Dichloropropylene <1	Dibromochloromethane	₹1	₹1	<1	
c-1,3-Dichloropropylene <1	1,1,2-Trichloroethane	 <1	<1		•
Tetrachloroethylene	c-1,3-Dichloropropylene	<1			
Tetrachloroethylene <1	1,1,2,2-Tetrachloroethane	\ \1			
Bromoform <1	Tetrachloroethylene	<1	<1	4	
EPA 602 (including Xylenes): Benzene		· <1	< 1		
EPA 602 (including Xylenes): (1	2-Chloroethylvinyl ether	\ \d	<1	 <1	<1
Benzene <1	EPA 602 (including Xylene	s):			
Toluene			<1		
Ethylbenzene		<1	\ \1	<1	
Xylenes (1 (1 (1 Halogenated Aromatics (601/602): (1 (1 (1 Chlorobenzene (1 (1 (1 (1 1,2-Dichlorobenzene (1 (1 (1 (1 1,3-Dichlorobenzene (1 (1 (1 (1			<1	 <1	
Halogenated Aromatics (601/602): Chlorobenzene <1	Xvlenes	¹ (1			<1
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene (1	Halogenated Aromatics (60	1/602):			
1,2-Dichlorobenzene	Chlorobenzene	1 <1	<1	<1	
1,3-Dichlorobenzene <1 <1 <1 <1					
				<1	
				\ \1	 <1

All results are expressed as ug/1.

Approved from Months

Date: 5/5/87

Analysis Results Report Number 050587002 Date: May 5, 1987

TPA 601/602:

Nixon, Hargrave, Devans & Doyle	EPA 601/602:				
Nixon, Hargrave, Devans & Doyle	CLIENT I.D.				
Chicromethane					
Chloromethane	ULI I.D.	11087044	11087045	11087046	11087047
### Strommethane	EPA 601:		44	41	/1
Single S					
Vinyl Chloride (1)	Bromomethane		1		
Methylene Chloride	Dichlorodifluoromethane	•			
Chloroethane	Vinyl Chloride				
Trichlorofluoromethane (1	Chloroethane				
1,1-Dichloroethylene	Methylene Chloride				
1,1-Dichloroethane	Trichlorofluoromethane				
t-1,2-Dichloroethylene Chloroform	1,1-Dichloroethylene				
t-1,2-Dichloroethylene	1,1-Dichloroethane				
Chloroform	t-1,2-Dichloroethylene	1 <1	\ 		
1,2-Dichloroethane		\ \1	4	 <1	
1,1,1-Trichloroethane		<1	 <1	<1	
Carbon Tetrachloride	1.1.1-Trichloroethane	\ \1	<1 (Trace)	X <1	
Bromodichloromethane	Carbon Tetrachloride		<1	<1	
1,2-Dichloropropane <1			<1	<1	 <1
Trichloropropylene				<1	 <1
Trichloroethylene	t-1.3-Dichloropropylene		1 /1	<1	<1
Dibromochloromethane				28.02	6
1,1,2-Trichloroethane <1		〈1		<1	 <1
c-1,3-Dichloropropylene <1				<1	 <1
1,1,2,2-Tetrachloroethane <1			N .	<1	<1
Tetrachloroethylene	1 1 2 2-Tetrachloroethane		4 '	<1	<1
Bromoform <1	Tetrachloroethylene				<1
2-Chloroethylvinyl ether				B	<1
EPA 602 (including Xylenes): Benzene <1					\1
Benzene <1	EPA 602 (including Xylen		'-	'-	
Toluene			1 <1	<1 <1	 <1
Ethylbenzene					<1
Xylenes <1		ζî		<1	<1
Halogenated Aromatics (601/602): Chlorobenzene <1	Yulanes	1 (1		1 <1	 <1
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene	Halogenated Aromatics (6	01/602):			
1,2-Dichlorobenzene	Chlorobenzene	1 (1	<1	<1	<1
1.3-Dichlorobenzene <1 <1 <1 <1	1 2-Dichlorobenzene				
110 00011111111111111111111111111111111	1 3-Dichlorobenzene				
	1,4-Dichlorobenzene	₹i	1 41	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1

All results are expressed as ug/1.

Approved:

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UPSTATE LABORATORIES, INC.

Page 5

Analysis Results Report Number 050587002 Date: May 5, 1987

EPA 601/602: CLIENT I.D.	MW 6 ** 4/16/87	MW 7 ** 4/16/87	MW 7 ** Duplicate	MW 8 ** 4/16/87
Nixon, Hargrave, Devans & Doyle			4/16/87	
ULI I.D.	11087048	11087049	11087049	11087050
EPA 601:			410	<10
Chloromethane	₹10	<10	<10	<10
Bromomethane	<10	<10	<10	10
Dichlorodifluoromethane	<10	<10	<10	<10
Vinyl Chloride	<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	7190	610	600	93
Dibromochloromethane	₹10	₹10	<10	(10
1,1,2-Trichloroethane	₹10	<10	₹10	<10
c-1,3-Dichloropropylene	₹10	1 <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 Xyle		1		410
Benzene	1 <10	<10	<10	<10
Toluené	(10	<10	<10	<10
Ethylbenzene	<10	<10	<10	<10
47 1	1 210	<10	<10	<10
Xylenes Halogenated Aromatics (601/602):			
Chlorobenzene	1 <10	<10	<10	<10
CUTOLOBEIISEUS	\ <10	<10	<10	<10
1,2-Dichlorobenzene	1 310	<10	<10	<10
1,3-Dichlorobenzene 1,4-Dichlorobenzene	\ <10	<10	<10	 <10

All results are expressed/as ug/1.

*Blank Corrected.

**Sample Dilutipm

Approved:

5/\$/87 Date:

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Page 6

Analysis Results
Report Number 50587002
Date: May 5, 1987

EPA 601/602:

Nixon, Hargrave, Devans & Doyle	
Nixon, Hargrave, Devans & Doyle 4/16/87 ULI I.D. 11087051 11087051 EPA 601: Chloromethane <1	
EPA 601: Chloromethane <1	
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,2-Dichloroethane 1,2-Dichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropylene Trichloroethylene 1,1-Dichloropropylene Trichloroethylene Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropylene Trichloroethylene	
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene 1,2-Dichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloropropane 1,1-Trichloropropylene Trichloroethylene Cathoromethane 1,2-Dichloropropylene Trichloroethylene	
Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropylene Trichloroethylene Trichloroethylene 1,1-Dichloropropylene Trichloroethylene Trichloroethylene	
Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,1-Dichloropropylene Trichloroethylene	
Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropylene Trichloroethylene	
Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropane 1,1-Trichloropropylene 1,2-Dichloropropylene 1,2-Dichloropropylene 1,2-Dichloropropylene 1,2-Dichloropropylene 1,1-Trichloroethylene Carbon Tetrachloropropylene	
Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,1,3-Dichloropropylene Trichloroethylene	
Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethylene 1,2-Dichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloromethane 1,2-Dichloromethane 1,2-Dichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropylene Trichloroethylene	
1,1-Dichloroethylene 1,1-Dichloroethane 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,1,3-Dichloropropylene Trichloroethylene (1	
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 (1	
t-1,2-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropylene Trichloroethylene \$\frac{1}{1}\$ \$\fra	
Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene (1	
1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene	
1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene	
Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Carbon Tetrachloride C1 C1 C1 C1 C1 C1 C1 C1 C1 C1 C1 C1 C1	
1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene (1	
t-1,3-Dichloropropylene Trichloroethylene	
t-1,3-Dichloropropylene Trichloroethylene	
Trichloroethylene Dibromochloromethane	
Dibromochloromethane (1 (1	
NTOFORM I TO I I TO I TO I TO I TO I TO I TO I	
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	
Toluene <1 <1	
Ethylbenzene <1 <1	
Xylenes <1 <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: Am Start W

Page 1

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 CaCO₂.

**Results are expressed as Standard Units.

***Results are expressed as umhos/cm @ Field Temperature.

Approved;

Date:___

5/5/87

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UPSTATE LABORATORIES, INC.

Page 2

Analysis Results
Report Number 050587001
Date: May 5, 1987

EPA 601/602:

EPA 601/602:			·	
CLIENT I.D.	Process Well #1	Process Well #2	Outfall to Lagoon	Lagoon Water
Nixon, Hargrave, Devans & Doyle	4/16/87	4/16/87	4/16/87	4/16/87
ULI I.D.	11087034	11087035	11087036	11087037
EPA 601:		1	1	
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	⟨1
Bromodichloromethane	<1	<1	<1	<1
1,2-Dichloropropane	(1	<1	<1	<1
t-1,3-Dichloropropylene	<1	<1	<u>L</u> <u> </u>	\ \1
Trichloroethylene		〈1	1	<1
Dibromochloromethane	1 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	(i	<1	<1	<1
Tetrachloroethylene	(1	<1	<1	<1
Bromoform	ä	<1	<1	<1
2-Chloroethylvinyl ether	1 ä	<1	<1	<1
EPA 602 (including Xylene		-		·
Benzene	1 <1	<1	<1	<1
Toluene	ki	(1	<1	<1
Ethvlbenzene	(1	(1	<1	√ 1
Xvlenes	1 (1	वं	1 1 1	<1
Xylenes Halogenated Aromatics (60	01/602):	1 '-		
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	रें	र्वे	रंग	⟨1
1,3-Dichlorobenzene	र्वे	रेंग	र्वे	(1

All results are expressed as ug/1.

*Blank Corrected.

Approved:

Date: 5/5/87

Page 3

Analysis Results Report Number 050587001 Date: May 5, 1987

EPA 601/602:		<u> </u>		
CLIENT I.D. Nixon, Hargrave, Devans &	Sewer Discharge Flume	Organic Free Blank		
Doyle	4/16/87	4/16/87		
ULI I.D.	11087038	11087039		
EPA 601:			1	
Chloromethane	<1	(1		
Bromomethane	\ < 1	(1	1	
Dichlorodifluoromethane	<1	 <1		
Vinyl Chloride	<1	\ \1		
Chloroethane	1 <1	<1		
Methylene Chloride *	<5	 <5		
Trichlorofluoromethane	<1	<1	1	
1,1-Dichloroethylene	<1	 <1		
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1 -	<1	1	
Chloroform	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1		
1,2-Dichloroethane	(1	<1		
1,1,1-Trichloroethane	(1	<1	}	į
Carbon Tetrachloride	िंदा	<1		
Bromodichloromethane	lä	(1	Ì	
Bromodicitorougher	\ai	\ \ \(\)1	1	
1,2-Dichloropropane	रिं	वि		
t-1,3-Dichloropropylene	2	रिंग	- 4	
Trichloroethylene		131		
Dibromochloromethane	(1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	i	
1,1,2-Trichloroethane	<1	रिं	l l	
c-1,3-Dichloropropylene	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	- []
1,1,2,2-Tetrachloroethane	<1			
Tetrachloroethylene	<1	<1		
Bromoform	<1	<1		
2-Chloroethylvinyl ether	1 <1	<1	ł	
EPA 602 (including Xyle	nes):	1,1	ł	
Benzene	Ω	\< <u>1</u>		
Toluene	<1	<1		1
Ethylbenzene	(1	<1		İ
Xylenes Halogenated Aromatics ((2) ((2))	<1	1	
Halogenated Aromatics (POT/002):		1	
Chlorobenzene	171	1 (1		
1 2-Dichlorobenzene	 <1	<1	1	ł
1.3-Dichlorobenzene	<1	 <1		
1,4-Dichlorobenzene	<1	<1		

All results are expressed as ug/1. *Blank Corrected.

Approved

5/5/87 Date:

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 till for the services performed shall be equal of ULI for the services performed shall be equal to the fee charged to the customer for the services

es liquidated damages.

ID: NIXON HARGRAVE ROCH

UPSTATE LABORATORIES, INC.

Analysis Results Report Number 050687002 Date: May 6, 1987

TEL NO: 17165468000

Collected
april 16,19:

Stuple Pond EPA 601/602:

BIN OOLTOOD.		·			
CLIENT I D	Creek Along		Creek at		6:420
CLIENT I.D.	R.R. Bed	Crossing	Crossing		
auth Common to	North of	Under McLean			
Smith Corona *	Smith Corona	Road	Cortland		
			Waterworks		
ULI I.D.	11087030	11087031	11087032		
EPA 601:	,		[
Chloromethane	<1	<1	<1		
Bromomethane	<1	<1 <1	〈1		
Dichlorodifluoromethane	<1	<1	<1		
Vinyl Chloride	<1	<1	<1		
Chloroethane	<1	<1	<1		
Methylene Chloride **	\(\sqrt{5} \)	< 5	< 5		
Trichlorofluoromethane	1 /1 /	<1	<1		
1.1-Dichloroethylene	9	16	6 6]	
1,1-Dichloroethane	100 VI	\ \1	ζ1	1	
t-1,2-Dichloroethylene		<1	<1		
Chloroform	(I)		(1)	İ	
1,2-Dichloroethane	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(1	<1		
1,1,1-Trichloroethane	<1	<1	< 1		
Carbon Tetrachloride	<1	<1	<1		
Bromodichloromethane	<1	<1	<1		
1,2-Dichloropropane	<1	< 1	<1	ļ	
t-1,3-Dichloropropylene	<1_	<u> </u>	\ \1	ţ	
Trichloroethylene		\$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	〈1	1	
Bromoform	<1	<1	<1		
2-Chloroethylvinyl ether	1 <1	<1	<1	İ	
EPA 602 (including Xylene	<u>es)</u> :			1	
Benzene	 <1	<1	₹1		
Toluene	2 <1	2 <1	0		
Ethylbenzene	(1	71	<1	1	
Xvlenes	¹ <1	<1	\ <1	1	
Halogenated Aromatics (60	01/602):	1	1 .		
Chlorobenzene	 <1	< 1	<1		
1,2-Dichlorobenzene	<1	<1	 <1	1	
1.3-Dichlorobenzene	<1	<1	<1	1	
1,4-Dichlorobenzene	<1	<1	(1]	
-		1	- L		

*Sample Dates are all 4/16/87.

**Blank Corrected.

All results are expressed

Approved: Date:

Disclaimer: The test results and procedures Discialmer: 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

Received by: (Signature) Received by: (Signature) 11 6870rd REMARKS Date/Time Date/Time Remarks VLT Relinquished by: (Signature) . Relinquished by: (Signature) 1505 CHAIN OF CUSTODY RECORD Received for Laboratory by: (Signature) TAINERS Received by: (Signature) 8 1 Received by: (Signature) 0 0.00 \mathfrak{D} Ĝ X Sank Dechara floor Dutal To Lypon Process wall#2 Process well #1 Lagor Willer STATION LOCATION NIXON - Highway 21-10 4/23/52 // co Date/Time Date/Time SCE Date/Time $\overline{\mathsf{x}}$ UPSTATE LABORATORIES, INC. **0**√719 COMP. Relinquished by: (Signature) Relinquished by: (Signature) PROJECT NAME 4.1 1.05 1/23/11.00 T. Sampled by: - (Signature) DATE PROJECT NO. M. Market and P. S. STA. NO.

Analysis Results Report Number 051187005

Date: May 11, 1987

EPA 601/602:

EPA 601/602:	·			
CLIENT I.D.	Process Well #1	Process Well #2	Outfall to Lagoon	Lagoon Water
Nixon, Hargrave, Devans & Doyle	4/23/87	4/23/87	4/23/87	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
1,2-Dichloropropane	\ \i	<1	 <1	<1
t-1,3-Dichloropropylene	र्वे	<1	1 <1	 <1
Trichloroethylene	1 2	₹1	<1 (Trace)	 <1
Dibromochloromethane	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \(\frac{1}{1}\)	<1	<1
1,1,2-Trichloroethane	-<î	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
c-1,3-Dichloropropylene	र्वे	र्व	<1	<1
1,1,2,2-Tetrachloroethane	1 41	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
Tetrachloroethylene	र्व	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	 <1	\<1
Bromoform	र्वे	1 41	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\<1
2-Chloroethylvinyl ether	1 ài	िंदी	\ \i	<1
EPA 602 (including Xylene		``		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Benzene	1 <1	<1	<1	<1
Toluene	l di	< 1	<1	<1
Ethylbenzene	र्व	ζī	\alpha i	<1
Yulanas	1 (1	ki	ंवं	<1
Xylenes Halogenated Aromatics (60	1/602):	1 **	1	
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	1 41	र्व	र्वे	₹1
1,2-Dichtorobonzene	1 41	1 21	₹1	ki
1,3-Dichlorobenzene	(1	1 31	र्वे	र्वे
1,4-Dichlorobenzene	1 77	1 /7	1 >+	\ `*

All results are expressed as ug/1.

*Blank Corrected

Approved:

Date:

5/11/B

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.

Analysis Results Report Number 051187005 Date: May 11, 1987

PA 601/602:

PA BULTOUZ:				
CLIENT I.D. Nixon, Hargrave, Devans	Sewer Discharge Flume	Organic Free Blank		
& Doyle	4/23/87	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	1	
Trichlorofluoromethane	<1	<1		
1.1-Dichloroethylene	<1	< 1		ł
1,1-Dichloroethane	<1	<1		
t-1,2-Dichloroethylene	<1	\(\)		
Chloroform *	\(\sigma\)	<5	l	
1,2-Dichloroethane	(1	<1	1	ĺ
1,1,1-Trichloroethane	(1	< 1		
Carbon Tetrachloride	\(1	<1		
Bromodichloromethane	1 41	(1	1	Į
1,2-Dichloropropane	⟨i	\di		
t-1,3-Dichloropropylene	l ä	<1	1	
Trichloroethylene	<1 (Trace)	<1	1	
Dibromochloromethane	(1)	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
1,1,2-Trichloroethane	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\(\dil\)		
c-1,3-Dichloropropylene	₹1	(1		
1,1,2,2-Tetrachloroethane	\\alpha\i	lä	1	
Tetrachloroethylene	िरं	ति		
Bromoform	तं	l ä		j
2-Chloroethylvinyl ether	lä	रंग		Ì
EPA 602 (including Xylene		\ ``		
Benzene	T <1	<1		
Toluene	<1	<1		
Ethylbenzene	<1	<1	1	
Xvlenes	\ (1	<1	}	
Halogenated Aromatics (6	01/602):	1		
Chlorobenzene	1 <1	<1	1	
1,2-Dichlorobenzene	⟨1	<1		,
1,3-Dichlorobenzene	(1	\ \di		
1,4-Dichlorobenzene	ki	<1		
-) _ NTAILTANAMAHILANA	'-	1 '-	1	l

All	results	are	expressed	as	ug/1
*B1	ank Corre	ected	L 1		

Approved: 5/11/87

Cer	364	5 70	2 Pams Colones 2.00 p	18			\					
All the Angelon	MANNE 40 30,60 \$ 340	MANN 1		Remorks Shis 16th A	432 /600	etory by: A	Received for Labor (Signature)		325	(S) Grantife	Key napished by: (S)	
	Received by: (Signature)	Date/Time	Date.	(Signature)	Relinquished by: (Signature)	(Signaturę) R	Received by: (Sign	Date/Time	Date	: (Signature)	Relinquished by: (Signature	
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-						TAINERS	STATION LOCATION		COMP.	DATE: TIME	STA. NO. DA	
	REMARKS						U.W. HAGINE EM WOLK "	X Y	TACK	WINT TOP		
7					12/) Q	7 200	,		PROJECT NAME	PROJECT NO	
	1218702/	10			TODY RECORD	OF C	CHAL					
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121870,32	REMARKS				Time Received by: (Signature)	1000 1000 1000 1000 1000 1000 1000 100
CHAIN OF CUSTODY RECORD	NO. CON- TAINERS	# # X X X # # # X X X X X X X X X X X X	Whor OK tree OX		ed by: (Signature) - Relinquished by: (Signature) Date/Time ed by: (Signature) Date/Time	and for Laboratory by: Date/Time Remarks Jus Marin C
UPSTATE CABORATORIES, INC.	NO. PROJECT NAME (1) Shot HANGING	у С С С С С С С С С С С С С С С С С С С	1 Cabil 7		Sampledby: (fignature). [1] Data/Time Received by:	Rennquished by: (Signature) (1/20 1/19 (Signature)

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Page 1

Analysis Results Report Number 051987005 Date: May 19, 1987

601/602:

601/602:				
CLIENT I.D.	Process Well #1	Process Well #2	Outfall to Lagoon	Lagoon Water
Nixon, Hargrave, Devans & Doyle	4/30/87	4/30/87	4/30/87	4/30/87
ULI I.D.	12187015	12187016	12187017	12187018
EPA 601:		ļ		
Chloromethane	\(\lambda\)	< 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	K 5	< 5	<5
Trichlorofluoromethane	<1	₹1	<1	 ⟨1
1,1-Dichloroethylene	\ \1	< 1	<1	<1
1,1-Dichloroethane	<1	 <1	<1	1 <1
t-1,2-Dichloroethylene	\<1	<1	<1	<1
Chloroform	\(\bar{1}\)	3	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	2	\ <1
Carbon Tetrachloride	<1	<1	<1	1 <1
Bromodichloromethane	\(\bar{1}\)	<1	<1	<1
?-Dichloropropane	<1	\(\dil\)	<1	<1
1,3-Dichloropropylene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\(\bar{1}\)	<1	<1
Trichloroethylene	1	₹1	<1	<1
Dibromochloromethane	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1	<1	₹1
1.1.2-Trichloroethane	र्व	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<u>(1</u>	\(\frac{1}{1}\)
c-1,3-Dichloropropylene	lä	ki	141	(1
1,1,2,2-Tetrachloroethane	\(\bar{\pi}\)	kī	<1	⟨1
Tetrachloroethylene	ΚÎ	िरंग	ki	₹1
Bromoform	\di	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\ \(\) 1	<1
2-Chloroethylvinyl ether	यं	र्वे	kī	<1
EPA 602 (including Xyler	. —	,-	1 '-	
Benzene	1 <1	<1	<1	<1
Toluene	र्व	⟨1	<1	<1
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1	<1	⟨1
Ethylbenzene	lä	रिं	ki	\alpha i
Xylenes Halogenated Aromatics (601/602):	`-	[]-	\ <u>'</u> -
Chlorobenzene	1<1	<1	<1	<1
1,2-Dichlorobenzene	रेंग	1	रां	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
1,3-Dichlorobenzene	रिं	₹1	k 1	₹1
1,4-Dichlorobenzene	रिं	र्वे	₹1	ki
T) - PICITOTOPONACIO	1 ' "	r -=	1	

All results are expressed as ug/l	All	results	are	expressed	85	ug/1.
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Page 2

Analysis Results Report Number 051987007 Date: May 19, 1987

PA 601/602:				
CLIENT I.D.	Sewer Discharge Flume	Organic Free Blank		
Nixon, Hargrave, Devans	4/30/87	4/30/87		
& Doyle	4730707			
ULI I.D.	12187019	12187020		
EPA 601:	1 40	1,1	ļ	
Chloromethane	(1	(1		
Bromomethane	<1	<1		Ì
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	\ < <u>1</u>	\ \langle 1	1	\
Chloroethane	<1	<1		
Methylene Chloride *	\ <5	\ <5	1	
Trichlorofluoromethane	(1	(1)	1	
1.1-Dichloroethylene	(1	<1		
1 1-Dichloroethane	<1	<1	1	
t-1,2-Dichloroethylene	(1	\ <1		1
Chloroform	(1	(1		ļ
1 2-Dichloroethane	<1	\ <u>{1</u>		
1 1 1-Trichloroethane	1	<1		
Carbon Tetrachloride	\ < <u>1</u>	(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	Ì	
Bromoform	<1	<1		
o chloroothylvinyl ether	\ <1	<1	1	
EPA 602 (including Xylen	(es)	/,		
Benzene	1 /1	(1		
Toluene	(1	<1	Į.	
Ethylbenzene	(1	<1	Ì	
	(1)	<1		
Halogenated Aromatics (01/002/:	<1		
Chiorobenzene	1 12	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	l	
1 2-Dichlorobenzene	<1	\dag{1}	1	}
1 3-bichlorobenzene	<1			
1,4-Dichlorobenzene	<1	<1		

A11	results	are	expressed	as	ug/l

*Blank Corrected.

Approved: 5/19/87 Date:

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UPSTATE LABORATORIES, INC.

Page 1

Analysis Results Report Number 051987008 Date: May 19, 1987

601/602:

A 601/602:				
CLIENT I.D.	MW-1 4/30/87	MW-2S 4/30/87	MW-2D 4/30/87	MW-3 4/30/87
Nixon, Hargrave, Devans & Doyle				
ULI I.D.	12187021	12187022	12187023	12187024
EPA 601:				İ
Chloromethane	l <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	\ \ \ \ \ /
Trichlorofluoromethane	<1	<1	 <1	<1
1,1-Dichloroethylene	9	8	<1 Trace	₹1
1,1-Dichloroethane	<1	<1	<1	<1 <1
t-1,2-Dichloroethylene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1	<1
Chloroform	2	i	3	3
1,2-Dichloroethane	\ \(\bar{\chi_1}	\ {1	\<\ri>1	<1
1,1,1-Trichloroethane	<1 Trace	<1 Trace	1	<1
Carbon Tetrachloride	<1	<1	\ <1	<1
Bromodichloromethane	1 41	\ \lambda{\bar{1}}	<1	<1
2-Dichloropropane	\(\frac{1}{1}\)	⟨1	<1	<1
1,3-Dichloropropylene	₹1	(1	<1	<1
Trichloroethylene	71	24	20	⟨1
Dibromochloromethane	\\\(\frac{1}{1}\)	\ <1	(1	<1
1,1,2-Trichloroethane	र्रो	<1	<1	<1
c-1,3-Dichloropropylene	र्व	रा	kī	<1
1,1,2,2-Tetrachloroethane	रां	ki	र्व	<1
Tetrachloroethylene	र्वे	ki	Κi	<1
Bromoform	रें	ζi	ki	⟨1
2-Chloroethylvinyl ether	1 21	₹1	ki	<1
EPA 602 (including Xyler		``	`-	
Benzene	<1	<1	<1	<1
Toluene	रो	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	< 1	<1
Ethylbenzene	र्व	₹1	₹1	<1
Xylenes	1 21	र्व	ki	₹1
Halogenated Aromatics (601/602):	`~	1 '-	\ ' <u>-</u>
Chlorobenzene	<1	(1	 <1	<1
1,2-Dichlorobenzene	\di	र्व	ki	ki
1,3-Dichlorobenzene	\ \di	वि	λi	र्वे
1, J-Dichlorobenzene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\ \lambda{1}
1,4-Dichlorobenzene	1 1	1 /-	\ <u>``</u>	

A11	results	are	ex	x essed	as	ug/l
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11 ipproved: 5/19/87 Date:

AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Page 2

Analysis Results Report Number 051987008

Date: May 19, 1987

601/602:

CLIENT I.D.	MW-45 4/30/87	MW-4D 4/30/87	MW-5S 4/30/87	MW-5D 4/30/87
Nixon, Ezzgrave, Devans, & Doyle				
ULI I.D.	12187025	12187026	12187027	12187028
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethane t-1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 2-Dichloropropane c-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane t-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60 Chlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	01 01 01 01 01 01 01 01 01 01 01 01 01 0	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (

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Approved:_

Date:

19/87

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CHAIN OF CUSTODY RECORD UPSTATE LA RATORIES, INC.

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THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Page 1

Analysis Results Report Number 052887005 Date: May 28, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle ULI I.D. EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane				
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane	Process Well #1 5/7/87	Process Well #2 5/7/87	Outfall to Lagoon 5/7/87	Lagoon Water 5/7/87
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane	12887062	12887063	12887064	12007065
Chlorobenzene 1,2-Dichlorobenzene	(1) (1) </td <td>12887063 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</td> <td>12887064 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</td> <td>12887065 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</td>	12887063 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	12887064 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	12887065 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
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All results are expressed as ug/1.

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Approved:

e: 5/28/87

Discialmer: 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.

Analysis Results Report Number 052887005 Date: May 28, 1987

EPA 601/602:

CLIENT I.D. Nixon, Hargrave, Devans & Doyle	Sewer Dischar Flume 5/7/87	organic Free Blank 5/7/87		
ULI I.D.	1288706	6 12007067		
EPA 601:	4200700	6 12887067		
Chloromethane	1			
Bromomethane	(1	<1		
Dichlorodifluoromethane	<1	<1		
Vinyl Chloride	<1	 <1		
Chloroethane	<1	<1	1	İ
Methylene Chloride *	<1	<1		İ
Trichlorofluoromethane	<5	<5	1	
1,1-Dichloroethylene	<1	<1	1	
1,1-Dichloroethane	 <1	<1		
t-1,2-Dichloroethylene	 <1	<1		
Chloroform *	 <1	⟨1	1	
1,2-Dichloroethane	< 5	₹5	ĺ	
1,1,1-Trichloroethane	<1	₹1	j	
Carbon Tetrachloride	1	₹ i		
Bromodichlesses	<1	रा		
Bromodichloromethane	<1	₹1	1	
1,2-Dichloropropane	<1	ki	1	
-1,3-Dichloropropylene	<1	1 <1	j	
cichloroethylene	2	<1		
Dibromochloromethane	<1			Ì
1,1,2-Trichloroethane	\ <1	<1		
C-1, J-Dichloropropylene	\ai	<1		
L, L, 4, 4-10trachloroethone	₹1	<1		
retrachioroethylene	\ai	<1	1	
promoiorm	\ \ai	(1		
2-Chloroethylvinyl ether	1	\ <1	1	
APA 002 (including Yulana	9).	<1		
TC116C11G				
Toluene	\(\frac{1}{1}\)	<1		
Ethylbenzene	1	<1 <1		
Xylenes	(1	 <1		
Halogenated Aromatics (60	1 (1	< 1	}	
Chlorobenzene				1
1,2-Dichlorobenzene	(1	<1		
1,3-Dichlorobenzene	<1	<1		
1,4-Dichlorobenzene	<1	<1		
, ===::================================	<1	\ \d	!	ſ

All results are expressed as ug/l.

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Approved: MU 5/28/87

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 all liability for actual and consequential damages of ULI for the services performed shall be aduated of UL! for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages.

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UPSTATE LABORATORIES, INC.

Page 1

Analysis Results Report Number 061187004

Date: June 11, 1987

PA 601/602:

Process Proc	PA 601/602:				
Nixon, Hargrave, Devans 5/28/87	CLIENT I.D.		-	Discharge	Free
LII I.D. 14987039 14987040 14987041 14987042	Nixon, Hargrave, Devans				
ULI I.D. 14987039 14987040 14987041 14987042		3/20/01		5/28/87	5/28/87
ILT 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,				1/0070/1	1/0870/2
Chloromethane	ULI I.D.	14987039	14987040	14987041	14307042
Chloromethane Chloromethane Chlorodifluoromethane Chlorodifluoromethane Chlorodifluoromethane Chloroethane Chloroethane Chloroethane Chloroethane Chloroethane Chloroethane Chloroethane Chlorofluoromethane Chlorofluoromethane Chlorofluoromethane Chlorofluoromethane Chlorofluoromethane Chlorofluoroethylene Chloroformethane Chloroformethane Chloroformethane Chlorofloromethane Chloroflor		1		1	/1
Bromomethane		<1			
Dichlorodifluoromethane (1)		<1	A contract of the contract of		
Vinyl Chloride 1	Dishloredifluoremethane	<1	N'		
Chloroethane	Dichiorodilidoromethane		<1		
Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloroethane 1,1,1-Trichloropthane 1,1,1-Dichloropropylene 1,1,2-Dichloropropylene 1,1,2-Dichloropropylene 1,1,2-Dichloropropylene 1,1,2-Dichloropropylene 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloropropylene 1,1,1,2-Trichloropropylene 1,1,1,2-Trichloroethane 1,1,1,2,2-Tetrachloroethane 1,1,1,2,2-Tetrachloroethane 1,1,1,2,2-Tetrachloroethane 1,1,1,2,2-Tetrachloroethane 1,1,1,2,2-Tetrachloroethane 1,1,1,2,2-Tetrachloroethane 1,1,1,2,2-Tetrachloroethane 1,	Vinyi Chioride		<1		
## Activation of the first of t	Unioroethane		<5		
1,1-Dichloroethylene	Methylene Unioriue			i .	
1,1-Dichloroethane	Trichiorolluolomethale	· ·		<1	7
1,1-Dichloroethylene	1,1-Dichloroethylene			<1	
Chloroform	1,1-Dichloroetnane			<1	
Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane 1,2-Dichloropropane 1,2-Dichloropropylene 1,1,2-Dichloropropylene 1,1,2-Trichloroethane Carbon Tetrachloroethane 1,2-Dichloropropylene 1,1,2-Dichloropropylene 1,1,2-Trichloroethane Carbon Tetrachloroethane Carbon Tetrachloropropylene Carbon Tetrachloropropylene Carbon Tetrachloropropylene Carbon Tetrachloropropylene Carbon Tetrachloroethane Carbon Tetrachloropropylene Carbon Tetrachloropropylene Carbon Tetrachloropropylene Carbon Tetrachloropropylene Carbon Tetrachloropropylene Carbon Tetrachloroethane Carbon Tetrachloropropylene Carbon Car	t-1,2-Dichloroethylene			1	<1
1,2-Dichloroethane	Chloroform			1	<1
1,1,1-Trichloroethane	1,2-Dichloroethane				<1
Carbon Tetrachloride (1)	1,1,1-Trichloroethane				<1
Bromodichloromethane	Carbon Tetrachloride				•
1,2-Dichloropropane	Bromodichloromethane	(•
Trichloropropylene	1.2-Dichloropropane				1
Trichloroethylene 6	t-1.3-Dichloropropylene	1			
Dibromochloromethane C1 <td< td=""><td></td><td>L L</td><td></td><td></td><td></td></td<>		L L			
1,1,2-Trichloroethane (1) (1	Dibromochloromethane	1			
C-1,3-Dichloropropylene	1 1.2-Trichloroethane	<1			
1,1,2,2-Tetrachloroethane (1) <t< td=""><td>c-1 3-Dichloropropylene</td><td>\ <1</td><td></td><td></td><td></td></t<>	c-1 3-Dichloropropylene	\ <1			
Tetrachloroethylene Cl	1 1 2 2-Tetrachloroethane	<1			
Bromoform	Tetrachloroethylene	<1	•	1	
2-Chloroethylvinyl ether	Recomptorm				
EPA 602 (including Xylenes): Benzene	2_Chloroethylvinyl ether		<1	 <1	(1
Benzene (1) <	EDA 602 (including Xvlend				
Toluene Ethylbenzene Xylenes Halogenated Aromatics (601/602): Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene	Pengana		₹1		
Chlorobenzene				<1	
Xylenes		1	L L	<1	
Halogenated Aromatics (601/602): Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene		1 21		<1	<1
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene	Xylenes	01/602):	1 '-		
Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	Halogenated Aromatics (o	1 /1	<1	<1	<1
1,2-Dichlorobenzene	Chlorobenzene				<1
1.3-Dichlorobenzene	1,2-Dichlorobenzene				
1,4-Dichlorobenzene	1.3-Dichlorobenzene				
	1,4-Dichlorobenzene	<1			

All results are expressed as ug/l.

*Blank Corrected.

Approved: Min

ate: 61/1/8

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 fu!! 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 CONFIDENTIAL, PREPARED AT THE REQUEST OF SOLUTION

UPSTATE LABORATORIES, INC.

Page 1

Analysis Results Report Number 061187005 June 11, 1987 Date:

A 601/602:			T 11 "00	Well #3
CLIENT I.D.	Well #1 5/28/87	Well #2D 5/28/87	Well #2S 5/28/87	5/28/87
Nixon, Hargrave, Devans	·			
& Doyle				
	1/0070/2*	14987044	14987045	14987046
ULI I.D.	14987043*	14907044		
EPA 601:		/1	<1	<1
Chloromethane	\ \5	<1 <1	ki	<1
Bromomethane	< 5	<1	\(\lambda\)	<1 <1
Dichlorodifluoromethane	<5	\ \(\delta\)1	<1	<1
Vinyl Chloride	< 5	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
Chloroethane	<5	35	<5	< 5
Methylene Chloride **	<10	1 41	<1	\ <1
Trichlorofluoromethane	< 5	\ \di	<1	<1
1,1-Dichloroethylene	\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	1 21	<1	<1
1 1-Dichloroethane	\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	₹1	<1	<1
t-1,2-Dichloroethylene	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<5	<5
Chloroform **	<5 <5	(1	<1	<1
1,2-Dichloroethane	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	₹1	<1	<1
1,1,1-Trichloroethane	(5)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1	<1
Carbon Tetrachloride	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ζi	<1	<1
Bromodichloromethane	<5	₹1	<1	<1
1,2-Dichloropropane	<5	\ \lambda1	<1	<1
-1,3-Dichloropropylene	71	23	9	<1 <1
Trichloroethylene	<5	<1	<1	<1
Dibromochloromethane	(5	\ \lambda{1}	<1	⟨1
1,1,2-Trichloroethane	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1	<1	<1
c-1,3-Dichloropropylene	<5	<1	<1	<1
1,1,2,2-Tetrachloroethane	<5	<1	<1	<1
Tetrachloroethylene	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	<1	 <1	<1
Bromoform	1 25	<1	\ <1	<1
2-Chloroethylvinyl ether EPA 602 (including Xyler	nes):			,,
EPA 602 (Including A)16.	1 <5	<1	<1	<1
Benzene	₹ 5	<1	<1	<1 .
Toluene	1 72	<1	<1	<1
Ethylbenzene	1 35	<1	<1	<1
Ethylbenzene Xylenes Halogenated Aromatics (601/602):			/1
Halogenated Atomatics V	 <5	<1	<1	<1
Chlorobenzene	\(\zeta\)	<1	<1	(1
1,2-Dichlorobenzene	< 5	<1	<1	<1
1,3-Dichlorobenzene	\ \ \ \ \ \	<1	<1	<1
1,4-Dichlorobenzene				

All results are expressed as ug/l.

*Sample Dilution.

**Blank Corrected.

Approved:

6/11 Date:

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by UL1 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.

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF CONFACT COOKER

UPSTATE LABORATORIES, INC.

Page 2

Analysis Results Report Number 061187005 Date: June 11, 1987

601/602:

A 601/602:			T	- 11 450
CLIENT I.D.	Well #4D 5/28/87	Well #4S 5/28/87	Well #5D 5/28/87	Well #5S 5/28/87
Nixon, Hargrave, Devans	372070		l	
& Doyle				
	110070/7	14987048	14987049	14987050
ULI I.D.	14987047	14907040	24701012	
EPA 601:	43	<1	<1	<1
Chloromethane	<1	\ <1	\ \lambda{i}	<1
Bromomethane	(1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
Dichlorodifluoromethane	<1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\di	<1
Vinyl Chloride	\ \langle 1	\ \di	<1	<1 <1
Chloroethane	1 1	\ \25	〈 5	< 5
Methylene Chloride *	< 5	1 1	<1	<1 ⋅
Trichlorofluoromethane	<1	₹1	<1	<1
1.1-Dichloroethylene	<1	₹1	<1	√ 1
1 1-Dichloroethane	<1	1 31	₹1	<1 <1
t-1,2-Dichloroethylene	<1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	< 5	<5
Chloroform *	<5	1 21	<1	<1
1,2-Dichloroethane	(1	₹1	<1	<1
1.1.1-Trichloroethane	<1	1 31	<1	<1
Carbon Tetrachloride	(1)	1 31	<1	<1
Bromodichloromethane	<1	1 31	<1	∵ <1
1,2-Dichloropropane	\ <1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1	<1
t-1.3-Dichloropropylene	1	₹1 Trace	13	2
√Trichloroethylene	1 <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
Tetrachloroethylene	<1	₹1	<1	<1
Bromoform	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ki	<1	<1 ⋅
2-Chloroethylvinyl ether				
EPA 602 (including Xylen	1 <1	<1	<1	· \ <1
Benzene	<1	<1	<1	<1
Toluene	₹1	<1	<1	<1 <1
Ethylbenzene	1 21	<1	<1	<1
Xylenes Halogenated Aromatics (6	501/602):	1		
Halogenated Aromatics (C	1 <1	<1	<1	(1
Chlorobenzene	(1	<1	<1	<1
1,2-Dichlorobenzene	₹1	<1	<1	<1
1,3-Dichlorobenzene	₹1	<1	<1	<1
1,4-Dichlorobenzene				

All results are expressed as ug/l. *Blank Corrected.

6/11/87 Date:

Disclaimer: The test results and procedures utilized, and laboratory interpretations of data obtained by UL! 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.

Analysis Results Report Number 061187005 Date: June 11, 1987

. A	601	16	<u>ن</u>	2	•
`A	וטסו	. / (JU	۷,	٠

CLIENT I.D. Nixon, Hargrave, Devans & Doyle ULI I.D. EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Organic Free Blank (1 (1 (1) (1) (1) (1) (1) (1) (1) (1)	
Nixon, Hargrave, Devans & Doyle ULI I.D. 14987051 EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vipyl Chloride ULI I.D. 14987051 C1 C1 C1 C1 C1 C1 C1 C1 C1	
ULI I.D. • 14987051 EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vipul Chloride 14987051	
EPA 601: Chloromethane Bromomethane Dichlorodifluoromethane Vipyl Chloride C1 C1 C1 C1 C1 C1 C1 C1 C1 C1 C1 C1 C1	
Chloromethane Bromomethane Dichlorodifluoromethane Vinvl Chloride	
Chloromethane Bromomethane Dichlorodifluoromethane Vinvl Chloride	
Dichlorodifluoromethane Vinvl Chloride	
Dichlorodifluoromethane Vipyl Chloride	
Vinvl Chloride	
Chloroethane	
Methylene Chloride *	
Trichlorofluoromethane \\\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
1 1-Dichloroethylene	
1.1-Dichloroethane	
+_1 2_Dichloroethylene	
Chloroform *	
1.2-Dichloroethane	
1.1.1-Trichloroethane	
Carbon Tetrachloride	
Bromodichloromethane	
1 2-Dichloropropane	
1 3-Dichloropropylene	
\ \richloroethylene \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Dibromochloromethane	
1.1.2-Trichloroethane	
c-1 3-Dichloropropylene	
1.1,2,2-Tetrachloroethane	
Tetrachloroethylene \frac{1}{2}	
Bromoform	
2_chloroethylvinyl ether '\langle '\lan	
FPA 602 (including Xylenes):	
Renzene	
Toluene	
Ethylbenzene (1	
Halogenated Aromatics (60170027.	
Chlorobenzene \int	
1.2-Dichlorobenzene	
1 3-Dichlorobenzene	
1,4-Dichlorobenzene	

A11	results	are	expressed	as	ug/1
_			3		

*Blank Corrected.

Approved:

6/1/1/87

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Page 1

Analysis Results Report Number 061687003 June 16, 1987 Date:

EPA 601/602:				1
CLIENT I.D.	Process Well #1	Process Well #2	Outfall to Lagoon	Sewer Discharge Flume
Nixon, Hargrave, Devans	6/4/87	6/4/87	6/4/87	6/4/87
& Doyle			0/4/0/	
ULI I.D.	15587044	15587045	15587046	15587047
				<1
EPA 601: Chloromethane	<1	<1	<1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	<1	<1	<1	\ \lambda1
Bromomethane	<1	<1 <1	<1	<1
Dichlorodifluoromethane	<1	<1	<1	<1
Vinyl Chloride	<1	<1	<1	
Chloroethane	<10	<10	<10	<10
Methylene Chloride *	<1	· <1	<1	<1
Trichlorofluoromethane	(1	<1	<1	<1
1,1-Dichloroethylene	\ \lambda{1}	<1	<1	<1
1,1-Dichloroethane	₹1	<1	<1	<1
t-1,2-Dichloroethylene	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<5	<5	< 5
Chloroform *	1 11	<1	<1	<1
1,2-Dichloroethane	1 41	<1	<1	<1
1,1,1-Trichloroethane	1 1	₹1	<1	<1
Carbon Tetrachloride	\\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1 3	8	<1
Bromodichloromethane	<1	₹1	<1	<1
1,2-Dichloropropane		\\ \(\cdot\)	<1	<1 <1
t-1,3-Dichloropropylene	<1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1 Trace	<pre><1 Trace</pre>
Trichloroethylene	3	1 31	₹1	<1 ⋅
Dibromochloromethane	<1	<1	र्वे	<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 31	<1
Tetrachloroethylene	<1	<1	₹1.	⟨1
Bromoform	<1	<1	1 1	\ \(\dil\)
2 Chloroethylvinyl ether	l ·<1	<1	1 1	\ `~
EPA 602 (including Xylen	nes):		1,1	<1
Benzene	1 <1	<1	<1	<1
Toluene	<1	<1	<1	l l
Ethylbenzene	<1	<1	<1	<1
	1 (1	<1	<1	<1
Xylenes Halogenated Aromatics (601/602):			/1
Halogenated Alomatics (<1	<1	\ <1	<1
Chlorobenzene	र्व	<1	<1	<1
1,2-Dichlorobenzene	₹1	<1	<1	<1
1,3-Dichlorobenzene	⟨1	<1	<1	<1
1,4-Dichlorobenzene				

All results are expressed as ug/l.

*Blank Corrected

Approved:

Date:

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.

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

UPSTATE LABORATORIES, INC.

Page 2

Analysis Results Report Number 061687003 Date: June 16, 1987

Nixon, Hargrave, Devans Free Blank 6/4/87	PA 601/602:			
Chloromethane	Nixon, Hargrave, Devans	Free Blank	·	ı
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * (10 Trichloroethylene (1,1-Dichloroethylene (1,1,1-Dichloroethylene (1,1,2-Dichloroethylene (1,1,1,1-Trichloroethylene (1,1,1,1-Trichloroethane (1,1,1,1-Trichloroethane (1,1,1,1-Trichloroethane (1,1,1,1-Trichloroethane (1,1,1,1-Trichloroethane (1,1,1,1-Trichloroethane (1,1,1,1-Trichloropthylene (1,1,2-Dichloropthylene (1,1,2-Dichloropthylene (1,1,2-Dichloropthylene (1,1,2-Trichloroethane (1,1,2-Trichloroethane (1,1,2-Trichloroethane (1,1,2-Trichloroethane (1,1,2,2-Tetrachloroethane (1,1,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethylene (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2-Tetrachloroethane (1,2,2,2,2-Tetrachloroethane (1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2	ULI I.D.	15587048	 	
I A DICHIZOTODO	Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform * 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (6 Chlorobenzene	(1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (

All results are expressed as ug/l.

*Blank Corrected

Approved:

6/1/6/87 Date:

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.

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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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform * 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2-Trichloroethane t-1,3-Dichloropropylene 1,1,2-Trichloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	(1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 ((1

A11	resu	ılts	ar	re	expre	ssed	as	ug/1
NYS	DOH	I.D.	:	10	01/10//			

Approved: Walu m.

Date: 6/25/87

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Disclaimer: The results and procedures utilized, and procedures interpretations of data obtained by UL sometimed in this report are believed by UL sometimed in this report are believed by UL sometimed and reliable for sample(s) tested in accepting this report, the customer agree: The full extent of any and all liability is successed and consequential damages of ULI for the performed shall be equal to the fee character are customer for the services as liquidated pages.

Analysis Results Report Number 062687001 Date: June 26, 1987

EPA 601/602:

EPA 601/602:				
CLIENT I.D.	Well 1	Well 2D	Well 2S	Well 3
Nixon, Hargrave, Devans & Doyle	6/11/87	6/11/87	6/11/87	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 <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	<1
Chloroform *	<10	<10	₹10	<10
1,2-Dichloroethane	<1 <1	<1	<1	<1
1,1,1-Trichloroethane	<1 <1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1 <1
Bromodichloromethane	1 <1	<1	<1	<1 <1
1,2-Dichloropropane	<1	<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
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1
Tetrachloroethylene	<1	<1	<1	<1 <1
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	1 41	<1	<1	<1
EPA 602 (including Xylene				
Benzene		<1	<1	<1
Toluene	⟨1	<1	<1	<1 .
Ethylbenzene	⟨1	<1	<1	<1
Xylenes	1 (1	<1	<1	<1
Halogenated Aromatics (60			ļ	ļ
Chlorobenzene	1 <1	<1	<1	<1 <1
1,2-Dichlorobenzene	(1	<1	<1	<1
1,3-Dichlorobenzene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1	⟨1	<1
1,4-Dichlorobenzene	\(\frac{1}{1}\)	\ \(\dil\)	⟨1	<1
1,4-DICHTOLODEHZene	1 14	1 1	``	

All results are expressed as ug/l.

*Blank Corrected.

Approved:

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.

CONTINUED THE WIND OF THE WIND UPSTATE LABORATORIES, INC.

Page 2

Analysis Results Report Number 062687001

Date: June 26, 1987

EPA 601/602:

EPA 601/602:				1
CLIENT I.D.	Well 4D	Well 4S	Well 5D	Well 5S
Nixon, Hargrave, Devans	6/11/87	6/11/87	6/11/87	6/11/87
& Doyle	Ì			1
ULI I.D.	16387047	16387048	16387049	16387050
EPA 601:		1	†	
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 <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	<1
Tetrachloroethylene	<1	 <1	<1	<1
Bromoform	<1	<1	<1	<1 <1
2-Chloroethylvinyl ether	1 <1	<1	<1	<1
EPA 602 (including Xylene	es <u>)</u> :			
Benzene	 <1	<1	<1	<1 .
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	\ \1	<1
Yvlenes	\ <1	<1	<1	<1
Halogenated Aromatics (60	01/602):			
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

A11	results	are	expressed	as	ug/1

*Blank Corrected.

Approved:

Date:

6/26/87

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Analysis Results Report Number 062687001 Date: June 26, 1987

EPA 601/602:

EPA 601/602:			γ	
CLIENT I.D.	Well 6	Well 7	Well 8 6/11/87	Well 9 6/11/87
Nixon, Hargrave, Devans	6/11/87	6/11/87	0/11/0/	0/11/0/
& Doyle				
ULI I.D.	16387051 *	16387052 *	16387053*	16387054 *
EPA 601:				4.5
Chloromethane	< 5	<1	<5	<5
Bromomethane	<5	<1	₹5	45
Dichlorodifluoromethane	<5	<1	<5	<5
Vinyl Chloride	<5	<1	<5	< 5
Chloroethane	<5	<1 <1	< 5	<5 450
Methylene Chloride **	<50	<10	<50	<50
Trichlorofluoromethane	< 5	<1	< 5	<5
1,1-Dichloroethylene	人 代5	<1	< 5	<5 /5
1.1-Dichloroethane	\(\) <5	<1	<5	<5 <5
t-1,2-Dichloroethylene	< 5	<1	<5	450
Chloroform **	<50	<10	<50	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
1,2-Dichloroethane	< 5	<1	< 5	(5)
1,1,1-Trichloroethane	<5	<1 <1	< 5	(5)
Carbon Tetrachloride	<5	₹1	< 5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Bromodichloromethane	< 5	(1	< 5	\(\sqrt{5}\)
1,2-Dichloropropane	< 5	⟨1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	<5
t-1,3-Dichloropropylene	<5	<1	<5 210	150
Trichloroethylene	200	3	210	<5
Dibromochloromethane	₹ 5	<1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	<5
1,1,2-Trichloroethane	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1	45	<5
c-1,3-Dichloropropylene	√ 5 -	1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	\ \dot{5}
1,1,2,2-Tetrachloroethane	< 5	<1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	(5
Tetrachloroethylene	< 5	<1	<5 /5	\ \dot{5}
Bromoform	<5	(1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	(5
2-Chloroethylvinyl ether	1 <2	<1	(5)	
EPA 602 (including Xylene	<u>es)</u> :	1,1	/5	<5
Benzene	\ <5	<1	<5 <5	(5)
Toluene	< 5	<1		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Ethylbenzene	<5 <5	<1	<5 <5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Xylenes	1 (5	<1	1 1	
Halogenated Aromatics (6	01/602):	/1	<5	<5
Chlorobenzene	<5	<1	<5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
1,2-Dichlorobenzene	< 5	<1	(5)	<5
1,3-Dichlorobenzene	< 5	<1	<5	<5
1,4-Dichlorobenzene	< 5	<1		

All results are expressed as ug/l.

*Sample Dilution.

**Blank Corrected.

Approved:

Date: 6/26/87

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VILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COREANT COORSES

UPSTATE LABORATORIES, INC.

Analysis Results Report Number 062687001 Date: June 26, 1987

EPA 601/602:

EPA 601/602:				
CLIENT I.D.	Organic			
Nixon, Hargrave, Devans	Free			
& Doyle	Blank			
	6/11/87			
ULI I.D.	16387055			
EPA 601:				
Chloromethane	<1			
Bromomethane	<1	Ì		
Dichlorodifluoromethane	<1			
Vinyl Chloride	<1			·
Chloroethane	<1			
Methylene Chloride *	<10 ⋅	ļ		
Trichlorofluoromethane	\(1 \)			ļ
1,1-Dichloroethylene	(1)			
1,1-Dichloroethane	<1			
t-1,2-Dichloroethylene	⟨1			
Chloroform *	<10			
1,2-Dichloroethane	<1 <1			1
1,1,1-Trichloroethane	<1			
Carbon Tetrachloride	<1			
Bromodichloromethane	<1	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		ļ	
Bromoform	<1			
2-Chloroethylvinyl ether	1 <1		Ì	
EPA 602 (including Xylen	<u>es)</u> :			
Benzene	<1		1	
Toluene	1 <1	•		
Ethylbenzene	<1			
Xvlenes	<1			
Halogenated Aromatics (6	01/602):			
Chlorobenzene	<1			
1,2-Dichlorobenzene	<1			1
1,3-Dichlorobenzene	<1			
1,4-Dichlorobenzene	<1		1	

A11 :	results	are	expressed	as	ug/1
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*Blank Corrected.

NYS DOH I.D.: 10170,

Approved

Date:

6/26/87

W,

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.

Page 4

C00/50018061	REMARKS				Date/Time Received by: (Signature) Shrs MANIM C Forest Constant C
CHAIN OF CUSTODY RECORD		# 2 3 X	· · · · · · · · · · · · · · · · · · ·		(Signature) Relinquished by: (Signature) (Signature) Relinquished by: (Signature) Laboratory by: Date/Line Remarks
UPSTATE LABORATORIES, INC.	ANGTHUE SCIU	STA. NO. DATE 11NE \$ 5, 14005 Well 10.30 \ 11.00 \ 11.	0 Kg. 1 rec Us		Sempled by (Sighature) Relinquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) (Signature)

Analysis Results
Report Number 070187006
Date: July 1, 1987

(X

À 601/602:

A 601/602:		1	T	
CLIENT I.D.	Process Well #1	Process Well #2	Sewer Discharge Flume	Organic Free Blank
Nixon, Hargrave, Devans & Doyle	6/18/87	6/18/87	6/18/87	6/18/87
ULI I.D.	17087004	17087005	17087006	17087007
EPA 601:	1		<1	<1
Chloromethane	(1	<1	1 21	सं
Bromomethane	\ <1	\ <1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	िंदा
Dichlorodifluoromethane	<1	<1	रिंग	रंग
Vinyl Chloride	<1	<1	रिं	रं
Chloroethane	<1	\ \langle 1	₹10	<10
Methylene Chloride "	<10	\ <10	1 31	(I
Trichlorofluoromethane	<1	⟨1 ⟨1	रिं	\ \lambda{1}
1.1-Dichloroethylene	<1	1 41	र्वे	<1
1.1-Dichloroethane	<1	1 1	₹1	<1
t-1,2-Dichloroethylene	<1	\ 3 5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<5
Chloroform	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	1 21	ki	<1 <1
1 2-Dichloroethane	<1	ì	ki	<1
1.1.1-Trichloroethane	1	<1	Κī	<1 <1
Carbon Tetrachloride	\ <1	रां	\ \ \\ \(\) \(\)	₹1
Bromodichloromethane	<1	1 41	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
,2-Dichloropropane	<1 <1	1 31	⟨1	<1
(-1,3-Dichloropropylene	4	\ <1	1	\ \1
Trichloroethylene	÷ <1	1 41	₹1	\ \1
Dibromochloromethane	र्वे	1 41	<1	<1
1,1,2-Trichloroethane	1 31	रंग	<1	<1
c-1,3-Dichloropropylene	र्व	1 41	<1	<1
1,1,2,2-Tetrachloroethane	1 31	kī	<1	<1
Tetrachloroethylene	रिं	<1	<1	\ \1
Bromoform	िर्दे	<1	<1	<1
2-Chloroethylvinyl ether				
EPA 602 (including Xyle	1 <1	<1	<1	(1
Benzene	वि	<1	<1	(1)
Toluene	(1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes Halogenated Aromatics	(601/602):			1.4
Halogenated Atomatics	1 <1	<1	<1	<1
Chlorobenzene	\ \(\dil\)	<1	<1	<1
1,2-Dichlorobenzene	1 41	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene			<u></u>	

All results are expressed as ug/l.

*Blank Corrected.

NYS DOH I.D.: 10170

Approved:

Date: 7/01/87

Discisimer: 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.

		C1 9 16101		
	REMAKS			Date/Time Received by: (Signature) Date/Time Received by: (Signature) 1 1 1 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3
OF CUSTODY RECORD	RS	RCCCS	MA A A COCO	Relinquished by: (Signature) Relinquished by: (Signature) By: 6-25 1500 000 0000
CHAIN	Nixon Hargrave Simin LOCATION T.		2 2 0 0 NG Free Bank	Received by: (S Received by: (S Received for La (Signature)
UPSTATE LABORATORIES, INC.	PROJECT NO. PROJECT NAME $\sum_{i=1}^{N} \chi_{i}$	6/25/87	55 s 11:00 50° 11:57 3° 4 11:00	Sampled by: (Signature) Marting Signature) Relinguished by: (Signature) Relinguished by: (Signature) Relinguished by: (Signature) Marting Signature) Marting Signature)

EKTATIONED WAS COMPANIESTED TE LABORATORIES, INC. UPS

Analysis Results Report Number 070987009

Date: July 9, 1987

A 601/602:				
CLIENT I.D.	Process Well #1	Process Well #2	Sewer Discharge	Organic Free Blank
Nixon, Hargrave, Devans & Doyle	6/25/87	6/25/87	Flume 6/25/87	6/25/87
d poyer			17787033	17787034
ULI I.D.	17787031	17787032	17787033	11101034
EPA 601:	<1	<1	<1	<1
Chloromethane	तं	₹1	\ <1	<1
Bromomethane	l či	1 41	<1	<1 <1
Dichlorodifluoromethane	ो दें	₹1	<1	<1 <1
Vinyl Chloride	र्वे	1 <1	<1	<1
Chloroethane	1 210	<10	 <10	<10
Methylene Chloride *	1 21	1 41	<1	<1
Trichlorofluoromethane	रिं	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
1,1-Dichloroethylene	1 31	ki	<1	<1
1,1-Dichloroethane		र्वे	<1	<1
t-1,2-Dichloroethylene	\ <1 <10	₹10	<10	<10
Chloroform *	<10	\(\frac{1}{1}\)	K1	\ < 1
1,2-Dichloroethane	\ \(\)	\ \(\)	रिंग	<1
1.1.1-Trichloroethane	<1	\ \di	रिं	<1
Carbon Tetrachloride	(1	\ \dag{1}	\ \{1	<1
Bromodichloromethane	1 41		रेंग	<1
2-Dichloropropane	(1	\ <1	रिं	(1
t-1,3-Dichloropropylene	<1	<1 mass	3	\(\dilanta\)
Trichloroethylene	4	<1 Trace	<1	(1
Dibromochloromethane	<1	<1	121	1 3
1,1,2-Trichloroethane	<1	<1		र्व
a-1 3-michloropropylene	<1	(1	<1	वि
1,1,2,2-Tetrachloroethane	<1	<1	<1	र्व
Tetrachloroethylene	<1	<1	<1	र्व
Bromoform	<1	(1	<1	र्भ
nuchioroethuluinvi ether	1 <1	<1	<1	1 12
EPA 602 (including Xyler	re <u>s)</u> :		1	<1
Benzene	1 <1	<1	\< <u>1</u>	
Toluene	< 1	<1	\<1	<1
Toluelle	<1	<1	<1	<1
Ethylbenzene	1 (1	<1	<1	<1
Xylenes Halogenated Aromatics (601/602):			11
Halogenated Atomatical	1 <1	<1	<1	<1
Chlorobenzene	र्व	<1	 <1	<1
1,2-Dichlorobenzene	िरं	<1	<1	<1
1,3-Dichlorobenzene	ki	<1	\<1	<1
1,4-Dichlorobenzene				

A11	results	are	expressed	as	ug/l
NYS	DOH I.D	.: 1	0170		

*Blank Corrected

WC Approved:

7909/87 Date:

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PRIVILEGED AND CONFIDENTIA: PREAPARED AT THE REQUEST OF CO NY COUNSTA Page 1 UPSTATE LABORATORIES, INC.

Analysis Results Report Number 070987010 Date: July 9, 1987



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:	<1	<1	<1	<1
Chloromethane	₹1	र्वे	<1	<1
Bromomethane	रों	l ä	<1	<1
Dichlorodifluoromethane	र्शे	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
Vinyl Chloride	रां	1 41	<1	<1
Chloroethane	₹10	₹10	<10	<10
Methylene Chloride *	1 41	\ <1	 <1	<1
Trichlorofluoromethane	1 35	₹5	<5	<5
1,1-Dichloroethylene	1 41	1 41	<1	<1
1,1-Dichloroethane	र्व	<1	<1	<1
t-1,2-Dichloroethylene	1 210	₹10	<10	<10
Chloroform *	1 31	1 (1)	<1	<1
1,2-Dichloroethane	3	1 41	<1	 <1
1,1,1-Trichloroethane	\ <1	रंग	<1	<1
Carbon Tetrachloride	1 3	ki	<1	<1
Bromodichloromethane	\ \ai	िंदा	⟨1	<1
1,2-Dichloropropane	(1	l ki	<1	<1
f-1'3-DICUTOLODIOPATENE	र्व	र्व	<1	<1
Trichloroethylene	13	28	12	<1
Dibromochloromethane	(1)	<1	<1	<1
1,1,2-Trichloroethane	1 41	र्वे	\alpha i	<1
c-1,3-Dichloropropylene	1 (1	रां	\< <u>1</u>	<1
1,1,2,2-Tetrachloroethane	di	ì	\<1	<1
Tetrachloroethylene	(1	₹1	1	 <1
Bromoform	1 21	\ \ai	\<1	<1
2-Chloroethylvinyl ether		`*	,-	
EPA 602 (including Xylen	1 <1	<1	<1	<1
Benzene		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	<1
Toluene	\\ \langle 1 \\ \langle 1	1 31	र्व	<1
Ethylbenzene	1 21	र्व	₹î	<1
Xylenes (6	01/602)	`*	, ,	
Halogenated Aromatics (6	1/1	<1	<1	<1
Chlorobenzene	(1	ki	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
1,2-Dichlorohenzene	(1	\ \di	ki	<1
1,3-Dichlorobenzene 1,4-Dichlorobenzene	<1 <1	\ <1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1

All results are expressed	88	ug/l
*Blank Corrected.		
~ 11		

Approved:	COM	ML
	7/100 107	
Date:	7(19/87	

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Page 2

Analysis Results Report Number 070987010 Date: July 9, 1987



401 /602 ·

EPA 601/602: CLIENT I.D.	MW-4D 6/25/87	MW-45 6/25/87	MW-5D 6/25/87	MW-5S 6/25/87
Nixon, Hargrave, Devans & Doyle	0/25/41			
ULI I.D.	17787039	17787040	17787041	17787042
EPA 601:			1	<1
Chloromethane	<1	\ <1	<1	1 41
Bromomethane	〈1	<1	<1	1 41
Dichlorodifluoromethane	<1	<1	\ <u> </u>	1 31
Vinyl Chloride	<1	<1	<1	(1)
Chloroethane	<1	<1	(1)	<10
Methylene Chloride *	<10	<10	<10	<1
Trichlorofluoromethane	(1	(1	<1	₹5
1,1-Dichloroethylene	< 5	< 5	<5	1 41
1,1-Dichloroethane	\ <1	<1	<1	िंदा
t-1,2-Dichloroethylene	(1	<1	<1	₹10
Chloroform *	<10	<10	<10	<1
1,2-Dichloroethane	<1	<1	<1	िरंग
1,1,1-Trichloroethane	<1	<1	<1	₹1
Carbon Tetrachloride	(1	<1	<1	र्व
Bromodichloromethane	√1	<1	<1	रें
1,2-Dichloropropane	<1	<1	<1	रंग
t-1,3-Dichloropropylene	i <1	<1	<1	2 2
Trichloroethylene	2	<1 Trace	6	₹1
Dibromochloromethane	 <1	<1	<1	र्वे
1,1,2-Trichloroethane	 <1	\ <1	<1	र्भ
c-1,3-Dichloropropylene	<1	<1	<1	\ \alpha i
1,1,2,2-Tetrachloroethane	<1	<1	<1	ì
Tetrachloroethylene	<1	<1	1 <1	₹1
Bromoform	<1	<1	<1	रिं
a chiaracthylyinyl ether	1 <1	<1	\ \\ \ .	``
EPA 602 (including Xyle	nes):	141	<1	<1
Benzene	1 12	\ <1 /1	\\ \di	⟨1
Toluene	<1	\ <1	ki	<1
Ethylbenzene	<1	<1	141	⟨1
	1 (1	<1	1 1	,_
Xylenes Halogenated Aromatics	(601/602):	11	<1	<1
Chlorobenzene	. `-	(1	\<1	₹1
1 2-Dichlorobenzene	(1	\ <1	\<1	l ki
1 3-nichlorobenzene	(1	<1	1 < 1	1 <1
1,4-Dichlorobenzene	<1	<1		

					Δ.0	no/1
A11	results	are	expr	elekar n	23	ng/ T
+07	ank Corre	actac	1.	/		
- DI	TIN COLL		. .	1 1		

Wr Approved: /87 Date:

Discisimen: The test results and procedures utilized, and laboratory interpretations of data 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 accusi of ULI for the services performed shall be equal of ULI for the services performer for the services

U. LATE LABORATORIES, INC.

Effect terrent see wire and and a

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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylen Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (6 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene	(1 (1 (1) (1) (1) (1) (1) (1) (1) (1) (1		

411	results	are	expre.	95edi	as	ug/1.
*Bla	ink Corre	ected	1. 70			

NYS DOH I.D.: 10170

Approved:

7/09/87 Date:

Discialmen: The test results and procedures utilized, and laboratory interpretations of data 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 aqual of ULI for the services performed shall be equal to the fee charged to the customer for the services

18387109-112	REMARKS				Date/Time Received by: (Signature)	Date/Time Received by: (Signature)	SMan-hrs. 2 pr. Gloucs
CHAIN OF CUSTODY RECORD	SC M OF CON-	1/4/3	ischnige Flunt		Received by: (Signature) Relinquished by: (Signature)	Received by: (Signature) Relinquished by: (Signature)	Received for Laboratory by: Date/Time Remarks (Signature) [M.S.R. 71, 71, 11, 12, 12, 12, 12, 13, 11, 12, 14, 15, 12, 14, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15
STATE LABORATORIES, INC.	NO. PROJECT NAME / MAJALE	STA. NO. DATE TIME SO BE STATES WE TAKES WE	opt. 1		Sampled W: (S/gnature)	te/Time	Reynalished by: 1(Signature) Date/Time R

.PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

STATE LABORATORIES, INC.

Analysis Results Report Number 072387009 Date: July 23, 1987

FPA 601/602:

CLIENT I.D.	Process	Process	Sewer	Organic
	Well	Well	Discharge	Free
Nixon, Hargrave, Devans	#1	#2	Flume	Blank
& Doyle	7/2/87	7/2/87	7/2/87	7/2/87
ULI I.D.	18387109	18387110	18387111	18387112
EPA 601:			İ	
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 Dishloroothylene	(1	<1	<1	<1
1,1-Dichloroethylene	<1	<1	<1	<1
1,1-Dichloroethane	1 41	₹1	<1	<1 ⋅
t-1,2-Dichloroethylene	1 31	₹1	<1	<1
Chloroform	\ <1	(1)	<1	<1
1,2-Dichloroethane	\ \di	\ \di	\ \ 1	<1
1,1,1-Trichloroethane	1 31	\ \di	\di	<1
Carbon Tetrachloride	\ \(\)	1 41	⟨1	<1
Bromodichloromethane		1 31	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
1,2-Dichloropropane	<1	\ \di	र्वे	⟨1
t-1,3-Dichloropropylene	<1	<1 Trace	2	₹1
Trichloroethylene	2		<1	₹1
Dibromochloromethane	<1	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\ \alpha \i
1,1,2-Trichloroethane	<1	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1 31
c-1,3-Dichloropropylene	<1	\ <1	<1	1 31
1,1,2,2-Tetrachloroethane	<1	<1 √1 √1 √1	L L	<1
Tetrachloroethylene	1	<1 Trace	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Bromoform	<1	<1	<1	<1
2-Chloroethylvinyl ether	\ <1	<1	<1	
EPA 602 (including Xylen	<u>es)</u> :		1,2	<1
Benzene	\ \ 1	<1	<1	<1
Toluene	<1	<1	<1	
Ethylbenzene	<1	<1	<1	<1
Vivlones	1 <1	<1	<1	<1
Halogenated Aromatics (6	01/602):			11
Chlorobenzene	1 (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:

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 UL1 to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all Hability for actual and consequential damages of ULL for the convices performed shall be equal to the to but ower for the services

as liquidated damages.

}	REMARKS								ie i ve	ues ins = 210.00	
	ODY RECORD	(D)				*5		Relinquished by: (Signature) Date/Time	Relinquished by: (Signature) Date/Time	17737 4.33 pm 31.T) 10 P. GlOVES	
	2/SCM//DUT/// NO.	STATION LOCATION T			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1000 V	LIMM OR FREE 1	Date/Time Received by: (Signature)	Date/Time Received by: (Signature)	pate/Time Received for Laboratory by: (Signature) (Mail 1) Mithitia	
JNI SHIGOTTES INC	COJECT NO. PROJECT NAME	A. NO. DATE TIME CONP.	7/9/c7 1/1 20 X	12.35 X	00.1 X X X X X X X X X X X X X X X X X X X	2,00%	04:7 04:7	Sample Bby: (Sighatung)	Relinquished by: (Signature)	Relinguished by: Sighetyfe)	

4500x0018161	REMARKS	Merals were Filterad in The Field HAIF GAlbe UNFITTERED	AMAlivAt results on BACK		6 MANIME 1 (S) - 110
1 OF CUSTODY RECORD CO.	NO. OF CON- TAINERS			Signature) Relinquished by: (Signature)	(Signature) Relinquished by: (Signature) Laboratory by: Date/Time Remarks [Munital. 7.937 4.41 pm [Laboratory by: 0.937 4.41 pm
STATE LABORATORIES, INC.	ROJECT NO. PROJECT NAME THE SE STATION LOCATION	1967 10:20 G	2 . A. X . Z . Y . Z . Y . Z . Y . Z . Z . Y . Z . Z	Sampledby: (Signature) - Date/Time Received by: (Si	Received by: (Signature) Received by: (Signature) Received for Lab Received for Lab (Signature) Received for Lab (Signature) Received for Lab (Signature) Received for Lab (Signature)

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SPSTATE LABORATORIES, INC.

Page 1

Analysis Results
Report Number 080587002
Date: August 5, 1987

CLIENT I.D.	MW-1	MW-2D	MW-3
	7/9/87	7/9/87	7/9/87
Nixon, Hargrave, Devans & Doyle			
ULI I.D.	19187020	19187021	19187022
Nitrate-Nitrogen Total Chloride Sulfate Total Hardness * Specific Conductivity ** Total Dissolved Solids Field Alkalinity * Dissolved Calcium Dissolved Iron Dissolved Magnesium Dissolved Potassium Dissolved Sodium Dissolved Sodium	3.9	3.1	5.0
	18	31	20
	20	16	19
	340	360	430
	530	510	570
	320	280	360
	190	180	230
	72	56	70
	<0.03	<0.03	<0.03
	13	11	12
	<0.02	<0.02	<0.02
	1.7	1.5	1.8
	16	21	15

All results are expressed as mg/l unless otherwise stated.

*Results are expressed as mg/1 CaCO3.

**Results are expressed as umhos/cm@ 25°C.

Approved: 8/05/87

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.

Page 2

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 Total Chloride Sulfate Total Hardness * Specific Conductivity ** Total Dissolved Solids Field Alkalinity * Dissolved Calcium Dissolved Iron Dissolved Magnesium Dissolved Potassium Dissolved Sodium Dissolved Sodium	3.4 20 18 380 510 310 190 60 <0.03 13 <0.02 1.1 11	5.8 35 16 430 670 420 230 73 0.09 14 <0.02 1.9 28	

All resul	lts are	express	sed	as n	$\lg/1$	unless	otherwise	stated
*Results	are ex	pressed	as	mg/l	. Ca	CO3.		

**Results are expressed as umhos/cm @ 25°C.

M Approved: 8/05/87 Date:

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Page 3

Analysis Results Report Number 080587002 Date: August 5, 1987

EPA 601/602:

EPA 6017602:				
CLIENT I.D.	MW-1	MW-2D	MW-2S	MW-3
Nixon, Hargrave, Devans & Doyle	7/9/87	7/9/87	7/9/87	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	<1
EPA 602 (including Xylene	s):			
Benzene	 <1	<1	<1	<1
Toluene	<1	<1 <1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	\ <1	<1	<1	<1
Halogenated Aromatics (60	1/602):		1	1
Chlorobenzene	1 <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

A11	raculte	ara	expressed	20	110/7
AII	results	are	expressed	as	ug/1

*Sample Dilution.
**Blank Corrected

Approved: 8/05/87

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to the fee charged to the dustome. For the services as liquidated damages.

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PSTATE LABORATORIES, INC.

Page 4

Analysis Results Report Number 080587002 Date: August 5, 1987

PA 601/602:

A 601/002.				····
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
-1,3-Dichloropropylene	<1	<1	<1	<1
richloroethylene	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 Xylene				
Benzene	1 <1	<1	<1	<1
Toluene	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1
Xylenes	1 <1	<1	<1	<1
Halogenated Aromatics (60		'-		
Chlorobenzene	1 <1	<1	<1	<1
1,2-Dichlorobenzene	<1	₹1	\<1	<1
1,3-Dichlorobenzene	<1	₹1	⟨1	<1
1,4-Dichlorobenzene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1	₹1	<1
T,4-DICHTOPOPHECIE	1	'-		J

All	results	are	expressed	as	ug/1.
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*Blank Corrected.

Approved:	UN	<u></u>
Date:	8/05/87	
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To the fee charged to the oustomer for the services as liquidated damages.

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UPWATE LABORATORIES, INC.	Γ
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UPSTATE LABORATORIES, INC.

Page 1

Analysis Results
Report Number 081287002
Date: August 12, 1987

PA 601/602:

<u> </u>				
CLIENT I.D.	MW-1	MW-2D	MW-2S	MW-3
Nixon, Hargrave, Devans	7/23/87	7/23/87	7/23/87	7/23/87
& Doyle				7,20,07
ULI I.D.	20487099 *	20/97100	20/07/09	
EPA 601:	20407099	20487100	20487101	20487102
Chloromethane	1		,	
Bromomethane	< 5	\ \1	<1	<1
Dichlorodifluoromethane	<5	<1 <1	<1	⟨1
Vinyl Chloride	₹ 5	<1	<1	<1
Chloroethane	<5	<1	<1	<1
Methylene Chloride **	<5	<1	<1	ķ 1
Trichlorofluoromethane	<10	< 5	<5	₹5
1,1-Dichloroethylene	<5	<1	<1	(1
1,1-Dichloroethane	<5	 <1	<1	ki
t=1 2-Dichlogochust	< 5	<1	<1	ki
t-1,2-Dichloroethylene Chloroform **	< 5	<1	⟨1	िं
1 2-Dieblassek	<10	<5	<5	₹5
1,2-Dichloroethane	< 5	<1	ki	रिं
1,1,1-Trichloroethane	<5	<1	<1	ki
Carbon Tetrachloride	<5	<1	(1	ki
Bromodichloromethane	<5	<1	ί∢ῖ	रिं
?-Dichloropropane	<5	<1	\ \(\) 1	रंग
1,3-Dichloropropylene	<5	< 1	रंग	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Trichloroethylene	65	31	21	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Dibromochloromethane	<5	<1	1 (1	<u> </u>
1,1,2-Trichloroethane	<5	<1	ki	
c-1,3-Dichloropropylene	< 5	ζī.	ki	<1
1,1,2,2-Tetrachloroethane	<5	\(\bar{1}\)	र्वे	1
Tetrachloroethylene	<5	ki	1 1	<1
Bromoform	<5	रंग	₹1	<1
2-Chloroethylvinyl ether	145	ki	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
EPA 602 (including Xylen	es):	`*	1	<1
benzene	<u>K5</u>	<1	<1	1,
Toluene		रा	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
Ethylbenzene	<5 <5	λì	ki	(1
Xylenes	128	₹1	<1	<1
Halogenated Aromatics (6	01/602):	``	171	<1
Uhlorobenzene	 <5	<1	177	1.0
1,2-Dichlorobenzene	< 5	₹1	<1	K1
1,3-Dichlorobenzene	< 5	₹1	<1	K1
1,4-Dichlorobenzene	1 35	₹1	(1	K1
	1 12	/T	 <1	K1

All	results	are	expressed	as	ug/1
*San	mole Dili	121 M	, -		···•

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Oved:_	all	W
Date:	8/12/87	

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

IPSTATE LABORATORIES, INC.

Page 2

Analysis Results
Report Number 081287002
Date: August 12, 1987

EPA 601/602:

CLIENT I.D.	MW-4D .	MW-45	MW-5D	MW-5S
Nixon, Hargrave, Devars & Doyle	7/23/87	7/23/87	7/23/87	7/23/87
ULI I.D.	20487103	20487104	20487105	20487106
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	(1	ki
Dichlorodifluoromethan	<1	<1	ki	रिं
Vinyl Chloride	<1	<1	रा	\di
Chloroethane	<1	<1	ki	<1
Methylene Chloride *	₹5	<5	₹5	<5
Trichlorofluoromethane	(1	<1	141	1 (1
1,1-Dichloroethylene	<1	<1	िंदी	I .
1,1-Dichloroethane	<1	\1	ki	ζ1
t-1,2-Dichloroethylene	र्वे	1 41	र्व	₹1
Chloroform *	₹ 5	135	₹ 5	<1
1,2-Dichlorocthane	\(\lambda\)	<1	िं	₹ 5
1,1,1-Trichloroethane	⟨1	<1	र्वे	<u><1</u>
Carbon Tetrachloride	\(\bar{1}\)	\di	र्व	<1
Bromodichloromethane	\\ \di	₹1	\<1	<u><1</u>
1,2-Dichloropropane	िंदा	⟨1	₹i	(1
t-1,3-Dichloropropyler≅	\alpha i	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Κ1
Trichloroethylene	i	₹1	4	\{1
Dibromochloromethane	<1	र्वे	<1	4
1,1,2-Trichloroethane	(1	₹1	ki	< 1
c-1,3-Dichloropropyler≥	र्वे	₹î	िरं	<u>{</u> 1
1,1,2,2-Tetrachloroethas	\(\frac{1}{1}\)	ियं	ki	Κ1
Tetrachloroethylene	<1	<1 ·	1 21	<1
Bromoform	(1	₹1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
2-Chloroethylvinyl ether	di ·	<1	रें	ζ 1
EPA 602 (including Fien		1	``	 <1
Benzene	<1	<1	<1	1,,
Toluene	रा	(i	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
Ethylbenzene	रंग	र्वे	<1	<u><1</u>
Xylenes	र्व	र्व	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
Halogenated Aromatics (6	01/602)	\ `*	1 1	<1
Chlorobenzene	1 <1	<1	/1	
1,2-Dichlorobenzene	1 41	िं	(1	<1
1,3-Dichlorobenzene	रं	₹1 ₹1	<1	<1
1,4-Dichlorobenzene	1 41	<1 <1	<1	<1
1,4 Dichiolonenzene	1.\.	1,1	<1	<1

All results are expresse as ug/l. *Blank Corrected.

)	Approved:_	ali	W _r
	Date:	8/12/87	

cisclaimer: The test results and procedures atilized, and laboratory interpretations of data softlined by ULI as contained in this report are selieved by ULI to be accurate and reliable for sample(s) tested. In accepting this report, the sample agrees that the full extent of any and stillability for actual and consequential demages of ULI for the services performed shall be equal

UPSTATE LABORATORIES, INC.

Page 3

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 Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform 1,2-Dichloroethane 1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene: Benzene Toluene Ethylbenzene Xylenes Halogenated Aromatics (60: Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,3-Dichlorobenzene	41 41 41 41 41 41 41 41 41 41 41 41 41 4		

All results are expressed as ug/l. NYS DOH I.D.: 10170

pproved:	<u> </u>	W
Date:	8/12/87	

Disciaimer: 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 itability 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.

RECORD 1838710(12)

(858 NOV. (12-)		REMARKS							-						Date/Time Received by: (Signature)	Swan-hrs. 2 pc Gloucs	1 1
CHAIN OF CUSTODY RECORD	// A"/	<u></u>	NS / / / / /	×		X							7	Relinquished by: (Signature)	Relinquished by: (Signature)	7: Date/Time Remarks	
CHAIN OF CI	C. M) (1)	STATION LOCATION T	Process well #1 2	· + +	Sover dischare thank)	ORC. From BIM							Time Received by: (Signature)	te/Time Received by: (Signature)	19.11 Received for Laboratory by: (Signature) (Signature) (M.C.P. M. Theritan	
to the total of th	PROJECT NO. PROJECT NAME		STA. NO. CATE TIME COMP.	1/2/gg 10:00	11 10:15	11:30							0 "	Sampled Mr. (Signature)	Relinquished by: (Signatury) Date	Affect of 1651 graph uses 1/8/19/	

11887021- OZY

Received by: (Signature) Received by: (Signature) REMARKS Date/Time Date/Time Remarks ~ Relinquished by: (Signature) Relinquished by: (Signature) CHAIN OF CUSTODY RECORD Date/Ilme Received for Laboratory by: (Signature) TAINERS Received by: (Signature) CON P Received by: (Signature) aksto SeveraliscHige FLM & STATION LOCATION 100055 Well # 2 7 ORG. Free BANK S.C. M. Weelly Girbs Jacess Well Sitt Sitt Date/Time Unatate LABORATORIES, INC. 8A R∂ COMP. Mclinquished by: (Signature) Hinguished by: (Signature) TIME 10:30 000 10:15 Samplediby: Signature) DATE To Kierly JECT NO. . NO.

31887025- (36

REMARKS			no sampler bailer in well		Te) Date/Time Received by: (Signature) Received by: (Signature)	145 FS 124 - W W 17 01
ECORD (1)	NO. DATE TIME S. S. STATION LOCATION TAINERS (B) SLACT 10'45 X 11.W. 1 SLACT 10'45 X 11.W. 1	13.00 K M.W. 45 3 K	0.5.W.M 0.5.W.M 0.5.W.M	1:55 7 NW & 2 X NW 9 2 X	pled by: (Signature) (Signature) (Signature) (Signature) (Signature) (Signature) (Signature) (Signature) (Signature)	nquished by (Signature) (Signature) (Signature) (Signature) (Signature) (Signature) (Signature)

22287005	REMARKS		- HAD TO RUSAMPLE	(W) flooting siet							Date/Time Received by: (Signature)	
										(Signature)	(Signature)	Remarks
OF CUSTODY RECORD	201		7							Relinquished by: (Signature)	Relinquished by: (Signature)	S Date/Time
Z	OF OF	TAINERS	7						;	(Signature)	(Signature)	Laboratory by:
CHA	HARGINAVE	STATION LOCATION	11#1							Received by: (Signature)	Received by:	Received for L. (Signature)
Ğ.	1	GRAB S	X Well							S-78/11CU	Date/Time	Bate/Time
S, IN	SIK SIK	comp.					-	-		3		
ATORIES	SC MY	TIME	0011						,	ture	nquished by: (Signature)	(Signature)
LABOR	-	DATE	13-1-8							y: (Signature	hed by: (nquished by:
UP! ATE LABORATORIES, INC.	PEULECT NO.	ST NO.								Scoledov	R.: nquis	R nquis

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL UPSTATE LABORATORIES, INC.

Analysis Results Report Number 082087003 Date: August 20, 1987

EPA 601/602:

LIR 001/002.					
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	
Chloromethane Bromomethane Dichlorodifluoromethane Vinyl Chloride Chloroethane Methylene Chloride * Trichlorofluoromethane 1,1-Dichloroethylene 1,1-Dichloroethylene 1,1-Dichloroethylene Chloroform * 1,2-Dichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Bromodichloromethane 1,2-Dichloropropane t-1,3-Dichloropropylene Trichloroethylene Dibromochloromethane 1,1,2-Trichloroethane c-1,3-Dichloropropylene 1,1,2,2-Tetrachloroethane Tetrachloroethylene Bromoform 2-Chloroethylvinyl ether EPA 602 (including Xylene Benzene Toluene	<pre> <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1</pre>	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	<1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <	
Ethylbenzene Xylenes	<1 <1	<1 <1	<1 <1	<1 <1	
Halogenated Aromatics (60 Chlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene		<1 <1 <1 <1 <1 <1 <1 <1 <1	<1 <1 <1 <1 <1	<1 <1 <1 <1 <1	

All	res	sults	are	expressed	as	ug/1.
*B1a	ank	Corre	ected	1.7		•

NYS DOH I.D.: 10170

Approved: Whale mo

Date: 8/20/87

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

PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

'STATE LABORATORIES, INC.

Page 1 of 4

Analysis Results Report Number 082487004 Date: Auugst 24, 1987

EPA 601/602:

ETTI COTTOOL.				
CLIENT I.D.	MW-1	MW-2D	MW-2S	MW-3
Nixon, Hargrave, Devans	8/6/87	8/6/87	8/6/87	8/6/87
& Doyle				
				·
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
Methvlene 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	1 1 5	\ \lambda{1}	<1	\ \(\frac{1}{1}\)
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	1 35	<1	<1	⟨1
EPA 602 (including Xylene		`-	1	'-
Benzene	 <5	<1	<1	<1
Toluene	<5	\di	<1	⟨1
Ethylbenzene	<5	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	⟨1	<1
Xylenes	1 25	र्वे	\di	₹1
Halogenated Aromatics (60		1		'-
Chlorobenzene	1 <5	<1	<1	<1
1,2-Dichlorobenzene	₹5	(1	⟨1	₹1
1,3-Dichlorobenzene	1 3 5	(1	⟨1	⟨1
1,4-Dichlorobenzene	35	⟨1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1
-,	1 '-	1 -	`-	1 '-

 M_{\cap}

All results are expressed as ug/l.

Approved: Jones Herrist

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.

^{*}Sample Dilution.

^{**}Blank Corrected.

'STATE LABORATORIES, INC.

Page 2 of 4

Analysis Results Report Number 082487004 Date: August 24, 1987

EPA 601/602:

CLIENT I.D.	MW-4D	MW-4S	MW-5D	MW-5S
Nixon, Hargrave, Devans & Doyle	8/6/87	8/6/87	8/6/87	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	\(\lambda\)	₹5
1,2-Dichloroethane	<1	<1	<1	(1
1,1,1-Trichloroethane	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	1 3
Carbon Tetrachloride	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\ \(\dil\)
Bromodichloromethane	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\ \(\frac{1}{1}
1,2-Dichloropropane	<1	\ \di	1 31	<1
t-1,3-Dichloropropylene	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\ \di	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1
Trichloroethylene	<1 Trace	\ \di	15	6
Dibromochloromethane	<1	<i< td=""><td>1 1</td><td><1</td></i<>	1 1	<1
1,1,2-Trichloroethane	र्वे	\ \di	\(\dil)	<1
c-1,3-Dichloropropylene	₹1	\ \di	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1
1,1,2,2-Tetrachloroethane	₹1	\ \di	\ \di	\ \langle 1
Tetrachloroethylene	<1	\ \di	1 21	<1
Bromoform	<1	\\ \(\)1	1 31	<1
2-Chloroethylvinyl ether	1 1	1 <1	\\ \di	<1
EPA 602 (including Xylen		1	1 11	1
Benzene	<u> </u>	<1	<1	<1
Toluene	1 41	1 1	<1	1 1
Ethylbenzene	<1	<1	<1	
Xylenes	1	1 <1	<1	<1 <1
Halogenated Aromatics (6		``	1 1	1 1
Chlorobenzene	1 <1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	
1,3-Dichlorobenzene	<1	<1	<1	<1
1,4-Dichlorobenzene	<1		1	<1
r, - Dichiolobenzene	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<1	<1	<1

All results are expressed as ug/l.

*Blank Corrected.

Approved: mis Harfu MV

Date: 8/24/87

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PRIVILEGED AND CONFIDENTIAL, PREPARED AT THE REQUEST OF COMPANY COUNSEL

PSTATE LABORATORIES, INC.

Page 3 of 4

Analysis Results Report Number 082487004 Date: August 24, 1987

EPA 601/602:

CLIENT I.D.	MW-6	MW-7	MW-8	MW-9
Nixon, Hargrave, Devans & Doyle	8/6/87	8/7/87	8/6/87	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	1 <10	<10	<10	<1
EPA 602 (including Xvlene		``	1.20	-
Benzene	T <10	<10	<10	<1
Toluene	<10	₹10	<10	₹1
Ethylbenzene	<10	₹10	<10	₹1
Xylenes	₹10	₹10	₹10	₹1
	1/602):	120		'-
Chlorobenzene	<10	<10	<10	<1
1,2-Dichlorobenzene	₹10	₹10	₹10	₹1
1,3-Dichlorobenzene	<10	₹10	<10 <10	₹1
1,4-Dichlorobenzene	<10	<10	<10	\ \di
2, 220112020201100110	1 110	1 110	1 110	1 1

Δ11	results	are	expressed	25	110/1	
α	Teamra	arc	CYDICOSCA	as	-u2/1	_

*Sample Dilution.

**Blank Corrected.

Approved:

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 limits 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

'STATE LABORATORIES, INC.

Page 4 of 4

Analysis Results Report Number 082487004 Date: August 24, 1987

EPA 601/602:

CLIENT I.D.	Organic			
Nixon, Hargrave, Devans	Free			
& Doyle	Blank	İ		
a boyle	8/6/87			
ULI I.D.	21887036			
EPA 601:				
Chloromethane	<1	·	ì	
Bromomethane	⟨1			
Dichlorodifluoromethane	<1		İ	
Vinyl Chloride	<1			
Chloroethane	<1			
Methylene Chloride *	<5			
Trichlorofluoromethane	<1	į		
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 Xylene	s):			
Benzene	<u> </u>			
Toluene	 <1			
Ethylbenzene	<1			
Xylenes	<1			
Halogenated Aromatics (60	<u>1/602)</u> :			
Chlorobenzene	₹1			
1,2-Dichlorobenzene	<1			
1,3-Dichlorobenzene	<1			ļ
1,4-Dichlorobenzene	<1			
	1			1

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All	result	s are	expressed	as	ug/1
	ank Cor				- 1

NYS DOH I.D., 101707

Approved:

Date: 8/24/8

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 libility for actual and consequential damages

to the fee charged to the customer for the services as liquidated damages.

22587063 -066

UPCTATE LABORATORIES, INC.

	REMARKS			Gran High						Date/Time Received by: (Signature)		Date/Time Received by: (Signature)	3 hrs Montime
UP TATE LABORATORIES, INC. CHAIN OF CUSTODY RECORD	. OF OF	S NO. DATE TIME S S STATION LOCATION TAINERS	dizer 1:05 1/2 (#1 2 8	1:30 & Saver dishing Plane 2 X	KOR, Free Bank X						Relinquished by: (Signature) Relinquished by: (Signature)	(Signature) Date/Time Received by: (Signature) Relinquished by: (Signature)	The Inquished by: (Shandfure) Rate/Time Received for Laboratory by: Date/Time Remarks 3 (Signature) (S

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.	Process Well #1	Process	Sewer	Organic
Nixon, Hargrave, Devans	1	Well #2	Discharge	Free
& Doyle	8/13/87	8/13/87	Flume	Blank
			8/13/87	8/13/87
ULI I.D.	22587063	22587064	22587065	22587066
EPA 601:	i			
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	\di	⟨1
Trichlorofluoromethane	<1	<1	⟨1	₹1
1,1-Dichloroethylene	<1	⟨1	\<1	₹1
1,1-Dichloroethane	<1	<1	<1	
t-1,2-Dichloroethylene	<1	<1	\<1	₹1
Chloroform	<1	<1	<1	
1,2-Dichloroethane	<1	<1	\di	₹1
1,1,1-Trichloroethane	<1	⟨1	₹1	λi
Carbon Tetrachloride	<1	⟨1	<1	₹i
Bromodichloromethane	<1	<1	< 1	₹1
1,2-Dichloropropane	<1	⟨1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1
t-1,3-Dichloropropylene	<1	<1	⟨1	₹1
Trichloroethylene	2	1 <1	2	₹1
Dibromochloromethane	 <1	<1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	₹1
1,1,2-Trichloroethane	<1	<1	(1	₹1
c-1,3-Dichloropropylene	<1	<1	⟨1	\ \tag{1}
1,1,2,2-Tetrachloroethane	<1	<1	Κī	₹1
Tetrachloroethylene	<1	2	2	₹1
Bromoform	<1	₹1	<1	₹1
2-Chloroethylvinyl ether	<1	⟨1	₹1	₹1
EPA 602 (including Xylene:	s):	1	`-	``
Benzene	 <1	<1	<1	<1
Toluene	<1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹1	₹1
Ethylbenzene	<1	⟨1	ki	\(\dil\)
Xylenes	<1	\ <1	₹1	<u> </u>
Halogenated Aromatics (60)	1/602):	' -	``	**
Chlorobenzene	<1	<1	<1	<1
1,2-Dichlorobenzene	₹1	₹1	₹1	<1
1,3-Dichlorobenzene	<1	ki	<1	<1
1,4-Dichlorobenzene	₹1	\ \di	<1	<1
·		<u></u>	``	

All	results	are expressed	as	ug/l
				_

NYS DOH I.D.: 10170

Approved: Deniel Forth m

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 this billity for actual and consequential demages. The court of the customer agrees when the customer agrees that the full extent of any and this billity for actual and consequential demages.

to the fee changed to the customer for the services as liquidated damages.

ISTATE LABORATORIES, INC.

Analysis Results Report Number 082887007 Date: August 28, 1987

EPA 601/602:

CLIENT I.D.	Process Well #1	Process Well #2	Sewer Discharge	Organic Free
Nixon, Hargrave, Devans	8/20/87	8/20/87	Flume	Blank
& Doyle	0,20,0,	0,20,0,	8/20/87	8/20/87
*** T T D		00007000		
ULI I.D.	23387037	23387038	23387039	23387040
EPA 601:				
Chloromethane	<1	<1	<1	<1
Bromomethane	<1	<1	<1	\ \lambda 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	j <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 Xylen	es):			
Benzene	1 <1	<1	<1	<1
Toluene	⟨1	<1	<1	<1
Ethylbenzene	₹1	⟨1	<1	<1
Xylenes	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	⟨1
Halogenated Aromatics (6		1		
Chlorobenzene	1 <1	<1	<1	<1
1,2-Dichlorobenzene	<1	₹1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
1,3-Dichlorobenzene	₹1	₹1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(1
1,4-Dichlorobenzene	(1	₹1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1
1,4-DICHIOLODenzene	``	1	1 11	``

A11	results	are expressed	as	ug/1.
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*Blank Corrected. NYS DOH I.D.

Approved:

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8/28/87 Date:

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 it itself. For actual and consequential damages of the formula activities persones and the full

to the fee charged to the customer for the services

25 63' 46.05 20 105' 42.0 3 84' 57.1 45 72' 45.65 4D 105' 45.7 5S 40' 14.0 5S 72' 14.6 6 58' 47.25 7 61' 48.0 8 61' 47.25 9 105' 45.15 25 63' 46.31 25 63' 46.31 26 105' 47.7 40 105' 47.7 58 40' 14.05 58 40' 14.05 58 40' 14.05	mell*
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Upstate Laboratories inc.

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TOP OF WELL PIPE TO WATER SURFACE.

WELL LOGS

ATTACHMENT A3

Boring Logs and Grain Size Analysis

SHEET 1 OF 2 REPORT OF BORING NO. Mi-1 TEST BORING LOG O'BRIEN & GERE ENGINEERS. INC. GROUND WATER DATE 12/9 DATE 12/11 ELEV. 1168.08 ELEV. 1168.15 SAMPLER DEPTH PROJECT LOCATION: CORTLANDVILLE DEPTH TYPE: SPLIT SPOON HAMMER: 140 LBS. FALL: 30" ENT: NIXON-HARGRAVE-DEVANS-DOYLE FILE NO.: 2410.010.130

BORING CD.: EMPIRE SOILS INVESTIGATION

BORING LOCATION: NEAR LAGOON GROUND ELEVATION: 1187.00

,	OCUBI	ST: GUY SWE				DATES: STARTED: 10/01/86			,	DED: 10	
			SAMPLE	, ,		SAMPLE	STRTUM	EQUIPMENT	ļ,	D TEST	
EPTH	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	VALUE	DESCRIPTION	CHANGE DEPTH	INSTALLED	SAL. 0/00	SP. COND.	HNU
0	1	0-1.5				Sand and fine gravel, trace to little silt (no samples)		<i>:</i> · ·			.*
5	2	5-6.5				·					
						Broken rock from gravel and cobbles. Cutting show fine to coarse sand and fine to coarse gravel	81			-1.	
10	3	9.5-11	18-41	12	85						
15	4	14.5-16	30–34	6	68	Same as above					
20	5	19.5-21	22-42	12	77	Same as above 20.8-21 dry silt, sand and gravel.	- 17'				
			35				24'				
25	6	24.5-26	25-20 22	4	42	Grey mixture of silt. fine to coarse sand and gravel. V. moist to saturated Drilling easier rig jumping Water Table ~ 27					
30	7	29.5-31	9-13-25	6	38	Same as above, saturated			Ì		

^{.020} slot. 2" I.D. PVC flush Jointed casing 441 - 13.51

Natural sand pack

^{44 - 10} 10 - 8 Bentonite mellets Formation collarge

^{5 - 0} Cement/Bentonite grout 0 - 2.35 Locking chitective goven

O' BR ENGI	IEN 8	GERE S. INC.				TEST BORING LOG	<u> </u>		RING NO.	HH-1	SHEE	1 5 OE
PROJEC	T LOC	CATION: CDRI				SAMPLER PE: SPLIT SPOON MMER: 140 LBS.	GROU DEPTI DEPTI	ND WATER H H	DATE 12/9 DATE 12/1	1	ELEV.	1168.08 1168.15
<u>ر</u>					FA	LL: 30"	FILE	NO.: 24	10.010.130			
		: EMPIRE SO: NDRE BUATRE	ils invest	IGATION		BORING LOCATION: GROUND ELEVATION:		N				
086 66	OL 061	IST: GUY SWE	ENSON			DATES: STARTED: 1	0/01/85			Ð	IDED: 1	0/03/86
			SAMPLE			SAMPLE		STRTUM	EQUIPMENT	FIEL	D TES	
DEPTH	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	DESCRIPTION		CHANGE DEPTH	INSTALLED	SAL. 0/00	SP. COND.	HNU S
						Same as above						
								34"				
35	8	34.5-36	21-33	4	56							
			23			Stiff combles and gravel, rig not ju	moing					
40	9	39.5-41	14-18	4	38							
			20			Same as above						
45	10	45-46.5	55-55	4	40							
			18			B. O. B						
50			<u> </u>									
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TEST BORING LOG O'BRIEN & GERE REPORT OF BORING NO. MN-2S SHEET 1 OF 3 ENGINEERS, INC. GROUND WATER DEPTH DEPTH DATE 12/9 DATE 12/11 ELEV. ELEV. PROJECT LOCATION: CORTLANDVILLE SAMPLER TYPE: SPLIT SPOON HAMMER: 140 LBS. FALL: 30" ENT: NIXON-HARGRAVE-DEVANG-DOYLE FILE NO.: 2410.010.130

BORING CO.: EMPIRE SOILS INVESTIGATION FOREMAN: JIM HAMMOND

BORING LOCATION: MN-2 GROUND ELEVATION: 1213.1

			SAMPLE				1 1		EIE	D TES	TIME	To
ЕРТН	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	SAL. 0/00			. #
0	ejer.	7.建度区				Brown sand and gravel little to trace of silt (no samples)	1 1	√ 21 W √ L W 1	\$ A	A - 27.	Salar Galar	\dagger
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5						······································						
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10			X 14									
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\mathcal{F}												
				,								
							14'					
15	1	15-17	28-52	12	97	Dry brown sand and gravel crushed stone.						
			45-51			17 boulder rig not jumping	16'					
						17 course 11g not Jumping						
												İ
						Moist brown sand and gravel, crushed stone.	19'			:		
20	5	20-22	25-25	12	47	little silt						
			22-16									
				·								
			<u> </u>									
25	3	25-27	37-37	12	74	Dry stiff sand and gravel, little silt						
			37-68		',,	The second case and all askers treete stre						
\						Rig not jumping						-
)-			30-50	12	104	Same as above				į		
30	4	30-32	54-52			1 .						

^{68 - 38 .020&}quot; slot 2" I.D. 68 - 43 Natural formation co 43 - 30 Washed Quartz sand 30 - 28 1 bucket of pellets .020" slot 2" I.D. PVC Flush Jointed

Natural formation collapse

^{28 - 15} Formation collapse 15 - 0 Bentoite/Cement grout

^{0 - 1.49} Locking protective cover

		*					e ee ee ee ee ee			•		, e			· · · · · · · · · · · · · · · · · · ·
O' BR	IEN NEFR	B GERE S. INC.				TEST	BORING LOG	Ri	EPORT OF BO	RING NO.	MV-2S	SHEE	1 2 0	F 3	
PROJEC	T LO	CATION: CO	RTLANDVILLE VE-DEVANS-D		H	/PE: SPLIT SPOON WHMER: 140 LBS.	AMPLER	Di	ROUND WATER EPTH EPTH	DATE 12/2 DATE 12/2	11	ELEV.		-	
FOREN	N: J	anommah mi	OILS INVEST	IGATION		ner . W	BORING LOCATION GROUND ELEVATION DATES: STARTED:	: MW-2 N: 1213.1	ILE NU. 1 E4	10.010.130		O ED: 1	0/08/	97	
			SAMPLE			<u> </u>					7	D TES		1	
DEPTH	No.	DEPTH	BLONS /6"	PENETRN/ RECOVERY	"N" VALUE		SAMPLE DESCRIPTION		Strtum Change Depth	EQUIPMENT INSTALLED	SAL. 0/00	SP.	1 1	×	
	(est to sure Secretification			e de la composition de la composition de la composition de la composition de la composition de la composition La composition de la composition de la composition de la composition de la composition de la composition de la La composition de la composition della comp				e de la companya de l			
35	5	35-38	112-100/.3		100+	Same as above									
												**			
					1/13°		ş	t de la company				٠٠.	#194.		{
40	6	40-42	54-57	16	87	11121 Dad			40'						
			50-61			KEO SIITY S	and seam, little (41'						
		.= .=		,											
45	7	45-47	35-38 35-33	. 16	73	F/C sand and grave	el. little silt								1
			30 33				•								
50	8	50-52	21-41	18	78	Water table * 49F			- 49'						
			37-35												
					-										
							,								
-			45.07				•								
55	9	55-57	16-24 29-19		53	Brown sand and gra cobbles	avel, broken rock	fragments	,						
50	10	60-68	18-10	12	34										
+			24-27					·						_	
•											٠			-	

	O' BR ENGI	IEN &	GERE INC.							MW-25	SHEE	T 3 (F 3
	$\overline{}$			RTLANDVILLE VE-DEVANS-D		HF	SAMPLER DEP DE: SPLIT SPOON DEP MER: 140 LBS.	TH	PATE 12/9 DATE 12/1 410.010.130	1	ELEV.		
1	FOREM	N: JI	EMPIRE SO M HAMMOND ST: PETER)ILS INVEST BOGARDUS	ISATION		BORING LOCATION: MW-2 GROUND ELEVATION: 1213.1 DATES: STARTED: 10/06/87		+10. 010. 1 <u>30</u>	ε	NDED: 1	0/08/	 /87
İ				SAMPLE				T		FIE	LD TES	TING	R
	DEPTH	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	SAL. 0/00	SP. COND.	HNU	KS
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	65	11	65 -6 7	31-32	17	116							
				84-44									
	70	12	70-72	31-39	18	73							
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							B. O. B.	72'					
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	ien 1 Neers	BERE , INC.				TEST BORING LOG REPO	RT OF PC	RING NO. MA	-20	SHEET	1 06
1			tlandville ove-Devans-		H	PE: Grab PER: Grab	H 47.15	DATE 12/9/ DATE 12/11	86 /86	ELEV.	167. 9 168. (
001140	· M ·	A.W. Kino	aid		15.5		NO. : 24	10-010-130			
ORĐY	N: Br	uce Yorden ST: Peter)			BORING LOCATION: MI-20 GROUND ELEVATION: 1213.10 (DATES: STARTED: 11/04/86	t.		Ð	0 ED: 11	1/07/
			SAMPLE			SAMPLE	CTOTIN	COULD DECK	FIE	D TEST	ING
EPTH	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	W. VALUE	DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	SAL. 0/00	SP. COND.	HNU
•					· 	Dry brown coarse sand to fine gravel. Some medium 1 coarse gravel. Little fine/medium sand, little to trace of silt. (well recovered)					
	\dashv					saint little to trace of \$11t. (Well recovered)					
<u> </u>	_				_	Dry brown coarse sand to fine gravel. Some					
						fine to medium sand, little silt.					
	_					Dry brown fine to coarse gravel, and fine to					
)-						coarse sand. Few small cooble. (Nell recovered)					
00						Same Afficave					
~				,		/5					
						381					
9			·			Dry brown fine to medium gravel and, medium to coarse sand. Occasional coarse spayel to					
~						small cobbles. Trace of fine sand and silt.					
						WATER TABLE 48 ft49 ft.					
50	_			<u> </u>		Het brown medium to coarse gravel gard Some					
_						fine gravel to medium gravel. Trace of fine sand and milt					
						SST.					į
-[Het brown medium to coarse gravel. Some fine gravel.					
						-					
		es were fr 2-82 .020		<u> </u>	L	<u> </u>	1		1	1	

O' BR ENGI	IEN & NEERS	BERE , INC.			T		BORING LOG	REPO	RT OF EC	RING NO. MH	-20	SHEE	T 2 DF	=
			tlandville ve-Devans-]HP	PE: Grab WER:	CAPLER	DEPT	H 47.13	DATE 12/9/ DATE 12/11	86 /86	ELEV. ELEV.	1167.9 1168.0	ж 11
ORENA	N: Br	A.W. Kinc uce Yorden ST: Peter	1	<u> </u>	<u>F.</u>		BORING LOCATION: NN-2: GROUND ELEVATION: 121: DATES: STARTED: 11/04	0 3. 10 f		10-010-130		DCD . 4		_
			SAMPLE					-				DED: 1		R
KEPTH	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N"		SAMPLE DESCRIPTION		Strtum Change Depth	EQUIPMENT INSTALLED	SQL.	SP. COND.		H -1 55
						Same as above with	h little fine to coarse	sand						
			······································						-					
		—— <u> </u>				1								
								69'						
70						Ifine to medium gr	to coarse sand. Occasion avel. Little fine sand :	nal and						
_										!				
			 _			1								
	_					<u> </u>		78'						
M,						Het brown medium to coarse sand. Occasion fine to medium gravel. Little fine sand a silt. Het brown medium to coarse gravel. Some f gravel. Little medium/coarse sand.		ine -						ĺ
						fine to medium gravel. Little fine sal								
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90			·				to coarse sand. Occassion	_881 881 						
						of silt.	,							
			· · · · · ·	ļ. 		Same as above								
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O'BRIEN & GERE TEST BORING LOG REPORT OF BORING NO. MW-3 SHEET 1 OF 2 ENGINEERS. INC. GROUND WATER PROJECT LOCATION: CORTLANDVILLE SAMPLER DEPTH DATE 12/9 ELEV. 1173.34 TYPE: SPLIT SPOON DEPTH DATE 12/11 ELEV. 1173.71 \ENT: NIXON-HARGRAVE-DEVANS-DOYLE HAMMER: 140 LBS. FALL: 30" FILE NO.: 2410.010.130 BORING CO.: EMPIRE SOILS INVESTIGATION BORING LOCATION: MW-3 UPGRADIENT FOREMAN: ANDRE BUATRE/JIM HAMMOND GROUND ELEVATION: 1229.10 OBG GEOLOGIST: PETER BOGARDUS DATES: STARTED: 10/09/87 ENDED: 10/13/87 SAMPLE FIELD TESTING R SAMPLE STRTUM **EQUIPMENT** иМи DEPTH BLOWS PENETRN/ DESCRIPTION CHANGE INSTALLED SAL. SP. No. DEPTH /6" RECOVERY VALUE DEPTH 0/00 COND. HNU S* 0° - 15° Easy drilling, rig jumping 0 (no samples) 10 15' - 20' - Slow drilling, rig not jumping 20 Í 20-22 21-22 15 73 201 Brown fine to coarse sand and fine to medium 51-52 25-27 38-70 12 136 66-78 30-32 30 39-28 12 55 Same as above, rig jumping 27-24 321 Brown fine to coarse sand. little silt 35-37 37-37 12 63 26-35 40 40-41.5 21-48 12 148+ 100/4 45-47 42-34 130 471 96 50 50-52 45-67 15 Brown sand and gravel. little silt 21-16 541 Same as above with occasional silt lense Water Table ~ 57 55-57 39-37 34-44 60 i* 81 - 51 .020" slot 2" I.D. AVC Flush Jointed casing

^{81 - 41} 41 - 39 Natural Samo Pack

Bentonite bellets 39 - 83 Formation collapse

^{23 - 0} Cement/Bentonite grout 0 - 2.36 Locking protective cover

ENGI	RIEN 8 INEERS	GERE INC.			-			ORING NO.	MH-3	SHEE	T20
_			RTLANDVILLE /E-DEVANS-D		ת	SAMPLER ID	ROUND WATE EPTH EPTH	R DATE 12/9 DATE 12/1	1	ELEV.	1168. 1168.
<u>) </u>		····			F		ILE NO.: 2	410.010.130			·
OREMA	N:		ILS INVEST	IGATION		BORING LOCATION: MW-3 UP GROUND ELEVATION:	GRADIENT				
BG G8	OL061	ST: PETER				DATES: STARTED: 10/09/87			E!	WED: 1	0/13/
			SAMPLE			SAMPLE	STRTUM	EQUIPMENT	FIE	D TES	TING
EPTH	No.	DEPTH	BLOMS /6"	PENETRN/ RECOVERY	"N" VALUE	DESCRIPTION	CHANGE DEPTH	INSTALLED	SAL. 0/00	SP. COND.	HNU
		60-62	26-34	12	94	Brown sand, gravel and cobbles, little silt. very hard drilling, (broken rock fragments)					
			60-67			very hard of 1111mg, toroken rock fragments/					
		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	į				
			25-37								
30		80-81.5	39-50	12	115	Same as above					
			65								
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						B. O. B.	83'			•	, į
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	IEN & NEERS	GERÉ INC.					BORING LOG	REPO	ORT OF BO	RING NO. MA	-4D, 49	SHEE	T 1 C	Fi
	T LOC	ATION: Cot: o n Ha rdgra		Doyle	ĮH	YPE: Grab KMMER: ALL:	AMPLER	DEP1	ዝ ዝ ————	DATE 12/9/ DATE 12/11	86 /86	ELEV.	1168. 1168.	25 33
FOREDY	W: Br	A.W. Kinc			!'	nu:	BORING LOCATION: GROUND ELEVATION:	MH-4D.		10-010-130		···		
0166 65	OL061	ST: Peter	Bogardus SAMPLE	·	 .		DATES: STARTED:	1/10/86	··		Ð	(DED): 1	1/21/	'86
DEPTH	No.	DEPTH	BLOWS /6°	PENETRN/ RECOVERY	"N"	-	SAMPLE DESCRIPTION		STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	SAL.	SP. COND.		Jĸ
0						Dry brown fine to	medium gravel. Son	e sedius/	DEPIN		0/00	LUND.	HNU	+
						— coarse sand. Litt _ sand and silt.	le coarse gravel to	ace fine						
			·			7								
						7							-	
10														
						Dry brown fine to	modius system life	121	,					
						coarse sand. Trac	sedium gravel little fine sand and sil	it.					1	
			····			_							l	
4						_								
7						Dry brown medium/	coarse sand. Some	ine to						
						medium gravei. Ir	ace of silt and fir	ne sand.				i.		
30			· 			-								
						-	•						İ	
		_				-								
						┪.								
								381						i
40						Dry medium to coa to fine gravel. T	rse gravel. Some marker of fine sand.	edium sand						
						- Water Table		151 100						
								8ft49ft.						
50						sand to fine grav	to coarse gravel. (el. Trace of fine	sand and						
<u>)</u>								551						
						Wet brown medium	to coarse gravel.	Some fine						
				ļ										
60 + MH-						pinted PVC well scre						1		

O' B' ENG	HEERS	GERE INC.		•		TEST	BORING LOG	REPO	RT OF BO	RING NO. MA	-4D, 49	SHEE	T 2 (OF i
)			tlandville ve-Devans-		H	YPE: Grab	OMPLER		NO HOTE					
BORINE	CO. 1	A. H. Kinc	aid		F	ALLI			NO. 1 24	10-010-130				
FORDY	W: Br	uce Yorden ST: Peter)			•	BORING LOCATION:MN-4 GROUND ELEVATION: 12 DATES: STARTED: 11/1	12.00 ft	t.					
			SAMPLE				SALES STANLEST 1171	07.00				DED: 1		
DEPTH	No.	DEPTH	BLOWS /6°	PENETRN/ RECOVERY	NALTE		SAMPLE DESCRIPTION		Strtum Change Depth	EQUIPMENT INSTALLED	SQL 0/00	SP.	Т	H.
			-			Wet brown medium sand to fine grave silt.	to coarse gravel. Some el. Trace of fine sand	sedius and						t
						Same as above, wit	th a few small cobbles.							
70						Wet brown medium medium gravel. Literatum gravel. Literatum gravel.	o coarse sand, and fit tle to trace of silt	681_ ne to and						
						Het brown fine to to coarse sands In	medium gravel. Some mo	73' - dium -						
]	•							
					-	-								
	-					Het brown gerting t	o coarse sand. Little	881 _		·				
90						gravel. Trace of s	ilt and fine sand.	Tine						
	\dashv					·								
						Same as above, wit coarse gravel.	h occasional medium to	,				į		
100														
					-									
						Bott	om of Hole # 102 ft.							
	_													
-														
_	\dashv													
4	4													
_	-+													
MI-49								1						

72-52 .020 slot 2" I.D. flush jointed PVC well screen
72-50 Natural formation collapse 0-2.04 4" montantive looking

		BERE , INC.			Ţ	TEST	RORING LOS	REPO	RT OF BO	RING NO. MA	-50, 59	SHEE	710	F 2
			tlandville ive-Devans-		H	(PE: G rab YM ER:	OMPLER	DEPT	H 14.57 H 14.67	DATE 12/9/ DATE 12/11	86 /86	erv.	1167. 1167.	85 85
BORINE	; CO. :	A.H. Kind	aid			AL:	BORING LOCATION: M	H-50		10-010-130				
096 6	01061	ST: Peter	Bogardus				GROUND ELEVATION: DATES: STARTED: 11	1180.00 f /20/86	ŧ.		Ð	4DED: 1	1/22/	'86
DEPTH	•	1	SAMPLE	local.	6310		SAMPLE		STRTUM	EQUIPMENT	FIE	D TES	TING	R
	No.	DEPTH	PLONS /6"	PENETRN/ RECOVERY	VALUE No		DESCRIPTION		CHANGE DEPTH	INSTALLED	SAL. 0/00	SP. COND.	HNU	l ti
0						Dry brown medium : fine sand and sile	sand to fine gravel.	Trace of					<u> </u>	†
						New books & Co. Land		8' _						1
10						coarse sand. Trace	medium gravel, and s e of fine sand and s	medium to						
						-								
						HATER TABLE		*16 ft.						
-	_		 			1								
20						Same as above, wit	th occasional coarse	gravel						
4			·) 		
	-		·											
								281						
30						Het brown medium wedium gravel. Li	o coasre sand, and sitle fine sand and si							
	•													
												!		
	-					1								
40					 -	Same as above								
							·							
	_					Het brown medium t	o coarse sand. Littl	441 - e fine -						
						gravel. Trace of s	silt and fine sand.							
50	\dashv													
$\overline{}$]								
-4	_													
60												i		
HH-5						<u> </u>								Ц

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' BR	IEN A	GERE , INC.				TEST RORING LOG	REPOR	T OF BC	RING NO. HA	-50, 59	SHEE	1 2 0	Fá
\ ,)	ATION: Cor on-Hardgra		•	lH.	SAMPLER PE: Grab WERI	GROUND WATER MW-55 DEPTH DATE 12/9/86 ELEV. 1168 C DEPTH DATE 12/11/86 ELEV. 1168 C						
CORING FORENCE 186 GE	CO. 1 W1 Br	A.W. Kinc uce Yorden ST: Peter	aid Bogardus		<u>_</u> <u>_</u>	BORING LOCATION: MH-SS GROUND ELEVATION: // 80 DATES: STARTED: 11/20/8		NU. 1 24	10-010-130				
			SAMPLE		 -		T				ODED: 1		
ЕРТН	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	ANT NO.	SAMPLE DESCRIPTION	- 10	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	SAL. 0/00	SP.		4
			- · · · · · · · · · · · · · · · · · · ·			Same as above						\Box	+
						·	l						
			-										
70						Same as above, with occasional fine/medium	.						
						gravel.							
·			 										
						Brown fine sand, little silt (heaving in casing)	⁷⁸ ' -						
						Bottom of Hole # 80 ft.							İ
			 										
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							1						
				<u> </u>				:					
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4: 163°-;				1									

	JEN A NEERS,					TEST BORING LOG	 			-6	SHEE	10	F
)		tlandville we-Devans-D	loyle	(HA	SAMPLER PEr Split-Spoon PER: 140 lbs. L1: 30°	DEPTH	49.6 47.0	DATE 12/10 DATE 12/11	/86 /86	ELEV.	168. 1168.	97 87
RING	CO. 1	Catch Env	/ironmental			BORING LOCATION: Backy:	STRTUM EQUIPMENT INSTALLED STATE STA		. –	 -		_	
REDYA G GE	W: Dei	nny Burrox ST: Peter	rs Bogardus			GROUND ELEVATION: 1215. DATES: STARTED: 11/10/8	.00 ft	•		อ	EDED: 1:	L/14/	/8
			SAMPLE			2010					D TES		_
PTH	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	*N* VALUE	SAMPLE DESCRIPTION		CHANGE	EQUIPMENT INSTALLED	SAL. 0/00	SP.	HNU	
,	1	0-5	22-16	8	32	Dry brown fine sand. Some silt occasional							1
			16-14			broken rock fragments.						1	1
	5	2-4	12-9	5	18								
			9-11										
5	3	4-6	25-36	8	52	Broken rock fragments, medium sand to find gravel, with little silt.	e						
			16-17			A.m.erd mrpii 119216 21124			;				
	4	6-8	16-18	12	41								
			ಚ-೫										
	5	8-10	18-27	8	49	Same as abover							
0			22-40			,							
									į.				
	6	13-15	50-55	4	48	Same as above					Ì		
,													
											İ		
	7	ಬ-ಚ	40-56	4	100+	Broken rock fragments.							
)												ł	
												l	
	8	33-35	38-52	6	83								
			31-22								Ì		
·													
			<u> </u>		ļ						. .	ł	
	9	43-45	21-39	4	80	Dry broken medium to coarse sand. Some fi gravel, little silt.	ne						
_			<u> </u>		ļ	1	FT.						
_						Het brown medium to coarse sand. Some fin				1			
				<u> </u>	 	gravel, little silt.							
_				<u></u>	-	Same as above					1		
	}		18 142 15	<u> </u>	111								
_		57-59	45-100/5	5	100+								
_			 		ļ	Bottom of Hole @ 60 ft.							
	57-47		ot 2" I.D.	J							1		_

01.88	EN &	GERE INC.			\top	TEST BORING LOG	REPOR	7 OF BO	RING NO. MA	-7	SHEET	1 0	Fi
TC T	LDC	ATION: Cor	landville ve-Devans-D	oyle	TYI	SAMPLER PE: Split-Spoon PER: 140 lbs.	DEPTH	0 HATER 48.21 48.15	DATE 12/10 DATE 12/11	/86 /86	ELEV. 1	168. 169.	94 00
				<u> </u>	FAI	上: 30*		NO. : 24	10-010-130				
ORENA	N: De	Catch Env nny Burrow ST: Peter	ironmental S Bogardus			BORING LOCATION: Backy GROUND ELEVATION: 1215 DATES: STARTED: 11/17/	. 50			Ð	OED: 11	1/25/	86
			SAMPLE			SOMPLE		STRTUM	EQUIPMENT	FIE	D TEST	TING	R
HTQ30	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE	DESCRIPTION		CHANGE DEPTH	INSTALLED	SAL. 0/00	SP. CONO.	HNU	E X TH
0	1	0-5	4-6	12	14	Moist brown silt. Some fine sand, little medium/coarse sand, Trace of clay (fill)							T
			8-6			accidant coarse saint, frace or city (1111/	1		ŗ.				
	2	2-4	11-12	12	24		l					İ	
			12-12			Moist brown medium sand to fine gravel. L silt and fine sand.	ittle.						
	3	4-6	5-6	NR	17	Silt and time same.	i						١
5			11-17			1			ı.				
	4	6-8	6-7	5	14	Same as above, with broken rock fragments							Ì
			7-9									1	
	5	8-10	9-11	5	22	Same as above							Ì
			11-15			1							l
\						*							
						1							
	6	17-19	17-13	8	ප	Moist brown medium to coarse graves. Sea medium sand to fine graves. Trace of sil							١
20			12-15			fine sand.	s and						
				•					·		1		
]							
						•							
	7	27-29	15-18	8	37	Dry brown medium sand to fine gravel. So broken rock fragments little silt.	400					İ	
30			19-23			John For Tragactive 11112 3115							
]							
]							
	8	37-39	17-20	6	41	Same as above							
40			21-23										
											1		
					1			1			.		
	9	47-49	21-23	10	51	WATER TABLE *	48 ft.						
50	1		28-50/4	•				1 .	1	1			-

O' BR	IEN &	GERE THE				TEST BORING LOG	EPOR'	T OF 80	RING NO. MH	-7	SHEET	1 2 OF
DOT TEC	T LOC	ATION: Cor	tlandville ve-Devans-			SAMPLER	ROUNI XEPTH XEPTH	NATER	DATE DATE		ELEV.	
	. 112.),, , ,	7C 0C70//3		FA		ILE I	NO. : 24	10-010-130			
ORING ORDIA 186 GE	CO. 1 No Dec OLOG 1	Catch Env nny Burrow 57: Peter	ironmental s Bogardus			BORING LOCATION: GROUND ELEVATION: DATES: STARTED: 11/17/86	5			Đ.	DED: 1:	1/25/8
			SOMPLE			covo e				FIEL	D TES	TING
ЕРТН	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	VALUE	SAMPLE DESCRIPTION		STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	0/00 SAL	SP. COND.	HNU
						Met brown medium sand to fine gravel. Broke rock fragments, little silt to fine sand.	m		-			
50												
	10	61-63	41-42	12	35			,				
			13-16			,						
	11	દ3–દ5	22-19 22-8	8	41	· ·	`\					
			2270	<u> </u>		Bottom of Hole # 60 ft.						
	-1					porton or note 4 80 ft.						
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NOJECT LI	06157:	SAMPLE BLOWS	PENETRN/ RECOVERY 3	FAL FAL VALUE	E: Split-Spoon PER: 140 lbs. L: 30'	MPLER DE	PTH 47.52 LE NO.: 24 ft. STRTUM CHANGE DEPTH	DATE 12/10 DATE 12/11 10-010-130	FIEL	DED: 11 D TEST SP. COND.	/19/(
REPYON: 16 SEOLO EPTH No	061ST: 10. DEPTH 0-2 2-4 4-6	BLOMS /6" 7-16 8-8 15-20 30-33 44-55 100/4 25-30	RECOVERY 3 4	°N° VRLUE 24		BORING LOCATION: Backyam GROUND ELEVATION: 1215.30 DATES: STARTED: 11/18/86 SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EBUIPMENT	FIEL SAL	D TEST	ING
EPTH No	061STs 10. DEPTH 0-2 2-4 4-6	BLOMS /6" 7-16 8-8 15-20 30-33 44-55 100/4 25-30	RECOVERY 3 4	24 50	Dry brown broken : coarse little fin	DATES: STARTED: 11/18/86 SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH		FIEL SAL	D TEST	ING
0	2-4	BLOMS /6" 7-16 8-8 15-20 30-33 44-55 100/4 25-30	RECOVERY 3 4	24 50	Dry brown broken : coarse little fin	DESCRIPTION	CHANGE DEPTH		SQL.	SP.	
0	2-4	7-16 8-8 15-20 30-33 44-55 100/4 25-30	RECOVERY 3 4	24 50	Dry brown broken i coarse little fin	DESCRIPTION	CHANGE DEPTH		SAL 0/00	SP. COND.	HNU
	2-4	8-8 15-20 30-33 44-55 100/4 25-30	4	50	Dry brown broken i coarse little fin	rock fragments. Some mediu e sand to silt.	V				
5	4-6	15-20 30-33 44-55 100/4 25-30	6	50							
5	4-6	30-33 44-55 100/4 25-30	6				ı				
5		44-55 100/4 25-30		100+			- 1	[
5		100/4 25-30		100+	}						
5	6-8	25-30	5		<u> </u>						
	6-8		6								
		21-26		54	Dry brown broken fine sand.	rock fragments. Some silt	and]			
		27 65			Tine Sand.						
								.			
	9-11	50-56	6	57		••	- [
10		20-17			Same as atomic .		1				
				····-	1	~ .					
						•	1				
										ł	
	17-19	6-10	12	19	Dry brown addium	sand to fine gravel. Some ≳nts, little silt.					
20		9-9									
					_						
					_						
	27-29	21-27	8	57	Sam as above						
30		31-26									
			<u> </u>		_						
					_						
					_						
	37-39	33-41	7	66	Same as above. w	ith fine to medium gravel.					
40		25-29	1		_						
				<u> </u>				1			
	47-39	25-100/4	MR	100+	Rock in shoe						
LT					HATER TABLE	*49	ft.				

60.3-50.3 60.3-49 49-45 .020 slot 2" I.D. fl Formation collapse Q rock 4x

PVC well screen 0-1.67 Protective locking cover

O' BR	IEN I NEERS,	SERE INC.				TEST E	ORING LOG	REPO	RT OF BO	RING NO. HA	-8	SHEET	5 06	5 2
	T LOC	TION: Cor	llandville ve-Devans-		HA	Sf PE: Split-Spoon PER: 140 lbs. L: 30"	MPLER	DEPTI		DATE DATE		ELEV.		
_					I PH	11 30	BORING LOCATION:	FILE	NU. 1 24	10-010-130				
RING REMA NG BE	OLOG1:	Catch Env nny Burrow ST: Peter	ironmental s Bogardus				GROUND ELEVATION: DATES: STARTED: 11	/18/86			Ð	DED: 1	1/19/	86
			SAMPLE				SAMPLE		STRTUM	EQUIPMENT	FIEL	D TES	TING	R
EPTH	No.	DEPTH	BLOMS /6°	PENETRN/ RECOVERY	value •N•		DESCRIPTION		DHANGE DEPTH	INSTALLED	SAL. 0/00	SP. COND.	HNU	X (3)
						Wet brown medium	sand to fine gravel,	little						
						1								
				ļ										
60]								
				<u> </u>		Bot	tom of Hole # 61 ft	•						
				<u> </u>										1
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O'BRIEN & SERE ENGINEERS, INC.		BORING LOG	REPORT OF	BORING NO. MA-	9 SHEET 1 OF 2
POT LOCATION: Cortlandville It: Nixon-Hardgrave-Devans-Doyle	TYPE: Split-Spoon HOMMER: 140 lbs. FALL: 30"	AMPLER	<u> </u>		86 ELEV. 1168.59 86 ELEV. 1108.85
BORING CO.: Catch Environmental FOREMAN: Denny Burrows OBG GEOLOGIST: Peter Bogardus		BORING LOCATION: B GROUND ELEVATION: DATES: STARTED: 12	1215.10		ENDED: 12/04/86
SAMPLE					FIELD TESTING R

			SAMPLE							FIELD TESTING		
PTH	No.	DEPTH		PENETRN/ RECOVERY	ANTIE . W.	SAMPLE DESCRIPTION	STRTUM CHANGE DEPTH	EQUIPMENT INSTALLED	<u> </u>	SP.		J١
0		0-5	14-23	12	40	Dry brown silt. Some fine sand occasional rock						t
			17-16			fragments, iron oxide stain (fill)						
		2-4	9-10	12	18							
			8-9									۱
		4-6	13-14	6	33							
5			19-23							ļ		
		6-8	25-16	0	30	Rock in shoe						
			14-14									0
		8-10	9-8	1	14	Broken rock fragments and fine to coarse sand with silt.		i				
			6-8	<u> </u>		4]				
				ļ	<u> </u>							
_				<u> </u>	<u> </u>							
	 			ļ								
	 	47.40	44.02	-	-	Res bears backer and foresents with medical				1		
~	-	17-19	44-23	8	39	Dry brown broken rock fragments with medium/ coarse sand. Trace of fine sand.						
50	-	ļ			-	4						
	╂				 	-						
	-			-	 	-	1					
	┼─	27-29	26-21	8	37	Dry brown broken rocks fragments, with rounder						
30	┼─		16-22	 	+	fine to medium gravel. Some fine to coarse sand, little silt.				1		
	╁			 	 	1						
	+			 	1	-						
	+-			 	+	1						
	+-	37-39	34-23	0	67	1						
40	+	1	40-30			401	_			Ì		
	十	40.5	Grab			moist fine to medium sand with silt lines, trace of clay.				İ	1	
7	1	1				411	-					
	1					7						
•		47-49	29-42	10	80	Broken rock formation, wet.						
50	1	38-22				fine/coarse gravel and fine/coarse sand.	-		1			

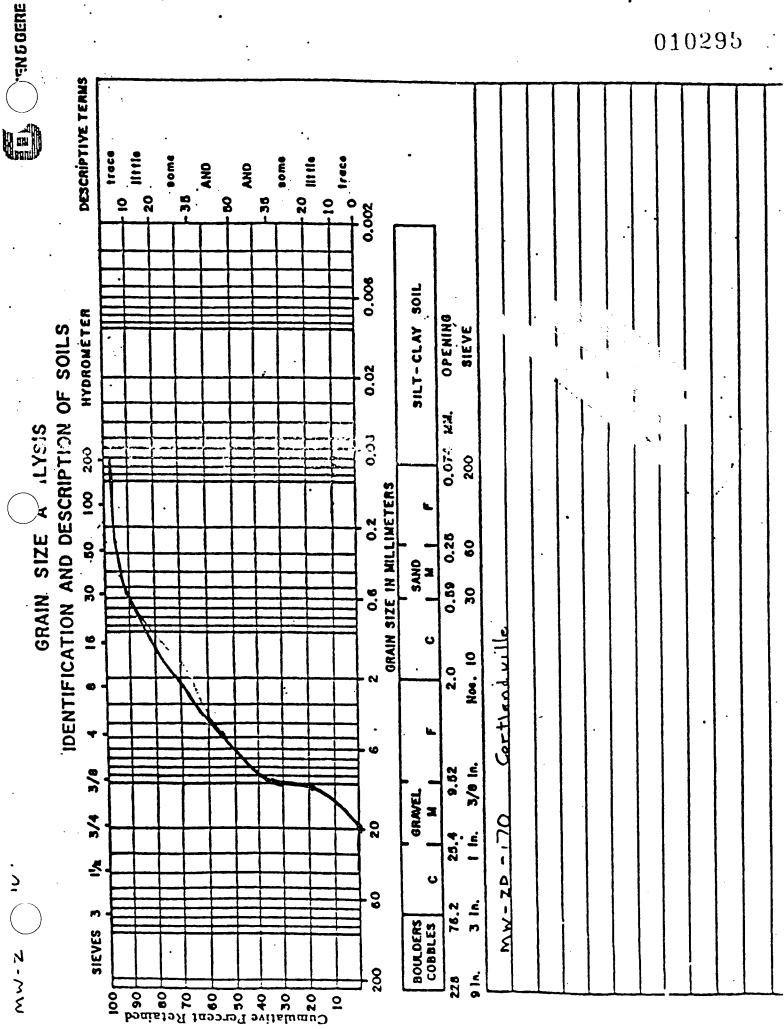
^{98-78 .020} slot PVC 2: I.D. 98-70 Sand, @ rock 4x

^{0-2.11} Protective locking cover

0' 88 DIG1	IEN L NEERS,	GERE INC.				TEST E	ORING LOS	 		NG NO. HA	-9	SHEET	5 OE	2
ROJEC	T LOCA	ATION: Cort			· 1H	SF PE: Split-Spoon HMER: 140 lbs. LL: 30"	MPLER	GROUND H DEPTH DEPTH FILE NO.]	DATE DATE		ELEV. ELEV.		
J. ING ORENA IRG GE	CO.: N: Dei	Catch Envir nny Burrows ST: Peter B	ronmental		L.		BORING LOCATION: GROUND ELEVATION: DATES: STARTED: 12/01/	1			 Đ	DED: 1	2/04/	 86
			SAMPLE				1	STRTUM EQUIPMENT		FIELD TESTING				
DEPTH	No.	DEPTH	BLOWS /6"	PENETRN/ RECOVERY	"N" VALUE		SAMPLE DESCRIPTION		ME	INSTALLED	SAL 0/00	SP. COND.	HNU	X
		57-59	32-30	9	87	Het broken rock f	ragments, fine/coarse s	and.						
60			57-25			Fine/coarse grave	i, little siit.							
		67-69	22-34	8	57	Same as above								
70			23-51			1								
							,		The Reserved					
<u></u>							• •					1		
		17-79	22-16		40	Same as above		1	1					
80	_		24-28											
		87-89	23-44	5	60	Same as above						ļ		
90	-		16-22		-	-								
]								
-	-			1	+	1								
100	1	100-100	28-50	5	77	Same as above								
	1		22-19				Hottom of Hole # 100 ft.							
	1				1	_			!					
	4-	<u> </u>			-	-								
1	1				T									

O' BR	IEN &	GERE INC.				TEST	ORING LOG	—		RING NO. B-1	0	SHEET	10	F I
EC	T LOCA	TION: Cort		lovle	TYI	SF PE: Split-Spoon MER: 140 lbs.	MPLER	GROUN DEPTH DEPTH	D HATER	DATE DATE		ELEV. ELEV.		
, —	. 112.61					LL: 30°		FILE	NO.: 24	10-010-130				
ING	(C). :	Catch Envi	ronmental				BORING LOCATION: Back GROUND ELEVATION:	yard B	-10					
6 BE	OL061	ST: Peter I	ogardus				DATES: STARTED: 12/04	/86			Ð	DED: 18	2/05/	'86
			SAMPLE				SAMPLE		STRTUM	EQUIPMENT	FIEL	D TES	TING	إل
EPTH	No.	DEPTH	BLOWS /6°	PENETRN/ RECOVERY	ANTRE .N.		DESCRIPTION (C		CHANGE DEPTH		SAL. 0/00	SP. CONO.	HNU	j
0	1	0-5	7-8	8	16	Moist brown silt. little medium san	some fine sand, broken	rock						1
			8-13					21					1	١
	2	2-4	10 -9	5	19	Dry brown silt, a	nd fine sand to coarse	sand						١
			11-15						Ì					
	3	4-6	7-9	3	18									
5			9-12					71						
	4	6-8	7-8	NR	15	Dry brown clay. S (broken rock frag	come silt to fine sand.	'	1					
			7-10			TOTOKETI FOCK 178	lactif 31			1				i
	5	8-10	6-8	6	16	1	•							
			8-15			1	•		2			1		
10						1							1	
						1	•							į
						1								
	\vdash				 	1					1	1		
	6	17-19	12-16	6	38	Dry brown medium	sand to fine gravel. L	ittle						
20	1		55-53	1		— fine sand and si	lt. Trace of clay.							
	1			 		7		,						
	-			1	1	1								
	+-			 	1	1							ļ	
	7	27-29	22-50	+	1004	Medium to coarse	gravel, little silt. I	Boulder	1					
30	+	-	100/4	+	+	33-36 slow drill	ing.							
	+-	 			1	7			1					
	+-	 		+	1	1	·							
	+	-		 	+	-			1					
	8	37-39	30-50	8	72	-								
40	+	+	22-26	+	+-	-								
	+	 	 	+	+-	-								
_	+-	 	 	+	 	HATER TABLE		46.5						
	}	 	 	+	+	_	o fine gravel, little s		-		1			
\simeq	9	47-49	43-50	15	72				1					
ا جم	+-	1777	22-29		- '		ottom of Hole # 49 ft.		_					
50			1 22.5											_

4.0 3.9 1.8 0.1 24.2 1.5 1.3 1.8 #200 6 0.102914.5 2.0 2.2 1.0 48.2 1.8 2.0 4.7 0.1 #100 5.6 5.2 1.0 1.9 2.4 1.0 75.4 2.4 3.7 5.7 **99**# 9.0 #30 8.4 9.5 12.9 8.3 13.2 1.0 83.0 1.1 2.1 Sieve Size - Percent Passing Sieve 9.4 15.5 32.6 43.0 9.61 33.6 #10 46.0 35.4 _ c: Nixon - Ha ..ave File #2410.010 Sieve Analysis 27.3 45.2 36.2 11.6 53.8 38.1 62.0 55.0 9.5 900. #4 1-870 80.7 53.0 78.3 63.8 76.3 80.4 82.4 44.5 67.7 94.1 3/8" 92.6 87.8 98.6 82.3 93.0 89.5 91.9 1/5" 94.3 80.4 95.7 notor - Handgrove: Cottlembullo 97.6 99.1 3/4" 100 100 100 100 100 100 100 100 100 100 _ 2410-010-130 ŀ ; Depth 45. 55 .09 .02 75' . 80 .06 100. 20. 80 Well # MW-20 MW-20 MW-2D MW-2D MW-20 MW-20 MW-2D MW-2D 01 1:0 MM-5 MM-5



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 <u>Well Development</u> 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.
- Record the physical appearance of the ground water on the Ground Water Sampling Field Log.
- 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.

- 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. NOTE: 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. NOTE: 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

-12	Location			Well No.		
nnled	By	Date		Time		
ther		Sampled	with E	Bailer	Pump	
	•					
WA	ATER TABLE:					
₩e	ell depth: below top of casing) ft.		Well (top	elevation of casing	:)	ft
(1	below top of casing)ic.	Water	table	elevation	:	 ft
De (1	epth to water table: below top of casing) ft. ength of water column (LWC)	,			,	
Ĺ	ength of water column (LWC)		_ ft.			• .
	olume of water in well:				. 33	
	2" diameter wells = 0.16: 4" diameter wells = 0.65	4 A LIWL1	-		30110110	
	6" diameter wells = 1.46	9 X (LWC)	=		gallons	
r	NUMETICAL ADDEADANCE AT START:		•			
. P	ColorOdor			Turbidi	ty	<u> </u>
V	Was an oil film or layer apparent?					
	PREPARATION OF WELL FOR SAMPLING:					
. 1	Amount of water removed before same	npling			gall	ons.
	Did well go dry?					
	PHYSICAL APPEARANCE DURING SAMPLI					
).	ColorOdor		,	Turbidi	ty	
	Was an oil film or layer apparent	?				
				•		
E . ·	CONDUCTIVITY			•		
F.	pH			•	•	
G.	TEMPERATURE					
н.	WELL SAMPLING NOTES:					
	·					
					· · · · · · · · · · · · · · · · · · ·	
ı						

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

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. <u>Hand Bailers</u>

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. <u>Manual of Groundwater Quality Sampling Procedures</u>, 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.

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ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Bacteriological Tests	<u>:</u>		
Coliform (Total) Standard Plate Coun	P,G t P,G	0.008% Na ₂ S ₂ O ₃ $0.008%$ Na ₂ S ₂ O ₃	30 hours 30 hours
Inorganic Tests:			
Alkalinity	P,G	Cool, 4°C	14 days
Arsenic	P,G	\mathtt{HNO}_3 to $\mathtt{pH} < 2$	6 months
Barium	P,G	HNO_3 to $pH<2$	6 months
Cadmium	P,G	\mathtt{HNO}_3 to $\mathtt{pH} < 2$	6 months
- Calcium	P,G	HNO3 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 Supplie	es P,G	Cool, 4°C	28 days
Non-Chlorinated Supplies	P,G	H ₂ SO ₄ to pH<2	14 days
рН	P,G	None	1 hour
Selenium	P,G	HNO_3 to $pH<2$	6 months

ATTACHMENT A	ATT	ACH	MEI	$\mathbf{T}V$	Α
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Page 2

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 wit foil or T lined cap	Teflon	14 days until extraction and 30 days after extraction
Herbicides: 2,4-D 2,4,5-TP (Silve)	Glass with foil or (a) Teflon lined cap	·	7 days until extraction and 30 days after extraction
Trihalomethanes: Bromodichlorome Bromoform Chlorodibromome Chloroform	Septum		0 ₃ 28 days

	ATTACHMENT A	<u>A</u>	Page 3
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 ₂ S ₂ O 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	Coo1, 4°C, H ₂ SO 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 Demar	nd P,G	Cool, 4°C, H ₂ SO 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

ATTACHMENT A		Page 4	
ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
Cyanide, Total and Amendable to Chlorination	P,G	Cool, 4°C, NaOH to pH>12, O.6g Asboric Acid	14 days
Fluoride	P	None	28 days
Hardness	P,G	${ m HNO_3}$ to pH<2 ${ m H_2SO_4}$ to pH<2	6 months
Hydrogen Ion (pH)	P,G	None	Analyze Immediately
Kjeldahl and Organic Nitrogen	P,G	Cool, 4°C, H ₂ SO 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 ₂ SO ₄ to pH<2	28 days
Nitrite	P,G	Cool, 4°C	48 hours
Oil and Grease	G	Coo1, 4°C, H ₂ SO ₄ to pH<2	28 days
Organic Carbon	P,G	Cool, 4°C, HCL or H ₂ SO 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

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	ATTACHMENT A	Page	5
ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIM
Phenols	G	Cool, 4°C, H ₃ PO 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 ₂ SO 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 Sodiu Hydroxide to pH>9	
Sulfite	P,G	None	Analyze Immediately
Surfactants	P,G	Cool, 4°C	48 hours
Temperature	P,G	None	Analyze Immediately
Turbidity	P,G		Immediately
Organic Tests:			
Purgeable Halocarbons plus Benzyl Chloride and Epichlorohydrin	G, Teflon- lined Septum	Cool, 4°C, 0.008% Na ₂ S ₂ O ₃ for Residual Chlorine	14 days

.

	ATTACHMENT A	Page 6			
ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME		
Purgeable Aromatics	G, Teflon- lined Septum	Cool, 4°C, 0.008% NaS ₂ O 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 ₂ S ₂ O ₃	14 days for		
	-	for ResidűaÍ Chlorine	3 days for Acrolein		
		Preserve as above and pH to 4-5	14 days		
Pheno1s	G, Teflon- lined cap	Cool, 4°C, 0.008% Na ₂ S ₂ O ₃ for Residual Chlorine	7 days until extraction 40 days afte extraction		
Benzidines	G, Teflon- lined cap	Cool, 4°C, 0.008% Na ₂ S ₂ O ₃ for Residual Chlorine	7 days untilextraction 7 days afterextraction is stored under		
Phthalate Esters	G, Teflon- lined cap	Cool, 4°C	7 days until extraction 40 days afte extraction		
Nitrosamines	G, Teflon- lined cap	Cool, 4°C, store in dark, 0.008% Na ₂ S ₂ O ₃ for Residual Chlorine For Diphenylnitro- samine add 0.008%	7 days untilextraction 40 days afteextraction		
		Na ₂ S ₂ O ₃ and adjust pH 7-10 with NaOH within 24 hours of sampling			

•

		ATTACHMENT A		Page 7
	ANALYTE	CONTAINER	PRESERVATION	MAXIMUM HOLDING TIME
	Nitroaromatics and Isophorone	G, Teflon- lined cap	Cool, 4°C, 0.008% Na ₂ S ₂ O 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-	Cool, 4°C,	72 hours
		lined cap	Cool, 4°C, pH 5-9, 0.008% Na ₂ S ₂ O ₃ for Residual Chlorine if Aldrin is to be determined	7 days until extraction 40 days after extraction
1	Polynuclear Aromatic Hydrocarbons	G, Teflon- lined cap	Cool, 4°C, 0.008% Na ₂ S ₂ O 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 ₂ S ₂ O 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 ₂ S ₂ O ₃ for Residual Chlorine only	7 days until extraction 40 days after extraction

CHAIN OF CUSTODY FORMS

CHAIN OF CUSTODY REGORD	NO. REMARKS	ON LOCATION TAINERS							Received by: (Signature) Relinquished by: (Signature) Date/Time Received by: (Signature)	Received by: (Signature) Relinquished by: (Signature) Date/Time Received by: (Signature)	Received for Laboratory by: Date/Time Remarks (Signature)
		STATION LOCATION								_	Received for L (Signature)
INC.		GRAB	•	-					Date/Time	Date/Time	Date/Time
UPSTATE LABORATORIES,	PROJECT NAME	DATE TIME							Relinquished by: (Signature)	Relinquished by: (Signature)	Relinquished by: (Signature)
UPSTATE	PROJECT NO.	STA. NO.							Relinquishe	Relinquish	Relinquish

SAMPLER'S INFORMATION SHEET

Upstate Laboratories inc.

43 Midler Park Drive • Syracuse, New York 13206 • (315) 437-0255 . Southern Region (607) 272-2708 ext. I

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:		
DILLABLE ITEMC.		
BILLABLE ITEMS:		

Upstate Laboratories inc.

GENERAL FIELD NOTES

Client:	······································		Projec	ct No	
Location_			Date_	·	
Time					
Type of Sampling		·			
Equipment used	·				
Comments:					· · · · · · · · · · · · · · · · · · ·
					:
<u></u>					 .
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					······································
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			· · · · · · · · · · · · · · · · · · ·		•
	No	ote Taker (Sig	gnature)		
		eam Leader (Si			
	. P:	roject Manage	r (Signature)_		• .

Upstate Laboratories inc.

MONITORING WELL CHAIN OF CUSTODY SAMPLE CHARACTERIZATION

LOG NO					
CLIENT	WELL I.D.				
LOCATION	WELL TYPE/SIZE				
<u>-</u>	ITEM	START	FINISH		
EVACUATION DATE	TIME				
TOTAL WELL DEPTH	рн				
DEPTH TO WATER	TEMPERATURE				
WELL VOLUME	CONDUCTIVITY				
NO. OF VOLUMES	APPEARANCE				
TOTAL VOLUMES	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					
AMPLING DATEPH	CONDUCT	IVITY			
TIME TEMPERATURE	APPEARANCE	***************************************			
CONTAINERS					
NOTES					
	 				
PRESERVATION DATE					
FILTERED YES NO TIME					
PRESERVED YES NO TIME	_ ,	•			
PRESERVATIVE H ₂ SO ₄ HNO ₃ I	 HCl Cooled 4	∔° C			
Other 3					
CUSTODY SAMPLER'S SIGNATURE		·			
TRANSFERRED TO #1					
RECEIVED BY	DATE		rime		
TRANSFERRED TO #2					
RECEIVED BY	DATE		TIME		

Upstate Laboratories inc.

F	ROJECT				LOCATION				
	EDIOD OF R	EADING							
F	REFERENCE F	OINT							
							INITIALS		
1	WELL NO.	DEPTH TO WATER	REF.ELEV.	ELEV.	WELL NO.	DEPIH TO WATER	REF.ELEV.	ELEV.	
_								·	
-		-							·:
									}
	-								
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ATTACHMENT A5

Gamma Ray Logs

ATTACHMENT A6

Aquifer Test Data

	RECOVERY	6	RECORDER 241	10,010.13	0
CLIENT: Smith Corona - Cor-	tland v. 1 le	, N Y,	JOB NO	PHASE	
PUMPING WELL (PW) process w	vell#1	OBSERVATION	WELL (OW) MU	v-6 (ch. 1)
DISCHARGE RATE 850 GPM	•		DISTANCE TO P	w 87	_ F T

			•	·	7121102 10 FW 61 F1		
DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS	
11:06:08	0	7.88			·		
:13	5	7.89	-,01				
1,28	20	7.82	. 06				
: 43	35	7.78	, 10		/		
:58	50	7,76	, 17				
7:13	65	7.74	.14	·			
;28	80	7.73	, 15		·		
: 43	95	• 7.72	. ,16				
:58	110	7,71					
8:28	140	7,70	, 18	<u> </u>	•		
() 9:43	215	7,68	, 20				
11:58	350	7.66	, 22				
15:13	54.5	7.64	,24				
19:58	830	7.62	,26			·	
11;24	1,072	7.60	, 28				
11:26	1,192	7.58	,30	<u> </u>			
11:32	1,552	7.56	,32				
11:39	1,972	7.54	134				
11:49	2,572	7.52	, 36				
12:02	3,352	7.50	138		•		
17:07	3,652	7.49	-39	·		•	
						·	
	· · · · · · · · · · · · · · · · · · ·						
					·		
				·	•		
•							
·_()				<u> </u>			

			WDOWN	×		•
	,		OVERY	RE	CORDER 2410, C	010.130
CLIENT: <u>Smit</u>	th Corona	- Cortland	Pulle, 12 7	/,JO	3 NO PH	ASE
					LL (OW) <u>mw - 3</u>	
	RATE \$50				TANCE TO PW_	
	(44)	1				
DATE / TIME	ELAPSED TIME	WATERLEVEL	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	. 101			
20:28	860	8.79	,01		<u> </u>	
23	1,012	8.79	,01		<u> • </u>	
24	1,072	8,77	,03			
11:29	1,372	8.76	,04			
11:41	2,092	8.75	,05		÷	-1
11:51	7,692	8.75	.05			
12:01	3,292	8,75.	.05			
12:10	3,832	8.75	20,		<u> </u>	
· · · · · · · · · · · · · · · · · · ·						
		<u> </u>				
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						7:

Ground Water Surveys

Economic Goology

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			WDOWN OVERY		ORDER <u>2410,</u> 0	10 . /30
CLIENT: Smil	th Corona	- Cortland	Pulle, NY	SOL //	No PH.	
			•		L (OW) MW-Z	
DISCHARGE F	RATE 850	GPM			ANCE TO PW	
	(sec)					
DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	8.70	-		·	
: 13	5	8.71	01			
: 28	20	8.69	.01			
.'58		8.68	102			
7:43	95	8.67	,03			
9:28	200	8.66	,04	·		
13:28	440	8.66	. 104		·	
15:28	560	. 8.66	. ,04			
16:58	650	8.65	,05			
18:58	770	8.65	105		•	
()20;58	890	8.65	105			
11;24	1,072	8.64	,06			
11/25	1,13.2	8.63	.07		· · · · · · · · · · · · · · · · · · ·	
77:28	-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	3,60	.10			
•	,					
					** ** * * ** ***	·
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		• •			•	
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					. 424	

		_	WDOWN OVERY	X	ORDER 2410, C	210 . Bo
CLIENT: Smit	th Corona		ار الع بدح	REC	No PH	
DISCHARGE R	RATE 850	GPM	0000	DIS:	L (OW) frocess A	19 ET
·	(sec)					<u> </u>
DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	12.32	_		·	
113	5	12.33	-,01			
;28	20	12.16	,16			
: 43	35	12.01	,31			
158	50	11.90	,42			
7;13	65	11.82	.50			
;28	80	11.76	,56		·	
: 4/3	95	. 11.71	,61			
.'58	110	11.67	.65		·	
8:13	125	11.65	,67		•	
() ;28	140	11.63	169			
:43	155	11.61	.71			
158	170	11.60	,72	i	· 	 ;
- 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			1
/1:23	1012	11.49	,83			
111,24	1,072	11.47	,85			
11;26	1,192	11.46	786			•
11:28	1,3/2	11.45	,87			•
//:34	1,672	11.44	,88			
11:39	1972	11.43	,89			
11:47	2452	11.42	,90	·	•	
11.55	2,932	11.4/	191			
0.7	3.652	11.40	,92			

			VDOWN OVERY	X	2///0	
				REC	ORDER <u>2410, 0</u>	
	th Corona		•		NoPH	 ,
PUMPING WEL	LL (PW) proc	ess well i	F I OBSER		L (OW) process b	
DISCHARGE R	RATE 850			DIST	ANCE TO PW (2, S FT
DATE / TIME	(Sec)	1	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS
11:06:08	0	46.52	-		·	
: 1/3	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	·		
158	110	41.95	4.57			
9:13	185	. 41.92	. 4.60			
158	230	41.90	4.62		•	
10:58	290	41.92	4.60		•	
11113	305	41.87	4.65			
11:28	320	41.90	4,62			
12:13	365	41.87	4.65			1 + + + ⋅ .
12:58	410	41.90	4.62			
13:43	1455	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			
: 143		41.87	4.65		·	
17:13	665	41.90	7.62			-
19:13	.785	41.87	4,65			·
20:13	845	41.90	4.62			
143		41.87	4,65			
2/:13	- 1	41.90	4.62		•	
11:23	1,012	41.85	4.67			
· ()4·	1,072	41.82	4,70			

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			WDOWN OVERY	⊠ □ _{REC}	ORDER 2410, C	010 . 130			
LIENT: Smit	th Corona	- Cortland) v. 1 le , pr >	/,Joa	_ JOB Nº PHASE				
UMPING WE	LL (PW) pou	ess well i	•		L (OW) process !	rell #/(d.8			
ISCHARGE F	RATE 850	GPM		DIST	FT				
DATE / TIME	ELAPSED TIME	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		1				
// ; 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 ···!43	1,972	41.77	4,75						
	2,212	41.75	4.77		•				
744	2,272	41.77	4.75						
11:46	2,392	41.75	4.77			1 \$			
11:47	1 2,452	41.77	4.75						
<u> </u>	1		\$			7.00			
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Ground Water Surveys

Economic Goology

Geophysical Surveys

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	_	ŔEC	WDOWN OVERY	X D	REC	ORDER <u>2410</u> (0/0.1	30
CLIENT: _ 	C.M. Pr	vcess We	11 #/			NºPH		
PUMPING WE	LL (PW)	•	OBSEF	RVATION	WEL	ر (OW) <u>m</u> , س	# 6	(ch. 1
DISCHARGE F	RATE \$50	GPM				ANCE TO PW		
DATE / TIME	ELAPSED TIME	WATERLEVEL	DRAWDOWN	CORREC	TION	TRUE DRAWDOWN	OBSERV	ATIONS
12:17:45	0	7.15				·	 	- 1
:47	2500	7,21	06					
:49	4 sec	7.22	07					
;51	6 sec	7,23	-,08					
153	8 Sec	7,24	-,09					
154	980	7. 25	-,10					
:56	11 sec	7,26	-,11					
:57	12 Sec	. 7.27	,12					
: 59	14 Sec	7.28	-,13			·		
18:03	18 Se C	7.30	-, 15			•		
18:08	23 500	7.32	-,17					
18:16	31 Sec	7.34	-, 19					
18'35	50 sec	7.36	-, 21					
19:12	87sec	7,38	-,23					
20:47	182 sec	7.41.	-126					
22:47	302 Sec	7.43	-,28					
26:47	542 sec	7.45	-130					
29:47	722 506	7.47	-132					
12:45	1,635 se c	7.49	-,34					
12:52	2,055 5€ €	7.51	36			·		
13:10	3,135 sec	7.55	-,40			and the second second company of the second	•	
13:50	5,535 sec	7,60	-, 45					•
14:20	7,335 sec	7.63	48					
	<u> </u>							
		. ,		·	•	•		
			l					



		ŔEC	WDOWN OVERY	D' RE	RECORDER 2410, 010, 130					
CLIENT: SI	C.M. Pro	cess Well	#/		3 No PH.					
PUMPING WE	LL (PW)		OBSER	RVATION WELL (OW) M, W, #25 (DISTANCE TO PW						
DISCHARGE I	RATE \$50	GPM		DIS	TANCE TO PW_	FT				
DATE / TIME	ELAPSED TIME	WATERLEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS				
12:17:45	0	8,57			·					
: 47	2 sec	8,59	02							
/8:47	67 sec	8.59	-,02		<i>y</i>					
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 40	8.59	02							
13:10	3/35 Sec	8.60	03							
13:40	4935.sec	8.61	04							
14:20	7335 Sec	8.61	04							
		<u> </u>								
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Engineering Geology

			VDOWN DVERY	□ Æ	RECO	ORDER 2410	010 , 130
LIENT: SIC	.m. R	ocess well	# 1			No PH	
DUMPING WEI	1 (PW)		OBSER	VATION		_ (OW) _M, W,	
DISCHARGE R	ATE 850	GPM			DIST	ANCE TO PW	FT
DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORREC	TION	TRUE DRAWDOWN	OBSERVATIONS
12:17:45	0	8.44				•	
: 47	2500	8.47	-103				
148	3 Sec	8.48	04				
;50	5 40	8.47	-,03				
152	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	242Sec	8.52	08				
27:47	602 Sec	8.53	-,09				
29:47	722.5ec	8.52	08				<u> </u>
/2:34	975 500	8.51	07	<u></u>			
/2:37	1155 Sec	8,50	06				
12:42	1455 Sec	8,49	05	<u> </u>			<u> </u>
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	7.07				<u> </u>
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nearing Geology

			VDOWN OVERY	□ RE	CORDER_2410.	010 ,130			
CLIENT: 5,0	c.m. po	ocess wel	1#/		B NºPH.				
PUMPING WEI	LL (PW)	•	OBSER	RVATION WELL (OW) Process # 2 (ch.6)					
	RATE_ 850				TANCE TO PW	•			
DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS			
12:17:45	0	11.05			·				
:47	2 sec	11.20	15						
:49	y sec	11.21	16			/			
:51	6 sec	11.23	- , 18						
:52	7 500	11.25	-,20						
:53	8 sec	11.27	-,22						
:54	9 50	11.28	-,23						
;55	10 Sec	. 11.30	,25						
;56	11 sec	11.32	-,27		·				
. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	12 Sec	11.34	-, 29		•				
;58	13 sec	11,36	-,31						
18:00	15 sec	11.40	- 135			-			
18:02	17 50	11.44	-,39						
18:04	19 Sec	11.48	-,43						
18:07	The Sec	11.53	-,48						
18:10	25 Sec	11.57	7,52						
18:14	29 Sec	11.62	-,57						
/8:19	· 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	· 545ec	11,76	-,71			·			
18:43	58 Sec	1	-,72						
18:47	62 Sec		7.73						
18:54	69 Sec	1	-,74		•				
19:00	75 Sec		-,75						
19:07	82 Sec		-176						

Engineering Geology

			OVERY	Ø RE	CORDER <u>2419</u> ,	0/0 ,/30			
CLIENT: 5	C.M. Prou	ess well #	1		8 NºPH				
PUMPING WE	LL (PW)	•	OBSEF		ILL (OW) Process				
DISCHARGE	RATE 850	GPM		DISTANCE TO PW					
DATE / TIME	ELAPSED TIME	WATERLEVEL	DRAWDOWN	CORRECTION	TRUE DRAWDOWN	OBSERVATIONS			
19:15	90 sec	11.82	7,77		·				
19:27	102 Sec	11.83	-, 78						
19:42	117 500	11.84	-,79						
20:17	152 Sec	11.85	-,80						
21:47	ZYZ Sec	11,88	-,83						
23:47	362 Sec	11.89	- 184	·					
26:47	542 Sec	11.91	-,86						
30:47	782 Sec	11.92	,87						
12:34	975 Sec	11,91	786	ļ					
35	1035 Sec	· · · · · · · · · · · · · · · · · · ·	-185		·				
12:37	11.55 Sec	11.9)	-,86						
/2:43	1515 Sec	11.92	-,87		-				
12:49	1875. Sec		-,88						
12:53	2115 Sec	11.94	-,89			<u> </u>			
13:10	3135 Sec	11.97	-, 92	ļ					
13:30	4335 Sec	11.98	-,93			<u> </u>			
13:50	5535 Sec	12.00	95						
14:00	6135 Sec	12.01	-,96			<u></u>			
14:20	7335 Sec	12.01	-196						
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			1			1			

		DRAV	VDOWN				•
		RECC	OVERY		RECO	ORDER 2410 -	010-136
CLIENT: 5	mith Co	ron n	· Traces	# 1	103	NoPH	ASE
PUMPING WEL	L (PW)	•	OBSER	VATION	WELI	(0W) - Pum	H 1 (ch. 8)
DISCHARGE R	ATE 850	GPM			DIST	ANCE TO PW	6.5 FT
				•		•	1
DATE / TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	CORRECT	LION	TRUE DRAWDOWN	OBSERVATIONS
12:17:45	0	41.40					
47	Zace	43.05	- 1.65			· · · · · · · · · · · · · · · · · · ·	
49		43.30	- 1,90				
50	<u> </u>	43.92	- 2.5Z				
51	6	44.47	- 3.07				
57	7	44.97	- 3.57	•			
53	8	45.42	- 4.02				
54	9	. 45.75	7.03				
55	10	46.05					<u> </u>
56	11	46.27	- 4.87			•	
57	12	46.45	- 5.05				
58	13	46.57	- 5,17				
59	14	76.65	- 5.25				
12:18	15	46.67	- 5,27				
12:18:07	22		- 5,12				
12:18:12	27		- 5.00				
12 18:17	32	46.27	- 4.87				
12:18:22	· 201	46.12	- 4,72				
2118:27	42	46.02	- 4.62				
132	47	46.02	- 4.62	<u> </u>			
: 37	52	40.02	- 4.62	<u> </u>			-
: 42	57	46.02	- 4.62				
: 47	67	46.02	- 4.62				
						·	
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Geophysical Surveys

Engineering Geology

		mw 6		1:3 &		. 10		process		process	
4:30 HRS	86/		#01	mw25		mw 2D		UELL #2		WELL #1	
	1	7.41	3	5.60	-1	a.47	Ġ	11.28	8	41.72	
4:20 HRS	1	7.63	<u>.</u>	5.61	4	8.51	۵	17.01	3	46,15	
4:10 HRS	1	7.62	<u>.</u>	8.61	44	8.52	Δ	12.01	8	46.15	
4:00 HRS	1	7.61	3	8.61	4	8.31	Ġ	12.01	8	46.15	
3()HRS	1	7.50	3	8.61	4	8.57	ė	12.00	8	46.15	
3:40 HRS	1	7.58	<u> </u>	8.61	4	8.51	Ó	11.98	3	46.12	
.3:30 HRS		7.57	<u></u>	8.60	4	8.51	6	11.98	8	46.12	
.3:20 HRS		7.55	<u></u>	8.60	4	8.51	6	11.77	8	46.10	
.3:10 HRS		7.55.	3	8.60	4	5.51	Ċ	11.77	8	46.12	
3:01 HRS		7.52	3	8.57	4	8.50	6	11.94	8	46.07	
.3:00 HRS		7,52	3	8.57	4	8.50	á	11.74	5	46.07	
2:59 HRS		7.51	-5	8.59	4	8.49	Ó	11.74	6	46.07	
.2:58 HRS		7.51	3	8.57	4	8.50	6	11.74	8	46.07	
.2:57 HRS		7.51	3	8.59	4.	8.50	Ġ	11,74	8 8	46.07 46.07	
2:56 HRS		7.51	3	8.59	4	8.49 0.40	és Z	11.54	8	46,07	
.2:55 HRS		7.51	3	8.57	4	8.49	Ó	11.74	0 5	46.07	
12:54 HRS		7.51	3	8.59	4 4	8.50 0 =0	<u>රා</u> /	11.93 11.94	8	46.07	
.2:53 HRS		7.51		8.59	4	8.50	<u>6</u>	11.77	3	46.07	
12:52 HRS		7.51	3	8.59	4	8.50 8.50	<u>6</u>	11.74	8	46.07	
12:51 HR8		7,50	3	8.59	4 1	8.49	6	11.71	3	46.07	
12:50 HRS		7.50	3	8.57 8.59	4 4	8.49	<u>ά</u>	11.95	8	46.07	
12:49 HRS		7.50	5	8.57	4	8.49	ė ė	11.92	3	46.07	
12:48 HRS		7.47	- -	0.U7 8.59	4	8.49	6	11.72	8	46.07	
[2:47 HRS		7.49	i T	8.59	4	8.49	ċ	11.72	3	46.07	
12:46 HRS		7.49 7.49	<u>-</u> 	8.59	4	8.49	ά	11.72	8	46.07	
12:45 HRS		7.45 7.45	3	8.57	-r -‡	8.50	ó	11.92	8	46.07	
12:44 HR5 12:43 HR6		7.48	3	8.59		8,49	6	11.92	8	46.05	
12:43 HR5 12:42 HR5		7.48		8.59		8.47	ά	11,91	5	46.05	
		7,47		8.59	4	8,50	έρ	11.91	8	46.05	
12() HRS 12,		7.47		5.57	4	8.50	ò	11.71	3	46.05	
12:39 HRS		7.47	3	5.57	il₁	8.50	á	11.91	8	4a.05	
12:37 m. 12:38 HRS		7,47	3	8.59	4	8.50	Ġ	11.91	8	46.07	
12:57 HRS		7.47	3		4						
12:36 HRE		7.47	3	5,59	4	8.51			ō	46.07	
12:35 HRE		7.47		8.57							
12:34 HRS	1			8.30						46.10	
12:32 HRS	`		-								
STATION I		01									
12:52:47		7,48		3.61	44.	8.52	Ġ	11.92	S	46.12	
	1			8.61	4.		έp	11.92	5	46.12	
	1	7.47			4		6	11.72		45412	
	:	7:47		8.61	4				雹	46:12	
12:28:47	1.	7,46			4	8.51				46.12	
12:27:47	c .L	7,45	20	5.60	4	8.55	ė			46.12	
12;26:47	i.	7.45	3	8.60	4		415		ä	46.1Z	
12:25:47	1	7.45	٠		Ã.		ćΣ		E	46,10	
	1	7.44		8.60	4		Ó	11.70		46.10	
12:24:17	4	7.44		8,60	4		ά	11.87	Ξ	46.10	
	.1.	7.45		5.60	4		<u></u>	11.87		46.10	
	1	7.43		S. OU	47		ć	11.88	Ξ	45.10	
	<u>.</u>	7.43		8.ac			۵	11.58	(2)	48.10	
12112117	.i.	7 2 4	:	8.60			Ġ	11,55		46.10	
12:11:47	1	7,42				. 8.52		11.28		46.10	·
12 : 17	٠ <u>.</u>	7.41					Ġ	11.87		40.07	
12 447	<u>.</u>	7.41		8.60				11.85		45.07	
12:20:17		7.40		8,50			<u></u>	11.85		40.07	
12:17:47	1	7.57		5.á0			Ó	11.54		46.05	
12:17:42	4	7.57		8.60			Ċ.	11.54		46.05	
12:17:37	1	7 a 7	<u></u>	3 .60			Ġ	11.83		46.05 47 5≅	
12:19:32	1	7.57		5.60						46.05	
12:19:27	1.	7 , 3 0	*,*	8.57	44.	5.51	- =	1.1.35	1	4,5 - 0.5	

2:19:17	1	7.38		3.59	4	8.51	ద	11.82	8	46.05
2:17:1/ 2:19:16	1	7.38		8.59	4	8.51	6	11.82	8	46.05
2:17:16	1	7.38	<u> </u>	8.59	4	8.51	6	11.82	5	46.05
2:17:10		7.38	3	8.60	4	8.51	6	11.81	8	46.05
	1		3	6.57	4	8.51	ò	11.81	8	46.05
2:17:13	1.	7.38	ر ت					11.81	0	46.02
2:19:12	1	7.38		8.57	4j.	8.51	Ġ	11.81	9	46.05
. 2: 11	1	7.37	3	8.59	. 4	8.51	ó			
2 10	1	7.37	3	8.59	4	8.51	Ó	11.81	8	46.05
2:17:07	1	7.37	<u> </u>	8.59	4	8.51	Ġ	11.81	8	46.02
.2:17:08	1	7.37	3	8.59	4	8.51	6	11.51	8	46.0 5
.2:19:07	1	7.37	្	8.60	4	8.51	ďΣ	11.81	5	46.05
2:19:06	Ï.	7.37	3	5.57	4	8.50	Ć	11.80	8	44.02
.2:19:05	1	7.37	3	8.59	4	8.50	Ġ	11.50	8	46.02
.2:19:04	ĺ	7.57	3	8.57	4	8.51	۵	11.50	8	46.02
.2:19:03	1.	7.37		8.57	4	8.51	Ġ	11.80	8	46.02
2:17:02	1	7.37		8.57	4	8.50	6	11.80	8	46.02
.2:17:01	1	7.57	<u></u>	8.59	4	8,51	Ġ	11.80	3	46.02
.2:19:00	1	7.37	3	8.59	4	8.50	6	11.80	8	46.02
.2:18:59	1	7,57	<u>:</u>	8.59	47	8.50	6	11.79	Ξ	46.OZ
.2:18:58	1	7.37	3	5.57	4	8.51	Ġ	11.79	\equiv	46.02
.2:18:57	1	7.37	3	8.59	4	8.50	6	11.79	8	46.02
.2:18:56	i	7.37	Ö	8.57	4	8.50	Ġ	11.79	8	46.02
.2:18:55	1	7.57	Ţ	8.57	4	8.50	Ó	11.79	3	46.0Z
.2:15:54	1	7.37		8,59	4	8.50	۵	11.79	Ξ	46.02
.2:18:53	1	7.57	Ţ	8.57	4	8.50	Ġ	11.78	3	46.07
2:18:52	1	7.37	:5	5.57	4	8.50	6	11.78	Ξ	46.02
2:18:51	.i.	7.37	-	8.59	4	8.50	b	11.78	\equiv	46.01
.Z:18:50	1	7.37		8.59	<u></u>	8,50	6	11.78	⊜	46.02
2:18:49	1	7.37	3	8.57	4	8.50	6	11.78	8	46.02
2:18:48	1	7.36	3	8,59	4	8.50	6	11.78	Ξ	46.02
2:18:47	1	7,36	3	8.57	4	8.51	c)	11.78	8	46.02
3:18:46	1	7,36	3	8.59	\mathcal{L}_{p}^{r}	8.50	6	11.77	8	46.02
.2():45	1	7.36	3	8.57	4	8.50	4	11.77	8	46.02
2 44	1	7.36	3	8.57	4	5.50	6	11.77	8	46.02
2:18:43	1	7.55	3	5,59	4	3.50	ċ	11.77	3	45.02
2:18:42	1	7.36	3	8.59	4	5.50	6	11.76	8	46.02
12:18:41	1	7.55	3	5.59	4	8.50	6	11.76	3	46.02
Z: 18: 40	1	7.36	3	5.59	4	8.50	Ġ	11.76	8	46.02
12:16:57	į	7.56	3	8.59	4	8.50	Ó	11.76	8	46.02
12:18:38	1	7.36	3	5.59	4	8,50	<u></u>	11.75	E	46.02
12:18:37	Ţ	7.56		8.57	4	8.50	<u>.</u>	11.75	Ξ	44.02
.z::40:00 .z::18:56		7.56		5.57	4	8.50	á	11.75	6	46.02
12:18:35	1	7,26		8.59	4	5.50		11.75	5	46.02
12:10:30 12:18:34	i.	7.35	<u></u>	6.59		8.50	60) Z.	11.74	8	
	1	7.54 7.54			4	8.50	Ó.	11.74		46.02
12:18:33 12:18:32	1.	7.35 7.35	<u></u>	8.57 8.57	4	8.50	<u>6</u>	11.74	3 3	46.00 24 00
12116152 12116131	1	/	্র ক্র	6.57	4		Δ 			46.00
12118131 12:18:30	1	7.35 7.35		6.59	4	3.50 = =0	© 		-	45.00
.z:16:50 12:18:27	i		3		4 1 .:	8.50	©		ā	46.00
	1	7,55	;·	8.57	4	5.50 7 = 0	Ġ	11.75	3	46.0I
12:15:28 :	1			8.57	4	5.50 5.50		11,72	=	46.02
12:18:27	1.	man man program of the facilities	-	8.59	4	8.50	42	A La Zan	; ;; 	Ada OI
17:18:76	1	7 g 122	5		4	5.50	<u>.</u>	11.71	3	46.05
12:18:25	<u>1</u> .	7 1 12 12	Ξ		4.	8.50	(D	1 1 T 1 1 1 1 T 1	Tank	44.07
	1	The same same same same same same same sam			4	5.50	٥	A A MARKET AND A		4-,10
12418:23	i.	2 dr 2m² (100)		4.57		5.50	÷	11.70	(<u>-</u>	44.12
12:18:22				8.57	4	5,50	<u>c</u>	11.69	8	46.12
12:18:21		7.54	**	Control of the Control	4	5.50	ŵ	11.48	₫.	46.15
12() ZO	i.	7,54		ā, II 7		5,50	Ċ	11.000	Ö	45.17
12 / 19	1	7.54		6.57	ą.	8.30	۵	11.67	(=)	40.11
12:18:18	A.	7 : 34	:	8,57	4	S.EO	Ċ	11.66	Ë/	
12:18:17	1.	7 9 54 44	~~	8.57	4	5.50	Ġ	ii.de	=	46.27
lī:iā:iā	à.	7.54	ः	I, I,	~ <u>;</u>	5.50	άb	1 i n 🖒 🕏	(11)	46.JO
12:15:15	4.	A sections			ij.	8.EC		ilia di	Ξ	
17:18:14	i.	7 g 100 100		(1) 10 10 10 10 10 10 10 10 10 10 10 10 10		5.20	÷	11.51	Œ	42,35
	i 1.	7 . 2 .		Company of the compan		3.47	Ó	1 1 n 3 1	(5)	40.0

PP 4 PP 4 1	-1		****		-			,	-	н .	
12:18:11	1	7.55	3	8.57	4	8.49	6	11.59	8	46.42	
.2:18:10	ī	7.52	3	8.59	4	8.49	6	11.57	8	46.45	
12:18:07	1	7.32	3	8.57	4	8.49	Ġ	11.55	3	46.47	
.2:18:08	i	7.32		5.59	4	8.49	6	11.55	\exists	46.50	
12:18:07	1	7.31	3	8.59	4	8.49	Ġ	11.53	8	46.52	
2:18:06	1	7.31	<u></u> .	8.59	4	8.49	6	11.51	Ξ	46.55	
.2;/-3:05	1.	7.31	3	8.59	4	8.49	<u>6</u>	11.50	8	46.57	
[z()]	i	7.30	3	8.59	4	8.49	6	11.48	8	46.62	
2:16:05	1.	7.30	3	5.59	4	8.49	ė				
								11.46	8	46.65	
2:18:02	1	7.29	3	8.59	4	8.49	Ó	11.44	8	46.67	
12:18:01	1	7.29	-3	8.57	4	8.49	۵	11.42	8	46.67	
.2:18:00	1	7.28	<u>.</u>	8.59	4	8.49	6	11.40	8	46.67	
.2:17:59	1	7.28	3	8.57	4.	8.48	ద	11.35	∃	46.65	
.2:17:58	1	7.27	:::	8.59	4].	8,48	۵	11.36	8	46.57	
.2:17:57	1	7.27	.3	8.57	4	8.48	ف	11.34	8	46.45	
2:17:56	: .1	7.26	3	8.57	4	8.48	6	11.32	8	46.27	
2:17:55	1	7.25	3	8.59	4.	8.48	خ	11.30	5	46.05	
2:17:54	1	7.25	3	8.59	4	8.48	6	11.28	8	45.75	
2:17:55	ļ.	7.24	3	8.59	4	8.48	6	11.27	8		
.2:17:52	1. 1	7.23	3	8.59						45.42	
					4	8.48	Ó	11.25	8	44.97	
12:17:51	1	7.25	3	8.57	4	5.47	6	11.23	3	44.47	
.2:17:50	i.	7.22	3	8.59	43.	8.47	င်း	11.22	Ξ	43.92	
2:17:47	į	7.22	-3	8.57	4	8.47	6	11.21	8	43.50	
.2:17:48	i	7.21	ँ	8.59	4	8.48	6	11.20	\equiv	41.70	
.2:17:47	1	7.21	<u> </u>	8.59	4	8.47	Ó	11.20	8	43.05	
2:00 HRS	86	/12/23	#01								
	1	7.15	3	8.57	4	8.44	ó	11,05	8	41.40	
1:55 HRS	1	7.15	3	8.57	4	8.45	6	11.05	8	41.40	
1:50 HRS	1	7.17	<u></u>	8.58	4						
						8.46	څ	11.06	8	41.40	
.0:00 HRS	1	7.15	3	8.54	4	8.42	6	11.05	5	41.37	
)9:45 HRS	1.	7.15	<u>.</u>	8.56	4	8.42	φ	11.05	8	41.40	
)7; <u>7</u> 0 HR8	i	7.15	I	8.56	÷	8.42	Ó	11.06	\equiv	41.37	
)5() HRS	1	7.16	三	8.57	4	8.43	έ	11.06	ō	41.37	
19:00 HRS	1	7.16	3	8.57	4	8.44	6	ii.Os	\equiv	41.37	
)8:45 HRS	1	7.17	3	8,57	4	8.44	Ó	11.06	5	41.40	
98:30 HRS	1	. 7.19		8.58	4	8.46	6	11.07	5	41.37	
)8:15 HRS	1	7,20	3	8.57	4.	8.45	,	11.08	9	41.42	
)8:13 HR8	1	7.19	3	8.57	4	8.44	*	11.08	8	41.40	
)8:12 HR5			<u></u>								
	1	7.20		5.57	47	8.44	6	11.08	3	41.40	
)8:11 HR5	1	7.20	3	8.57	4	8.44	á	11.08	8	41.40	
)8:10 HRS	1	7.20	3	8.57	4	8.44	۵	11.08	8	41.40	
18:09 HRS	1	7,20		8.57	4	8.44	Ġ	11.08	8	41,42	
)6:08 HRS	Ţ	7.20	3	8.57	4	8.44	Ġ	11.08	8	41,42	
)8:07 HRS	1	7.20	5	8.57	4].	8.44	Ó	11.08	8	41.37	
)8:06 HRS	.i.	7,21	.3	8.58	4	8.44	έb	11.09	8	41.37	
9:05 HR5	1	7.21	<u></u>	8,58	47	5,45	Ó	11.08	<u>=</u>	41.37	
05:04 HRS	ī	7.21	3	B. 57	4	6.45	ä	11.05	5	41,40	
98:03 HRS	1	7.21	3	8,57	4	8,4E		11.05	5		
)8:02 HRS	1	7 . A.4 7 . A.4	ے 3	6.58			Ó			41,40 .	
					4	8.45	Ġ	11,09	8	41,40	
/8:01 HR8	1	7.21	5	8.55	4	8,45	Ó	11.09	\equiv	41.42	
)5:00 HRS	1.	7 = 4 4		8,58	4	8.45	Ġ	11.07	Ξ	41.37	
7:59 HR8	1	7.21		8.35	4	8.45	Ó	11.09	\equiv	41.40	
)7:58 HRS	1.	7.11	3	5.38	4	8.45	ώ	11.05	(3)	41.37	
/7:57 HRE	i.	7.21		8.58	4	5.45	Ó	11.10	ظ	41,40	
)7:56 HRS	i	7 - 414		3.58	4	5.4I	ŵ	11.09	S	41,40	
W:ES HRS	1	7 - 21.41.		5.55	4		Ó	11,10	5	41,42	
)7:54 HAS	1	7.22	Ī	8.58	4	3,45	Ġ	11.10	5	41.42	
7 HES	1	7.25		8.58	4						
HRS		7 . 444 7 . 444				5,45	Ó	11,10	3	41,42	
****	1.		<u></u>	8.38	4	8.45	÷	11.10	3	41,40	
/7:51 HRS	i.	A se all cil	 :	5.55	4	5.45	۵	11,10	Ō	41.40	
/Z:50 HRS	1	7 = 4 4		8.58	4	5.45	۵	11.	三	41,40	
:Z:47 HRS	i.	7 u		5.55	4	3.4E	Ċ	11.11		41 a 40	
7:45 HRS	1	7.5.4	****	5.55	4	8.45	Ġ	11.13	<u></u>	41.42	
/7:47 HRS	i.	7 B 344 544		5.58		E.A.	ć2	11.16	<u> </u>	41.42	
/7:46 HRS	1	7.16		200 1 100 Cm		Z. ÷o	a sa	11,20	<u></u>		
						and de 3 Sada	17.00	as as a diseast as			

41.52 555552 44.6.00 500 500 500 500 500 500 500 500 500	41.42 41.37 41.40 41.42 41.42	41,41 41,41 41,42
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	रामें क्षाने करते हरते रामें करते हरते करते हरते करते हरते करते हरते करते हरते करते हरते करते हरते करते हरते करते हरते	મુખી માની કહ્યો
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	HRS	1	7.17		8.58	4	8.45	Ġ	11.07	8	41,42	
6:36	HRS	1	7.17	3	8.58	3.4	8.44	4	11.07	5	41.40	
	HRS	1	7.17	3	8.58	4	5.44	6	11.07	\equiv	41.40	
6:34	HRS	1	7.17	3	8.58	4	8.44	6	11.07	∄	41.40	
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6:/	HRS	1	7.17		8.58	4	9.44	Ġ	11.08		41.42	
6 ()	HRS	i	7.17	<u></u>	5.58	4	8.44	Ó	11.08		41.42	
6:00	HRS	1	7.17	<u>.</u>	5.58	4	5.44	Ó	11.08	8	41.42	
6:29	HES	·! 	7.17	I	8.58	4	8,45	Ó	11.08	☲	41.37	
6:28	HAS	1	7.17	3	8.58	4	S.44	Ġ	11.07	8	41.42	
6:27	HRS	i.	7.17	3	8.58	4	8.44	6	11.08	8	41.40	
6:26	HAS	1	7.17		8.58	4	8.44	Ġ	11.08	8		
											41,42	
6:25	HRS	1	7.17	3	8.57	4	8.44	Ċ	11.08	8	41.42	
6:24	HR:5	1	7.17	75	8.58	4	8.44	Ċ	11.05	Ξ	41,40	
6:23	HRS	1	7.18	3	8.58	4	8.45	Ó	11.05	Ξ	41.40	
6:22	HRS	1.	7.18	3	8.58	4	8.45	څ	11.08	⊞	41.42	
6:21	HRS	1	7.18	3	8.58	4	8.45	<u>څ</u>	11.07	3	41,42	
6:20	HRS	1	7.18		3.58	4	8.45	Ġ	11.08	5	41,40	
	HRS		7.18	2	8.58	4	5,45			8		
6:17		1						Ó	11.07		41.42	
6:18	HRS	1	7.19	3	8.58	4	8.45	۵	11.09	8	41.42	
6:17	HRS	Ĺ	7.19	3	8,58	4	8.45	43	11.09	\equiv	41.42	
6:16	HRS	Ĺ	7.18	<u> </u>	8.58	47	5.45	6	11.08	\square	41,40	
6:15	HRS	1	7.18	3	8.58	<u>.:</u>].	8.45	6	11.08	\equiv	41.42	
6:14	HRE	1	7.19	3	8.58	4	8.45	ä	11.08	5	41.40	
6:13	HRS	i	7.19	<u> </u>	8.58	4	8.45			8		
								Ó	11.09		41.42	
6:12	HRS	1	7.19	3	8,58	4	8.45	ά	11.09	=	41,42	
6:11	HRS	1	7.19	3	8.58	4	8.45		11.07	8	41.40	
6:10	HRS	1	7.19	3	8.58	4	8.45	ćo	11.09	8	41,42	
6:07	HFIS	i	7.19		8.58	44	8.45	Ġ	11.09	8	41,40	
6:08	HF:5	1	7.19	<u></u>	8.58	4	8.45	Ġ	11.09	5	41,40	
6:07	HRS	1	7.19	<u>.</u>	8.58	4	5.45	÷	11.09	8	41,42	
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()		ļ	7.19		8.58	÷.		(2)	11.07	5	41.41	
6:\/	HRE	i.	7.19	3	8.58	4	8.45	C	11.07	\equiv	41.45	
6:04	HRS	1	7.17	.5	3.58	4	8,45	(1)	11.10	5	41.42	
6:03	HRS	1	7.20		9,57	÷	5,45	Ġ	11.10	8	41.40	
6:02	HRS	1	7.50		8.58	-77	8.45	Ġ	11.10	Ξ	41,42	
es Oi	HRE	1	7.20		5,58	<u>√7</u> ,	8,45	á	11.10	8	41,42	
06:00	HRS	1	7.20	<u></u> ت	8.59	4	5.45	á	11.10	5	41,41	
5:59	HES		7.20	3	8.57		5,45			8		
		1				4].		C	11.10		41,42	
5:55	HF 5	1.	7.20	3	8.57	4	₹.45	4.77	11.10	8	41.40	
5:57	HES	l.	7.20		5.57	4	8,45	Ó	11.10	\equiv	41,45	
5: 55	HRS	1.	7.20	3	8.58	4	8.45	ŵ	11.10	(3)	41.37	
	HRE	1	7:20	Z	8.58	즊	5.45	Ó	11.10	Ξ	41,42	
)5:54	HF.S	1.	7.20		8.58	44.	8.45	ė	11.10	E	41.40	
	HRS	1	7,21		8.55	Ą	8,45	<u>~</u>	11110	3	41,42	
5:51	HAS	1	7 4 44 4	<u>.</u>	5.55	4	8,45	Ġ	11.10	E	41.42	
			7 a alii a 7 a alii a	: :	8.58		5.45					
E:E1	HF:5	1				44		⇔	11.11	5	41.37	
5:50	HF.5	1	7.21	Z	3.53	4	3.45	(II)	11.11	65	41.41	
15:47	HF.5	1	7.21	<u></u>	5.35	4	5.45	ć.	11,11	(5)	41.42	
)=14E	hiñā	.i.	7,21	3	5.57		5.45	Ġ	11.11	(3)	41,40	
E:47	HPS	1.	7.22		5.57	4	8.45	Œ.		Õ	41,42	
) 5 :45	HE.E		eren eren eren E a eren eren	****	5,37	-1	3,45		11.12		41,40	
/E:4E	HES	L	/ 1 44 42	****	5.27	4	The same of the sa	ė	11.12	=	41.42	
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			A di amin'ny	*				CD				
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)E; ;I	77.2	<u>i</u> .	a diam'ni	1.44		Ξ.	E.45	Ġ	11.12		41.41	
	hir.ā	ï			3.5	<u></u> ;	5,40		111114	:::	41.42	
DEN	HRE	. <u>.</u>	7 4 44 44	****	5.57	<u>.</u> ,.	5.46		11.15		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Æ		<u> </u>					5, 95		4 4 7	65	41,45	
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Process of the Community of the Communit	HRS	:	7 8 444 444 444 444 4 5 444 44 7				8,47		11,44	S		
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AND A TOTAL	HFE	Ţ	7.45		(1) 1 VII T	-Ā		(11)	and the state	₩.	46.05	
15:54	MA.S				5.37	.7.		÷	11.71			

		4	72 /4 9	٠,	6.37	4	5.50	_	11.70	\circ	40.00	
	HRS	1	7.43 7.43	ے 3	8.59	4	8.50	Ġ	11.70	8	46.05	
		* -: .t.					5.49	å	11.89	5	46.02	
	HRS	1	7.43	<u></u>	8,59	4						
	HRS	1	7.42	3	8.57	4	8.49	é	11.89	8	46.02	
5:28	HR3	1	7,42	3	8.57	<u> 41</u>	₩.47	Ġ	11.87	=	46.02	
5:27	HRS	1	7.41	Ž.	8.57	4	8.49	Ġ	11.88	Ξ	46.02	
چکرات	HRS	1	7.41	3	8.57	4.	8,49	슾	11.88	3	46.02	
5()	HRS	1	7.40	<u></u>	8.59	4	8.49	6	11,87	\equiv	46.02	
51-1	HES	1	7.57	3	5.59	4	8.49	6	11.87	8	46.00	
5:25	HRS	1	7.38	3	8.59	4	8,47	6	11.86	Ξ	46.00	
5:22	HŖ5	1	7.37		5.57	4].	5.47	Ġ	11.85	8	46.00	
5:21			7.36	3	8.59	44	8.48	Ġ	11.83	8	45.97	
	HRS	1								3	45.75	
5:20	HRS	i.	7.54	3	5.57	4	8,48	ė	11.30			
5:19	HFIS	1	7.30	<u> </u>	8.58	4	8.47	6	11.66	8	46.00	
5:18	HRS	1	7.15		8.58	4	8.44	ė	11.08	3	41.42	
5:17	HRS	1	7.15	I	8.58	4	8,44	€	11.08	8	41.42	
5:16	HRS	1	7.15		8.58	47	8.44	<u>5-</u>	11.08		41.42	
5:15	HRS	1	7.15	3	8.58	4	5.44	Ġ	11.08	8	41.42	
5:14	HRS	ļ.	7.15	.3	8.58	4-7-	. B. 44	ćo.	11.07	8	41.40	
5:13	HRS	1	7.15	3	8.58	4	8.44	۵	11.07	8	41.42	
)5:12	HRS	1	7,15	3	5.58	4	8.44	Ġ	11.07	8	41.40	
				3	8.58	4	8,44		11.08	8	41.42	
5:11	HRS	1	7.15					Ġ				
)5:10	HRS	1	7.15	<u></u>	8.57	4	8.44	۵	11.08	8	41,42	
)5:09	HRS	1	7.15	3	8,58	4	8.45	۵	11.08	3	41,42	
)5:08	HES	1	7.16		8.58	4	8.45	ĊD.	11.08	8	41.42	
5:07	HRS	1	7.16	3	8.59	4	8.45	۵	11.07	\equiv	41.42	
)5:ეგ	HRS	1	7.16	3	8.59	4	8,45	6	11.09	8	41.45	
)5:05	HRS	4	7.16	3	8.59	4	8.45	Ó	11.09	ϵ	41.42	
)5:04	HRS	1	7.17		8.59	44	8.45	6	11.09	5	41.45	
)5:03	HRS	1	7.17	3	8.59	4	5,45	6	11,08	8	41.42	
				<u>.</u>	8.59	-T	8.45	å	11.08	8	41.42	
)5:0Z	HRS	1.	7.17									
)5:01	HRS	1	7.17	3	8.57	4.	8.45	Ó	11.09	8	41,40	
)5()	HRS	1	7.1ò		8,58	44	8.45	Ġ	11.07	5	41.42	
)4 \	HRS	.i.,	7.16	3	8,58	4	8,45	Ó	11.08	\equiv	41,45	
04:58	HRS	1.	7.16		8.58	4	8.45	Ó	11.05	Ξ	41,42	
04:57	HRS	1.	7.16	3	8,58	44	8.45	Ó	11.08	(2)	41,40	
)4:56	HRS	} 2.	7,16	3	8.58	4	8.45	ά	11.09	8	41.41	
)4:55	HRS	1	7.16	<u></u>	8.59	4].	8.45	é.	11,08	8	41,42	
D4:54	HRS	1.	7.14		8.58	4	8,45	ė	11.08	Ē	41.42	
)4:53			7.16	<u></u>	8.58	4].	5,45	Ġ	11.08	8	41,42	
	HRS	4 1 1							11.08	8	41,42	
D4:5Z	HRS	4	7.16	3	8.58	4	8.44	dis J				
04;51	HRB	.1	7.16		5.55	4	5.44	Ó	11.08	8	41,40	
04:50	HRS	.L	7.16	3	8.58	4	8.44	ċ	11.08	5	41.47	
04:49	HRS	i	· 7.16		8,59	4	5.44	Ó	11.05	8	41.40	
04:45	HRS	1.	7.16		8.58	4	8.44	<u></u>	11.05	\equiv	41.41	
04:47	HRS	1	7.16	3	a, Ea	4	8,44	Ó	11.08	Ξ	41,40	
)4:45	HRS	. <u>i</u>	7.16	****	8.58	44	8.44	Ċ	11.08	. (5	41,40	
04:45	HRS	1	7,16	.5	5.58	4	5.44	45	11,08	<u></u>	41.42	
04:44	HES	.i.	7.16		8.55	4	8,44	Ó	11.08	<u> </u>	41,41	
)4:45			7,16		8.58	4	5.44		11.05	8	41,42	
	HES	1						=				
04:42	HRS	1.	7.15	<u></u>	9.58	4	5,44	5D	11.57	5	4 1 35	
04:41	HES	1	7.1ć		5,55	- }	S, ÷÷	٥	11.09	8	41,42	
)4:40	HES	Ä	7 4 4 7		6.55	4	5.45	Ċ	11.50	(22)	41.40	
)4:39	HE5	i.	7 7	:	3,55	4	8.45	Ċ	11.5		41,42	
04:58	HR5	ī.	7 4 4 7	:		ď,	3,45		1 4 7 mm 2 2 4 12 7	\equiv	41.42	
54:57	HRS	-i.	7.17		8,58	4	(T) e 1 (T)	Φ.	4 0 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(11)	41:42	
)4:36	-FS	1	7 4 7			4-1		ŵ	11.5.7		41 44	
24/T	HES	-! -!	Zalaz	***	8.58	4				1444) 1444) 1444)		
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24	HAS			·		÷.	8.45	CD	11.07			
)4:II	mF.S	ů.	, n .1 r		5.05	4		(2)	11:17	<u></u>	41,40	
04:5I	HES	4 .L	7 a 1 -		5.55		5.45	úl.	11111	25	11.2	
04:31	HES	:i .1.	7 p A. 7		8,58			Ċ	1.1 . 1.7	;	41.41	
04:30	HRS				8.52		8,45		41457			
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		1	7.17		5.58 0.50	4	8.45	Ó	11.09	8	41.42	
	HRS	1	7.17		8.58	4	8.45	٥	11.09	8	41.37	
		1	7.17		8.58	4	8.45	Ó	11.09	8	41.42	
	HRS	1	7.17		8,58	4	8.45	6	11.09	8	41.40	
	HRS	1.	7.17		8.58	4	8.45	6	11.10	8	41.40	
		1	7.18		8.58	4	8.45	6	11.10	8	41.40	
/ \		1	7.18		8.59	4	8.45	Ġ	11.10	5	41.42	
		1	7.18		8.59	4	8.45	6	11.10	8	41.40	
		1	7.15		8.59	4].	8.45	Ġ	11.10	8	41.40	
		1	7.19		8.59	4	8.45	Ġ	11.10	8	41.45	
		1	7.18		8.59	4	8.45	6	11,10	8	41.40	
		1	7.15		8.59	4	8.45	ద	11.10	\equiv	41.42	
		1	7.18		8.58	4	8.45	Ė	11.10	8	41.40	
		1	7.18		8.58	4	8.45	6	11.10	8	41.42	
	HRS	1.	7.1E		8.58	4	8.45	6	11.11	8	41.42	
	HRS	Ţ	7.19		8.59	4	8.45	Ó	11.11	\exists	41.42	
	HRS	1	7.19		8.59	4	8.45	6	11.11	8	41,42	
	HRS	1	7.19		8.59	4	8,45	6	11.11	8	41.42	
	HRS	1	7.19		8.59	4	8.45	6	11.11	3	41.42	
	HRS	1	7.19		8.59	4	8.45	6	11.11	8	41.45	
	HRS	1	7.19		8.59	4	8.45	Ġ	11.11	8	41.42	
	HRS	1	7.19		8.59	4	8.45	6	11.11	8	41.42	
	HRS	<u> </u>	7.19		8.59	4	8.45	6	11.11	8	41.37	
4:03	HRS	<u>;</u>	7.17		8.59	4	8.45	6	11.12	8	41.40	
	HRS	1	7.19		8.59	4	8.45	á	11.12	5	41.47	
4:01	HRS	1	7.20		8.57	4	8.45	6	11.12	8	41,45	
4:00	HRS	1	7,20	3	8.59	4	8.45	රා	11.12	8	41.47	
	HRS	1	7.20		8.59	4	8.45	6	11.12	\exists	41.40	
3:58	HRS	i.	7.20	3	8.59	4	8.45	6	11.12	3	41.42	
J:57	HRS	1	7.21	3	8.59	4	8,45	Ġ	11.12	8	41.42	
3:56	HRS	1	7.21	3	8.59	4	8.45	ث	11.13	8	41,42	
J: 55	HRS	1	7.21		8.59	4	8.45	6	11.13	8	41.45	
)Z()	HRS	1.	7.21		8.57	4	8.45	6	11.13	8	41.42	
	HRS	1	7.21	<u> 3</u>	8.59	4	8.45	6	11.13	8	41.40	
	HRS	1	7,21		8.59	4	8,45	6	11.13	8	41.40	
		1	7.22		8.59	4	8.46	6	11.14	\equiv	41.42	
		1	7.22	. 3	8.59	4	8.46	Ó	11,14	8	41,42	
		1	7.22		8.59	4	8.46	6	11.14	8	41.45	
3:48		1	7,23		8,57	4	8,46	Ó	11.15	Ξ	41.45	
		1	7,23		8.59	4	8,46	6	11.15	\equiv	41.42	
		1	7.24		8.59	4	8.46	Ó	11.17	\Box	41,45	
	HRS	1	7.25		8.59	47	8.46	6	11.17	8	41.45	
	HRS	1	7.24		8.57	4	8.47	6	11.25	8	41.42	
	HF:5	1	7,28		8.60	4].	8.47	6	11.40	8	41.52	
	HRS	1	7.57		8.60	4	8,49	· 6	11.79	8	41.75	
	HRE	1	7,44		8.60	4	8,50	6	11.93	⊜	46.05	
	HRS	1.	7.44		8.50	4	8.50	Ġ	11,73	5	46.05	
	HRE	1.	7,45		8.60	4	8.50	Ó	11.92	3	46,05	
3:38	HRS	† .j.	7.43		8.60	4	8.50	Ó	11.72	3	46.05	
5:57	HRE	1	7.43		8.60·	4	8.50	έs	11.72	8	46.05	
3:36	HRS	1	7.43		8.50	41	8.50	à	11.72	8	46.05	
3:35	HRS	1	7,42		5.60	4	8.50	5	11,71	8	46.05	
)3:34	HR:5	1	7.41		8.60	4	8,50	ä	11.70	5	46.02	
	HRS	1	7,41		8.60	4].	8.50	Ġ	11.70	=	46.02	
3:32	HES	1.	7,40		5.59	4	8,49	Ġ	11.87	8	46.UZ	
03:31	HRS		7.37		5.59	4].	5,49	ò	11.87	5	46.02	
)5:50	HRS	1	7.35		5.57	4	5.49	ė	11.55	8	45.00	
3(HRS	1	7.37		8,59	<u>į</u> .	5.49	Ġ	11.87	8	4a.00	
	HES	1	7.37		8.59	4	3,49	6	11.56	8	46.00	
)3:27	HF.S	1	7.35		8.57	4	8.49	Ś	11,8E	8	45,97	
)J:Z6	HRS	1	7 4 525		8.59	4	8.48	Ġ	11.52	S	45.45	
75:25	HRS	1	7:25		8.57	4	5.47	ó	11.69	8	45.95	
)5:24	HRS	1	o de sala de Tomos de sala de Tomos de sala de		e.59	4	5.45	á	11.09	8	41,40	
75:23	HES	1			8.59		8,45	ó	11.07	8	41,45	
/5+25)[]4][]2]	HAS	4	7. 19		6.37 5.59	4	0:40 8,45	o ė	11.07	© Fi	41.45	
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	115.5	4			8.59	4	8.45	6	11.09	8	41.45	_
	HRS	1	7.15	3 3	8.59	4	8.45	6	11.09	8	41.42	
	HRS	1	7.15	3	8.57	4	8.45	6	11.09	8	41.42	
	HRS	1	7.15						11.07	8	41.45	
	HRS	1	7.15	3	8.59	4	8.45	6		8		
	HRS	1	7.15	3	8.58	4.	8.45	Ó	11.09		41.42	
	HES	1	7.15	3	8.57	4	8.45	6	11.09	8	41.42	
	HRS	1	7.15	3	8,59	4	8.45	Ġ	11.09	8	41.42	
3()	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.42	
	HRS	1	7.15	3	8.59	4	€.45	Ó	11.09	8	41.42	
3:11	HRS	1	7.15	; ;	8.58	4	8.45	6	11.09	8	41.40	
3:10	HRS	1	7.15	 1	8.58	4	8.45	Ġ	11.09	8	41.45	
J:07	HF:S	1	7.15		8.59	4	8.45	6	11.09	8	41.42	
)J:08	HRS	1	7.15	3	8.58	4	8.45	6	11.09	8	41.42	
3:07	HRS	1	7.15	三	8,58	4	8.45	6	11.09	8	41.42	
3:06	HRS	1	7.15	-	8.59	4	8.45	6	11.09	8	41.40	
3:05	HRS	1	7,15	<u></u>	8.59	4	8.45	6	11.09	8	41.40	
03:04	HRS	1	7.15	3	8.57	4	8.45	6	11.09	8	41.47	
Z:03	HRS	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42	
03:02	HRS	1	7.15	3	8.57	4	8,45	6	11.07	8	41.40	
3:01	HRS	1	7.15		8.59	4].	8.45	6	11.09	8	41,40	
00:00	HRS	1	7.15		8.59	4	8.45	6	11.09	8	41.40	
)2:59	HRS	1	7.15	3	8,59	4	8.45	6	11.09	8	41.42	
02:58	HR5	1	7.15	3	8.59	4	8.45	6	11.09	8	41.42	
2:57	HRS	1	7.15	3	8,59	4	8.45	ó	11.09	8	41.42	
2:56	HRS	1	7.15	3	8.59	4	8.45	<u>-</u>	11.09	8	41.40	
)2:55	HRS	1	7.15	3	8.59	4	8,45	6	11.09	8	41,40	
2:54	HRS	1	7.15	3	8.59	4	8.45	<u>۔</u> خ	11.09	8	41.42	
)2:53	HRS	1	7.15	3	8.59	4.	8.45	5	11.09	8	41.42	
)2:52	HRS	.L 4 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	
)2:50	HRS	1	7.15	3	8.57	4	8.45	ò	11.09	8	41.40	
)2:49	HRS		7.15	3	8.59	4 -	8.45	6	11.09	8	41,42	
		1		3						8		
P2()	HRS	1	7.15	د 3	8.57 0 50	4	8.45	<u>ა</u>	11.09	8	41.42 41.42	
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02:46	HRS		7.15		8.59	4	8.45	<u>6</u>	11.09	8	41.42	
2:45	HRS	7	7.15	<u>.</u>	8.59	4	8.45	6	11.07	8	41.45	
02:44	HRS	1	7.15	3	8.57	4	8,45	6	11.09	E	41.42	
02:43	HES	i.	7.15	3	8.57	4	8.45	Ó.	11.09	8	41.42	
02:42	HES	1	7.16	<u> </u>	8.57	4	8.45	Ġ	11.07	8	41.40	
02:41	HRS	7	7.16	<u> </u>	8.57	4	8.45	Ó	11.09	8	41,42	
02:40	HRS	1	7.16	ౌ	3.59	4	8.45	6	11.07	8	41.42	
72:39	HRS	Ţ.	7.16		8.59	4	8,45	6	11.09	8	41.42	
02:38	HRS	1	7.16	3	9.57	4	8,45	ćo	11.09	8	41.45	
02; 57	HRS	7	7.16	;	8.59	4	8.45	Ó	11.09	8	41.40	
02:36	HRS	1	7.16		8.59	4	8,45	ώ	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	Ţ.	7.16		3.59	4	5.45	Ć	11,09	8	41,45	
)2:33	HRS	1	7.16	3	8.59	47	8,45	Ė	11.07	8	41.40	
)2:32	HRS	4 .i.	7.16	5	8,59	47	5.45	6	11.09	8	41.40	
)2:31	HRS	1	7.16	Ξ.	8,57	47	8.45	6	11.09	8	41,42	
02:30	HRS	1	7.16	<u></u>	8.57	4	8.45	څ	11.07	S	41.40	
02:29	HRS	i.	7.16	3	8,57	4	8.45	6	11.09	8	41,42	
02:28	HRS	1	7.16	3	9.59	4	8.45	ά	11.09	8	41.37	
02:27	HRS	1	7,16	3	8.57	4	8.45	5	11.09	8	41.42	
02:26	HRS	1	7 4 7	مید. میرد این	6.59	4	8,45	Ġ	11.09	5	41.37	
02:25	HRS	4	7.17	3	8.59	4	8.45	6	11.09	8	41.40	
02:24	HAS	1	7.16	اب سید آب	8.59	4	6.45	<u>ა</u>	11.09	8	41,42	
	nra HRS	1	7.16	3	8,57	4	8.45	Ġ	11.09	8	41.40	
52()	HRS	4 4	7.15	 	0.57 8.59	4	8.45	à	11.10	8	41,40	
02:21	HR5	1		<u>.</u>	6.57	4	8.45		11.10	3	41,40	
02:21 02:20			7.17	3				6 4		8	41,41	
	HRS use		7.17		5.57	4	8.45	ćo L	11.10	9		
02:19	HRS	1	7.17	3	8.57	4	8.45	© ∴	11.10		41.40	
02:15	HRS		7.17	<u> </u>	8.59	4	8.45	<u>6</u>	11.10	8	41.40	
02:17	HRS		7.17	3	8.57	4	8.45	Ć	11,10	8	41.42	
Ozilo	HRS	1	7.17	3	Company of the Compan	4	5,45	۵	11.10	\equiv	41,42	





14 ARS 1 7,17 3 8,59 4 8,48 6 11,10 8 41,40 15 ARS 1 7,18 3 8,59 4 8,45 6 11,10 8 41,40 16 ARS 1 7,18 3 8,59 4 8,45 6 11,10 8 41,40 16 ARS 1 7,18 3 8,57 4 8,45 6 11,10 8 41,40 16 ARS 1 7,18 3 8,57 4 8,45 6 11,10 8 41,40 16 ARS 1 7,18 3 8,57 4 8,45 6 11,10 8 41,40 17 ARS 1 7,18 3 8,57 4 8,45 6 11,10 8 41,40 18 ARS 1 7,18 3 8,57 4 8,45 6 11,10 8 41,40 18 ARS 1 7,18 3 8,57 4 8,45 6 11,10 8 41,40 19 ARS 1 7,19 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,17 3 8,57 4 8,45 6 11,11 8 41,40 10 ARS 1 7,20 3 8,60 4 8,47 6 11,12 8 41,42 55 ARS 1 7,20 3 8,60 4 8,47 6 11,12 8 41,42 55 ARS 1 7,21 3 8,60 4 8,47 6 11,12 8 41,42 51 ARS 1 7,21 3 8,60 4 8,47 6 11,13 8 41,42 52 ARS 1 7,21 3 8,60 4 8,47 6 11,15 8 41,42 51 ARS 1 7,21 3 8,60 4 8,47 6 11,15 8 41,42 52 ARS 1 7,22 3 8,60 4 8,47 6 11,15 8 41,42 52 ARS 1 7,22 3 8,60 4 8,47 6 11,15 8 41,42 53 ARS 1 7,22 3 8,60 4 8,47 6 11,15 8 41,42 54 ARS 1 7,42 3 8,60 4 8,47 6 11,15 8 41,42 54 ARS 1 7,42 3 8,60 4 8,47 6 11,15 8 41,42 54 ARS 1			
Table Tabl	41.42 41.42 41.42 41.42 41.40 41.40 41.42 41.42 41.42 41.42 41.42 41.42 41.42 41.42	41.42 41.45 41.42 41.42 41.45 41.45 41.45 41.45 41.45 41.45 41.45 41.45 46.05 46.05 46.05 46.05	46.02 46.00 46.00 46.00 46.00 46.00 47.42 41.45 41.45 41.45 41.45 41.45 41.45 41.45 41.45 41.45 41.45 41.45
13 HRS 1 7.18 3 8.59 4 8.45 6 11.10 11 HRS 1 7.18 3 8.59 4 8.45 6 11.10 11 HRS 1 7.18 3 8.59 4 8.45 6 11.10 10 HRS 1 7.18 3 8.57 4 8.45 6 11.10 10 HRS 1 7.18 3 8.57 4 8.45 6 11.10 10 HRS 1 7.18 3 8.57 4 8.45 6 11.10 10 HRS 1 7.18 3 8.57 4 8.45 6 11.10 10 HRS 1 7.18 3 8.57 4 8.45 6 11.10 10 HRS 1 7.18 3 8.57 4 8.45 6 11.10 10 HRS 1 7.18 3 8.59 4 8.45 6 11.10 10 HRS 1 7.19 3 8.59 4 8.45 6 11.11 10 10 10 HRS 1 7.17 3 8.57 4 8.46 6 11.11 10 10 10 HRS 1 7.17 3 8.59 4 8.46 6 11.11 10 10 HRS 1 7.17 3 8.59 4 8.46 6 11.11 10 10 HRS 1 7.17 3 8.59 4 8.46 6 11.11 10 10 HRS 1 7.17 3 8.59 4 8.46 6 11.11 10 10 HRS 1 7.17 3 8.59 4 8.46 6 11.11 10 10 HRS 1 7.17 3 8.59 4 8.46 6 11.11 10 10 HRS 1 7.17 3 8.59 4 8.46 6 11.11 10 10 HRS 1 7.17 3 8.59 4 8.47 6 11.12 12 15 HRS 1 7.20 3 8.50 4 8.47 6 11.12 12 15 HRS 1 7.21 3 8.60 4 8.47 6 11.12 12 15 14 HRS 1 7.21 3 8.60 4 8.47 6 11.12 12 15 14 HRS 1 7.21 3 8.60 4 8.47 6 11.12 12 15 14 HRS 1 7.21 3 8.60 4 8.47 6 11.12 12 15 14 HRS 1 7.21 3 8.60 4 8.47 6 11.12 12 15 14 HRS 1 7.21 3 8.60 4 8.47 6 11.13 15 14 HRS 1 7.21 3 8.60 4 8.47 6 11.13 15 14 HRS 1 7.21 3 8.60 4 8.47 6 11.13 15 14 HRS 1 7.21 3 8.59 4 8.46 6 11.13 15 14 HRS 1 7.21 3 8.59 4 8.46 6 11.13 15 14 HRS 1 7.21 3 8.59 4 8.46 6 11.13 15 14 HRS 1 7.21 3 8.59 4 8.46 6 11.13 15 14 HRS 1 7.21 3 8.59 4 8.46 6 11.13 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.21 3 8.59 4 8.47 6 11.15 15 14 HRS 1 7.22 3 8.60 4 8.47 6 11.15 15 14 HRS 1 7.22 3 8.60 4 8.47 6 11.15 15 14 HRS 1 7.43 3 8.60 4 8.47 6 11.15 15 14 HRS 1 7.43 3 8.60 4 8.51 6 11.77 15 15 14 HRS 1 7.43 3 8.60 4 8.51 6 11.77 15 15 14 HRS 1 7.43 3 8.60 4 8.51 6 11.77 15 15 14 HRS 1 7.43 3 8.60 4 8.51 6 11.77 15 15 14 HRS 1 7.44 3 8.59 4 8.40 6 11.08 11.08 11 HRS 1 7.44 3 8.59 4 8.40 6 11.08 11.08 11 HRS 1 7.44 3 8.59 4 8.40 6 11.08 11.08 11 HRS	000000000000000000000000000000000000000		
13 HRS 1	11.10 11.10 11.10 11.10 11.10 11.10 11.11 11.11 11.11 11.11 11.11 11.12 11.12 11.12 11.12	11.13 11.13 11.13 11.13 11.14 11.14 11.15 11.17 11.22 11.33 11.61 11.92 11.92 11.91 11.91	11.70 11.87 11.88 11.88 11.88 11.88 11.88 11.88 11.08 11.08 11.08 11.09 11.09 11.09 11.09 11.09
13 HRS 1	\d\d\d\d\d\d\d\d\d\d\d\d\d\d\d\d\d\d\d	\$	\$
13 HRS 1	8.5 8.4 8.4 8.4 8.4 8.4 8.4 8.4 8.4	8.47 8.46 8.46 8.47 8.47 8.47 8.47 8.49 8.51 8.51 8.51	8.555555555555555555555555555555555555
13 HRS 1	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	*****
13 HRS 1	55799999999999999999999999999999999999	8.67 8.57 8.57 8.57 8.60 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00 8.00	
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1:08	HHS	-1	7.15		8.59	4	8.45	6	11.09	8	41.42	
		1	7.15	3	8.59	4	8.46	6	11.09	8	41.42	
		1	7.15	3	8.60	4	8.46	6	11.09	8	41.45	
		1	7.15	3	8.40	4	8.46	6	11.09	8	41.42	
		1	7.15	3	8.60	4	8.46	Ġ	11.09	8	41.40	
1:03	HRS	.i	7.15	3	8.40	4	8.46	6	11.09	8	41.40	
/	HRS	1	7.15	3	8.60	4	8.46	Ġ	11.07	8	41.42	
\ /	HRS	1	7.15		18.60	4	8.46	6	11.09	8	41.40	
	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42	
	HRS	1	7.15	3	8.60	4	8.45	6	11.07	8	41.40 41.42	
0:58	HRS	1	7.15	3	8.60	4	8.45 8.46	5	11.09 11.09	8	41.42	
0:57	HRS	1	7.15 7.15	3 3	8.60 8.60	4 4	6.45 8.45	6	11.07	8	41.40	
0:54 0:55	HRS HRS	1	7.15 7.15	3	8.60	4	8.46	6	11.09	8	41.42	
:0:55 :0:54		1	7.15	3	8.60	4	8.46	<u>ن</u> خ	11.09	8	41.42	
	HRS	1	7,15	3	8.60	4	8.45	6	11.09	8	41.45	
0:52	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42	
0:51	HRS	1	7.15	3	8.60	4	8.46	6	11.09	8	41.42	
0:50	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42	
0:49	HRS	1	7.15	3	8.40	4	8.45	6	11.09	8	41.42	
0:48	HRS	1	7.15	3	8.40	4	8.45	6	11.09	8	41.42	
0:47	HRS	1	7.15	3	8.40	4	8.45	6	11.09	8	41.42	
0:46	HRS	1	7.15	3	8.60	4	8.45	ద	11.09	8	41.42	
0:45	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.37	
0:44	HRS	1	7.15	3	8.60	4	8.45	6	11.09	8	41.42	
0:43	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	Ó	11.09	8	41.42	
0:41	HRS	1	7.15	3	8.60	4	8.45	6	11.09 11.09	8	41.42 41.42	
0:40	HRS	1	7.15	3 3	8.60 0 40	4 4	8.45 8.45	5 6	11.09	8	41.42	
0:39	HRS	1	7.15 7.15	ن 3	8.60 8.60	4	8.45	5	11.09	5	41.42	
00:38	HRS HRS	1 1	7.15	<u>.</u>	8.60	4	8.45	6	11.09	8	41,40	
00.00	HRS	1	7.15	<u>.</u>	8.60	4	8.45	6	11.09	8	41.42	
	HRS	1	7.15	<u> </u>	8.40	4	8.45	6	11.09	8	41.40	
00:34	HRS	1	7.15	3	8.50	4	8.45	Ġ	11.09	8	41.42	
50:33	HRS	1	7.15	3	8.60	4	8.45	6	11.09	Ξ	41.42	
00:32		1	7.15	3	8.50	4	8.45	6	11.09	8	41.40	
00:31	HRS	1	7.15	3	8.40	4	8.45	6	11.09	8	41.42	
00:30	HRS	1	7.15	3	8.60	4	8.45	Ó	11.09	3	41.42	
00:27	HRS	1	7.15	3	8.40	4	8.46	ద	11.10	8	41.42	
00:28		1	7.16	3	8.60	4	8.46	۵	11.10	8	41.37	
00:27	HRS	1	7.16	3	8.60	4	8.46	Ó	11.09	8	41.42	
00:26	HRS	1.	7.15	3	8.60	4	8.45	ó	11.10	8	41,42	
00:25	HRS	1	7.16	3	8.60	4	8.46	6 4	11.10 11.10	8	41.42 41.45	
00:24	HRS	<u>1</u>	7.16 7.17	3	8.60 8.60	4 4	8.46 8.46	6 6	11.10	8	41.42	
00:23 00:22	HRS HRS	1	7.16 7.16	<u>.</u>	8.60	-r 4	8.46	ó	11.09	8	41.42	
00:24 00:21	HRS	1 1	7.16	3	8.60	4	5.70 8.46	6	11.10	8	41,45	
00:20	HRS	1	7.16	j	8.60	4	8.46	6	11.05	8	41.42	
00:19	HRS	1	7.16	3	8.60	4	8.46	6	11.09	8	41,42	
00:18		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	\Box	41,42	
00:16		1	7.16	<u></u>	8.61	4	8.46	ά	11.10	8	41.47	
00:15		1	7.16	3	8.61	4	8.46	⇔	11.07	\equiv	41.42	
OO:14		7	7.16	3	8.60	4	3,46	خ	11.10	3	41.40	
00:13		1.	7.16	<u>.</u>	8.61	4	8,46	6	11.10	8	41.45	
00:12		Ţ	7.16		5,61	4	8.46	6	11.10	8	41,40	
00;	HES	1	7.16	3	8.60	4	3.46	Ó	11.07	5	41,42	
٠٠ <i>٠</i> ٠	/HRS	Ĺ	7.16		3.60	4	8.46	6	11.10	8	41.47	
00:07		.l.	7.16	3	8.60	4	8.46	6	11.10	5	41,42	
00:05		1	7.15		8.40	4	8,46	÷	11.09	3	41.40	
30:07			7.16		8.60	.1 -1 -1	8,46	.	11.10	8	41.40	
00:06 00:05		1.	7,15	3	8.61 - 41	4 	8.45 8.45	ė ė	11.10	S 8	41.4I 41.4Z	
00:05 00:04		1	7.16 7.16	ن 3	8.61 5.61		8.46 8.45	6 6	11.10	3	41,40	
(2023-024)	en inco	i_	. 1 (9		O . O i		್ಕಾಗ್		44445	<u>, , , , , , , , , , , , , , , , , , , </u>	TT A. a TT W	

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 13:59 HRS 86/12/22 #01 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:59 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:51 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:49 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:45 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:45 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:45 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:45 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:45 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:45 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:43 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13:41 HRS 1		TOTAL TOTAL		7 m i 🕮	- 4	0.01	7	0,40	<u></u>	* * * * * * * * * * * * * * * * * * * *	0	~~ + + - ***	
10-101 RRS 1 7,17 5 8,61 4 8,46 6 11,10 8 41,45				7.17	3	8.61	4	8.46	Ġ	11.10	8	41.40	
			1	7.17	3	8.61	4	8.46	6	11.10	Ξ	41.45	
1 7.17 5 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.55 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.56 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40 13.57 HRS 1 7.17 3 8.61 4 8.46 6 11			1	7.16		8.61	4	8.46	6	11.10	3	41.42	
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HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42			1	7.17		8.61	4	8.46	6	11.10	8	41.42	
Si	3:58	HRS	1	7.17		8.61	4	8.46	6	11.10	8		
13.55 HRS 1	23/	HRS	1	7.17	3	8.61	4	8.46	6	11.10	3	41,42	
33:53 HRS 1	23.	HRS	1	7.17		8.61	4	8.46	6	11.10	8		
13:52 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.40	23:55	HRS	1	7.17		8.61	4	8.46	ద	11.10	8	41.40	
Sign HRS 1	23:54	HRS	1	7.17		8.61	4	8.46	5	11.10	$egin{array}{c} \egin{array}{c} \egin{array}$		
13:51 HRS 1		HRS	1	7.17		8.61	4	8.46	Ġ	11.10			
13:80 HRS 1	23:52	HRS	1	7.17		8.61	4	8.46	6	11.10			
33:49 HRS 1	23:51	HRS	1	7.17		8.61	4	8.46	6		3	41,42	
13;48 HRS 1 7.17 3 8.61 4 8.46 6 11.10 8 41.42	23:50	HRS	1	7.17		8.61	4	8.46	6				
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	HRS	1	7.19	3	8.61	4	8.46	6	11.11	8	41.42
	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
	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
12	HRS	1	7.19	3	8.61	4	8.47	6	11.12	8	41.42
22:	HRS	1	7.19	3	8.61	4	8.47	Ś	11.12	8	41.42
	HRS	1	7.19	<u>:</u>	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	I	8.61	4	8.47	6	11.12	8	41.42
22:43.	HRS	1	7.20	3	8.61	4	8.47	<u>-</u>	11.12	8	41.40
				3							
22:42	HRS	1	7.20		8.61	4	8.47	6	11.12	8	41.45
22:41	HRS	1	7.21		8.61	4	8.47	ė	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	<u></u>	8.62	4	8.47	6	11.13	8	41.45
22:37	HRS	1	7.21	3	8.62	4	8.47	<u>-</u>	11.13	8	41.45
12:36	HRS	1	7.21	3	8.62	4	8.47	6	11.13	8	41.42
22:35	HRS	1	7.21	<u> </u>	8.62	4	8.47	ė	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	7,25	3	8.62	4	8.47	6	11.14	8	41.42
22(HRS	1	7.23		8.62	4	8.47	6	11.14	8	41.42
22/_/	HRS	1	7.23	3	8.62	4	8.47	6	11.15	8	41.45
22:23	HRS	1	7.23	Ī	8.62	4	8.47	6	11.15	8	41.45
	HRS	i	7.23	3	8.62	4	8.47	6	11.15	8	41.45
22:21		Ţ Ţ	7.24	3 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	3	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	Ξ	41.45
22:17	HRS	1	7.25		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	5	11.19	8	41.45
22:14	HRS	1	7.27	3	8.62	4	8.48	6	11.24		41.47
22:13				- - 3		4					
		1	7.29		8.63		8.49	Ė	11.33	3	41.50
22:12	HRS	İ	7.33	3.	8.63	4	8.49	<u> </u>	11.55	8	41.57
22:11	HR5	1	7.47	I	8.43	4	8.52	Ġ	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	<u>.</u>	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	45.07
22:07	HRS	1	7.45	3	8.63	4	8.52	5	11.94	8	46.07
22:06	HRS	-1 -1	7.45	3	8.63	4	8.52				
								6	11.93	8	46.07
	HRS	1	7.44	3	8.63	4	8.52	6	11.73	8	46.07
22:04	HRS	1	7.44	<u></u>	8.63	4	8.52	6	11.92	\equiv	46.05
12:03		1	7.43	.3	8.63	4	8.52	å	11.72	\exists	46.05
	HRS	1	7.42	.5	8.63	4].	8.51	5	11.91	8	46.05
22:01	HRS	<u>+</u>	7.41	3	8.63	4	8.51	ė	11.90	5	46.05
22/	HRS	1	7.41		8.63	4	8.51	5	11.90	8	46.02
21()	HRS	; ;	7.39	3		4	8.51			8	
					8.62			ćs Z	11.88		46.02
21:58	HRS	1	7.38	3	8.62	4	8.51	5	11.86	3	46.00
21:57	HRS	1	7.35	<u>.</u>	8.61	4	8.50	Ġ	11.83	3	46.00
21:56	HRS	1	7.52	Z.	8.62	4	5.49	6	11.67	ij	46.12
21:55	HRS	1	7.18		8.61	4	5.47	Ġ.	11.11	Ξ	41,47
21:54	HRS	1	7.18	<u> </u>	8.62	4	8.47	6	11.11	3	41.47
			7.18	<u>.</u>	3.61	4	8.47	5	11.11	8	41.42
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21:51	HRS	1	7.18	3	8.61	4	8.47	6	11.11	8	41.47	
1:50	HRS	1	7.18	3	8.62	4	8.47	6	11.11	Ξ	41.47	
21:49	HRS	1	7.18	3	8.62	4	8.47	6	11.11	8	41.42	
1:48	HRS	1	7.18	3	8.62	4	8.47	6	11.11	8	41.47	
1:47	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47	
	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.50	
11:46										8		
1	HRS	1	7.18	<u> </u>	8.62	4	8.47	6	11.12		41.47	
	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	చ	11.12	3	41.47	
11:42	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47	
21:41	HRS	i	7.18	3	8.62	4	8.47	6	11.12	8	41.47	
1:40	HRS	1	7.18	3	8.62	4	8.47	6	11.12	8	41.47	
21:39	HRS	1	7.18	<u> </u>	8.62	4	8.47	ద	11.12	8	41.45	
1:38	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			7.19	3		4			11.12	8		
	HRS	1			8.62		8.47	6			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	5	11.12	8	41.45	
21:33	HRS	1	7.19	.3	8.62	4	8,47	Ġ	11.12	3	41.47	
21:32	HRS	1	7.19	Ξ.	8.62	4	8.47	6	11.12	\equiv	41.47	
21:31	HRS	1	7.19	.3	8.62	4	8.47	Δ	11.12	8	41.45	
21:30	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47	
11:29	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		8.47					
						4		۵	11.12	8	41.47	
11:26	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	ద	11.12	3	41.42	
11:24	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	
1:22	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	
21:50	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.47	
21()	HRS	1	7.19	3	8.62	4	8.47	6	11.12	8	41.45	
1:18	HRS	1	7.19	3	8.62		8.47					
						4		6	11.12	8	41,47	
21:17	HRS	- I	7.19	<u> </u>	8.62	4	8.47	ć	11.12	8	41.45	
		1	7.19	3	8.62	4		6	11.12	8	41.47	
21:15		1	7.19	3	8.62	4	8.47	6	11,12	8	41.47	
11:14	HRS	i	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	3	41.47	
21:11	HRS	i 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	5	11.13	8	41.47	
	HRS	1	7.19	3	8.82	4	8.47	6	11.12	5	41.47	
	HRS	1	7.19	<u>.</u>	8.62	4	8.47					
								5	11.13	8	41.50	
	HRS	1	7.19	3	3.62	4	8.47	Ġ	11.13	5	41.47	
21:06	HRS	Ĺ	7.19	3	8.63	4	8.47	6	11.13	8	41.47	
	HRS	7	7.19	靐	5.62	4	8.47	Ġ	11.13	8	41.47	
	HRS	1	7.19	3	8.67	4	8.47	6	11.13	Ξ	41.47	
	HR:S	1	7.19	I	8.62	4	8.47	Ġ	11.13	8	41,47	
21:02	HRS	1	7.19	.5	8.62	4	8.47	6	11.13	3	41.50	
21:01	HRS	1	7.19	3	8.62	4.	8.47	Ġ	11.13	5	41.45	
	HRS	1	7.19	3	8.63	4	8.47	5	11.13	8	41.47	
	HRS	1	7.19	<u></u>	8.62	4	8.47	6	11.13	8	41.50	
	HRS	1	7.19	3	8.63	ਾ 4	8.47		11.13	9		
20:57			7.17 7.19					Ć			41.47	
		1		3	9.6Z	4	8.47	Ö	11.13	5	41.47	
20:56	HR5	1	7.19	3	8.62	4	8.47	6	11.13	5	41.47	
20:55	HRS	1	7.19		8.62	4	8.47	1	11.12	Ξ	41.45	
20()) HF(5	1	7.17	3	8,62	- -}	8.47	6	11.13	8	41.47	
20:	HRS	1	7.19		8.62	4	8,47	d٥	11.13	3	41,42	
20:52	HRS		7.20		8.63	<u></u> .	8.47	6	11.13	3	41.45	
20:51	HRS	4	7.20	3	8.63	-1	8.47	٥	11.13	5	41,45	
20:50	HRS	1	7.20	<u></u>	8.63	4	8.47	5	11.13	3	41,47	
20:47	HRS	1	7.20	<u>.</u>	8.63	4	8.47	ė	11.13	- 3	41.45	
20:48	HRS			<u> </u>						- C - S		
10	HKD UDG	1	7.20 T.a	÷	8,63	4	8.47	<u> </u>	11:15	25) 753	41.47	
arag (i i	أسامسا نسا	-			the terms				1 1 1 1	1	4 1 1 1 1 1 may	

(E)

20:45	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.47	
	HRS	7	7.20	3	8.63	4	8.47	6	11.13	8	41.47	
			7.20	3								
	HRS	1			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	HR:S	4	7.20	3	8.63	4	8.47	త	11.13	8	41.45	
20:40	HRS	1	7.20	3	8.63	4	8.47	6	11.13	8	41.45	
20;79	HR'S	1	7.20	13	8.63	4	8.48	ద	11.13	8	41.47	
20()	HRS	1	7.20	<u> </u>	8.63	4	8.48	6	11.13	8	41.45	
20:37	HRS	1	7.20	3	8.63	4	8.48	చ	11.13	8	41.47	
	HRS		7. Z1	3								
		1			8.63	4	8.48	5	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	
	HRS	1	7.21	3	8.63	4	8.48	చ	11.13	8	41.45	
	HRS	1	7.21	3	8.63	4	8.48	6	11.13	8	41.47	
	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	Ξ	41.47	
	HR:S	1	7.21	3	8.63	4	8.48	6	11.13	5	41.47	
/	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	ద	11.13	8	41.45	
20:26	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.42	
	HRS			Ī								
		1	7.21		8.63	4	8.48	6	11.14	8	41.47	
	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	
	HRS	1	7.21	3	8.63	4	8.48	6	11.14	8	41.47	
	HRS			3								
		1	7.21		8.63	4	8.48	6	11.14	3	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	
	HRS	1	7.21	3	8.63	4	8.48			ā		
								6	11.14		41.45	
	HRS	1	7.21	<u> </u>	8.63	4	8.48	6	11.14	3	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:J4	HRS			3								
		1	7.21		8.63	4	8.48	6	11.14	8	41.47	
20()	HRS	1	7.21	3	8.63	4	8.48	ద	11.14	8	41.47	
2011	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	
	HRS	1	7.21	3	8.62	4	8.48	6	11.14	\equiv	41.47	
20:09	HR:S	1	7.21	<u> </u>	8.62	4	8.46	త	11.14	8	41.50	
20:08	HRS	1	7.21	3	8.62	4	8.48	6	11.14	Ξ	41.47	
20:07			7.21	3								
		1			8.62	4	8.48	6	11.14	8	41.45	
20:06		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	8.45	6	11.14	$egin{array}{c} \Xi \end{array}$	41,45	
20:04	HPS	1	7.21	3	8.62	4	8.48	6	11.14	S	41.45	
20:03		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	I	8.62	4	8.48	4	11.14	8	41.47	
20:00		1	7.21	3	8.62	4	8.48	6	11.14	8	41.47	
19:59		1	7.21	3	8.42	.]	8.48	6	11.15	3	41.47	
19:58	HRS	1	7.21	₹.	8.63	4	8.48	6	11.14	8	41.47	
19:57	HRS	1	7.21	3	8.63	4	8.48	ڪ	11.15	8	41.50	
		1	7.21	3								
					8.63	4	8.48	6	11.15	8	41.50	
19:55		1	7.21	3	8,43	4	8.47	Φ	11.15	8	41.47	
17:54	HRS	ĺ	7.21	<u></u>	8.63	4	8.48	Ġ	11.15	Ξ	41,45	
	HR:S	1	7.21	3	8.63	4	8.49		11.15	5	41.47	
								φ				
	HRS	1	7.21	2	8.65	4	8.48	ά	11.15	\equiv	41.45	
19:51	HR:S	1	7.21	3	8.63	4	8,48	ė	11.15	8	41,47	
19:50	HRS	1 1	7.21	3	8.63		8.48	6	11.15	Ξ	41.47	
19:45	HRS	1	7.21	3								
					8.43	4	3.49	6	11.15	8	41,47	
19()	HRS	1	7.22	3	8.63	÷	8,48	Ė	11.15	Ξ	41.47	
19	HRS	1	7.22	3	8.43	4	8.45	6.	11.15	8	41.47	
19:46	HRS	1	7.22	<u> </u>	8.63	4	8.48		11.15	8		
								Ó			41.47	
19:45	HRS	1	7,22	3	5.63	4	8.48	Ó	11.15	\equiv	41,47	
17:44	HRS	7	7 - 4 4	<u></u>	8.63	4	8.48	άþ	11.15	Ξ	41.50	
19:43	HES	1	7		8.63	- <u>-</u> -	3.45	ė	11.15	3	41,45	
19:42				<u>.</u>								
	HRS	1	7.22		8.63	4	8.49	Ó	11.15	8	41.47	
19:41	HRS	<u> </u>	پسر سر بشریک و ک	**************************************	8.63	.:	6,49	Ś	1 1 1 1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1	9	41.50	

HRS HRS HRS	1 1 1	7.22 7.22 7.22	3 3	8.63 8.63	4 4 4	8.47 8.47 8.49	0 40 40	11.15 11.15 11.15	ពា ១០ ជ	41.47 41.47 41.47
6 HRS 5 HRS	1 1	7.22 7.22	3	8.63 8.63	4 4	8.47 8.47	6 6	11.15 11.16	8	41.47 41.50
HRS HRS HRS	1 1 1	7.22 7.22 7.22	2	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	6 6 6	11.15 11.15 11.15	8 8	41.47 41.50 41.50
HRS HRS HRS	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	7.22 7.23 7.23	3 3	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	6 6	11.15	8 8	41.47 41.47 41.47
28 HRS 27 HRS	1	7.23 7.23	3 3	8.63 8.63	4 4	8.47 8.49	6 6	11.15 11.16	8	41.47 41.47
26 HRS 25 HRS 24 HRS	1	7.23 7.23 7.23	555	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	6 6	11.16 11.16 11.16	8 8	41.45 41.50 41.47
23 HRS 22 HRS 21 HRS	1 1 1	7.23 7.23 7.23	3 3 3	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	6 6	11.16 11.16 11.16	8 8 8	41.47 41.47 41.45
20 HRS 19 HRS	1 1	7.23 7.23		8.63 8.63	4 4	8.49 8.49	6 6	11.16 11.16	8 8	41.47 41.45
18 HRS 17 HRS 15 HRS	. 	7.23 7.23 7.23	3 3	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	6 6	11.16 11.16 11.16	8 8 9	41.47 41.47 41.47
15 HRS 14 HRS 13 HRS	1 · 1 1	7.23 7.23 7.23	0 8 8	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	5 5 5	11.16 11.16 11.16	8 8 8	41.47 41.47 41.47
12 HRS 11 HRS 10 HRS	1 1 1	7.23 7.23 7.23	888	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	6 6	11.16 11.16 11.16	8 8	41.45 41.47 41.45
09 HRS 08 HRS	1 1 1	7.23 7.23 7.23	3 3 3	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	- 5 5	11.16	8 8	41.47 41.45
HRS :05 HRS	1 1	7.23 7.24	3	8.63 8.63	4 4	8.49 8.49	6 6	11.16	8	41.47 41.50 41.45
:04 HRS :03 HRS :02 HRS	7 d 7 d 7 d 7 d 7 d 7 d 7 d 7 d 7 d 7 d	7.24 7.23 7.24	000	8.63 8.63 8.63	4 4 4	8.49 8.49 8.49	6 5 6	11.16 11.16 11.16	8 8	41.45 41.47 41.47
:01 HRS :00 HRS :59 HRS	1 1 1	7.24 7.24 7.24	5 5 5	8.63 8.64 8.64	4 4 4	8.49 8.49 8.49	6 6 6	11.16 11.17 11.17	3 3 8	41.47 41.50 41.50
:58 HRS :57 HRS :56 HRS	1 1 1	7.24 7.24 7.24	3 3 3	8.63 8.64 8.64	4 4 4	8.49 8.49 8.49	6 6 6	11.17 11.17 11.17	8	41.45 41.50 41.47
55 HRS 54 HRS 53 HRS	1	7.24 7.25 7.25	0000	8.64 8.64 8.64	4 4 4	8.49 8.49 8.49	6 6	11.17 11.17	888	41.47 41.50
52 HRS 51 HRS	1	7.25 7.25	3 3	8.64 8.64	4 4	8.49 8.49	6 6 6	11.17	8	41.47 41.47 41.50
50 HRS 49 HRS 48 HRS	1	7.25 7.25 7.25	5 5 5	8.64 8.64 8.64	4 4 4	8.47 8.47 8.47	6 6	11.17 11.17 11.17	3 3 B	41.45 41.47 41.47
47 HRS 46 HRS 45 HRS	1	7.25 7.25 7.25	585	8.64 8.64 8.64	4 4 4	8.49 8.49 5.49	6 6	11.17 11.17 11.18	8 8	41.47 41.47 41.50
44 HRS 43 HRS HRS	1	7.25 7.25 7.26	5 5 5	8.64 8.64 8.64	4 4 4	8.49 8.49 8.50	6 5 6	11.18 11.18 11.18	8 8	41.50 41.50 41.50
HRS:40 HRS:39 HRS	1	7.28 7.26 7.26	5 5	8.64 8.64 8.64	4 4 4	5.49 8.50 8.50	- 6 6	11.18	888	41.50 41.50 41.50
:38 HRS :37 HRS	4 4	7.27 7.27	3 3	3.64 8.64	4 4	8.50 8.50	6 6	11.18 11.18	8	41.47 41.50
:36 HRS :35 HRS		7.27	3 3	8.64 8.64	4 4	8.50 6.50	ó	11.19	3 8	41.50 41.47





8:33		-,	7.27	3	8.54	4	8.50	6	11.19	8	41.52	
	HRS	1 1	7.28	3	8.65	4	8.50	6	11.17	8	41.50	
.8:31	HRS	1	7.28	3	0.0J 8.65	4	8.50	ص خ	11.20	8	41.47	
	HRS	1	7.28	3	8.65	4	8.50	<u>ა</u>	11.20	8	41.50	-
	HRS	1	7.28	3	8.65	4	8.50	6	11.20	8	41.52	
	HRS	1	7.29	3	8.65	4	8.50	6	11.20	8	41.52	
18:27	HRS	1	7.29	3	8.65	4	8.50	5	11.21	3 8	41.50	
	HRS	1	7.27	<u>ਂ</u>	8.65	4	8.50	6	11.21	8	41.50	
18:22	HRS	1	7.29	্ উ	8.65	4	8.50	ó	11.21	8	41.52	
	HRS	1	7.30	3	8.65	4	8.51	6	11.21	8	41.50	
18:23	HRS	1	7.30	<u> </u>	8.65	4	8.51	6	11.22	0 8	41.52	
	HRS	1	7.30 7.30	3	8.65	4	8.51	6	11.22	0 3	41.52	
			7.30 7.31	3	8.65	4	8.51	<u>ර</u>	11.23	8	41.52	
	HRS	1	7.31 7.31	3			8.51		11.25	8	41,52	
18:20	HRS HRS	1	7.53	<u> </u>	8.65 0 /=	4	8.51	6	11.27	8	41.55	
18:19	HRS	1	7.33 7.33	د 3	8.45 a / s	4	8.51	<u>6</u>	11.32	8	41.55	
		1		3	8.45	4 4	0.J1 8.52	5		8		
	HRS	1	7.35	3 3	8.45 0 / 5			6	11.43		41.60	
	HRS	1	7.40		8.65	4	8.53 c=	6	11.69	8	41.67	
	HRS	1	7.52	3	8.66	4	8.55 0 FF	<u> </u>	12.01	8	46.15	
	HRS	1	7.52	3	8.66 5 //	4	8.55	6	12.01	8	46.15	
	HRS	1	7.52	3	8.66	4	8.55	6	12.01	3	46.15	
	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 0.77	4 4	8.55	<u> </u>	12.00	8	46.12	
	HR8	1	7.51	3	8.66	4 4	8.55	6	11.99	8	46.12	
	HRS	1	7.50	3	8.66	4	8.55	6	11.79	8	46.12	
	HRS	1	7.50	3	8.66	4	8.55	6	11.78	8	46.12	
18:07	HRS	1	7.49	3	8.66	4	8.55	Ó	11.98	6	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	11.76	8	46.10	
18:03	HRS	1	7.45	3	8.65	4	8.54	6	11.75	8	46.10	
18:02	HRS	1	7.44	3	8.65	4	8.54	6	11.92	8	46.07	
18()	HR:S	1	7.41	3	8.65	4	8.53	Ġ	11.87	8	46.05	
18:/	HRS	1	7.34	3	8.65	4	8.52	6	11.53	8	46.60	
17:59	HRS	1	7.24	3	8.65	4	8.50	6	11.18	3	41.55	
	HR3	1	7.24	3	8.65	4	8.50	5	11.18	8	41.55	
17:57		1	7.24	3	8.65	4	8.50	6	11.18	8	41.55	
17:56		1	7.24	3	8.45	4	8.50	6	11.18	8	41.55	
17:55			7.24	3		4	8.50	φ		8	41.55	
17:54		1	7.24	<u>.:</u> ,	8.65	4	8.50	Ó	11.18	8	41.55	
17:53			7.24	3	8.65	4	8.50	6	11.18	3	41.52	
17:52			7.24	3	8.65	4	8.50	6		3	41.55	
17:51			7.24	3	8.65	4	8.50	$\stackrel{\leftarrow}{\Box}$		3	41.55	
17:50			7.24	<u>.</u>	8.65	4	8.50	6	11.18	8	41.55	
17:49			7,24	3	8.65	4	8.50	φ	11.18	8	41.55	
17:48			7.24	3	8.65	4	8.50	5	11.19	8	41.55	
17:47			7.24	3	8.65	4	8.50	ά	11.18	5	41.57	
17:46			7.24	<u></u>	8.65	4	8.50	Ó	11.18	8	41.55	
17:45			7.24	3	8.65	4	8.50	Ó	11.19	8	41,55	
17:44			7.24	3	8.65	\mathcal{L}_{T}^{1}	8.50	Ó	11.19	8	41,55	
17:43			7.25	ౌ	5.65	4	8.50	Ġ	11.19	8	41.52	
17:42			7.25	3	8.65	\mathcal{Q}_r	8.50	$\dot{\hookrightarrow}$	11.19	8	41.55	
17:41			7.25	3	8.65	4	5.50	$\stackrel{\triangle}{=}$	11.19	8	41.55	
17:40			7.25		8.65	4	8.50	6	11.19	Ë	41.55	
17:39		1	7.25	3	8.65	4	8.50	6	11.19	5	41.57	
17:38		1	7.25	3	8.65	4	8.50	6	11.19	Ξ	41.52	
17:37		Ţ.	7.25		€.65	4.	3.50	Ġ	11.19	5	41.55	
17/	HF.8	1	7,25	3	8.65	4	8.50	Ś	11.19	3	41,52	
17	HRS	1	7.25	3	S.a5	4	8.50	6	11.19	\equiv	41.55	
17:34		1	7.25	3	8.65	4	8.50	Ó	11.19	8	41.55	
17:33			7.25	<u>.</u>	8.45	4	8.50	۵	11.17	5	41.51	
17:32			7.25		8.65	4	8.51	6	11.17	8	41.57	
17:31	HRS	1	7.25	1	6.45	4	5.51	6	11.17	8	41.55	
17:30			7,25		8,65	4	8.51	6	11.19	3	41.55	
17:29			7:35		8.65	4	8.50	۵	11,15	5	41.55	

7.	25 3	8.65 4 8.65 4		6 11.17	8 .	41.55 41.55		
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HRS 1	7.25 3			6 11.20		41.57	•	
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o nno i 5 HRS 1	7.26 3 7.26 3	8.65 4		6 11.20		41.55		
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)6 HRS 1	7.27 3	8.67 4	8.52	6 11.21	8 4	41.57		
)5 HRS 1	7.26 3			6 11.21		41.55		
04 HRS 1				6 11.21		41.55		
03 HRS 1 02 HRS 1	7.27 3 7.27 3	8.66 4 8.66 4		6 11.21 6 11.21		41.57 41.55		
01 HRS 1	7.27 3 7.27 3	8.66 4		6 11.21		41.57		
OO HRS 1	7.27 3	8.66 4		6 11.21		41.55		
79 HRS 1	7.27 3	8.66 4		6 11.21		41.57		
58 HRS 1	7.27 3	8.66 4		ó 11 . 21		41.57		
57 HRS 1	7.27 3	8.66 4				41.55		
56 HRS 1 HRS 1	7.27 3 7.27 3	8.66 4 8.66 4		6 11.21 6 11.21		41.57 41.57		3
HRS I	7.27 3			6 11.21		41.60		
53 HRS 1	7.27 3	8.55 4				41.57		
32 HRS 1	7.27 3	8.66 4		6 11.21		41.55		
51 HRS 1		8.66 4		6 11.21				
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48 HRS 1	7.27 3	8.66 4		6 11.21		41.57		
47 HRS 1	7.27 5	8.66 4		à 11.21				
46 HRS 1	7.27 3	8.67 4	8,51	á 11 . 21		41.57		
45 HRS 1	7.27 3	6.67 4		6 11,22		41.57		
44 HRS 1 43 HRS 1	7.27 3	8.67 4		6 11.22 / 1.22		41.55		
43 HRS 1 42 HRS 1	7,27 S 7,27 S	8.67 4 8.67 4		6 11.22 6 11.22		41.55 41.57		
41 HRS 1	7.27 3	8.67 4		6 11.22		71 U/ 41 U7		
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28 HR8 1	7.27 S	8.67 4		6 11.23 6 11.23		41.57 41.57		51.41
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26 HRS 1	A series of the series	8.67 4		6 11.23		41.57		
15 HRS 1	7.27 3	8.67 4	8.53	6 11.IJ	8 4	41.55		
II4 HRB 1	7.27 3	8.67 4				41.00		
:23 HRS 1	7,27 3	8.67 4	5.53	6 11.22	8 4	41.5E		

EXHIBIT A1

Portion of U.S.G.S. Water Resource Investigation 78-3

ATTACHMENT AA-1

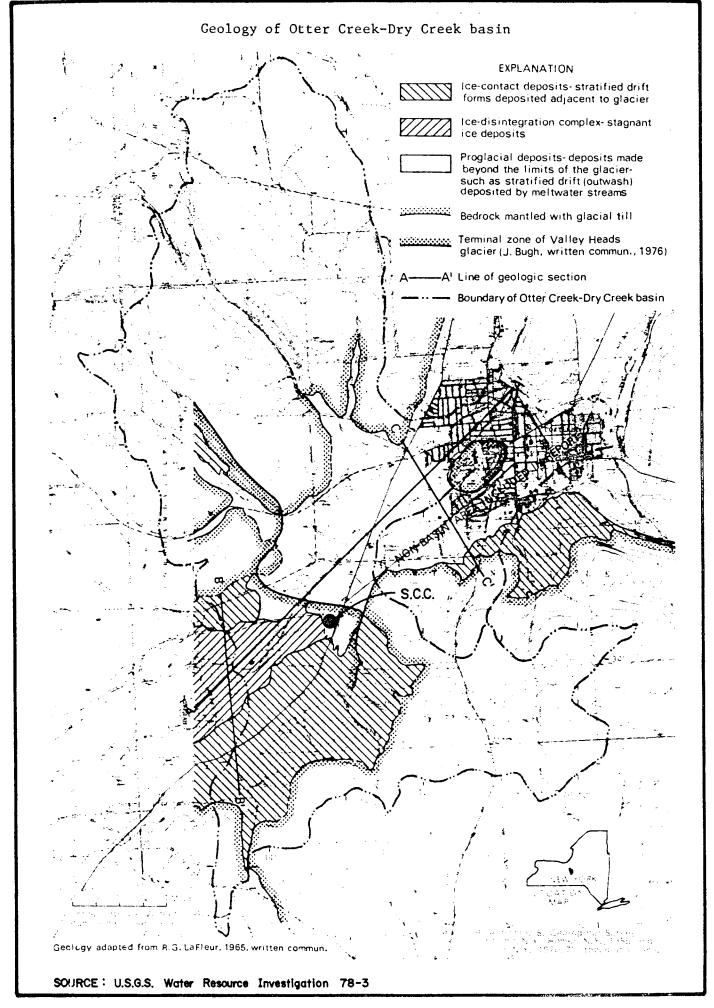


EXHIBIT A2

On-Site Process Well Investigation

GROUND WATER INVESTIGATION

FOR

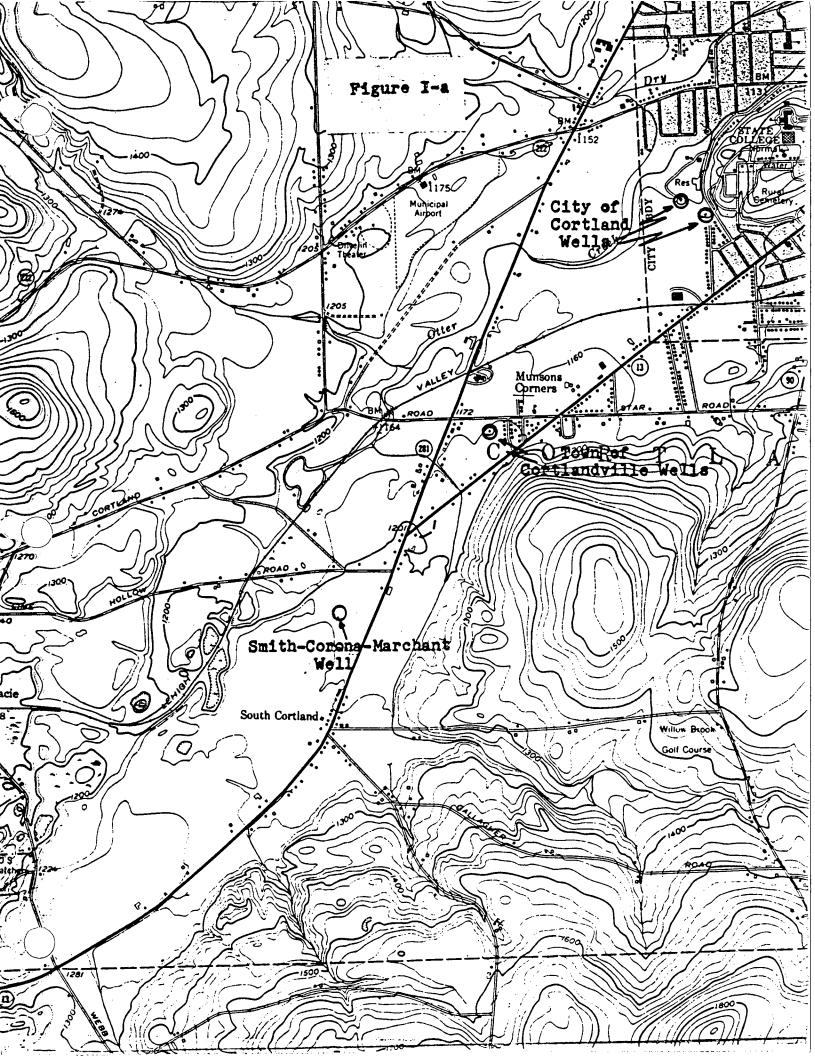
SMITH-CORONA-MARCHANT INC.
SOUTH CORTLAND. NEW YORK

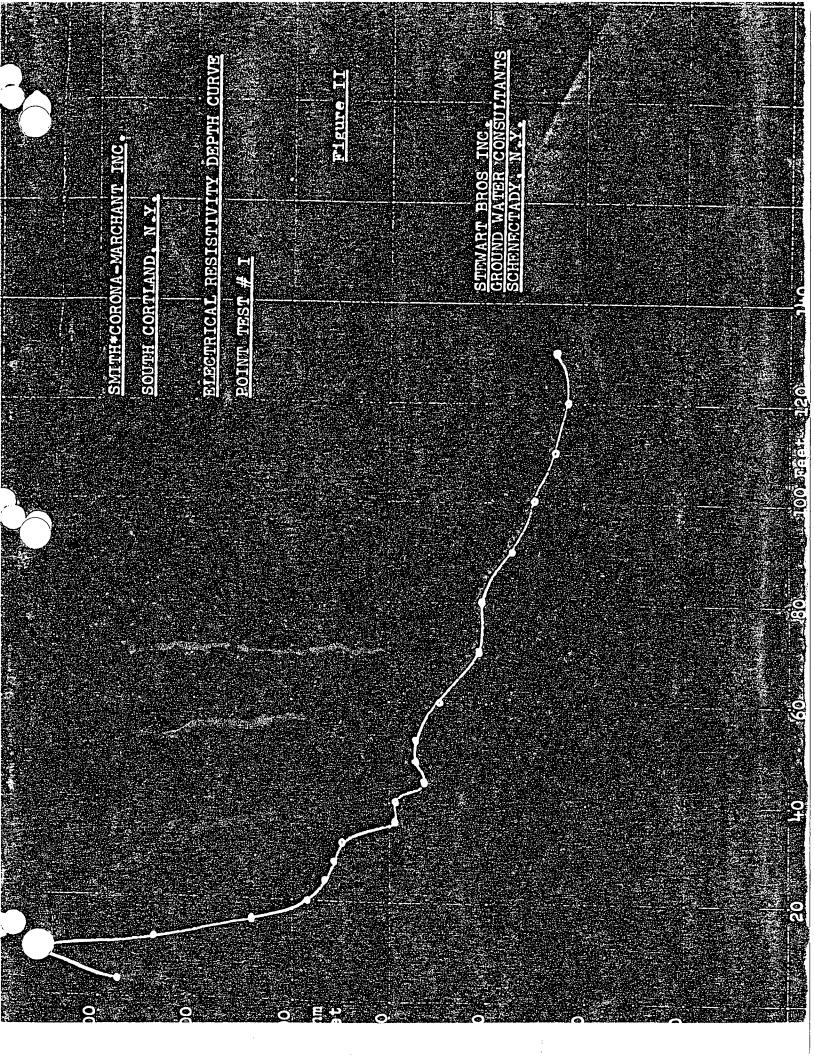
Mr. James Condron Assistant Works Manager

Stewart Bros Inc.
Ground Water Consultants
Schenectady, N.Y.

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Figure IITypical Electrical Resistivity Depth Curve.
Figure III12-inch well log drawing
Figure IVVertical Section thru Aquifer
Figure VTypical Sand Analysis Curve for 12-inch pumped well.
Figure VI VII VIII IXTypical Sand Analysis Curves for Test-Observation Wells.







STEWART BROS., INC., Schenectady, N. Y.

Pigure Hi

Industrial and Municipal Well Water Works

WELL LOG

SMITH-CORONA-MARCHANT INC.

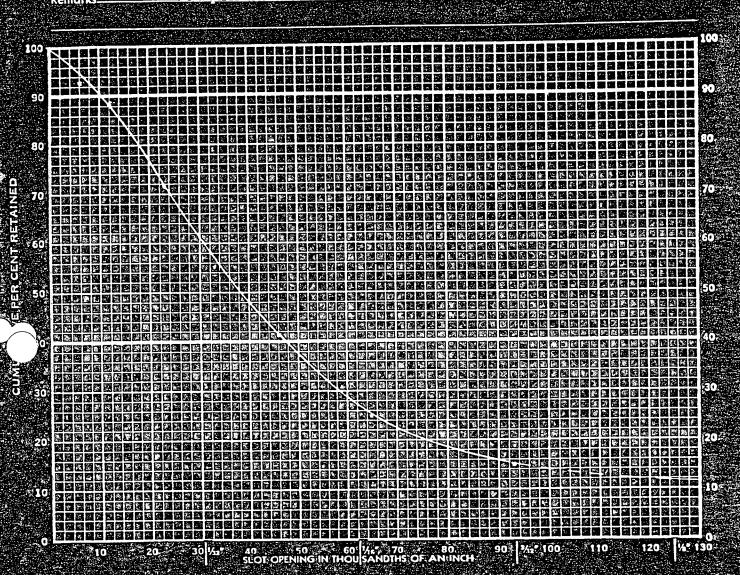
SOUTH CORTLAND, N.Y.

			د د د د د د د د د د د د د د د د د	TYPE WELE:
				Single Cased Screened Gravel Filter Well
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1087=1		12"— -		Slot Size Top 20
			0 2 0	AttachmentsStandard
get.		The second second	***********	5+' STATIC LEVEL 51.36 E
				PUMPING TEST:
	1'-6" 26'-5"	10-3/8"	Water Bearing Sand-Gravel	Type PumpTurbine GPM1000 Draw Down11 ft
		11-1/4+		
			eley.	108
		L		l 1130

Figure IV	Observation Well No. 2	Observation Well No. 4			9 148 861	Clay-Silt
Observation Monit No. 1	# 12" Screened					0001 (1000) (100
	Observation Well No. 3	Non-Water Bearing Strata	9 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	Water Bearing		1051 1051 1051

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SAND ANALYSIS

STEWART BROS., INC.

Figure VI

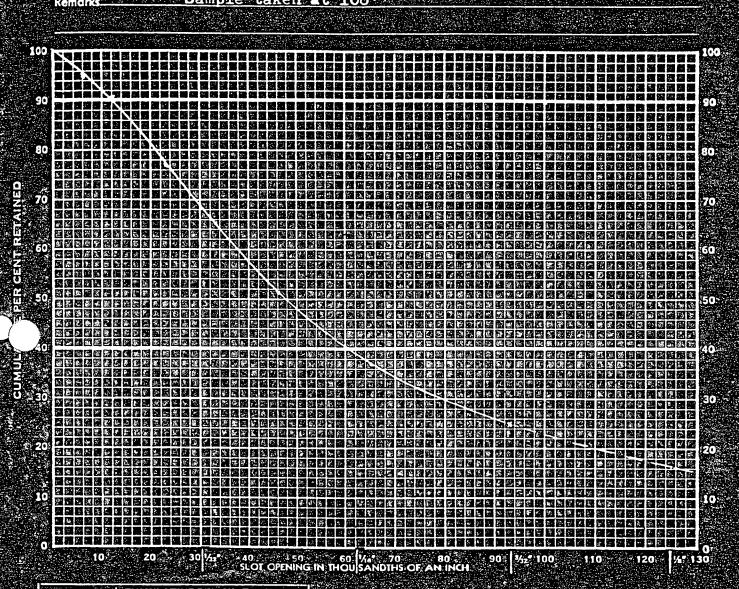
SCHENECTADY, N. Y.

Sample sent in by Smith-Corona Marchant Date \$\frac{1}{2}\$ 1959

Address South Cortland, N.Y.

From well of Test Well # 1

Remarks Sample taken at 108'



NOTES:

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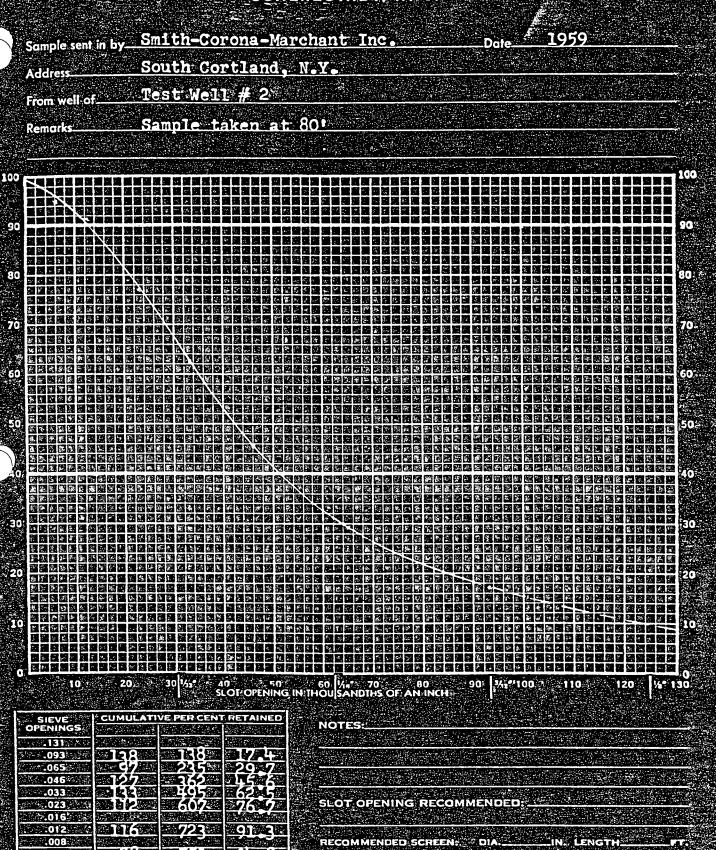
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STEWART BROS...INC.

Figure VII

-SCHENECTADY, N. Y.



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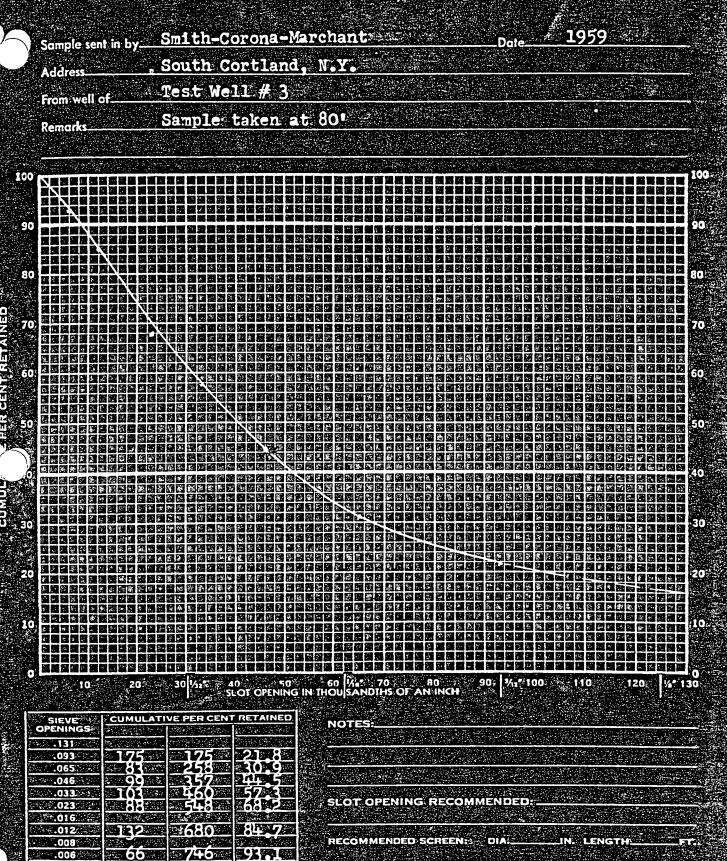
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STEWART BROS., INC.

Figure VIII

SCHENECTADY, N. Y



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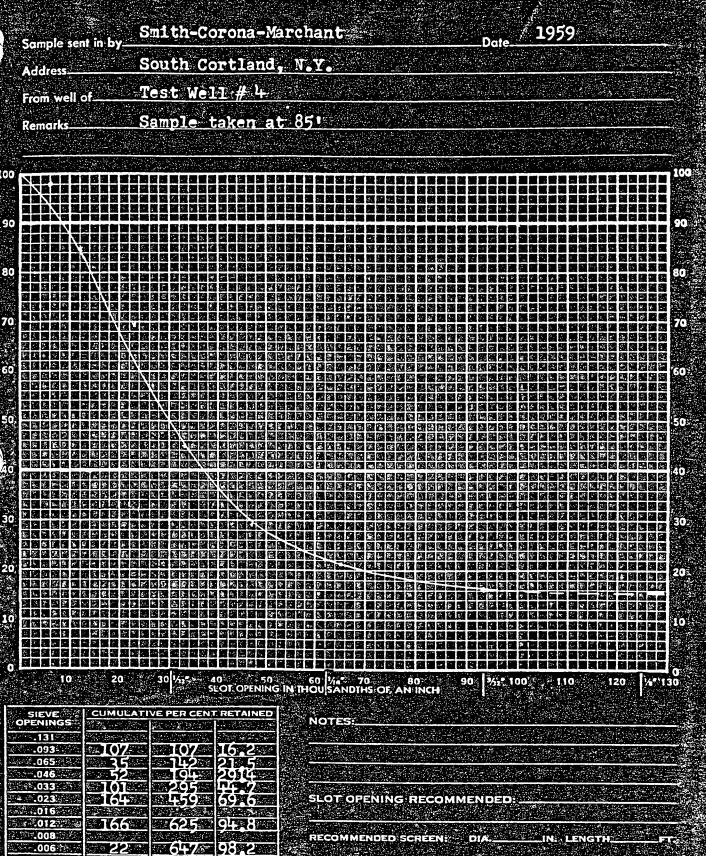
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SAND ANALYSIS

STEWART BROS., INC.

Figure IX

SCHENECTADY, N. Y.



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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.

Date September 1959

STEWART BROS INC.
GROUND WATER CONSULTANTS
Schenectady, New York

Location: Smith-Corona-Marchant Inc. South Cortland, New York

Draw Down Measurements 12" Screened Pumping Well

PUMPING TEST:

Screen bottomed at	
Screen length	27.001
Static Level	
Thickness of Aquifer	
OverburdenSand-Gravel	Silt-Clay Binder
Pumping Rate	1000GPM
Pump Cut on10:13AM	Sept. 22, 1959
Pump Cut on10:13AM Pump Cut off10:30AM	Sept. 25, 1959

Date	Elapsed Tim	e Minutes	Draw Down	Feet	G.P.M.	Temp.
Sept. 22, 1959	9					
10:13AM	39135791279135791357913579696		10 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1049 1049 1049 1060 1060 1060 1060 1060 1060 1060 1071 1071	

Date	Elapsed	Time	Minutes	Draw	Down Feet	G.P.M.	Temp.
Sept. 22, 1959		91 96 101 106 116 126 146			11½ 11½ 11½ 11½ 11½ 11½ 11½ 11½ 11½ 11½	1082 1082 1082 1082 1082 1082 1082	
At 150 minutes,	Pumping	rate	cut back	to 1	OO1 GPM		47° F
		1522344556778887078880777777777777888507777777777				1001 1001 1001 1001 1001 1001 1001 100	47° F

) (

Date	Elapsed Time Minutes	Draw Down Feet	G.P.M.	Temp.
Sept. 25, 195	2207 2262 2322 2382 2442 2507 2562 2687 2747 2807 2867 2987 3167 3167 3127 3347 33573 3453 35753 3693 3752 3871 3994 4187 4247 4308 9 Pump Cut off 10:3	11' 11 11 11 11 11 11 11 11 11 11 11 11	1001 1001 1001 1001 1001 1001 1001 100	47° F.
Recovery	32	11		

Location: Smith-Corona-Marchant Inc. South Cortland, New York

Draw Down Measurements
For Observation Well # 1

PUMPING TEST:

Distance from Pumped Well	•75 '
Static Level	361
Thickness of Aquifer53	.001
Thickness of Adulter Cond Charoladay hinder	
OverburdenDry Sand Gravel-clay binder	MGDA
Pumping Rate100	001 m
Pump Cut on10:13AM Sept. 22, 1959	
Pump Cut Off10:30AM Sept. 25, 1959	

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
10:13AM	68 112 146 180 122 123 133 144 155 155 155 155 155 155 155 155 155	7.15° 7.20 7.26 7.26 7.37 7.38 7.38 7.38 7.38 7.38 7.38 7.38

Date	Elapsed	Time	Minutes	Draw	Down	Feet
Sept. 22, 1959		72 75 80 85 90 95 105 115 125 130 145	·		7.58 7.55 7.55 7.55 7.55 7.55 7.55 7.55 7.75	· ,
At 150 minutes,	Pumping Rate Cut	back	to 1001	GPM		
12:51PM		158 2286 3405 465 584 768 768		•	6.97 6.99 7.05 7.19 7.13 7.14 7.15 7.12 7.14	
Sept. 23, 1959						
12:00AM		827 886 950 1007 1127 1128 1247 1365 1486 1542 1662 1783 1849			7.19 7.19 7.21 7.21 7.20 7.17 7.08 7.17 7.08 7.06 7.08 7.09 7.09 7.09	

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 23, 1959	1907 1962 2023 2087 2148 2156 2262	6.95' 6.95 6.95 6.97 6.97 7.00 7.01
Sept. 24, 1959	· .	
•	2322 2382 2442 2502 26824 26824 2682 27840 2882 29840 3105 3132 3133 3133 3133 3133 3133 3133 313	7.00° 7.
Pump Cut Off 10		-1
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. Depth of Well Point Static Level	77•/7°
Static Level	47.00°
OverburdenDry Sand-Gra Pumping Rate	TOOOG PM
Pump Cut on10:13AM Pump Cut off10:30AM	Sept. 22, 1959 Sept. 25, 1959

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
10:13AM	2468 1021468 122246802468044468052	1.444444 1.44444 1.44444 1.44444 1.44444 1.4

Date	Elapsed	Time	Minutes	Draw	Down Feet
Sept. 22, 1959		54 56 56 56 56 56 57 50 50 50 50 50 50 50 50 50 50 50 50 50			1.59' 1.59 1.60 1.60 1.60 1.60 1.60 1.61 1.61 1.61
At 150 minutes, P	rumping Rate Cut	back	to 1001 G	PM	
1:00PM		167 220 284 292 342 462 576 692 751 812			1.57° 1.58 1.60 1.61 1.62 1.64 1.64 1.64 1.65 1.66
Sept. 23, 1959					
12:42AM		869 932 991 1050 1112 1172 1232 1305 1362 1422			1.67° 1.66° 1.67° 1.67° 1.66° 1.66° 1.68° 1.68

Date	Elapsed	Time Minutes	Draw Down Feet
Sept. 23, 1959		1482 1540 1601 1660 1722 1780 1845 1902 1961 2011 2072 2131 2193 2253	1.68' 1.70 1.72 1.66 1.67 1.67 1.67 1.67 1.67 1.67
Sept. 24, 1959			·
12:45AM		2312 2372 2433 2433 24551 2672 25672 2739 2857 29857 29857 2982 2917 2982 2917 33162 33162 33162 33162 33162 33163	1.69° 1.69° 1.69° 1.69° 1.69° 1.68° 1.68° 1.70° 1.68° 1.70° 1.73° 1.73° 1.73° 1.73° 1.73° 1.73° 1.79°

Date	Ela	psed Time 1	Minutes	Draw Down Feet
Sept. 24, 1959		4185 4242 4302		1.75' 1.71 1.77
	Pump Cut off	10:30 AM		
		2 4 6 8 10 12 14 16 18 20 26 34		•28 •39 •37 •36 •36 •34 •33 •31

Smith-Corona-Marchant Inc. South Cortland, New York Location:

Draw Down Measurements for Observation Well_# 3

PUMPING TEST:

Distance from Pumped Well Depth of Well Point	198.00'
Depth of Well Tomicont	51.881
Static Level	
Static Level	47.00
Overhurden Sand-Gravel	Sitt-Clay binder
Pumping Rate	
Pump Cut on10:13AM	Sept. 22, 1959 Sept. 25, 1959

Elapsed Time Minutes	Draw Down Feet
2468 1011468 1822468 28333333344446	.82 .84 .88 .88 .88 .99 .99 .99 .99 .99 .99 .99
	Elapsed Time Minutes 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50

Date	Elapsed	Time Minutes	Draw Down Feet
Sept. 22, 1959		52 54 56 58 60 64 70 75 80 85 90 95 100 105 110 115 120 130 142	.96' .96 .96 .97 .97 .97 .98 .98 .99 .99 .98 .1.00 1.00 1.00 1.01 1.01
At 150 Minutes Sept. 22, 1959	Pumping Rate cut	back to 1001	(LM
12:55PM		162 232 -292 347 412 470 526 592 647 702 762 822	94* •93 •98 •97 •95 •96 •96 •96
Sept. 23, 1959		00-	061
12:54AM		881 942 1002 1061 1123 1181 1241 1312 1369	96 93 96 94 94 94 90 97

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 23, 1959	1429 1487 1547 1607 1666 1727 1787 1853 1910 1967 2030 2082 2143 2202	995 995 995 995 995 995 995 995 995
Sept. 24, 1959		
12:00AM	2267 2389 24501 256287 256287 27407 28627 28627 28627 2877 2877 2877 2877	96 96 96 96 96 96 96 97 98 98 98 98 98 98 98 98 98 98 98 98 98

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 24, 1959	4117 4187 4247 4307	.93' 1.00 1.01 1.02
Sept. 25, 1959	Pump Cut off 10:30AM	·
	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36	.20° .19 .19 .17 .16 .16 .16 .15 .14 .14 .14 .13 .13 .13

Location: Smith-Corona-Marchant Inc. South Cortland, New York

Draw Down Measurements for Observation Well # 4

PUMPING TEST:

Distance from Pumped Well Depth of Well Point Static Level	
Thickness of Aquifer	
OverburdenSand-Gravel Pumping Rate	1000GPM
Pump Cut on10:13AM Pump Cut off10:30AM	Sept 22, 1959 Sept 25, 1959

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 22, 1959		
10:13AM	2 4 6 8 10 12 14 16 18 20 22 24 28 30 33 34 42 44 46 48 50	.13' .13 .18 .18 .18 .19 .19 .20 .17 .19 .20 .18 .20 .19 .20 .20 .20 .20 .20 .18 .23 .19 .19 .18

Date	Elapsed	Time Minutes	Draw Down Feet
Sept. 22, 1959		52 54 56 58 60 65 70 75 80 85 90 95 100 105 110 115 120 130 140	.20' .20 .20 .21 .20 .13 .20 .18 .17 .20 .18 .20 .20 .20 .20 .20 .20 .21
At 150 Minutes	Pumping Rate cut		
Sept. 22, 1959	•	•	
1:06PM		173 217 276 336 396 465 517 578 637 697 757	.13' .14 .15 .18 .18 .20 .14 .11 .11
Sept. 23, 1959			
12:48AM		875 938 997 1055 1118 1177 1237 1302	.20° .21 .25 .27 .26 .25 .25 .33

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 23, 1959	1357 1417 1477 1537 1602 1655 1717 1777 1842 1897 1957 2016 2077 2138 2199 2258	•33 •33 •34 •33 •35 •38 •38 •38 •38 •38 •38 •38 •39 •39
Sept. 24, 1959		
12:51AM	2318 2378 2437 2498 2559 2617 2617 2617 2737 2852 2915 3097 3097 3157 3212 33463 3463 3582 3641 3762 3881 3941 4003	333344444444444444444444444444444444444

Date	Elapsed Time Minutes	Draw Down Feet
Sept. 24, 1959	4065 4127 4172 4237 4310	.48° .47 .46 .45
Sept 25, 1959	Pump Cut Off at 10:30 AM	
	2 6 8 10 12 16 18 20 22 24 28 30 33 34 44 48 48	45 45 45 45 44 44 44 44 44 44 44 44 44 4

A		P	R		
14	Feet	135. oh	ms 3 ¹ +00.	ohm	feet
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24	Ħ	±/•/	- 5 · · ·	11	11
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32	Ħ	11.2 "	2250.	11	
3 6	11	11.2 "	1970.	11	11
TO.	Ħ	7 <u>.</u> 85 "	1970.	11	11
111	11	7.85 " 6.65 "	1970. 1970. 1835. 1870. 1860.	- 11	11
1.0	11	6.2	1870.	11	11
40		5.7 1	1860	11	11
52	Ħ	/ _ /	1720	13	11
60	11		1/30.	11	11
70	11	3.5 "	1540.		
80	11	3.5 " 3.42 "	1530.	.11	11
90	11	2.42 *	1365.	11	Ħ
760	11	2. !		11	11
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110	11	1.65 1		Ħ	11
120		エ・マン・	1140.	11	11
130	Ħ	1.40	1140.	••	• •

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70 80 90 100 110	11 11	1.92 " 1205.	11 11	# #
120 130	# #	1.88 " 1300. 1.6 " 1205. 1.42 " 1160.	11 11	tt 11

A		<u>P</u> <u>R</u>		
4826048260482608 11222334445678	Feet n n n n n n n n n n n n n	140. ohms 70. " 3520. 47. " 3540. 36. " 3390. 27. " 3390. 21.5 " 3240. 17. " 2820. 14. " 2820. 12.2 " 2760. 10.2 " 2550. 8.4 " 2320. 7.2 " 2170. 6.1 " 1990. 4.75 " 1790. 3.7 " 1630. 2.95 "	H H H H H H H H H H H H H H H H H H H	feet n n n n n n n n n n n n n
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100	n	1.95 " 1225	. 11	15 11
110 120	11 11	1.45 " 1090	. n	11
130	Ħ	1.21 " 986	H	11

A		P	<u>R</u>		
4 1 8 12 16 20	Feet n n n	170. ohms 81.5 " 57. " 34. "	4260. 4090. 4300. 3420.	ohm n n n	feet " " " " " "
24 28 33 44 44	11 11 11 11 11	19. " 14.5 " 11.5 " 8.9 " 6.65 " 6.3 " 5.75 "	3020. 2860. 2550. 2310. 2010. 2030. 1840. 1900. 1505. 1495.	11 11 11 11 11	## ## ## ## ##
8 16 16 24 28 33 44 45 67 89 10 12 12	# # # # # # # # #	4. " 3.4 " 2.72 " 1.95 " 1.85 " 1.45 "	1875. 1505. 1495. 1365. 1100. 1035. 1005. 830. 636.	99 93 99 99 99 99 99 99 99	11 11 11 11 11 11 11 11 11
130	11	•78 [#]	636.		••

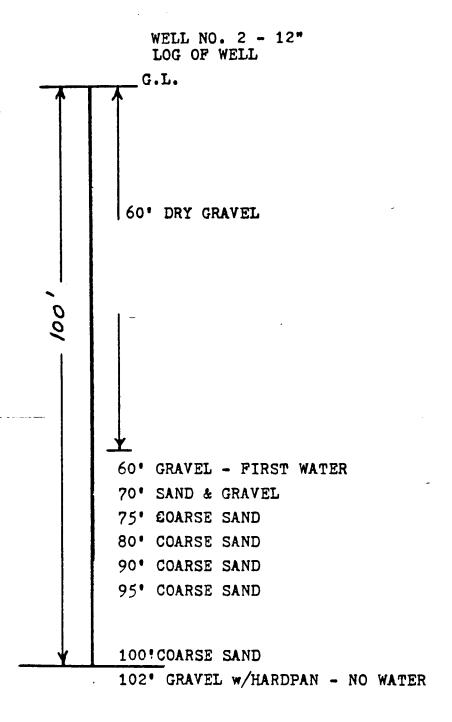
A		P	R		
	Feet	185. ohms	4650. 4280. 3470. 2510. 2490. 2430. 1830. 1685. 15860. 1180. 1130. 1105.		feet
Ŕ	11	. 84. 11	4280.	11	11
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لبلب	11	6.35 "	1755.	11	11
ӥ́я	11	5.8"	1690.	11	15
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120	H	1.3 "	1060.	11	11
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A		2		K		
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16	Ħ	23.	Ħ	2320.	11	11
20	11		tt.	2320.	Ħ	11
5/7	Ít	15.	Ħ	2260.	Ħ	11
28	11	12.5	11	2200.	11	11
32	11	10.8	11	2170.	Ħ	11
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7.8	11	5.78	11	1740.	Ħ	11
ギ ク	11	4.5	11	1470. 1515. 1450. 1280. 1165.	11	'n
60	11	4.5 4.02	11	1515.	11	11
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120		1.0		0200		

RANDOLF WELL & PUMP CO. R.D. 4, CORTLAND, NY

Randolph Well & Pump Co. Inc.

R.D. 4. CORTLAND, NEW YORK • PHONE 756-6581 or 838-3550



Randolph Well & Pump Co. Inc.

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

20 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

LA TORY NO. C 44/75		COLLECTED BY Randolph Well	and Pump Co.
DALE COLLECTED 1/1/75	REC	EIVED1/1/75	REPORTED
(CITY, TOWN, VILLAGE	OR HA	MLET)	COUNTYCortland N. Y.
SAMPLING FORM			
owner Smith Corona	Corp	TENANT	
BACTERIAL EXAMINATION		TEST FOR COLIFORI	d GROUP
BACTERIA PER ML. AGAR. 350C - 24 HRS	···	M. P. N. * / 100 M	less than 1.1
THIS WATER WAS OF A SAT	ISFACT	ORY SANITARY QUALITY WHEN THE SAMPLI	E WAS COLLECTED
PHYSICAL EXAMINATION			
COLOR		TURBIDITY	ODOR + COLD YOR + HOT
CHEMICAL EXAMINATION		RESULTS IN	PARTS PER MILLION
IF (FE)08		AMMONIA FREE (AS N)	OXYGEN CONSUMED (0)
(MESE (MN) less than 0.1	z ż	ALB. AMMONIA (AS N)	CHLORIDES (C1) 24
carson Dioxide (CO2) 5.0	NITROGEN	NITRITES (AS N)	TOTAL HARDNESS (AS CACOS) 198
FLOURIDES (F)70	CON	NITRATES (AS N)	ALKALINITY (AS CACOS) 177
TOTAL SOLIDS		LOSS OF IGNITION	CALCIUM (AS CACOS)
BICARBONATES 212	-	SULFATES 19	MAGNESIUM (AS CACOS)29
SILICA		COPPER -	PH VALUE 7.3
TOTAL PHOSPHATES		ORTHO PHOSPHATES	META PHOSPHATES
SUSPENDED MATTER		TEMPT AIR * F	TEMPT WATER *F
DETERGENTS			

REMARKS:

+1=VERY SLIGHT, S=DISTINCT, 4=DECIDED, S=EXTREME

CHARLES V. COSTELLO

[.] MOST PROBABLE NUMBER

-INDEX OF SAND ANALYSIS

RANDOLPH WELL & PUMI SCM SOUTH CORTLAND NEW YORK PLANT WELL #2

· UOP JOHNSON DIVISION 315 North Pierce Street

			aul, Minn. 551		e ∫t	
Sample sent in			h Well &			
Town			State			
From well of	<u></u>	CM Sout	h Cortlan	d, N.Y. 1	Plant	
Remarks		W	Mell #2			
•	·					
					\$355 5 555555555555555555555555555555555	
	!=====================================	0	8 3 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6			×
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						10
20 40	60 80	100 120				o
20 40			140 160 N SIZE, IN THOUSANDI	180 200 HS OF AN INCH	220	240 260 280
SIEVE CU	JMULATIVE PER CENT	RETAINED N	otes:			
.250	72 73	75'				
	3 1	<u> </u>			·	
.094 ∠ .066 .047	13 19 64 28	20 — 25 Re	ecommended S	Slot Openina:	700 12'	90 SCOT
.033	80 36 92 46	3/	BUTTON :	18' 70	COT	90 SLOT
.016. 9	75		ecommended S	Screen: Dia 🚄	Lelein. Leng	gth <u>30</u> Ft.
SCREEN , DO	= <u>83</u>	94 -				

CUMUL TIVE PER CENT RETAINED

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,

UOP JOHNSON DIVISION 315 North Pierce Street

Saint Paul, Minn, 55104

100

SETAINED

	Jank 1 20, 1411111. 55104	
Sample sent in by.		
	State N.Y. Date 10/30/74	
From well of	SCM South Cortland, N.Y. Plant	
Romarks	Well #2	
,		
	,	
20 40 60 90		
	100 120 140 160 160 200 220 240 OT OPENING AND GRAIN SIZE, IN THOUSANDTHS OF AN INCH	260
SIEVE CUMULATIVE PER CE	ENT RETAINED Notes:	
.250 76 -77	177-83T 5	
.187 2	21	
.094 7	3/ 42 Page Page 1 2 2	
.047	Recommended Slot Opening:	
.023 .076 50	Recommended Screen: Diain. Length	F+
SCREEN 20 S 3 3	Longin Longin	

UOP JOHNSON DIVISION 315 North Pierce Street

Saint Paul, Minn. 55104

Town	in by		State N.Y. Date 10/30/74
From well o	f	SCM Sc	outh Cortland, N.Y. Plant
			Nell #2
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YIIIIN			
$\mathbb{N} + \mathbb{N}$			
		+	
20 4		100 120	
		LOT OPENING AND (GRAIN SIZE, IN THOUSANDTHS OF AN INCH
SIEVE OPENINGS	CUMULATIVE PER C	37.87	Notes:
.250 .187 .132	40,	3	
.094	37	16	Base and Sin Out in
.047	48	35	Recommended Slot Opening:
.023 .016	74	<u> </u>	Recommended Screen: Diain. LengthFt.
SCREEN,	27 1: 9:5	<i>54.</i> 70.	

80

CENT RETAINED

JOHNSON DI 315 North Pierce Street

100

80

PET CENT RETAINED

CUMULA'

SCREEN , J n

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By:

UOP JOHNSON DIVISION 315 North Pierce Street

Saint Paul, Minn. 55104

100

80

CENT RETAINED

CUMULA 30

Sample sont in by	Randolp	n Well & Pump (Co., Inc.
Town Cortland	9 **	State_N.Y.	Date 10/30/74
From well of	SCM South	Cortland, N.Y	. Plant
Remarks	Well	‡2	
•			
/110 H20 Nu 00 27 10 10 10 10 10 10 10 10 10 10 10 10 10			
1841 (***) 1841 1850 1841 1841 1841 1841 1841 1841 1841 1841 1841 1841 1841 1841 			
			841-85
90-911			
20 40 60 80		0 160 180 2	200 220 240 260
	100 120 14 OPENING AND GRAIN SIZE	0 160 180 2 IN THOUSANDTHS OF AN INCH	200 220 240 260
SIEVE CUMULATIVE PER CEN		:	
OPENINGS 7 - 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	100'-91' 4		<u> </u>
132 3	14		

OPENINGS	56-59	100-91		······································	
.250	/3	4			
.187	23	7			
.132	3.3	14			
.094	-4	2/		·····	
.066	72	2.9	Recommended Slot Opening:		
.047	8	31	Troopg.		
.033	90	- 51			
.023	97		Recommended Screen: Dia	in. Length	Ft.
216	79	9 2	7,00011111011404 00100111 21414		
1-1/2	99	2/			
SCREEN, O	15	ا بحالا		Bv:	
SLUI,	26				

JOHNSON DI 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 woll of SCM South Cortland, N.Y. Plant Well #2 10 10 10 10 10 10 10 10 10 1		Same Faul, Willin. 55104	
From woll of	Sample sent in by		
Remarks Well #2 10	Town Cortland	State N.Y.	Date10/30/74
10 10 20 20 220 240 250 290 SIEVE CUMULATIVE PER CENT RETAINS DO SOLO PENDS AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSANDINS OF AN INCH. OPENING SOLO TOTAL AND GRAIN SALE IN THOUSAND SALE THOUSAND SALE IN THOUSAND SALE THOUSAND SALE THOUSAND SALE THOUSAND SALE THOUSAND SALE THOUSAND SALE THOUSAND SALE THOUSAND SALE	From woll of		Plant
20 40 50 80 100 120 140 160 180 200 220 240 260 290 SIEVE CUMULATIVE PER CENT RETAINCD OPENINGS 200 210 240 260 290 SIEVE CUMULATIVE PER CENT RETAINCD Notes: OPENINGS 2/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3	Remarks	Well #2	
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20 40 60 80 100 120 140 160 180 200 220 240 260 290 SLOT OPENINGS AND GRAIN SIZE, IN THOUSANDTHS OF AN INCH SIEVE CUMULATIVE PER CENT RETAINED Notes: OPENINGS 9/7-9-77 97-7-3 132 77 4 096 24 17 0984 17 0966 27 Recommended Slot Opening:			6
20 40 60 80 100 120 140 160 180 200 220 240 260 290 SLOT OPENINGS 07 - 9 7 9 3 3 250 250 250 250 250 250 250 250 250 250			
20 40 60 80 100 120 140 160 180 200 220 240 260 280 SLOT OPENING AND GRAIN SIZE, IN THOUSANDTHS OF AN INCH SIEVE OPENINGS 07 - 077 7 2 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7			*
20 40 60 80 100 120 140 160 180 200 220 240 260 280 SLOT OPENING AND GRAIN SIZE, IN THOUSANDTHS OF AN INCH SIEVE OPENINGS 07 - 077 7 2 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7 4 132 7 7			
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20 40 60 80 100 120 140 160 180 200 220 240 260 280 SLOT OPENING AND GRAIN SIZE, IN THOUSANDTHS OF AN INCH SIEVE OPENINGS 0/-077 077-033 250 .187 7 .132 7 .094 17 .066 2 4 .8 Becommended Slot Opening:			
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20 40 60 80 100 120 140 160 180 200 220 240 260 280 SLOT OPENING AND GRAIN SIZE, IN THOUSANDTHS OF AN INCH SIEVE			
20 40 60 80 100 120 140 160 180 200 220 240 260 280 SLOT OPENING AND GRAIN SIZE, IN THOUSANDTHS OF AN INCH SIEVE OPENINGS 0/-077 197-03 -250 -187 -132 /7 -094 /7 -066 2 4 8 Recommended Slot Opening:			
SIEVE CUMULATIVE PER CENT RETAINED Notes: OPENINGS 07-077 97-03 .187 7 2 .132 / 7 4 .094 / 7	24931571		
SIEVE CUMULATIVE PER CENT RETAINED Notes:			0 220 240 260 290
OPENINGS 07.07/ 97.03 .250 .187 7 2 .132 /7 4 .094 /7 5 .066 2.4 9 Recommended Slot Opening:			
.187 7 2 .132 /? 4 .094 /7 5 .066 2.4 9 Recommended Slot Opening:	OPENINGS 07-07	97733	
066 2 F 9 Recommended Slot Opening	.187	4	1
	.066	8 Recommended Slot Opening:	
047 033 023 023		19	

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80

CUMULATIVE PER CENT RETAINED

20

10

SCREEN, 0.1 \$

By:

JOHNSON DI 315 North Pierce Street

Saint Paul, Minn, 55104

own	Cor	tland	·····	State_	N.Y.	Date	10/30/74	
		SCM						
emarks			We	11 #2	2			
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20	40 60		20 140			0 2	1	+
		SLOT OPENING A	D GRAIN SIZE,	IN THOUSA	NOTHS OF AN INCH		1	
SIEVE OPENINGS	CUMULAT	VE PER CENT RETAINE	Notes:					
.187	43			 .				
.132	75		_					
.066	12		Recom	mende	d Slot Opening:			
.033	72							
0/6 3/2 SCREEN, J	- 3.7		Recon	mende	d Screen; Dia	i	n. Length	F1
1 / 1/	19 95 19 35		· I					

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CENT RETAINED

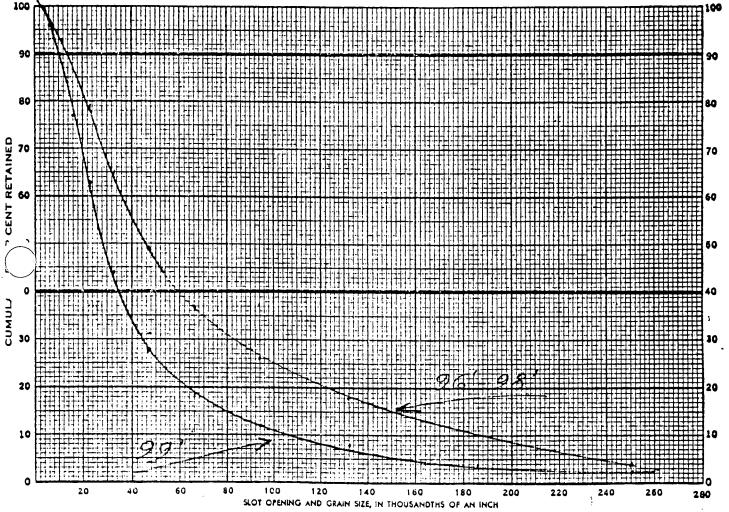
By:

SAND ANALYSIS

UOP JOHNSON DIVISION

315 North Pierce Street Saint Paul, Minn. 55104

	Cortland	١	State N.Y. Date 10/30/74
	<u> </u>		South Cortland, N.Y. Plant
Remarks			Well #2
•			



SIEVE OPENINGS	CUMULATIVE PER CE	NT RETAINED	Notes:
	41-		
.187	15	4	•
.132	15		
.094	26	12.	
.066	27	/ 0	Recommended Slot Opening:
.047	-19	ं द	Neconinienced Sidt Opening.
.033	23	44	1
.023	73	63	Pagamental Carrey Dia Landa di Santana
1016	37	1111	Recommended Screen: Diain. LengthFt.
2/2	133	37	
SCREEN OC SLOT	3 96	33	Ву:

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET

				2	
Wel For	1 ::0. TWI-2"	RECORD	of test	Date 12 -	31-74
	1 Located At	PUMP PIT			
TIME	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	
1:00 A.M.			4-2'1"		
2 - HR.	42'4" 48'0"	P.N.R.		548	
3 "	48'0"	P.R.	,	554	ļ
4 11	42' 42"	P.NR		11	
5 11	42' 42"	11	,	H	
6 "	42'45"	1/		jt	
7 "	42' 5"	11		u	
8 "	42'5"	11	ΔS= ·33	ч	
9 "	48'2"	-P.R		//	
1	48' 2"	P, R.	:	554	
	42'72"	P.N.R.		888	
12 11	42'7"	"		896	
13 11	42'7"	11		11	
14 "	42'72"	11		"	
15 "	42' 75"	11		"	
16 "	42'72"	11		и	
17 "	42'9"	P.R.		19	
18	42' 72"	P.N.R.	:	896.	
	e of engine or	motor used:			
Remarks:					
LAGE,	IPTION OF PUMP	USED	SIZE OF PU	INCH ORIFI	GE ON
STACES STZE			DEPTH AIR		

STACES SIZE SHOP MO. DISMARGE OF SETTING DET TNCH PIPE FT

AIR PRES. WHEN NOT PUMPING STATIC LEVEL Height of gauge above base

FOR: MANDOLPH WELL & PUHP CO.

RANDOLPH WELL & PUMP CO.

R. D. 4, CORTLAND, N. Y. SHEET 2 OF 2

RECORD OF TEST

Wel				Date	
For	1 Located At Po	IMP PIT.			
Tire	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR
19 HR.	42'7堂"	PN.R.		896	, in the second
20 "	42'72"	1/	Δ5 = .34		
	4285	INCREASED TO PN.R.	_	1065	762"
21 ,,	42'82"	"			
23 "	42'8"	11			
24 "	42'8"/	. 10			
25 "	42'8"	"			
26 "	42'8"	"			
27 "	42'8"	"			
20 "	42'8"	,,			
<u>, "</u>	42'B"	"			
30 11	42'8"	PN.R.	.58	1065	765"
					· .
T. T	NOTE:				
	WATE	R BACK TO	STATIC LEVEL	IN 6 MIN.	
·					
ake & 612 emarks:	e of engine or	motor used:			
DESCR	IPTION OF PUMP	USED	SIZE OF PU	LLEY	
YPE				INCH ORIFI	CE ON
TACES IZE			DEPTH AIR		
IZE HOP MO.			AIR PRES	WHEN NOT PUMP	98G
ISCHARGE			STATIC LEV	EL	
	ETTIMG		Height of		"
Ü	FT	TWCH PIPE		ve	
			Kasi	Kandolph	<u> </u>
WITE	ESS FOR PURCHAS	ER	FOR: MAND	OLPH WELL & PU	лар со.

RANDOLPH WELL & PUMP CO. R. D. 4, CORTLAND, N. Y. SHEFT 1 0F 3

Well To. TW2-6" RECORD OF TEST Date 12-31-74					
For Well Located At					
TIME / JE HR	PUMPING LEVEL	METER READING	STATIC LEVEL	G. P. M.	
1:00 A.M	FROM TOP OF CASING.	PN.R.	47'62"		
:05 MIN	48'85"	1/		554	
./0 ''	48'82"	11		<i>71</i>	
	48'9"	1/		y ,	
./5 " 20 "	48' 92"	11		11	•
25 "	48' 82"	11		11	
30 "	48'8"	l (n	
45 "	48'82"	//		11	
2 - H.R.	48'9"	11		554	
3 "	48'8"	AR.		554	
	48'92"	P.N.R.		1/	
	48'82"	/1		,,	-
6 "	48'82"	/1		11	
7 "	48' 82"	71		554	
8 "	48'9"	,,		11	
9 "	48'9"	P.R.		1)	
10 11	48'9"	P.R.	DS-1.71	554	
- INCREASED TO -					
Make & siz Remarks:	e of engine or	motor used:			
DESCRIPTION OF PURP USED SIZE OF PULLEY					
INCH ORIFICE ON					
STACES DEPONI ATP TITE					
SIZE					
STATIC LEVEL					
DE OF CENTELLINE					
560	FT	TNCH PIPE	gauge abo)¥8	

R. D. 4, CORTLAND, N. Y. SHEET 2 OF 3

Well Located At RECORD OF TEST Date							
TIRE 10-14R.		METER READING	STATIC	LEVEL	G. P. M.	WEIR	
HR-5MN	49'8"	P. R.			888		
10 MIN.	49'82	P.R.			11	,	
20 M/N.	49'82"	1)			.,		
30 MIN.	49'82"	//			11		
45 MIN	49'8 <u>"</u> 49'8 <u>"</u>	11			11		
11- HR.	49'9	PNR.			1/		
	49'9"	71			,,		
12 ₁₁	49'9"	u			,,		
14 "	49'92"	11			888		
15 11	49'9"	11			it		
	49'82"	71			11		
10"	49' 8½"	P.R.			II .		
18 "	49'82"	P.N.R.			11		
19 "	49' 8/2"	"			//		
20 "	49'82"	11	∆ S = 2	17	888		
 		INCREASED	To -		"		
21 "	5032"	P.N.R.			1065	76岁	
22 "	50'32"	, (1	1/ .		
ake & size of engine or motor used:							
	IPTION OF PURP	US DID	SIZ	of Pul	JEY		
YPE INCH ORIFICE ON							
TAGES DEPTH AIR LINE							
HOP WO. LAIR PRES. WHEN NOT PUMPING							
ISCHARGE STATIC LEVEL Height of							
U. IVCH PIPE Height of gauge above base							
Vade							

R. D. 4, CORTLAND, N. Y. SHEET 30F3

RECORD OF TEST Well No. TW2 - 6" Date_ For Well Located At PUMPING LEVEL G. P. M. METER READING STATIC LEVEL WEIR. TIME PEET 76/2" 50'3" 23 HR. 1065 PNR. ,, 11 /1 1/ P.R. " 11 RNR 51'3室" " PNR 51'32" 1) 28 P.N.R. " 51'32" 29 P.N.R. 1065 30 P.N.R. DS= 3.75 Take & size of engine or motor used: Remarks: DESCRIPTION OF PURP USED SIZE OF PULLEY INCH ORIFICE ON TYPE WIDTH OF WELR STACES SIZE SHOP MO. DEPTH AIR LINE AIR PRES. WHEN NOT PUMPING STATIC LEVEL DISCHARGE Height of DE (OF SETTING

WITHESS FOR PURCHASER

FOR: RANDOLPH WELL & PUMP CO.

gauge above

THEH PIPE

R. D. 4, CORTLAND, N. Y.

SHEET 1 OF 5

FOR: MANDOLPH WELL & PUMP CO.

RECORD OF TEST

Well :: 0. 2 - 12" Date 12-31-74 SMITH - CORONA OPERATIONS For ROUTE 13 - SOUTH GORTLAND PLANT Well Located At PUMPING LEVEL METER READING G. P. M. STATIC LEVEL WEIR FEET FROM TOP OF 47'55" 20" 548 1:00 AM ΔS CASINA 11 " 3.08 1/2 1/ 2.12 ., /1 2.6 " 11 11 ,/ 11 " 11 11 11 11 /1 <u>2</u>0" 548 11 11 11 10 " 20" 15 " 11 11 20" 11 11 202 25 " 11 11 30" 11 45" 11 11 2 MD. HR. 2.25 554 ake & size of engine or motor used: lemarks: DESCRIPTION OF PURP USED SIZE OF PULLEY LINE-SHAFITURBINE TYPE INCH ORIFICE ON 6" PIPE TAGES
SIZE
SHOP MO.
OF SHOP STORY WIDTH OF WEIR DEPTH AIR LINE ELECTRIC-PROBE AIR PRES. WHEN NOT PUMPING STATIC LEVEL Height of OF SETTING gauge above THEM PIPE base Kay Kandolph

WITHESS FOR PURCHASER

* 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 - /2"

Date_____

For Wel	1 Located At						
IIE	PUMPING LEVEL FEET	METER READING	STATIC LEVEL	G. P. M.	WEIR		
- HR.	50'-3'5"	P.R. ×	5'32 D2	554	205"		
r 11,80	49'.95"	P.N.R. *	2.33		21"		
5 1, 129	49'-8/2"	"	2.25		21"		
9 11320	" " .	<i>'</i>			20"		
7 113/03	" "	//			20"		
9 "423	47-92	//	2.33	554	21"		
9 "480	50-35	P.R. *	2.83				
10 11540	51'- 95"	P. R *	4,33		21"		
		INCREASE-T					
C PZN	IN. 51-10'2"	P. R. *	म, म्।	888	52"		
NIN	52'		4.54				
1.2 "	52'-2"		4.53				
2 "	52'-12"		4.66				
2/2"	52-2"		4 70	888	52"		
3 "	52'-2"						
2½" 3" 3½"	52'-2"						
4 "	52'2"						
42"	52'2"			888	52"		
ke & siz parks:	e of engine or	motor used:					
	IPTION OF PURP	USED	SIZE OF PU		ration of		
TPE TAGES TZE HOP NO.			WIDTH OF W	VIDEN OF WEIR DEPTH AIR LINE			
			DEPTH AIR				
OP MO.			AIR PRES.	WHEN NOT PUMP	ING		
SCHARGE			Height of	Erri			
EP SETTING			mail me a bo	cauce above			

INCH PIPE

WITTESS FOR PURCHASER

FT

U.

Kaymond Kandolph FOR RANDOLPH WELL & PURP CO.

gauge above base

R. D. 4, CORTLAND, N. Y.

SHEET 3 OF 5

RECORD OF TEST

Well No. 2 - 12" Date_ For Well Located At PUMPING LEVEL G. P. M. STATIC LEVEL METER READING TIME WEIR. PEET 52" 52'25 888 4.74 5 MIN. 11 <u>52' 3"</u> 4.78 10 MIN. 51'92" 11 P. N. R. 4.33 15 MIN. 5192" 888 52" 20 MIN. 53" 51'9" 896 30 MIN 4.29 51'95" 11 4.33 P.N.R. 45MX 11 11 12 " الم 53" 396 11 13 " 740 11 P.N.R. 11 4 780 896 5a" 11 840 " 11 16. 322 896 <u>5</u>3" 51'92" P.N.R. ۵,5 52' 3½" 5211 P. R. 4,83 51' 82" 1010 .11 . 4 25 18 P.N.R. 51' 82" (03) 11 51'8堂" 1140 52" P. N. R. INCREASE-TO 76岁" 20 MR. 2MIN 52'65" 5,08 1065 Make & size of engine or motor used: Remarks: DESCRIPTION OF PURP USED SIZE OF PULLEY INCH ORIFICE ON TYPE WIDTH OF WELR DEPTH AIR LINE STACES SIZE SHOP MO. AIR PRES. WHEN NOT PUMPING STATIC LEVEL DISCHARGE DEF OF SETTING Height of gauge above TWCH PIPE SU O FT. base

FOR: HANDOLPH WELL & PUHP CO.

R. D. 4, CORTLAND, N. Y.

SHEET 4 OF 5

RECORD OF TEST

Well 10. 2 - 12" Date For Well Located At PUMPING LEVEL G. P. M. METER READING STATIC LEVEL TIME WEIR PEET 76岁" 52'62" 5.08 1065 MIN, 52'7½" 1/2 " = 17 76岁" " 1065 22" " 3 11 76岁" 3色" 11 1065 52'76" 52'7堂" 76堂" 52'8" 5.21 1065 53'5" P.R. 5,96 * 11 6.00 76%" 53'6" ١١ 0 ي " 6,54. 1065 53'7" 30 11 6.12 P.R. * 53'0" 45" 5.54 P.N.R. * 53' 生" 21-HR. P.N.R. × 1065 5.58 22 53'0")/ 5.54 53'11堂" 1320 •/ 6.50 1380 762" 1065 5,13 " ake & size of engine or emarks: DESCRIPTION OF PURP USED SIZE OF PULLEY YPE INCH ORIFICE ON WIDTH OF WEIR TACES IZE HOP NO. DEPTH AIR LINE AIR PRES. WHEN NOT PUMPING STATIC LEVEL Height of 1SC ARGE OF SETTING gauge above U, TWOH PIPE base

FOR: RANDOLPH WELL & PURE CO.

R. D. 4, CORTLAND, N. Y.

SHEET 5 OF 5

RECORD OF TEST

	1 110.2 - 12"		Date			
For	l 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堂"	
26 1500	53'0"	"/		11		
27 "	53'0"	"		,,		
28 -	53'0"	',		1,		
29	53'0"	_ '/		,,		
30	53' 0"	P.N.R		1065	76室"	
		- END OF	TEST-			
Tagi kecim kiliki secusiy	graph and the second of the se		Barry Commence of Commence of the Commence of	a jamaka sentu ing 1911 kanasa b		*****
	·					
<u>.</u>		RECOVERY -	TIME -			
MIN.	47'82"			,		
2 " 3 " 4 "	47' 72"					
3 "	47' 7"					
	47'62'					
5 "	47'6"		-1-17			
6 "	47'52		47′5至"			
	se of engine or	motor used.		:{ 		=
emarks:	e or estime of	movor usedi				
	IPTION OF PURP	4	SIZE OF PU			
TYPE LINE - SHAFT - TURBINE TAGES 4				5 INCH ORIFICE ON6"PIPE WIDTH OF WEIR		
TAGES 4 IZE 12" HOP NO. 4			AIR PRES.	AIR PRES. WHEN NOT PUMPING		
ISCHARGE 10" STATIC LEVEL Height of						
U OF S	FT	TNOH PIPE		Ye		
			base			
				n = n	a 1	

WITHESS FOR PURCHASER

APPENDIK 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

Ms. Jean H. McCreary February 26, 1987 Page 2

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., 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.

Ms. Jean H. McCreary February 26, 1987 Page 3

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.

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

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Specified

- 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.
- 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

- 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.

- 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

 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.

- 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

- 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

- Backfill shall be compacted to a minimum of 90% of the Modified Proctor density.
- Where required, to assure adequate compaction, in-place density test shall be made by an approved testing laboratory.
 - The moisture-density relationship of the backfill material shall be determined by ASTM D1557, Method D.
 - 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.

- 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

 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.
- 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

- 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

 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

t

 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.



SELECT FILL - SECTION 02001

D. Type D

1. Clean, washed, coarse sand having the following gradation by weight:

<pre>% Passing</pre>	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

 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

- 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.
- 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

- 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

 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

 Unless otherwise directed by the Engineer, all water removed from excavations shall be diverted to a temporary storage unit.

REMOVAL OF CONTAMINATED SURFACE SOILS - SECTION 02004

- 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 -

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.

- 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.

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.

- 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.
 - 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.

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

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- 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"
 - W. National Fire Protection Association, Volume 327, "Cleaning or Safeguarding Small Tanks and Containers"
 - 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	Capacity	Material	Material of Construction
<u>Location</u>	(gal)	Stored	
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
...letals by Atomic Absorption
Wet Chemistry
Volatile Organics

Pesticides, Herbicides

Comments:

Friend Laboratory, Inc.

446 BROAD STREET ● WAVERLY, N. Y. 14892-1445
Phone (607) 565-2893

. 17

Chemical and Bacteria analysis of: WATER STREAM POLLUTION WASTEWATER SLUDGE SOIL DAIRY PRODUCTS

FOODS and MORE

Plant Mgr. Smith-Corona Corpora Company P. O. BOX 2020 Cortland, NewYork 13 Date Received: June 12, 1984		☐ J SAMPLE	SOURCES	MG/L = Millig NTU = Neph Tur ND = None UMHOS = Micro	than er than um Cobalt Unit: per Million grams per Liter rams per Liter elometric bidity Unit detected
Pick up by:	Undergrour	,			
Analysis Performed:	storage tank PLTI				
pH					
B.O.D. 5 28 mg/L					
C.O.D. mg/L					
Total Hardness mg/L					
)dahl Nitrogen mg/L					
ussolved Solids mg/L				<u> </u>	
Suspended Solids mg/L					<u> </u>
Total Solids mg/L					
Volatile Solids mg/L					
PCB's ppm	< 10				
Copper					
Iron					
Nickel			1	1	
Zinc					
Arsenic					
Barium					
Cadmium					
Chromium					
Lead					
Mercury					
Selenium					
Silver					1
))	6 20	_1_		//) \	//

Approved by: __

Upstate Laboratories înc.

103 Horton Place • East Syracust, 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

Pet 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: College Man Steel

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.

Analysis Results Report Number 010887001

Da	te: Januar	y 8, 1987	•	
EPA 601/602: Wate	from Under			
CLIENT I.D Smith	#2-U	#3-U	T	
Corona	11/11/86	11/11/86		
	1 -1/11/00	11/11/00		1
			1	
ULI I.D.	31986007	31986008	ļ	
EPA 601:		31700000	ļ	
Chloromethane	<50	450		ţ
Bromomethane	₹50	<50		
Dichlorodifluoromethane	₹50	<50		,
Vinyl Chloride	₹50	<50 <50		
Chloroethane	₹50	<50		,
Methylene Chloride	₹50	<50		
Trichlorofluoromethane	₹50	<50 <50		
1,1-Dichloroethylene	₹50	<50		
1,1-Dichloroethane	49			
t-1,2-Dichloroethylene	110	<50		
Chloroform	₹50	<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	İ	
1,1,2-Trichloroethane	<50	₹ 50		
c-1,3-Dichloropropylene	<50	<50 I	1	
1,1,2,2-Tetrachloroethane	<50	₹50	ł	
Tetrachloroethylene	450	₹50	{	
Bromoform	<50	₹50		
2-Chloroethylvinyl ether	<50	<50	Ī	
EPA 602 (including Xylenes	s):			
Benzene	<50	<50		
Toluene	4300	1500		
Ethylbenzene	72	<50 │		
Xylenes	1700	300	1	
Halogenated Aromatics (601		Ĭ	1	
Chioropenzene	<50	<50	}	
1,2-Dichlorobenzene	<50	<50		
1,3-Dichlorobenzene 1,4-Dichlorobenzene	<50	<50		
1,4-DICHIOLODGUSGUG	<50	<50		

All results are expressed as ppm unless otherwise stated.

Approved: Date: <u>1/08/87</u>

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 damage. 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.

Citent: Smith Corona

Report #: 010887001 Date: January 8, 1987

UPSTATE LABOL ORIES, INC.

PCB Analysis

Page 1

				PCB	CONCENT	RATION		
CLIENT I.D.	ULI	1221	1016	1242	(Ppm) 1242 1248 1254	1254	1260	TOTAL
#2-U 11/11/86	31986007							450
#3-U 11/11/86	31986008							<50
		•						
				!				
				_				
					1		·	
*					1			
					1	 - '		
e bur Ce								
J. J.					:	-		

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

Approved: Modela

(/ 1/08/87

UPSTATE LABORATORIES, INC.

Analysis Results Report Number 112086002 Date: November 20, 1986

EPA 601/602:

EPA 601/602:		•			
CLIENT I.D.	Under- ground				
Smith Corona	Tank (18,000)				
ULI I.D.	29586012				<u></u>
EPA 601:		ŀ	!		
Chloromethane	<10				
Bromomethane	<10	ļ.			
Dichlorodifluoromethane	<10	1			
Vinyl Chloride	39	1			
Chloroethane	<10				
Methylene Chloride	<10	į			
Trichlorofluoromethane	<10			4	
1,1-Dichloroethylene	<10		,	1	
1,1-Dichloroethane	<10			1	
t-1,2-Dichloroethylene	<10			į	
Chloroform	<10	1			
1,2-Dichloroethane	<10				
1,1,1-Trichloroethane	<10	ļ			
Carbon Tetrachloride	<10				
Bromodichloromethane	<10		1		
1,2-Dichloropropane	<10		1	İ	
t-1,3-Dichloropropylene	<10			1	
Trichloroethylene	2500				
Dibromochloromethane	<10		ł		
1,1,2-Trichloroethane	<10		1	Į	
c-1,3-Dichloropropylene	<10		[
1,1,2,2-Tetrachloroethane	<10		1		
Tetrachloroethylene	<10	}]	
Bromoform	<10		į		
2-Chloroethylvinyl ether	(10	Ì	- 1	1	
EPA 602 (including Xyler			,	ļ	
Benzene	<10				
Toluene	120	1		1	
Ethylbenzene	<10		ļ	•	
Xylenes	(10 (01/602)		ļ		
Halogenated Aromatics (ļ	İ	1	
Chlorobenzene	<10	1		1	
1,2-Dichlorobenzene	<10	1	1	ĺ	
1,3-Dichlorobenzene	<10			1	
1,4-Dichlorobenzene	<10	1			

All results are expressed as ppm.

Approved: Danie / 1/a

Date: _____ 11/20/86

Discialmen: 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

Client: Smith Corona

Report #: 112086002 Date: November 20, 1986

UPSTATE LABORATORIES, INC.

PCB Analysis

					•	Underground Tank (18.000)	CLIENT I.D.	
	_					29586012	CODE	1
		-					1221	
							1016	
							1242	РСВ
,							1248	CONCENT
							1254	PCB CONCENTRATION (ppm)
							1260	
						<10	TOTAL	

consequential damages of ULI for the services performed shall be equal to the fee charged to the customer accepting this report, the customer agrees that the full extent of any and all Hability for actual and Discisimer: 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 for the tervices as liquidated damages.

Approved: 1

11/20/86

WASTE CHARACTERIZATION DATA

Exhibit A





PRODUCT CODE	
WCD NUMBER	
REVIEWED BY	 _

BFI WASTE CODE COMPLETING THIS FORM

		*			
ı.	GENERAL INFORMA				
	a) Generator's Nan		Se Ma	NYD00224602	23
			-):	
	c) Generating Facility Complete Address:_	ב בב בטטעת ענט		··	
	<u>: </u>		3045		
	d) Authorized Company Representative:			Manager, Pla	ant Engineering
	e) Phone Number: 607 753-6011		ter Hours Phone Number		
	f) Emergency Contact: Same g) General Description of The Waste: Contact:	ntaminated Soil	Title: Same	Phone.	Same
	g) General Description of the waste: Qui	iteaminated SOII			
	h) Process Generating Waste: P1	ant Clean Up			
2.	WASTE PROPERTIES @ 25°C:			•	
	a) Physical State: [x] Solid	[] Powder	[] Liquid	[] Semi-solid (sludge) or
	[] Mixture—Describe		Viscosity: [] Lov	v N/A [] Med	
	b) Phases/Layers: [x] Single	[] Bilayered	[] Multilavered		
	Percentage Volume Each Layer: Top 10	<u>)%</u> %, <u>Solid</u> , A	Middle%,	; Bottom	%,
	c) Density: / [] Lbs/gal.	[] Lbs./yd. ³	[x] g/cc.	[] Other	
	at Odor: [] None [K] Mi	ld or [] Strong	☐ 1 — Describe		
	e) Vapor Pressure (in mm of Hg): N/A Neutral	(1) (1)	(f) Color(s): _	Brown	
	g) pH: <u>Neutral</u> i) Flash Point: <u>None</u>	(n) Solubi			
3.	REACTIVITY:	l j T	[]℃	[] Open Cup	[] Closed Cup
J .					
	Hydrophoric [] Yes [x] No	Autopolymerizable		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	[] Voc. Dr. No.	0-21	
	Etiological Agents [] Yes [x] No	Dioxins	[] Yes [X] No [] Yes [X] No	Pesticides Oils	[]Yes [K]No
	Free Cyanide [] Yes [X] No	Free Sulfide	[] Yes [X] No		[X] Yes [] No
	Radioactive Materials [] Yes [X] No	Free Liquids	_[] Yes [X] No	Free Ammonia Absorbents	[] Yes [X] No
	OSHA Carcinogens [X] Yes [] No	PCBs: (circle one)	(A) B C D	Ausorbents	[] Yes [X] No
	If yes, specify type (if applicable) and	concentration in the was	ite composition, Section 5	i.	
5.	COMPLETE WASTE COMPOSITION:		, , , , , , , , , , , , , , , , , , , ,		
	ORGANIC			INORGANIC	
	Cutting Oil < 1%		Dirt, Grit,		
	Hydraulic Oil			_scone)	
			Concrete		Balance
	Chlorinated Solvents < 17	70ppm		al Pb 55-240	
_	Tr	nta1		g<0.2; Ag<2	
6.	Is this waste a "Hazardous Waste" as defined	I by regulations of the U.S.	Environmental Protection	Agency pursuant to 4	0 CFR 261 of the Resource
	TO THE MELONETY METE THE				
	Is this a "Hazardous Waste" as defined by	State or Local Regulation	n? NO		
_	Is a sample included? [] Yes [X] N	ło			
8.	Anticipated Volume: 450	[] Gallons	[] Tons [X] Cubic Yard	s [] Other	
		Year, or [X] Other	One time	. ,	
	To be transported in: [x] Bulk [] CEC(D-PAK 1 Drums (h/no/	cizal		

		BFI WASTE CODE				PRODUCT CODE	
9.	MANIFEST INFORMATIO	_					Local Man
	Proper USDOT Shipping Na	me	USDOT Hazard	Class		UN or NA No.	Local Haz. Waste No.
			None		N	ONE	None
	Non-Regulated	L			<u> </u>	<u> </u>	None
	Mon-Keguraceu						
		USEPA H	azardous Waste N	o(s).			USEPA Haz. Code(s)
	N O N E						NONE
10.	Required personal protect	ive equipment &	handling procedu	res:Glove	es, re	spirator	
11.	Supplemental information	amadad lan	1				
•••	Supplemental information	attached: _Ana	IVSIS				
							No. of pages 8
12.	GENERATOR'S CERTIFIC	TION:					
	nereby certify that the ab	ove and attached	description is com	plete and accu	rate to th	ne best of my knowledge	and ability to determine, th
	no deliberate or willful or GENERATOR'S AUTHORY			es exists, and t	hat all k	nown or suspected hazar	ds have been disclosed.
3	11/87			D .	\bigcirc		
J		NATURE	Indian,	Harrage	~ Y4	ut Greeneen	3 QC
13.			CTION IS SOO DE	TINCE			INITIALS
	A. APPROVAL	STATUS.	[] ACCEPTABLE			OCUMENTATION	
	B. REASONS	OR SPECIAL CO	NDITIONS FOR A	E [] . NPPROVAL STAT	APPROV	AL WITHHELD	[] DISAPPROVED
					0 5.		
		-			-		
	<u> </u>						
	4		•				
		·	GNATURE				
		_				TITLE/AGENCY	
This fr	orm is to be completed by		REPRESENTATIV	E SAMPLE CE	RTIFICAT	<u>E</u>	
SAMP	LES THAT ARE RADIOACT	TVE, SHOCK SEI	HING THE SAMPLE, PRE NSITIVE EXPLOSIV	eférably a repre	sentative	of the generator, DO NO	OT COLLECT OR FORWAR
		,	3, 2, 2, 2,	c, ok rikori	TORIC		
	Cenerato	r's Company Nar					
		is conpany Nar	ne			Company's Ad	dress
	Location of Sampling	Linit Good Gie	Tools our				
Date	Sampled:	Time S:	moled			Process Producing '	
Type o	of Waste: (circle)	IIIIre 3a	umpiea:	^M	PM	Volume of Sample (ollected:
	udge Wastewater	Solid Mix	Other				
Pt	nases/Layers: (circle)		ingle	Bilaye			(specify
	of Sampler: (circle)		G -1	bilaye	reu	Multila	yered
	oliwasa Grain Trier	Scoop Aug	er Pond Wei	ghted Bottle	Thief	Other	(specify
	osite Sample:	——— Nur	nber of sub-sampl	les		Volume of sub-car	iples (specify
ield l	nformation: (Comments)						ipies
	·	certify th	is sample is ma				
		r certify (n	is sample is repres	entative of the	waste to	be managed.	
Collect	tor						
)	· Print N	lame		Signature		Tale	phone Number
/				•		·	Priorie raumoer
	-	Title					
		HE				Company	

ADDENDUM TO WASTE CHARACTERIZATION DATA

NOTE: This addendum is to be utilized only for wastes which are destined for CECOS' Niagara



Product Code	
WCD Number	
Reviewed By	
BET Washe Cada	

Falls. New York TSDF	utagara	CECOS		Kentemed BA	
-8115, NAW 101K 1301				BFI Waste Code	
	INSTRUCTIONS FOR	WASTE CHARACTERI	ZATION DATA	ADDENDUM	
SECTION 1 - GENERA	L INFORMATION:				
i) Business Contact - quote letter and co	The name, title and ontract addendum shou		n individual re	presenting the ge	nerator that the
j) Billing Address - sent to, if different		to which the invoice, ng Facility Complete		and contract adde	ndum should be
SECTION 4 - WASTE	CONTAINS:				
- Organic Priority Pol WASTES ONLY.	lutants - The 109 orga	anic chemicals designe	ed as priority p	pollutants by EPA	- FOR AQUEOUS
SECTION 8 - VOLUME	:				
B. (a) Indicate the typ	pe of vehicle (i.e.:	Box Van. Roll-Off. Va	ac Truck, etc.)	•	
SECTION 12 - GENER	ATOR'S CERTIFICAT	TION:			
An authorized representation of be processed nor a				l for recognition	. The WCD will
) IMPORTA	ANT: PLEASE READ	INSTRUCTIONS BEF	DRE COMPLETI	NG THIS ADDEND	<u>IUM</u>
1. GENERAL INFORM	MATION:		Directo	or.	
i) Business Contac	ct: <u>David Verostk</u>	co1		elations Phone:	(607) 753-60
j) Billing Addres:	s: Same				
4. THIS WASTE CON	ITAINS:				
		of 50 ppm (Aqueous Was on in the waste compos			Yes [] No
8. (a) Type of Vehic	le: <u>Dump truck, ro</u>	oll off		····	
2. GENERATOR'S CE	RTIFICATION:				
and ability to de	that the above and at termine, that no deli suspected hazards ha	tached description is berate or willful omis we been disclosed.	complete and ac	ccurate to the bes	st of my knowled ies exists, and
GENERATOR'S AUTHO	mes Endr	ne Mana	ger Plans	Torgineer	n 20
Date _	Signature	FOR CECOS USF \cap	Title	U	Initials
\ /					

PREPARED FOR SETTLEMENT PURPOSES A. DISPOSAL SITE __ B. DISPOSAL METHOD: 010675 المساوح المناطقة والمناشقة المناسبين F MARMUM ______ % SETTLEABLE SOCIUS BY VOLUME C. REGULATORY CORRESPONDENCE 25000 DAOH 2 THA 22 22 CA OF TON D NOTIFICATION SUPPLEMENTAL REQUEST _ H MUST NOT BE DUSTY 2. NUMBER ___ IBIAL LOADS DEAT ____ IDEC INTORINE NUMBER __ / OINE# ___ SHOWATURE



CLIENT O'Brien & Gere Engineers, Inc	C. 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 12/15/80	5 DATE REC'D. 12/16/86 DATE	ANALYZED 1/8/87
ррь		ppb
STATE OF THE STATE	t-1,3-Dichloropropene	<1000.
Bromomethane	原则是影響的學術學的	11/4/4/2013 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Benzene	
Chloroethane	The state of the second	
表示的 1000 · 1000	1,1,2-Trichloroethane	
1,1-Dichloroethene	Carrie Hall Contract Contract	
在100mm的100mm01000mm0100mm0100mm0100mm01000mm01000mm01000mm01000mm01000mm01000mm01000mm010000mm010000mm010000mm01000000	2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene 1700.	的情况要是 从"管理"。1995年	Fine His Property and the
Zorbinous Comments of the Comment of	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane		1000.
TO BE THE BUILDING OF THE STATE OF THE STATE OF	Toluene	2000.
Carbon tetrachloride	The War Control	
	Ethylbenzene	<1000.
1,2-Dichloropropane		

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

Authorized: 2-2-8-7

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



CLIENT)'Brien & Ge	re Engineers	Inc.		JOB NO	3435.001.100
DESCRIPTION	lixon Hargra	ve, SCM Site				
	lo. 2 Backfi	11 Pile				
SAMPLE NO. A6	573 DATE	COLLECTED 12/	15/86	DATE REC'D. 12/16/86	DATE ANA	LYZED 1/12/87
		PP	b			ppb
			W ₀	t-1,3-Dichloropropene		<1000.
Bromomethan	9	1		ME CONSIDER THE		
(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)				Benzene		
Chloroethane				and the same		MANAGE PANG
			y garanta	1,1,2-Trichloroethane		
1,1-Dichloroet	hene			Market Bridge Bridge	特定的基本	1986年1月1日 - 1983年1日 - 1983年1日 - 1983年1日 - 1983年1日 - 1983年1日 - 1983年1日 - 1983年1日 - 1983年1日 - 1983年1日 - 1983年1日 -
The property				2-Chloroethylvinyl eth	er	<10000.
t-1,2-Dichloro	ethene		<u>-</u>			Letter State State State
Seattle Transport			《山麓》.	1,1,2,2-Tetrachloroeth	ane	<1000.
1,2-Dichloroet	hane			\$10000 · 6· · · · · · · · · · · · · · · ·	《沙海神》	
				Toluene		
Carbon tetracl	hloride			(3.18) WAR TO SEE		
Mark Arthrey	支持的原施	cive a markete.	Style Vite	Ethylbenzene		
1,2-Dichioropi	ropane		/			

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: OPUTT

Date: 2-2-87



CLIENT	O'Brien & Ger	e Engineers, Inc.	JOB NO	3435.001.100
DESCRIPTION _	Nixon Hargrav	e, SCM Site		
	No. 3 - First	Truckload		
SAMPLE NOA	6574 DATE C	OLLECTED 12/15/86	DATE REC'D. 12/16/86 DATE A	NALYZED 1/8/87
		ppb		ppb
	400 · \$1	Section Administration	t-1,3-Dichloropropene	<1000.
Bromometha	ine			
2000 Big 1986			Benzene	
Chloroethan	e		THE REPORT OF THE CONTRACTOR	
	44 (A 1960) (P. 18)		1,1,2-Trichloroethane	
1,1-Dichloro	ethene		在这种的过去分词 。	
The state of the s		Mary Company	2-Chloroethylvinyl ether	<10000.
t-1,2-Dichlor	roethene	(220.)		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloro	ethane		· 1998年 - 199	
34. 1865 · 1866 · 18		第277条约62条件	Toluene	
Carbon tetra	achloride			
or market			Ethylbenzene	1
1,2-Dichloro	propane	V		

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

Authorized: 2-2-87



CLIENT	O'Brien & Gere Engine	ers, Inc.		OB NO	3435.001.100
DESCRIPTION_	Nixon Hargrave, SCM S	Site			
	No. 4 - Side of Tank				
SAMPLE NO. A	DATE COLLECTED	12/15/86	DATE REC'D. 12/16/86	ATE ANA	LYZED 1/9/87
		ppb			ppb
17.18	经验证证明的 对对的		t-1,3-Dichloropropene		<1000.
Bromometh	ane		A STATE OF THE STA		
建设建设设置			Benzene		
Chloroethai	ne		等级数数 领导等	为连交流	
A. S. C. C. C. C. C. C. C. C. C. C. C. C. C.	AND MICHAEL WITH MARKET		1,1,2-Trichloroethane		
1,1-Dichlore	oethene				
			2-Chloroethylvinyl ether		<10000.
t-1,2-Dichlo	proethene	(330.)			
Control single		A SWAR	1,1,2,2-Tetrachloroethane		<1000.
1,2-Dichlor	oethane		The same of the sa		
11-27-31-31			Toluene		
Carbon tetr	rachloride				
\$ \$10 miles	经国际的		Ethylbenzene		V
1,2-Dichlor	opropane	\overline{V}			建筑 的产生的最大

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 83 %

2-Bromo-1-chloropropane = 87 %

Trifluorotoluene = 86 %

μg/kg wet weight

Authorized: 2-2-87



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 ANA	ALYZED 1/12/87
ppb		рръ
	t-1,3-Dichloropropene	<1000.
Bromomethane	TO SERVICE CONTRACTOR OF THE SERVICE	· () 从 [5] () () () () () () () () () () () () ()
	Benzen e	
Chloroethane	多种的性质大学的一种主义和主义的	STATE OF BEEN
A SECTION OF THE PROPERTY OF	1,1,2-Trichloroethane	
1,1-Dichloroethene		
and the state of t	2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene	The second of th	
The service of the se	1,1,2,2-Tetrachioroethane	<1000.
1,2-Dichloroethane	The state of the s	10年的基金公司
The street of th	Toluene	
Carbon tetrachloride		
	Ethylbenzene	
1,2-Dichloropropane	医多数性的 化加尔摩擦器的现在分词	

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: 12-2-8



CLIENT	O'Brien & Gere E	ngineers, Inc	•	_JOB NO	3435.001.100
DESCRIPTION	Nixon Hargrave,	SCM Site			
	No. 6 - Last Buc	ket Out			
SAMPLE NOA6	577 DATE COLL	ECTED 12/15/8	6 DATE REC'D12/16/86	_DATE ANA	LYZED 1/12/87
		ppb			ppb
A. 特别表现的	TOPING COLPANIE	atak sakibiks	t-1,3-Dichloropropene		<1000.
Bromomethan	10				
	等解源自己的发出		Benzene		
Chloroethane)		N - 10 10 10 12 - 12 12 12 12 12 12 12 12 12 12 12 12 12		
美国共享美国	PARTER STREET	海人员和自己的 经净	1,1,2-Trichloroethane		
1,1-Dichloroe	thene			WAR TO SHE	The second second
	新兴之小,蒙 多。	· · · · · · · · · · · · · · · · · · ·	2-Chloroethylvinyl ether	. · · <u>-</u> ·	<10000.
t-1,2-Dichloro	ethene		The state of the s		
Section Consider			1,1,2,2-Tetrachloroethan	16	<1000.
1,2-Dichloroe	thane				
			Toluene		
Carbon tetrac	chloride				
			Ethylbenzene	*:	
1,2-Dichlorop	ropane	V	网络树木 计算数数	Medicin	

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: 2-2-87



CLIENT O'Brien & Gere Engineers, Inc.	JOB N	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
ррь		ppb
	t-1,3-Dichtoropropene	<1000.
Bromomethane		2000年100年18日本
	Benzene	<1000.
Chloroethane	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	
· 1988年中的中国中国中国中国中国中国中国中国中国中国中国中国中国中国中国中国中国中国中	1,1,2-Trichloroethane	
1,1-Dichloroethene	A street and the stre	
等的 这种的特殊的 是不是这种的。	2-Chloroethylvinyl ether	<10000.
t-1,2-Dichloroethene	The state of the s	
	1,1,2,2-Tetrachloroethane	<1000.
1,2-Dichloroethane	Constitution of the Consti	1000 .
Constitution of the Consti	Toluene	<1000.
Carbon tetrachloride	CHECKED ACTIONS	
TO THE PROPERTY OF THE PARTY OF	Ethylbenzene	
1,2-Dichloropropane		

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: 2-2-87



CLIENT 0'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 RE	CD.12/16/86 DATE ANALY	ZED 1/9/87
ррь		ppb
	Dichloropropene	<1000.
Bromomethane	(1965年) · · · · · · · · · · · · · · · · · · ·	
Benze	ene	
Chloroethane		
1,1,2-	Trichloroethane	Salaries of the secondary
1,1-Dichloroethene	Alternative of the Valley of	
2-Chic	proethylvinyl ether	Internal many contents
t-1,2-Dichloroethene (670.)		10000.
Printer and the Control of the Contr	2-Tetrachloroethane	41000
1,2-Dichloroethane	STOPPENS TO LINE SATER A LINE SAME	<1000.
Tolue	ne	
Carbon tetrachloride		For a Comment of the
Ethylh	enzene	
1,2-Dichloropropane		

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

Authorized: 2-2-87

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



CHAIN OF CUSTODY RECORD

2410,010,612 SURVEY SAMPLERS: Sigmonio SMITH CORONA CORTLANDVILLE NIXON HARGRAVE SAMPLE TYPE MOITATE STATION LOCATION SIAO SEQ. NO. OF TIME AMALYSIS Water NUMBER CONTAINERS REQUIRED Come. Gras. WEST OF TANK CEVIES 12/15/201045 3 FT BELOW GNADE O+G, VHO BACKFILL PILE (2/14/86) (100 2 OG, WO 12/14/26/1205 FIRST TRUCKWAD 3 OHG, VHO SIDE OF TANK 1215/86/1225 OHG. VHO BACKFILL PILE 5 046,VH0 LAST BUCKET OUT 12/15/26/1430 OIG, VHO 12/18/86 1500 center westwindrow OHG VHO CENTER-CENTER WINTOROW 1415/86 1505 O+G,VHO Relinquished by: (Sjepenore) Received by: (Signerure) 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 Date/Time analysis: ¡Signature! Dispatched by: signatural Date/Time Received for Laboratory by: Date/Time Method of Shipment: AUTOMOBILE



CLIENT O'BRIEN & GI	ERE ENGINEERS, INC.	JOB	NO. <u>3435.001.100</u>
DESCRIPTION Ni XOI	n-Hargrave, SCM site, Ta	unk Removal #2, #1	
SAMPLE NO. <u>D3433</u>	DATE COLLECTED 12-19-86		E ANALYZED <u>1-13-87</u>
	ррь		ppb
STANDARD OF CE		t-1,3-Dichloropropene	<100.
Bromomethane			
AND THE PROPERTY OF THE PARTY O		Benzene	
Chloroethane		MARKS STANDARD	
Same Control (St. 18)		1,1,2-Trichloroethane	The state of the s
1,1-Dichloroethene		The second of the second	
年 经过度的		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		到我们的 对公司	
		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane			Mark San Assault and Control
CONTRACTOR STATE		Toluene	
Carbon tetrachloride		1867 1867 1867 1867 1867 1867 1867 1867	
		Ethylbenzene	<1000.
1,2-Dichloropropane			Mindrin Verkensen
			· 经产品的 医二氏性 医二氏性 (1) 医二种 (1) End (1)

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%

Authorized: CMT

Date: February 9, 1987



CLIENT O'BRIEN & GERE ENGINE	EERS, INC.	JOB N	o. <u>3435.001,100</u>
DESCRIPTION Nixon-Hargrave	e, SCM site, Tan	k Removal #2, #2	
SAMPLE NO. D3434 DATE COLLE	стер 12-19-86	DATE REC'D. 12-29-86 DATE	ANALYZED 1-13-87
	ppb		ppb
AND THE PROPERTY OF THE PROPER		t-1,3-Dichloropropene	<100.
Bromomethane		· 1000000000000000000000000000000000000	
		Benzene	
Chloroethane			
to rekanika kekerangan belancar	WAR ANT TO	1,1,2-Trichloroethane	Carage of the caracter of the caracter
1,1-Dichloroethene		· · · · · · · · · · · · · · · · · · ·	
Sales of the second of the second	5.450 We 操行。	2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		19. 高的 18. 18. 18. 18. 18. 18. 18. 18. 18. 18.	
		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane			
		Toluene	
Carbon tetrachloride			
		Ethylbenzene	<1000.
1,2-Dichloropropane	V	(1) · · · · · · · · · · · · · · · · · · ·	

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 85% 2-Bromo-1-chloropropane = 81%

Trifluorotoluene = 83%

Authorized: CNUTA

Date: February 9, 1987



CLIENT O'BRIEN & GERE ENGIN	IEERS, INC.	JOB N	o. <u>3435.001.100</u>
DESCRIPTION Nixon-Hargray	e. SCM site. Tar	nk Removal #2. #3	
SAMPLE NO. <u>D3435</u> DATE COLL	ЕСТЕD <u>12-19-86</u>	DATE REC'D. 12-29-86 DATE	ANALYZED
	ppb		ppb
	建工设施 基本的设置	t-1,3-Dichloropropene	<100.
Bromomethane			TO MARKET STATE OF THE STATE OF
	等一种原理 然为人	Benzene	<100.
Chloroethane			(1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1) 1980 (1
网络沙鸡类		1,1,2-Trichloroethane	
1,1-Dichloroethene		· · · · · · · · · · · · · · · · · · ·	
" 我不懂这么?"		2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene		William State of the State of t	
STORY WAS A STATE OF THE STATE		1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane			
She had been been been been been	建筑地域的建筑	Toluene	
Carbon tetrachloride		· · · · · · · · · · · · · · · · · · ·	
	数据是对他的。 第12	Ethylbenzene	<1000.
1,2-Dichloropropane	1		

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 76% 2-Bromo-1-chloropropane = 72%

Trifluorotoluene = 67%

Authorized: February 9, 1987

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CLIENT O'BRIEN & GERE ENGINEERS, INC.		юв NO. <u>3435.001.100</u>
DESCRIPTION Nixon-Hargrave, SCM site, Ta	nk Removal #2, #4	
SAMPLE NO. D3436 DATE COLLECTED 12-19-86		DATE ANALYZED1-13-87
ррь		ppb
	t-1,3-Dichloropropene	<100.
Bromomethane	在 国际中国的 医电影	
	Benzene	
Chloroethane	人名意人名 安全公司 神學學院	
100mm (100mm)	1,1,2-Trichloroethane	
1,1-Dichloroethene	MINERAL TOPICS	
	2-Chloroethylvinyl ether	<1000.
t-1,2-Dichloroethene	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	
	1,1,2,2-Tetrachloroethane	<100.
1,2-Dichloroethane		
产业等 发 变化多级产品或用数十分性质的现在分词	Toluene	A STATE OF THE STA
Carbon tetrachloride	16. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	
And the State of t	Ethylbenzene	<1000.
1,2-Dichloropropane		A BOX TO A PART OF THE

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

Comments:

SURROGATE RECOVERIES:

Bromochloromethane = 88% 2-Bromo-1-chloropropane = 88% Trifluorotoluene = 89%

Authorized: Authorized:



SURVEY				SAN	PLER	S: ¡Sign	alviel		
Nijo	n-Hadgione: C	subandu	Hle	1) ste	. T	Zan	udys.	
NOITATZ RBBMUH	STATION LOCATION	SIAO	TIME		MPLE IT		sea NO.	NO. OF	AMALYSIS REQUIRED
me Remain	Sample #1	12/9/86	il:00a			4			Hold until
* 2	Z#	1	1			1		/	Jurille Note
out Rem		1	11			1		1	from G.A.S
#2	#4	V	"			Y		1	P.G.R =
		-							P.G.B on S.R. Gam
		-							
		 							
		+		-		.			
	ned by: (Signature)		Receiv	ed by:	(Signer	ure)			Date/Time
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			VECRIA	ed by:	: [Signel	N rel			Date/Time
Relinquish	ned by: (Signatura)		Receiv	ed by:	(Signel	uroj			Date/Time
Relinquisi	hed by: (Signature)		Receiv analys	ed by is: ¿sign	Mobil	e lab	orator	y for field	Date/Time
Dispatche	ed by: (Signoture)	Date	Time	Recei	Wed to	or Lab	orato	ry by:	Date/Time
Method.o	t Shipment:		<u> </u>	ser	m	<u> </u>	10/	ut	12/29/26
	r snipment:	any	Van						

EXHIBIT D1 DETREX VAPOR DEGREASER INFORMATION

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.

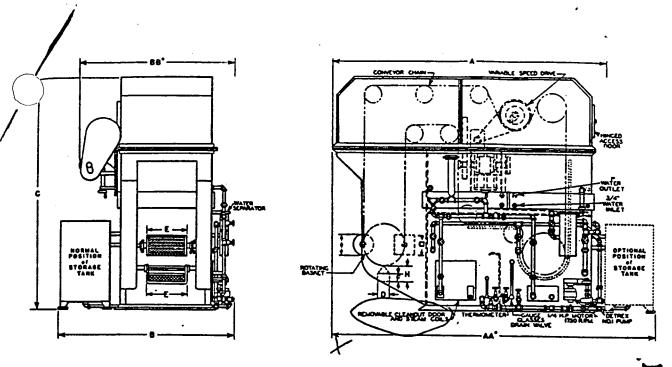
As the unit was disassembled and cleaned, I examined, as best I could, all tank joints, pipe connections, and liquid containment components for evidence of leakage, I found none.

The cleaned components and sections of the degreaser and still were placed in a scrap gondola for removal by Wallace Steel Company.

Attachments:

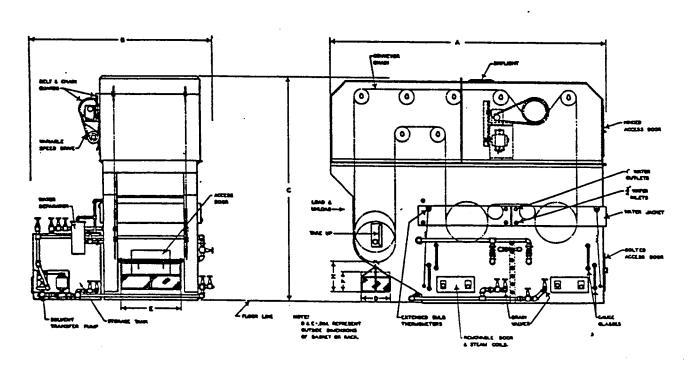
Eric 0. Cleveland

10/31/86



DETREX Model 1 DCR 750-1 S Degreaser Steam-heated, Return-type Crossbar Conveyor, Rotary Basket Design

Degresser discribed in afforhed report.



DETREX Model 2 DCR 650-15 Degreaser
Steam-heated, Return-type Crossbar Conveyor

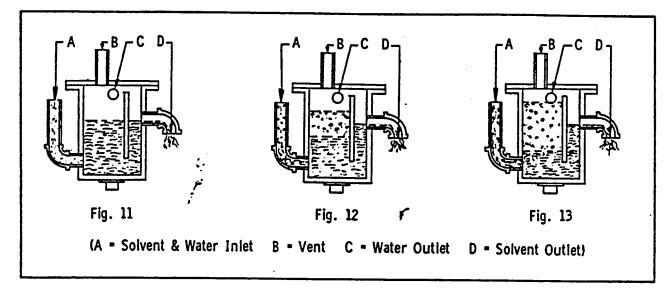
DETREX WATER SEPARATOR

(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 runback 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.



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.

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

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).

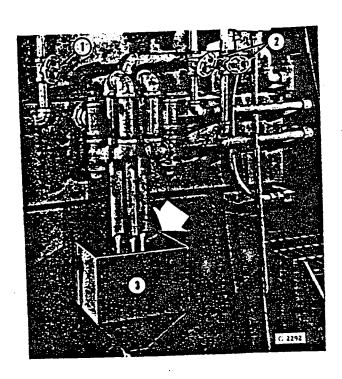


Fig. 1 Regulate Flow of Condenser Water Discharge

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 Numbér
- 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:

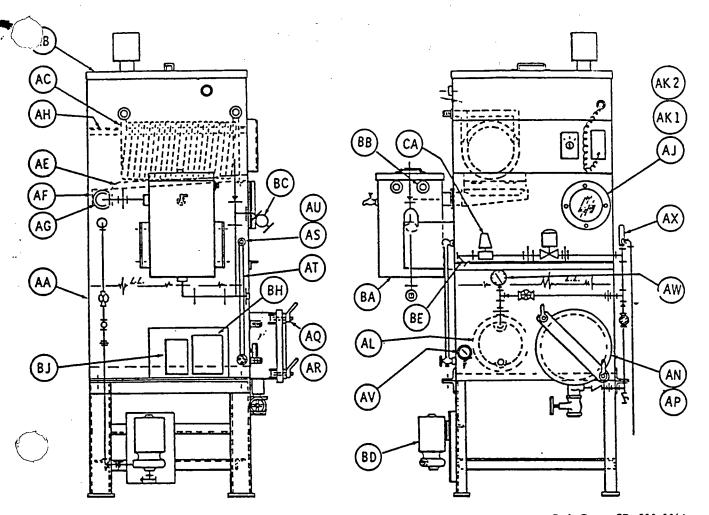
DETREX CHEMICAL INDUSTRIES, INC.

Parts Order Department 15331 Idaho Detroit, Michigan 48238

The minimum invoice for each part order is \$3.00.



REPLACEMENT PARTS LIST for DETREX S-60 S 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

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REPLACEMENT PARTS for DETREX S-60S (Steam-Heated) STILL (Cont'd.)

SYM.	PART NUMBER DESCRIPTION		QUANTITY	
AL AN AP AQ	2300, 5059-1 2980, 5125-1 4020, 5581-125 5580, 5056-1	Steam Coil Clean-out Door Gasket - Clean-out Door Lever	1 1 1 2	
AR AS AT AU	6500. 5013-2 4060. 6-1 4140. 5-11 7340. 22-1	Pin - Hinge Gauge Glass Cocks Gauge Glass Seal - Gauge Glass	1 (Set) 1 2	
AV AW	8490, 5007-1 4060, 4-1 4060, 4-2	Thermometer Gauge 0-30 lb. (Tri) Gauge 0-60 lb. (Perk)	1 1 1	
AX	9204.1-1 9204.4-1	Valve Pop - Safety - 20 lb. (Tri) Valve Pop - Safety - 60 lb. (Perk)	1 1	
BA BB	9461.5009-1; 9461.5010-1 2310.5028-1 2310.5025-1	Water Separator (FF-1 Coated) Water Separator (Stainles Steel) Coil - Water Separator (FF-1 Coated) Coil - Water Separator (Stainless Steel)	1 1 1 1 1	
ВС	4060.3-2 4020.43-1 4140.8-1	Visi-Flo Gasket - Visi-Flo Glass	1 2/glass 2	
BD	6661. 5075-402 6660. 28-1 1520. 13-1 5820. 5021-110	Pump and Motor - 230/460/3/60 (motor pump) Pump Only - Belt Driven (optional) Belt - "V" Motor - 1/3 hp - 1750 rpm - TEBB, 115/230/1/60 (For Belt Driven Pump)	1 1 1	
BE	1591.1-4 7300.5-4	Steam Strainer Body 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 INDUSTRIBLE ANC. P.O. BOX 50L 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.

NOV 19 1985 E. CLEVELAND