8 wells

34-12
12-14-00

January 19, 2001

-Some metals
-no VOCs

HDR

Mr. Larry Rose
North Carolina Department of Environment
and Natural Resources
Division of Solid Waste Management
Solid Waste Section
P. O. Box 27687
Raleigh, North Carolina 27611-7687

JAN 2001
Section

Re: Fall 2000 Semiannual Ground-Water Sampling Analytical
and Landfill Gas Monitoring Results
Winston-Salem Construction and Demolition Landfill (No. 34-12)
Forsyth County, North Carolina
HDR Project No. 00162-130-018

Dear Mr. Rose:

HDR Engineering, Inc. of the Carolinas (HDR) is hereby submitting, on behalf of the Winston-Salem City/County Utilities Commission (the City), the ground-water analytical and landfill gas monitoring results for the Fall 2000 monitoring period at the C&D Landfill (the Landfill) located in Forsyth County, North Carolina.

Ground-water samples were collected from onsite detection monitoring wells MW-1R, MW-2R, MW-3R, MW-4R, MW-5R, MW-6R, MW-7, and MW-8 on December 14 and 15, 2000, for the eight Resource Conservation and Recovery Act metals (excluding mercury) and Appendix I volatile organic compound (VOC) analysis. A trip blank was also included for QA/QC purposes. Field measurements of pH, specific conductance, and temperature were also recorded during pre-sampling well purging. These measurements were recorded on field forms, which have been attached to the Report of Laboratory Analysis. Monitoring well construction record drawings for each monitoring well sampled are attached to this submittal. Based on past ground-water flow characteristics for the site, ground-water monitoring well MW-1R is hydraulically upgradient of the Landfill and, therefore, is considered as "background" for the site.

In addition, landfill gas monitoring was performed from the six permanent methane gas monitoring stations (MM-1 through MM-6) located around the perimeter of Phase I of the Landfill. Methane stations MM-2 and MM-4 are nested monitoring stations, while all other stations are constructed as a single monitoring point. Methane gas probe monitoring construction record drawings for each station are attached to this submittal.

The metals arsenic, barium, chromium, and lead were detected in the ground water during this round of sampling. The concentrations detected are reflective of the naturally-occurring trace metals typically present in the saprolite of this region. In addition, all of the trace metal concentrations for this period were below their respective 2L ground-water standards. As reflected by the Pre-sampling Well Purging forms, the presence of these trace metal detections is due to the slight lingering well turbidity in each well (especially monitoring well MW-8 which was sampled for the first time this period).

HDR Engineering, Inc.
of the Carolinas

Employee Owned

128 S. Tryon Street
Suite 1400
Charlotte, North Carolina
28202-5001

Telephone
704 338-6700
Fax
704 338-6760

No VOCs were detected in any of the ground-water monitoring wells this period. None of the compounds were detected in either the trip blank or the equipment blank.

The Report of Laboratory Analysis for this sampling event at the Landfill is attached to this letter (including the Chain-of-Custody Record and field purging forms). Table 1 is also attached to this report and summarizes the results of all sampling events performed to date at the Landfill. The results of this recent sampling event indicate that the existing ground-water monitoring well network at the Landfill, with the recent installation of monitoring wells MW-3R, MW-6R, and MW-8 is adequate to provide representative ground-water quality data and release detection determination for the Old Salisbury Road Landfill.

Finally, no trace of methane was detected at the site in any of the onsite methane monitoring stations. Only a trace of carbon monoxide was detected in methane monitoring probe MM-5. A copy of the Perimeter Gas Probe Monitoring Field Data Form is attached to this submittal.

This is the first sampling event where the collection of a ground-water sample from MW-8 has occurred. This well will be sampled from this point forward to obtain adequate background data from this location before Phase III of the Landfill is used. Based on the current schedule, Phase III certification is being prepared by HDR and will be submitted by mid-year. However, the existing landfill Cell has adequate volume for approximately 1 year of use. Therefore, background analytical data will be continued over at least the next two quarters before waste is placed in this phase of the Landfill.

If you have any questions or comments concerning the information summarized in this letter or in the attached analytical data report, please do not hesitate to contact me at (704) 338-6832.

Sincerely,

HDR Engineering, Inc. of the Carolinas

John R. Isham, PG
Senior Hydrogeologist

JRI/jvd

Attachments: Table 1, Summary of Ground-Water Analytical Results
Report of Laboratory Analysis (w/Chain-of-Custody Record)
Perimeter Gas Probe Monitoring Field Data Form
Pre-Sampling Well Purging Forms
Monitoring Well Construction Record Drawings
Methane Gas Monitoring Construction Record Drawings
Ground-Water and Methane Gas Monitoring Well Locations

cc: Edward Gibson, PE., Winston-Salem City/County Utility Commission
Danny Hockett, Winston-Salem City/County Utility Commission

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-1R

Parameter	1/17/96	10/24/96	5/13/97	10/30/97	5/5/98	11/5/98	6/2/99	11/19/99	6/5/00	12/14/00
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Barium	0.224	0.18	0.10	0.29	0.10	0.16	0.15	0.13	0.11	0.15
Cadmium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	<0.010	0.006	0.003	0.011	0.049	0.012	0.0078	0.0052	<0.002	0.0066
Lead	0.006	<0.005	<0.005	0.012	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury	0.0018	0.0002	<00002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	<0.001	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005
Methyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	<5	<5	<5	<5	<5	<5	<10	<10	<10	<10
Acetone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Methyl Iodide	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acrylonitrile	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dichloromethane	<5	<5	<5	<5	<5	<5	13	<5	<5	<5
Carbon Disulfide	23	<5	<5	<5	<5	28	<5	<5	<5	<5
Trans-1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Acetate	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Methyl Ethyl Ketone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroporpane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-Pentanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,3-Dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,3-Dichloro-1-Propene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Dibromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Xylenes (total)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-Trichloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,4-Dichloro-2-Butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-2R

Parameter	1/17/96	10/24/96	5/13/97	10/30/97	5/5/98	11/5/98	6/2/99	11/20/99	6/5/00	12/14/00
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	<0.005	<0.005	<0.005
Barium	0.35	0.16	0.20	0.34	0.19	1.1	0.15	0.12	0.18	0.061
Cadmium	<0.010	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	0.012	0.009	0.004	0.043	0.034	0.21	0.0078	0.014	0.003	0.0039
Lead	0.026	0.008	0.014	0.031	0.019	0.068	<0.005	0.0069	0.0065	<0.005
Mercury	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	<0.005	<0.005	0.006	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	<5	<5	<5	<5	<5	<5	<10	<10	<10	<10
Acetone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Methyl Iodide	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acrylonitrile	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dichloromethane	<5	<5	<5	<5	<5	<5	13	<5	<5	<5
Carbon Disulfide	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Acetate	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Methyl Ethyl Ketone	86	<100	<100	<100	<100	<100	<100	<100	<100	<100
Cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroporpane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-Pentanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,3-Dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,3-Dichloro-1-Propene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Dibromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Xylenes (total)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-Trichloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,4-Dichloro-2-Butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-3/3R

Parameter	1/17/96	10/24/96	5/13/97	10/30/97	5/5/98	11/5/98	6/2/99	11/20/99	6/5/00	12/15/00
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-----	0.0059	<0.005	0.031
Barium	1.23	0.79	0.80	0.62	0.86	1.4	-----	0.052	0.30	1.5
Cadmium	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	-----	<0.001	<0.001	<0.001
Chromium	0.009	0.020	0.028	0.016	0.025	0.077	-----	0.024	<0.002	0.10
Lead	0.015	0.015	0.027	0.026	0.032	0.039	-----	0.040	<0.005	0.08
Mercury	0.0007	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	-----	<0.0002	<0.0002	NA
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-----	<0.005	<0.005	<0.005
Silver	<0.001	<0.005	<0.005	<0.005	<0.002	<0.002	-----	<0.002	<0.002	<0.002
Methyl Chloride	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Trichlorofluoromethane	<5	<5	<5	<5	<5	<5	-----	<10	<10	<10
Acetone	<100	<100	<100	<100	<100	<100	-----	<100	<100	<100
1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Methyl Iodide	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Acrylonitrile	<100	<100	<100	<100	<100	<100	-----	<100	<100	<100
Dichloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Carbon Disulfide	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trans-1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Vinyl Acetate	<50	<50	<50	<50	<50	<50	-----	<50	<50	<50
Methyl Ethyl Ketone	<100	<100	<100	<100	<100	<100	-----	<100	<100	<100
Cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Chloroform	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Bromochloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Benzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dichloroporpane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Dibromomethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
4-Methyl-2-Pentanone	<50	<50	<50	<50	<50	<50	-----	<50	<50	<50
Cis-1,3-Dichloropropene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Toluene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trans-1,3-Dichloro-1-Propene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
2-Hexanone	<50	<50	<50	<50	<50	<50	-----	<50	<50	<50
Dibromochloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Tetrachloroethylene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,1,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Ethylbenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Xylenes (total)	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Styrene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2,3-Trichloropropane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trans-1,4-Dichloro-2-Butene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-4R

Parameter	1/17/96	10/24/96	5/13/97	10/30/97	5/5/98	11/6/98	6/2/99	11/20/99	6/5/00	12/15/00
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0075	<0.005	<0.005
Barium	0.595	0.72	0.28	0.65	0.85	2.0	0.95	0.86	0.57	0.35
Cadmium	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	0.021	0.047	<0.002	0.055	0.13	0.30	0.11	0.06	<0.002	0.028
Lead	0.017	0.016	0.012	0.029	0.043	0.076	0.050	0.04	0.0095	0.0081
Mercury	0.0017	0.0003	<0.0002	<0.0002	<0.0002	0.00021	<0.0002	0.00036	<0.0002	NA
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	<0.001	<0.005	0.006	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	<5	<5	<5	<5	<5	<5	<10	<10	<10	<10
Acetone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Methyl Iodide	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acrylonitrile	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dichloromethane	<5	<5	<5	<5	<5	<5	10	<5	<5	<5
Carbon Disulfide	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Acetate	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Methyl Ethyl Ketone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroporpane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-Pentanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,3-Dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,3-Dichloro-1-Propene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Dibromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Xylenes (total)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-Trichloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,4-Dichloro-2-Butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-5R

Parameter	1/17/96	10/24/96	5/13/97	10/30/97	5/5/98	11/6/98	6/2/99	11/20/99	6/5/00	12/14/00
Arsenic	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	0.005
Barium	1.00	0.62	0.33	0.61	0.82	0.48	0.24	0.20	0.20	0.40
Cadmium	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	0.096	0.043	0.070	0.016	0.17	0.096	0.038	0.029	0.0081	0.082
Lead	0.019	0.020	0.014	0.031	0.069	0.029	0.016	0.0082	<0.005	0.0076
Mercury	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	NA
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	<0.001	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	<5	<5	<5	<5	<5	<5	<10	<10	<10	<10
Acetone	<100	<100	<100	<100	<100	150	<100	<100	<100	<100
1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Methyl Iodide	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acrylonitrile	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dichloromethane	<5	<5	<5	<5	<5	<5	10	<5	<5	<5
Carbon Disulfide	<5	<5	<5	<5	<5	25	<5	<5	<5	<5
Trans-1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Acetate	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Methyl Ethyl Ketone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroporpane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-Pentanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,3-Dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,3-Dichloro-1-Propene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Dibromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Xylenes (total)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-Trichloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,4-Dichloro-2-Butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-6/6R

Parameter	1/17/96	10/24/96	5/13/97	10/30/97	5/5/98	11/5/98	6/2/99	11/19/99	6/5/00	12/14/00
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-----	<0.005	<0.005	<0.005
Barium	1.40	0.59	0.30	0.26	0.36	0.16	-----	0.059	0.082	0.041
Cadmium	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	-----	<0.001	<0.001	<0.001
Chromium	0.012	0.010	0.021	0.014	0.033	0.012	-----	0.0028	<0.002	0.0026
Lead	0.018	0.011	0.014	0.014	0.020	<0.005	-----	<0.005	0.0058	<0.005
Mercury	0.0014	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-----	<0.0002	<0.0002	NA
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-----	<0.005	<0.005	<0.005
Silver	<0.001	<0.005	<0.005	<0.005	<0.002	<0.002	-----	<0.002	<0.002	<0.002
Methyl Chloride	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10	<10	-----	<10	<10	<10
Trichlorofluoromethane	<5	<5	<5	<5	<5	<5	-----	<10	<10	<10
Acetone	<100	<100	<100	<100	<100	<100	-----	<100	<100	<100
1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Methyl Iodide	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Acrylonitrile	<100	<100	<100	<100	<100	<100	-----	<100	<100	<100
Dichloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Carbon Disulfide	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trans-1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Vinyl Acetate	<50	<50	<50	<50	<50	<50	-----	<50	<50	<50
Methyl Ethyl Ketone	<100	<100	<100	<100	<100	<100	-----	<100	<100	<100
Cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Chloroform	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Bromochloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Benzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dichloroporpane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Dibromomethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
4-Methyl-2-Pentanone	<50	<50	<50	<50	<50	<50	-----	<50	<50	<50
Cis-1,3-Dichloropropene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Toluene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trans-1,3-Dichloro-1-Propene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
2-Hexanone	<50	<50	<50	<50	<50	<50	-----	<50	<50	<50
Dibromochloromethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Tetrachloroethylene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,1,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Ethylbenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Xylenes (total)	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Styrene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2,3-Trichloropropane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
Trans-1,4-Dichloro-2-Butene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	<5	-----	<5	<5	<5

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-7

Parameter	1/17/96	10/24/96	5/13/97	10/30/97	5/5/98	11/6/98	6/2/99	11/20/99	6/5/00	12/15/00
Arsenic	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0098	<0.005	<0.005	0.045
Barium	1.93	0.97	0.75	1.8	1.2	1.3	0.96	0.39	0.36	2.6
Cadmium	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	0.028	0.021	0.18	0.41	0.43	0.35	0.19	0.062	0.0025	0.58
Lead	0.017	0.006	0.023	0.053	0.038	0.036	0.03	0.012	0.0087	0.065
Mercury	0.0014	0.0004	<0.0002	0.0002	<0.002	<0.002	<0.0002	<0.0002	<0.0002	NA
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	<0.001	<0.005	<0.005	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Vinyl Chloride	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bromomethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	<5	<5	<5	<5	<5	<5	<10	<10	<10	<10
Acetone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Methyl Iodide	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acrylonitrile	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dichloromethane	<5	<5	<5	<5	<5	<5	10	<5	<5	<5
Carbon Disulfide	<5	<5	<5	<5	<5	9	<5	<5	<5	<5
Trans-1,1-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Acetate	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Methyl Ethyl Ketone	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Cis-1,2-Dichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chloroform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Benzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroporpane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dibromomethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromodichloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-Methyl-2-Pentanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Cis-1,3-Dichloropropene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Toluene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,3-Dichloro-1-Propene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-Hexanone	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Dibromochloromethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethylene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Chlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Xylenes (total)	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2,3-Trichloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trans-1,4-Dichloro-2-Butene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromo-3-Chloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5

TABLE 1
Summary of Ground-Water Analytical Results
Winston-Salem C&D Landfill
MW-8

Parameter	12/15/00									
Arsenic	0.089									
Barium	4.2									
Cadmium	<0.001									
Chromium	0.24									
Lead	0.40									
Mercury	NA									
Selenium	<0.005									
Silver	<0.002									
Methyl Chloride	<10									
Vinyl Chloride	<10									
Bromomethane	<10									
Chloroethane	<10									
Trichlorofluoromethane	<5									
Acetone	<100									
1,1-Dichloroethene	<5									
Methyl Iodide	<5									
Acrylonitrile	<100									
Dichloromethane	<5									
Carbon Disulfide	<5									
Trans-1,1-Dichloroethene	<5									
1,1-Dichloroethane	<5									
Vinyl Acetate	<50									
Methyl Ethyl Ketone	<100									
Cis-1,2-Dichloroethene	<5									
Chloroform	<5									
Bromochloromethane	<5									
1,1,1-Trichloroethane	<5									
1,2-Dichloroethane	<5									
Carbon Tetrachloride	<5									
Benzene	<5									
Trichloroethene	<5									
1,2-Dichloroporpane	<5									
Dibromomethane	<5									
Bromodichloromethane	<5									
4-Methyl-2-Pentanone	<50									
Cis-1,3-Dichloropropene	<5									
Toluene	<5									
Trans-1,3-Dichloro-1-Propene	<5									
1,1,2-Trichloroethane	<5									
2-Hexanone	<50									
Dibromochloromethane	<5									
Tetrachloroethylene	<5									
1,2-Dibromoethane	<5									
Chlorobenzene	<5									
1,1,1,2-Tetrachloroethane	<5									
Ethylbenzene	<5									
Xylenes (total)	<5									
Styrene	<5									
Bromoform	<5									
1,1,2,2-Tetrachloroethane	<5									
1,2,3-Trichloropropane	<5									
Trans-1,4-Dichloro-2-Butene	<5									
1,4-Dichlorobenzene	<5									
1,2-Dichlorobenzene	<5									
1,2-Dibromo-3-Chloropropane	<5									

NA – Not available.

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JAN 12 2001
HDR ENGINEERING, INC
OF THE CAROLINAS

January 10, 2001

Mr. John Isham
HDR Engineering
128 South Tryon Street
Suite 1400
Charlotte, NC 28202

RE: Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Dear Mr. Isham:

Enclosed are the analytical results for sample(s) received by the laboratory on December 15, 2000. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bonnie Hervey

Bonnie Hervey
Project Manager

Enclosures

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

DATE: 01/10/01
PAGE: 1

HDR Engineering
128 South Tryon Street
Suite 1400
Charlotte, NC 28202

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Attn: Mr. John Isham
Phone: (704)338-1800

Solid results are reported on a dry weight basis

Pace Sample No: 921377420 | Date Collected: 12/14/00 | Matrix: Water
Client Sample ID: MW-1R | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	12/22/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	12/22/00	RWF	7440-38-2	
Barium	0.15	mg/l	0.005	12/22/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	12/22/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/22/00	RWF	7440-43-9	
Chromium	0.0066	mg/l	0.002	12/22/00	RWF	7440-47-3	
Cobalt	ND	mg/l	0.005	12/22/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	12/22/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	12/22/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	12/22/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/22/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/22/00	RWF	7440-22-4	
Vanadium	0.015	mg/l	0.005	12/22/00	RWF	7440-62-2	
Zinc	0.024	mg/l	0.01	12/22/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/09/01	RWF	7440-28-0	
Date Digested				01/09/01			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/23/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/23/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/23/00	RPJ	74-83-9	

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NC Drinking Water 37706
SC 99006

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078

Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377420 | Date Collected: 12/14/00 | Matrix: Water
Client Sample ID: MW-1R | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Chloroethane	ND	ug/l	10	12/23/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/23/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/23/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/23/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/23/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/23/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/23/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	75-34-3	
Vinyl Acetate	ND	ug/l	50	12/23/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/23/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/23/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/23/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/23/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/23/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/23/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/23/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/23/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/23/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/23/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/23/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/23/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/23/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/23/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/23/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/23/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/23/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/23/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/23/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/23/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/23/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	79-34-5	

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NC Drinking Water 37706
SC 99006

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Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377420
Client Sample ID: MW-1R

Date Collected: 12/14/00
Date Received: 12/15/00

Matrix: Water

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
1,2,3-Trichloropropane	ND	ug/l	5	12/23/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/23/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/23/00	RPJ	96-12-8	
Dibromofluoromethane (S)	109	%		12/23/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	131	%		12/23/00	RPJ	17060-07-0	1
Toluene-d8 (S)	106	%		12/23/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	90	%		12/23/00	RPJ	460-00-4	

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Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377438 | Date Collected: 12/15/00 | Matrix: Water
Client Sample ID: MW-2R | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	12/22/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	12/22/00	RWF	7440-38-2	
Barium	0.061	mg/l	0.005	12/22/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	12/22/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/22/00	RWF	7440-43-9	
Chromium	0.0039	mg/l	0.002	12/22/00	RWF	7440-47-3	
Cobalt	ND	mg/l	0.005	12/22/00	RWF	7440-48-4	
Copper	0.0043	mg/l	0.002	12/22/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	12/22/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	12/22/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/22/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/22/00	RWF	7440-22-4	
Vanadium	0.014	mg/l	0.005	12/22/00	RWF	7440-62-2	
Zinc	0.026	mg/l	0.01	12/22/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/09/01	RWF	7440-28-0	
Date Digested				01/09/01			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/23/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/23/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/23/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/23/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/23/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/23/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/23/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/23/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/23/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/23/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	75-34-3	

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Huntersville, NC 28078

Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377438
Client Sample ID: MW-2R

Date Collected: 12/15/00
Date Received: 12/15/00

Matrix: Water

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/23/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/23/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/23/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/23/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/23/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/23/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/23/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/23/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/23/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/23/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/23/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/23/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/23/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/23/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/23/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/23/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/23/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/23/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/23/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/23/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/23/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/23/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/23/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/23/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/23/00	RPJ	96-12-8	
Dibromofluoromethane (S)	112	%		12/23/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	136	%		12/23/00	RPJ	17060-07-0	1
Toluene-d8 (S)	102	%		12/23/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	90	%		12/23/00	RPJ	460-00-4	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377446 Date Collected: 12/15/00 Matrix: Water
Client Sample ID: MW-3R Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	12/23/00	RWF	7440-36-0	
Arsenic	0.031	mg/l	0.005	12/23/00	RWF	7440-38-2	
Barium	1.5	mg/l	0.005	12/23/00	RWF	7440-39-3	
Beryllium	0.014	mg/l	0.001	12/23/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/23/00	RWF	7440-43-9	
Chromium	0.10	mg/l	0.002	12/23/00	RWF	7440-47-3	
Cobalt	0.035	mg/l	0.005	12/23/00	RWF	7440-48-4	
Copper	0.059	mg/l	0.002	12/23/00	RWF	7440-50-8	
Lead	0.08	mg/l	0.005	12/23/00	RWF	7439-92-1	
Nickel	0.052	mg/l	0.005	12/23/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/23/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/23/00	RWF	7440-22-4	
Vanadium	0.22	mg/l	0.005	12/23/00	RWF	7440-62-2	
Zinc	0.43	mg/l	0.01	12/23/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/09/01	RWF	7440-28-0	
Date Digested				01/09/01			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/23/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/23/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/23/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/23/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/23/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/23/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/23/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/23/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/23/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/23/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	75-34-3	

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Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377446 Date Collected: 12/15/00 Matrix: Water
Client Sample ID: MW-3R Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/23/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/23/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/23/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/23/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/23/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/23/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/23/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/23/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/23/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/23/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/23/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/23/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/23/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/23/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/23/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/23/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/23/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/23/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/23/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/23/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/23/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/23/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/23/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/23/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/23/00	RPJ	96-12-8	
Dibromofluoromethane (S)	112	%		12/23/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	136	%		12/23/00	RPJ	17060-07-0	1
Toluene-d8 (S)	96	%		12/23/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	86	%		12/23/00	RPJ	460-00-4	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377453 Date Collected: 12/15/00 Matrix: Water
Client Sample ID: MW-4R Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	0.007	mg/l	0.005	12/23/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	12/23/00	RWF	7440-38-2	
Barium	0.35	mg/l	0.005	12/23/00	RWF	7440-39-3	
Beryllium	0.0018	mg/l	0.001	12/23/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/23/00	RWF	7440-43-9	
Chromium	0.028	mg/l	0.002	12/23/00	RWF	7440-47-3	
Cobalt	0.0059	mg/l	0.005	12/23/00	RWF	7440-48-4	
Copper	0.014	mg/l	0.002	12/23/00	RWF	7440-50-8	
Lead	0.0081	mg/l	0.005	12/23/00	RWF	7439-92-1	
Nickel	0.01	mg/l	0.005	12/23/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/23/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/23/00	RWF	7440-22-4	
Vanadium	0.045	mg/l	0.005	12/23/00	RWF	7440-62-2	
Zinc	0.075	mg/l	0.01	12/23/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/09/01	RWF	7440-28-0	
Date Digested				01/09/01			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/23/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/23/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/23/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/23/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/23/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/23/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/23/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/23/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/23/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/23/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	75-34-3	

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Huntersville, NC 28078
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Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377453
Client Sample ID: MW-4R
Date Collected: 12/15/00
Date Received: 12/15/00
Matrix: Water

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/23/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/23/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/23/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/23/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/23/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/23/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/23/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/23/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/23/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/23/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/23/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/23/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/23/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/23/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/23/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/23/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/23/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/23/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/23/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/23/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/23/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/23/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/23/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/23/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/23/00	RPJ	96-12-8	
Dibromofluoromethane (S)	111	%		12/23/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	137	%		12/23/00	RPJ	17060-07-0	1
Toluene-d8 (S)	107	%		12/23/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	88	%		12/23/00	RPJ	460-00-4	

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377461 | Date Collected: 12/14/00 | Matrix: Water
Client Sample ID: MW-5 | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	12/23/00	RWF	7440-36-0	
Arsenic	0.005	mg/l	0.005	12/23/00	RWF	7440-38-2	
Barium	0.40	mg/l	0.005	12/23/00	RWF	7440-39-3	
Beryllium	0.0019	mg/l	0.001	12/23/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/23/00	RWF	7440-43-9	
Chromium	0.082	mg/l	0.002	12/23/00	RWF	7440-47-3	
Cobalt	0.012	mg/l	0.005	12/23/00	RWF	7440-48-4	
Copper	0.024	mg/l	0.002	12/23/00	RWF	7440-50-8	
Lead	0.0076	mg/l	0.005	12/23/00	RWF	7439-92-1	
Nickel	0.027	mg/l	0.005	12/23/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/23/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/23/00	RWF	7440-22-4	
Vanadium	0.084	mg/l	0.005	12/23/00	RWF	7440-62-2	
Zinc	0.10	mg/l	0.01	12/23/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/09/01	RWF	7440-28-0	
Date Digested				01/09/01			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/23/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/23/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/23/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/23/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/23/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/23/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/23/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/23/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/23/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/23/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	75-34-3	

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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377461
Client Sample ID: MW-5
Date Collected: 12/14/00
Date Received: 12/15/00
Matrix: Water

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/23/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/23/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/23/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/23/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/23/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/23/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/23/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/23/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/23/00	RPJ	74-95-3	
Bromodichlorometha	ND	ug/l	5	12/23/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/23/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/23/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/23/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/23/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/23/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/23/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/23/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/23/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/23/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/23/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/23/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/23/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/23/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/23/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/23/00	RPJ	96-12-8	
Dibromofluoromethane (S)	109	%		12/23/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	132	%		12/23/00	RPJ	17060-07-0	1
Toluene-d8 (S)	100	%		12/23/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	90	%		12/23/00	RPJ	460-00-4	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377479 | Date Collected: 12/14/00 | Matrix: Water
Client Sample ID: MW-6R | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	0.0061	mg/l	0.005	12/23/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	12/23/00	RWF	7440-38-2	
Barium	0.041	mg/l	0.005	12/23/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	12/23/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/23/00	RWF	7440-43-9	
Chromium	0.0026	mg/l	0.002	12/23/00	RWF	7440-47-3	
Cobalt	ND	mg/l	0.005	12/23/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	12/23/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	12/23/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	12/23/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/23/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/23/00	RWF	7440-22-4	
Vanadium	ND	mg/l	0.005	12/23/00	RWF	7440-62-2	
Zinc	ND	mg/l	0.01	12/23/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/09/01	RWF	7440-28-0	
Date Digested				01/09/01			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/23/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/23/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/23/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/23/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/23/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/23/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/23/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/23/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/23/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/23/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	75-34-3	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377479 Date Collected: 12/14/00 Matrix: Water
Client Sample ID: MW-6R Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/23/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/23/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/23/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/23/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/23/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/23/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/23/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/23/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/23/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/23/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/23/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/23/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/23/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/23/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/23/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/23/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/23/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/23/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/23/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/23/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/23/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/23/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/23/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/23/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/23/00	RPJ	96-12-8	
Dibromofluoromethane (S)	111	%		12/23/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	134	%		12/23/00	RPJ	17060-07-0	1
Toluene-d8 (S)	106	%		12/23/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	87	%		12/23/00	RPJ	460-00-4	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377487 | Date Collected: 12/15/00 | Matrix: Water
Client Sample ID: MW-7 | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	12/23/00	RWF	7440-36-0	
Arsenic	0.045	mg/l	0.005	12/23/00	RWF	7440-38-2	
Barium	2.6	mg/l	0.005	12/23/00	RWF	7440-39-3	
Beryllium	0.021	mg/l	0.001	12/23/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/23/00	RWF	7440-43-9	
Chromium	0.58	mg/l	0.002	12/23/00	RWF	7440-47-3	
Cobalt	0.092	mg/l	0.005	12/23/00	RWF	7440-48-4	
Copper	0.15	mg/l	0.002	12/23/00	RWF	7440-50-8	
Lead	0.065	mg/l	0.005	12/23/00	RWF	7439-92-1	
Nickel	0.25	mg/l	0.005	12/23/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/23/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/23/00	RWF	7440-22-4	
Vanadium	0.48	mg/l	0.005	12/23/00	RWF	7440-62-2	
Zinc	0.84	mg/l	0.01	12/23/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/08/01	RWF	7440-28-0	
Date Digested				12/19/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/23/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/23/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/23/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/23/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/23/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/23/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/23/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/23/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/23/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/23/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	75-34-3	

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Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377487
Client Sample ID: MW-7

Date Collected: 12/15/00
Date Received: 12/15/00

Matrix: Water

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/23/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/23/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/23/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/23/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/23/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/23/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/23/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/23/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/23/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/23/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/23/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/23/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/23/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/23/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/23/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/23/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/23/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/23/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/23/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/23/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/23/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/23/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/23/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/23/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/23/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/23/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/23/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/23/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/23/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/23/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/23/00	RPJ	96-12-8	
Dibromofluoromethane (S)	110	%		12/23/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	134	%		12/23/00	RPJ	17060-07-0	1
Toluene-d8 (S)	94	%		12/23/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	86	%		12/23/00	RPJ	460-00-4	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
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Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377495 Date Collected: 12/15/00 Matrix: Water
Client Sample ID: MW-8 Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP	Method: EPA 6010				Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	12/23/00	RWF	7440-36-0	
Arsenic	0.089	mg/l	0.005	12/23/00	RWF	7440-38-2	
Barium	4.2	mg/l	0.005	12/23/00	RWF	7440-39-3	
Beryllium	0.064	mg/l	0.001	12/23/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/23/00	RWF	7440-43-9	
Chromium	0.24	mg/l	0.002	12/23/00	RWF	7440-47-3	
Cobalt	0.20	mg/l	0.005	12/23/00	RWF	7440-48-4	
Copper	0.042	mg/l	0.002	12/23/00	RWF	7440-50-8	
Lead	0.40	mg/l	0.005	12/23/00	RWF	7439-92-1	
Nickel	0.12	mg/l	0.005	12/23/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/23/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/23/00	RWF	7440-22-4	
Vanadium	0.61	mg/l	0.005	12/23/00	RWF	7440-62-2	
Zinc	1.2	mg/l	0.01	12/23/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace	Method: EPA 7841				Prep Method: EPA 3020		
Thallium	0.0022	mg/l	0.002	01/08/01	RWF	7440-28-0	
Date Digested				12/19/00			
GC/MS Volatiles							
GC/MS VOCs by 8260	Method: EPA 8260				Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/26/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/26/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/26/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/26/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/26/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/26/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/26/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/26/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/26/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/26/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/26/00	RPJ	75-34-3	

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Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377495 | Date Collected: 12/15/00 | Matrix: Water
Client Sample ID: MW-8 | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/26/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/26/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/26/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/26/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/26/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/26/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/26/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/26/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/26/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/26/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/26/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/26/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/26/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/26/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/26/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/26/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/26/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/26/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/26/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/26/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/26/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/26/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/26/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/26/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/26/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/26/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/26/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/26/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/26/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/26/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/26/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/26/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/26/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/26/00	RPJ	96-12-8	
Dibromofluoromethane (S)	108	%		12/26/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%		12/26/00	RPJ	17060-07-0	
Toluene-d8 (S)	81	%		12/26/00	RPJ	2037-26-5	2
4-Bromofluorobenzene (S)	96	%		12/26/00	RPJ	460-00-4	

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Huntersville, NC 28078

Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377503
Client Sample ID: TRIP BLANK

Date Collected: 12/15/00
Date Received: 12/15/00

Matrix: Water

GC/MS Volatiles

GC/MS VOCs by 8260 — Method: EPA 8260 — Prep Method: EPA 8260

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Chloromethane	ND	ug/l	10	12/26/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/26/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/26/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/26/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/26/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/26/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/26/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/26/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/26/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/26/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/26/00	RPJ	75-34-3	
Vinyl Acetate	ND	ug/l	50	12/26/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/26/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/26/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/26/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/26/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/26/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/26/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/26/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/26/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/26/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/26/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/26/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/26/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/26/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/26/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/26/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/26/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/26/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/26/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/26/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/26/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/26/00	RPJ	108-90-7	

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377503 | Date Collected: 12/15/00 | Matrix: Water
Client Sample ID: TRIP BLANK | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/26/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/26/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/26/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/26/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/26/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/26/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/26/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/26/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/26/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/26/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/26/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/26/00	RPJ	96-12-8	
Dibromofluoromethane (S)	99	%		12/26/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%		12/26/00	RPJ	17060-07-0	
Toluene-d8 (S)	101	%		12/26/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	99	%		12/26/00	RPJ	460-00-4	

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Fax: 704.875.9091

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377511 | Date Collected: 12/15/00 | Matrix: Water
Client Sample ID: EQIUPMENT BLANK | Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Metals							
Metals by Trace ICP		Method: EPA 6010			Prep Method: EPA 3010		
Antimony	ND	mg/l	0.005	12/23/00	RWF	7440-36-0	
Arsenic	ND	mg/l	0.005	12/23/00	RWF	7440-38-2	
Barium	ND	mg/l	0.005	12/23/00	RWF	7440-39-3	
Beryllium	ND	mg/l	0.001	12/23/00	RWF	7440-41-7	
Cadmium	ND	mg/l	0.001	12/23/00	RWF	7440-43-9	
Chromium	ND	mg/l	0.002	12/23/00	RWF	7440-47-3	
Cobalt	ND	mg/l	0.005	12/23/00	RWF	7440-48-4	
Copper	ND	mg/l	0.002	12/23/00	RWF	7440-50-8	
Lead	ND	mg/l	0.005	12/23/00	RWF	7439-92-1	
Nickel	ND	mg/l	0.005	12/23/00	RWF	7440-02-0	
Selenium	ND	mg/l	0.005	12/23/00	RWF	7782-49-2	
Silver	ND	mg/l	0.002	12/23/00	RWF	7440-22-4	
Vanadium	ND	mg/l	0.005	12/23/00	RWF	7440-62-2	
Zinc	ND	mg/l	0.01	12/23/00	RWF	7440-66-6	
Date Digested				12/21/00			
Thallium, AAS Furnace		Method: EPA 7841			Prep Method: EPA 3020		
Thallium	ND	mg/l	0.002	01/08/01	RWF	7440-28-0	
Date Digested				12/19/00			
GC/MS Volatiles							
GC/MS VOCs by 8260		Method: EPA 8260			Prep Method: EPA 8260		
Chloromethane	ND	ug/l	10	12/26/00	RPJ	74-87-3	
Vinyl Chloride	ND	ug/l	10	12/26/00	RPJ	75-01-4	
Bromomethane	ND	ug/l	10	12/26/00	RPJ	74-83-9	
Chloroethane	ND	ug/l	10	12/26/00	RPJ	75-00-3	
Trichlorofluoromethane	ND	ug/l	10	12/26/00	RPJ	75-69-4	
Acetone	ND	ug/l	100	12/26/00	RPJ	67-64-1	
1,1-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	75-35-4	
Iodomethane	ND	ug/l	5	12/26/00	RPJ	74-88-4	
Acrylonitrile	ND	ug/l	100	12/26/00	RPJ	107-13-1	
Methylene Chloride	ND	ug/l	5	12/26/00	RPJ	75-09-2	
Carbon Disulfide	ND	ug/l	5	12/26/00	RPJ	75-15-0	
trans-1,2-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	156-60-5	
1,1-Dichloroethane	ND	ug/l	5	12/26/00	RPJ	75-34-3	

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Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Pace Sample No: 921377511 Date Collected: 12/15/00 Matrix: Water
Client Sample ID: EQIUPMENT BLANK Date Received: 12/15/00

Parameters	Results	Units	PRL	Analyzed	Analyst	CAS#	Footnotes
Vinyl Acetate	ND	ug/l	50	12/26/00	RPJ	108-05-4	
2-Butanone	ND	ug/l	100	12/26/00	RPJ	78-93-3	
cis-1,2-Dichloroethene	ND	ug/l	5	12/26/00	RPJ	156-59-2	
Chloroform	ND	ug/l	5	12/26/00	RPJ	67-66-3	
Bromochloromethane	ND	ug/l	5	12/26/00	RPJ	74-97-5	
1,1,1-Trichloroethane	ND	ug/l	5	12/26/00	RPJ	71-55-6	
1,2-Dichloroethane	ND	ug/l	5	12/26/00	RPJ	107-06-2	
Carbon Tetrachloride	ND	ug/l	5	12/26/00	RPJ	56-23-5	
Benzene	ND	ug/l	5	12/26/00	RPJ	71-43-2	
Trichloroethene	ND	ug/l	5	12/26/00	RPJ	79-01-6	
1,2-Dichloropropane	ND	ug/l	5	12/26/00	RPJ	78-87-5	
Dibromomethane	ND	ug/l	5	12/26/00	RPJ	74-95-3	
Bromodichloromethane	ND	ug/l	5	12/26/00	RPJ	75-27-4	
4-Methyl-2-Pentanone	ND	ug/l	50	12/26/00	RPJ	108-10-1	
cis-1,3-Dichloropropene	ND	ug/l	5	12/26/00	RPJ	10061-01-5	
Toluene	ND	ug/l	5	12/26/00	RPJ	108-88-3	
trans-1,3-Dichloropropene	ND	ug/l	5	12/26/00	RPJ	10061-02-6	
1,1,2-Trichloroethane	ND	ug/l	5	12/26/00	RPJ	79-00-5	
2-Hexanone	ND	ug/l	50	12/26/00	RPJ	591-78-6	
Dibromochloromethane	ND	ug/l	5	12/26/00	RPJ	124-48-1	
Tetrachloroethene	ND	ug/l	5	12/26/00	RPJ	127-18-4	
1,2-Dibromoethane	ND	ug/l	5	12/26/00	RPJ	106-93-4	
Chlorobenzene	ND	ug/l	5	12/26/00	RPJ	108-90-7	
1,1,1,2-Tetrachloroethane	ND	ug/l	5	12/26/00	RPJ	630-20-6	
Ethylbenzene	ND	ug/l	5	12/26/00	RPJ	100-41-4	
m&p-Xylene	ND	ug/l	10	12/26/00	RPJ	7816-60-0	
Styrene	ND	ug/l	5	12/26/00	RPJ	100-42-5	
o-Xylene (1,2-Dimethylbenzene)	ND	ug/l	5	12/26/00	RPJ	95-47-6	
Bromoform	ND	ug/l	5	12/26/00	RPJ	75-25-2	
1,1,2,2-Tetrachloroethane	ND	ug/l	5	12/26/00	RPJ	79-34-5	
1,2,3-Trichloropropane	ND	ug/l	5	12/26/00	RPJ	96-18-4	
trans-1,4-Dichloro-2-Butene	ND	ug/l	5	12/26/00	RPJ	110-57-6	
1,4-Dichlorobenzene	ND	ug/l	5	12/26/00	RPJ	106-46-7	
1,2-Dichlorobenzene	ND	ug/l	5	12/26/00	RPJ	95-50-1	
1,2-Dibromo-3-Chloropropane	ND	ug/l	5	12/26/00	RPJ	96-12-8	
Dibromofluoromethane (S)	102	%		12/26/00	RPJ	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%		12/26/00	RPJ	17060-07-0	
Toluene-d8 (S)	103	%		12/26/00	RPJ	2037-26-5	
4-Bromofluorobenzene (S)	100	%		12/26/00	RPJ	460-00-4	

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Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

PARAMETER FOOTNOTES

ND	Not Detected
NC	Not Calculable
PRL	Pace Reporting Limit
(S)	Surrogate
[1]	The surrogate and/or spike recovery was outside acceptance limits.
[2]	Low surrogate recovery was confirmed as a matrix effect by a second analysis.

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QUALITY CONTROL DATA

HDR Engineering
128 South Tryon Street
Suite 1400
Charlotte, NC 28202

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Attn: Mr. John Isham
Phone: (704)338-1800

QC Batch ID: 35977
Analysis Method: EPA 7841
Associated Pace Samples: 921377487 921377495 921377511

QC Batch Method: EPA 3020
Analysis Description: Thallium, AAS Furnace

METHOD BLANK: 921381406
Associated Pace Samples:
921377487 921377495 921377511

Parameter	Units	Method Blank Result	PRL	Footnotes
Thallium	mg/l	ND	0.002	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 921381414 921381422

Parameter	Units	921377487	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Thallium	mg/l	0.001500	0.0250	0.01823	66.9	0.01824	67.0	0	1,1

LABORATORY CONTROL SAMPLE: 921381448

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Thallium	mg/l	0.0250	0.02170	86.8	

SAMPLE DUPLICATE: 921381430

Parameter	Units	921377495	Dup. Result	RPD	Footnotes
Thallium	mg/l	0.002200	ND	NC	

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QUALITY CONTROL DATA

HDR Engineering
128 South Tryon Street
Suite 1400
Charlotte, NC 28202

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Attn: Mr. John Isham
Phone: (704)338-1800

QC Batch ID: 36115
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: Metals by Trace ICP
Associated Pace Samples: 921377420 921377438 921377446 921377453 921377461 921377479 921377487 921377495 921377511

METHOD BLANK: 921386041
Associated Pace Samples:
921377420 921377438 921377446 921377453 921377461 921377479 921377487 921377495 921377511

Parameter	Units	Method Blank Result	PRL	Footnotes
Antimony	mg/l	ND	0.005	
Arsenic	mg/l	ND	0.005	
Barium	mg/l	ND	0.005	
Beryllium	mg/l	ND	0.001	
Cadmium	mg/l	ND	0.001	
Chromium	mg/l	ND	0.002	
Cobalt	mg/l	ND	0.005	
Copper	mg/l	ND	0.002	
Lead	mg/l	ND	0.005	
Nickel	mg/l	ND	0.005	
Selenium	mg/l	ND	0.005	
Silver	mg/l	ND	0.002	
Vanadium	mg/l	ND	0.005	
Zinc	mg/l	ND	0.01	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 921386058 921386066

Parameter	Units	921377420	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Antimony	mg/l	0.003340	0.2500	0.2290	90.3	0.2310	91.1	1	
Arsenic	mg/l	0.0001550	0.2500	0.2480	99.1	0.2500	99.9	1	
Barium	mg/l	0.1490	0.1875	0.3340	98.7	0.3280	95.5	3	

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QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 921386058 921386066

Parameter	Units	921377420	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Beryllium	mg/l	0.0008820	0.2500	0.2530	101	0.2560	102	1	
Cadmium	mg/l	0	0.2500	0.2400	96.0	0.2440	97.6	2	
Chromium	mg/l	0.006580	0.2500	0.2480	96.6	0.2500	97.4	1	
Cobalt	mg/l	0.002220	0.2500	0.2380	94.3	0.2420	95.9	2	
Copper	mg/l	0.001710	0.2500	0.2740	109	0.2760	110	1	
Lead	mg/l	0.0001910	0.2500	0.2350	93.9	0.2390	95.5	2	
Nickel	mg/l	0.003800	0.2500	0.2400	94.5	0.2430	95.7	1	
Selenium	mg/l	0.002950	0.2500	0.2400	94.8	0.2420	95.6	1	
Silver	mg/l	0.0006960	0.2500	0.2460	98.1	0.2480	98.9	1	
Vanadium	mg/l	0.01470	0.2500	0.2620	98.9	0.2640	99.7	1	
Zinc	mg/l	0.02390	0.2500	0.2710	98.8	0.2720	99.2	0	

LABORATORY CONTROL SAMPLE: 921386082

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Antimony	mg/l	0.2500	0.2380	95.2	
Arsenic	mg/l	0.2500	0.2570	103	
Barium	mg/l	0.1875	0.1720	91.7	
Beryllium	mg/l	0.2500	0.2570	103	
Cadmium	mg/l	0.2500	0.2480	99.2	
Chromium	mg/l	0.2500	0.2450	98.0	
Cobalt	mg/l	0.2500	0.2410	96.4	
Copper	mg/l	0.2500	0.2660	106	
Lead	mg/l	0.2500	0.2350	94.0	
Nickel	mg/l	0.2500	0.2390	95.6	
Selenium	mg/l	0.2500	0.2430	97.2	
Silver	mg/l	0.2500	0.2520	101	
Vanadium	mg/l	0.2500	0.2520	101	
Zinc	mg/l	0.2500	0.2470	98.8	

SAMPLE DUPLICATE: 921386074

Parameter	Units	921377479	Dup. Result	RPD	Footnotes
Antimony	mg/l	0.006100	ND	NC	
Arsenic	mg/l	ND	ND	NC	
Barium	mg/l	0.04100	0.04300	5	
Beryllium	mg/l	ND	ND	NC	

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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TN UST List
VA Drinking Water 213

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Fax: 704.875.9091

QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

SAMPLE DUPLICATE: 921386074

Parameter	Units	921377479	Dup. Result	RPD	Footnotes
Cadmium	mg/l	ND	ND	NC	
Chromium	mg/l	0.002600	0.002000	0	
Cobalt	mg/l	ND	ND	NC	
Copper	mg/l	ND	ND	NC	
Lead	mg/l	ND	ND	NC	
Nickel	mg/l	ND	ND	NC	
Selenium	mg/l	ND	ND	NC	
Silver	mg/l	ND	ND	NC	
Vanadium	mg/l	ND	ND	NC	
Zinc	mg/l	ND	ND	NC	

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QUALITY CONTROL DATA

HDR Engineering
128 South Tryon Street
Suite 1400
Charlotte, NC 28202

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Attn: Mr. John Isham
Phone: (704)338-1800

QC Batch ID: 36190
Analysis Method: EPA 8260
Associated Pace Samples: 921377420 921377438 921377446 921377453 921377461 921377479 921377487 921377495 921377503 921377511

QC Batch Method: EPA 8260
Analysis Description: GC/MS VOCs by 8260

METHOD BLANK: 921388476
Associated Pace Samples: 921377420 921377438 921377446 921377453 921377461 921377479 921377487

Parameter	Units	Method Blank Result	PRL	Footnotes
Chloromethane	ug/l	ND	10	
Vinyl Chloride	ug/l	ND	10	
Bromomethane	ug/l	ND	10	
Chloroethane	ug/l	ND	10	
Trichlorofluoromethane	ug/l	ND	10	
Acetone	ug/l	ND	100	
1,1-Dichloroethene	ug/l	ND	5	
Iodomethane	ug/l	ND	5	
Acrylonitrile	ug/l	ND	100	
Methylene Chloride	ug/l	ND	5	
Carbon Disulfide	ug/l	ND	5	
trans-1,2-Dichloroethene	ug/l	ND	5	
1,1-Dichloroethane	ug/l	ND	5	
Vinyl Acetate	ug/l	ND	50	
2-Butanone	ug/l	ND	100	
cis-1,2-Dichloroethene	ug/l	ND	5	
Chloroform	ug/l	ND	5	
Bromochloromethane	ug/l	ND	5	
1,1,1-Trichloroethane	ug/l	ND	5	
1,2-Dichloroethane	ug/l	ND	5	
Carbon Tetrachloride	ug/l	ND	5	
Benzene	ug/l	ND	5	
Trichloroethene	ug/l	ND	5	
1,2-Dichloropropane	ug/l	ND	5	

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QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

METHOD BLANK: 921388476
Associated Pace Samples:
921377420 921377438 921377446 921377453 921377461 921377479 921377487

Parameter	Units	Method Blank Result	PRL	Footnotes
Dibromomethane	ug/l	ND	5	
Bromodichloromethane	ug/l	ND	5	
4-Methyl-2-Pentanone	ug/l	ND	50	
cis-1,3-Dichloropropene	ug/l	ND	5	
Toluene	ug/l	ND	5	
trans-1,3-Dichloropropene	ug/l	ND	5	
1,1,2-Trichloroethane	ug/l	ND	5	
2-Hexanone	ug/l	ND	50	
Dibromochloromethane	ug/l	ND	5	
Tetrachloroethene	ug/l	ND	5	
1,2-Dibromoethane	ug/l	ND	5	
Chlorobenzene	ug/l	ND	5	
1,1,1,2-Tetrachloroethane	ug/l	ND	5	
Ethylbenzene	ug/l	ND	5	
m&p-Xylene	ug/l	ND	10	
Styrene	ug/l	ND	5	
o-Xylene (1,2-Dimethylbenzene)	ug/l	ND	5	
Bromoform	ug/l	ND	5	
1,1,2,2-Tetrachloroethane	ug/l	ND	5	
1,2,3-Trichloropropane	ug/l	ND	5	
trans-1,4-Dichloro-2-Butene	ug/l	ND	5	
1,4-Dichlorobenzene	ug/l	ND	5	
1,2-Dichlorobenzene	ug/l	ND	5	
1,2-Dibromo-3-Chloropropane	ug/l	ND	5	
Dibromofluoromethane (S)	%	105		
1,2-Dichloroethane-d4 (S)	%	125		2
Toluene-d8 (S)	%	107		
4-Bromofluorobenzene (S)	%	92		

METHOD BLANK: 921388708
Associated Pace Samples:
921377495 921377503 921377511

Parameter	Units	Method Blank Result	PRL	Footnotes
Chloromethane	ug/l	ND	10	

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

METHOD BLANK: 921388708
Associated Pace Samples:
921377495 921377503 921377511

Parameter	Units	Method Blank Result	PRL	Footnotes
Vinyl Chloride	ug/l	ND	10	
Bromomethane	ug/l	ND	10	
Chloroethane	ug/l	ND	10	
Trichlorofluoromethane	ug/l	ND	10	
Acetone	ug/l	ND	100	
1,1-Dichloroethene	ug/l	ND	5	
Iodomethane	ug/l	ND	5	
Acrylonitrile	ug/l	ND	100	
Methylene Chloride	ug/l	ND	5	
Carbon Disulfide	ug/l	ND	5	
trans-1,2-Dichloroethene	ug/l	ND	5	
1,1-Dichloroethane	ug/l	ND	5	
Vinyl Acetate	ug/l	ND	50	
2-Butanone	ug/l	ND	100	
cis-1,2-Dichloroethene	ug/l	ND	5	
Chloroform	ug/l	ND	5	
Bromochloromethane	ug/l	ND	5	
1,1,1-Trichloroethane	ug/l	ND	5	
1,2-Dichloroethane	ug/l	ND	5	
Carbon Tetrachloride	ug/l	ND	5	
Benzene	ug/l	ND	5	
Trichloroethene	ug/l	ND	5	
1,2-Dichloropropane	ug/l	ND	5	
Dibromomethane	ug/l	ND	5	
Bromodichloromethane	ug/l	ND	5	
4-Methyl-2-Pentanone	ug/l	ND	50	
cis-1,3-Dichloropropene	ug/l	ND	5	
Toluene	ug/l	ND	5	
trans-1,3-Dichloropropene	ug/l	ND	5	
1,1,2-Trichloroethane	ug/l	ND	5	
2-Hexanone	ug/l	ND	50	
Dibromochloromethane	ug/l	ND	5	
Tetrachloroethene	ug/l	ND	5	
1,2-Dibromoethane	ug/l	ND	5	
Chlorobenzene	ug/l	ND	5	
1,1,1,2-Tetrachloroethane	ug/l	ND	5	
Ethylbenzene	ug/l	ND	5	
m&p-Xylene	ug/l	ND	10	

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QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

METHOD BLANK: 921388708
Associated Pace Samples:
921377495 921377503 921377511

Parameter	Units	Method Blank Result	PRL	Footnotes
Styrene	ug/l	ND	5	
o-Xylene (1,2-Dimethylbenzene)	ug/l	ND	5	
Bromoform	ug/l	ND	5	
1,1,2,2-Tetrachloroethane	ug/l	ND	5	
1,2,3-Trichloropropane	ug/l	ND	5	
trans-1,4-Dichloro-2-Butene	ug/l	ND	5	
1,4-Dichlorobenzene	ug/l	ND	5	
1,2-Dichlorobenzene	ug/l	ND	5	
1,2-Dibromo-3-Chloropropane	ug/l	ND	5	
Dibromofluoromethane (S)	%	98		
1,2-Dichloroethane-d4 (S)	%	99		
Toluene-d8 (S)	%	102		
4-Bromofluorobenzene (S)	%	101		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 921388492 921388500

Parameter	Units	921377420	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
1,1-Dichloroethene	ug/l	0	50	58.90	118	67.85	136	14	2
Benzene	ug/l	0	50	48.52	97.0	54.68	109	12	
Trichloroethene	ug/l	0	50	47.37	94.7	56.78	114	18	
Toluene	ug/l	0	50	50.99	102	56.95	114	11	
Chlorobenzene	ug/l	0	50	39.79	79.6	44.30	88.6	11	
Dibromofluoromethane (S)					109		110		
1,2-Dichloroethane-d4 (S)					131		131		2,2
Toluene-d8 (S)					109		110		
4-Bromofluorobenzene (S)					92		92		

LABORATORY CONTROL SAMPLE: 921388484

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Chloromethane	ug/l	50	37.58	75.2	
Vinyl Chloride	ug/l	50	43.35	86.7	
Bromomethane	ug/l	50	40.03	80.1	
Chloroethane	ug/l	50	46.06	92.1	

Laboratory Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006

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QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

LABORATORY CONTROL SAMPLE: 921388484

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Trichlorofluoromethane	ug/l	50	52.04	104	
Acetone	ug/l	100	114.9	115	
1,1-Dichloroethene	ug/l	50	51.56	103	
Iodomethane	ug/l	100	95.60	95.6	
Acrylonitrile	ug/l	250	245.1	98.1	
Methylene Chloride	ug/l	50	48.45	96.9	
Carbon Disulfide	ug/l	100	85.98	86.0	
trans-1,2-Dichloroethene	ug/l	50	47.48	95.0	
1,1-Dichloroethane	ug/l	50	44.58	89.2	
Vinyl Acetate	ug/l	100	67.22	67.2	
2-Butanone	ug/l	100	96.55	96.6	
cis-1,2-Dichloroethene	ug/l	50	44.88	89.8	
Chloroform	ug/l	50	46.90	93.8	
Bromochloromethane	ug/l	50	41.94	83.9	
1,1,1-Trichloroethane	ug/l	50	52.98	106	
1,2-Dichloroethane	ug/l	50	50.35	101	
Carbon Tetrachloride	ug/l	50	55.22	110	
Benzene	ug/l	50	42.59	85.2	
Trichloroethene	ug/l	50	44.62	89.2	
1,2-Dichloropropane	ug/l	50	41.14	82.3	
Dibromomethane	ug/l	50	41.23	82.5	
Bromodichloromethane	ug/l	50	47.24	94.5	
4-Methyl-2-Pentanone	ug/l	100	94.61	94.6	
cis-1,3-Dichloropropene	ug/l	50	41.75	83.5	
Toluene	ug/l	50	45.28	90.6	
trans-1,3-Dichloropropene	ug/l	50	43.88	87.8	
1,1,2-Trichloroethane	ug/l	50	40.98	82.0	
2-Hexanone	ug/l	100	84.77	84.8	
Dibromochloromethane	ug/l	50	38.14	76.3	
Tetrachloroethene	ug/l	50	61.33	123	
1,2-Dibromoethane	ug/l	50	37.75	75.5	
Chlorobenzene	ug/l	50	36.49	73.0	
1,1,1,2-Tetrachloroethane	ug/l	50	38.25	76.5	
Ethylbenzene	ug/l	50	40.00	80.0	
m&p-Xylene	ug/l	100	80.89	80.9	
Styrene	ug/l	50	38.56	77.1	
o-Xylene (1,2-Dimethylbenzene)	ug/l	50	40.33	80.7	
Bromoform	ug/l	50	38.43	76.9	
1,1,2,2-Tetrachloroethane	ug/l	50	34.47	68.9	2
1,2,3-Trichloropropane	ug/l	50	42.13	84.3	
trans-1,4-Dichloro-2-Butene	ug/l	50	38.90	77.8	

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QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

LABORATORY CONTROL SAMPLE: 921388484

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
1,4-Dichlorobenzene	ug/l	50	38.20	76.4	
1,2-Dichlorobenzene	ug/l	50	38.10	76.2	
1,2-Dibromo-3-Chloropropane	ug/l	50	47.09	94.2	
Dibromofluoromethane (S)				107	
1,2-Dichloroethane-d4 (S)				123	
Toluene-d8 (S)				107	
4-Bromofluorobenzene (S)				95	

SAMPLE DUPLICATE: 921388518

Parameter	Units	921377438	Dup. Result	RPD	Footnotes
Chloromethane	ug/l	ND	ND	NC	
Vinyl Chloride	ug/l	ND	ND	NC	
Bromomethane	ug/l	ND	ND	NC	
Chloroethane	ug/l	ND	ND	NC	
Trichlorofluoromethane	ug/l	ND	ND	NC	
Acetone	ug/l	ND	ND	NC	
1,1-Dichloroethene	ug/l	ND	ND	NC	
Iodomethane	ug/l	ND	ND	NC	
Acrylonitrile	ug/l	ND	ND	NC	
Methylene Chloride	ug/l	ND	ND	NC	
Carbon Disulfide	ug/l	ND	ND	NC	
trans-1,2-Dichloroethene	ug/l	ND	ND	NC	
1,1-Dichloroethane	ug/l	ND	ND	NC	
Vinyl Acetate	ug/l	ND	ND	NC	
2-Butanone	ug/l	ND	ND	NC	
cis-1,2-Dichloroethene	ug/l	ND	ND	NC	
Chloroform	ug/l	ND	ND	NC	
Bromochloromethane	ug/l	ND	ND	NC	
1,1,1-Trichloroethane	ug/l	ND	ND	NC	
1,2-Dichloroethane	ug/l	ND	ND	NC	
Carbon Tetrachloride	ug/l	ND	ND	NC	
Benzene	ug/l	ND	ND	NC	
Trichloroethene	ug/l	ND	ND	NC	
1,2-Dichloropropane	ug/l	ND	ND	NC	
Dibromomethane	ug/l	ND	ND	NC	
Bromodichloromethane	ug/l	ND	ND	NC	
4-Methyl-2-Pentanone	ug/l	ND	ND	NC	
cis-1,3-Dichloropropene	ug/l	ND	ND	NC	

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QUALITY CONTROL DATA

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

SAMPLE DUPLICATE: 921388518

Parameter	Units	921377438	Dup. Result	RPD	Footnotes
Toluene	ug/l	ND	ND	NC	
trans-1,3-Dichloropropene	ug/l	ND	ND	NC	
1,1,2-Trichloroethane	ug/l	ND	ND	NC	
2-Hexanone	ug/l	ND	ND	NC	
Dibromochloromethane	ug/l	ND	ND	NC	
Tetrachloroethene	ug/l	ND	ND	NC	
1,2-Dibromoethane	ug/l	ND	ND	NC	
Chlorobenzene	ug/l	ND	ND	NC	
1,1,1,2-Tetrachloroethane	ug/l	ND	ND	NC	
Ethylbenzene	ug/l	ND	ND	NC	
m&p-Xylene	ug/l	ND	ND	NC	
Styrene	ug/l	ND	ND	NC	
o-Xylene (1,2-Dimethylbenzene)	ug/l	ND	ND	NC	
Bromoform	ug/l	ND	ND	NC	
1,1,2,2-Tetrachloroethane	ug/l	ND	ND	NC	
1,2,3-Trichloropropane	ug/l	ND	ND	NC	
trans-1,4-Dichloro-2-Butene	ug/l	ND	ND	NC	
1,4-Dichlorobenzene	ug/l	ND	ND	NC	
1,2-Dichlorobenzene	ug/l	ND	ND	NC	
1,2-Dibromo-3-Chloropropane	ug/l	ND	ND	NC	
Dibromofluoromethane (S)	%	112	110	0	
1,2-Dichloroethane-d4 (S)	%	136	133	0	2
Toluene-d8 (S)	%	102	103	0	
4-Bromofluorobenzene (S)	%	90	88	0	

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QUALITY CONTROL DATA

HDR Engineering
128 South Tryon Street
Suite 1400
Charlotte, NC 28202

Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

Attn: Mr. John Isham
Phone: (704)338-1800

QC Batch ID: 36673
QC Batch Method: EPA 3020
Analysis Method: EPA 7841
Analysis Description: Thallium, AAS Furnace
Associated Pace Samples: 921377420 921377438 921377446 921377453 921377461 921377479

METHOD BLANK: 921406005
Associated Pace Samples:
921377420 921377438 921377446 921377453 921377461 921377479

Parameter	Units	Method Blank Result	PRL	Footnotes
Thallium	mg/l	ND	0.002	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 921406013 921406021

Parameter	Units	921375051	Spike Conc.	Matrix Spike Result	Spike % Rec	Matrix Sp. Dup. Result	Spike Dup % Rec	RPD	Footnotes
Thallium	mg/l	0.001350	0.0250	0.01269	45.4	0.01327	47.7	5	1,1

LABORATORY CONTROL SAMPLE: 921381398

Parameter	Units	Spike Conc.	LCS Result	Spike % Rec	Footnotes
Thallium	mg/l	0.0250	0.02421	96.8	

SAMPLE DUPLICATE: 921405585

Parameter	Units	921375069	Dup. Result	RPD	Footnotes
Thallium	mg/l	ND	ND	NC	

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Pace Project Number: 9219332
Client Project ID: W-S Salisbury 00162-128-018

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

ND	Not Detected
NC	Not Calculable
PRL	Pace Reporting Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	The spike recovery was outside acceptance limits for the MS and /or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
[2]	The surrogate and/or spike recovery was outside acceptance limits.

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CHAIN OF CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

565396

Page: 1 of 1

Section A — Required Client Information:

Company: HDR Engineering
Address: 128 S. Tryon St., Ste 1400
Charlotte NC 28202
Phone: 704 338 6700
Fax:

Section B — Required Client Information:

Report To: John Isaacs
Invoice To:
P.O.
Project Name: W-S Old Salisbury Road LF
Project Number: 00162-128-018

Client Information (Check quote/contract):
Requested Due Date:
*TAT: NORM

* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

Section C — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager: BH
Project #: 9219332
Profile #:
Requested Analysis:

App 1

Section D — Required Client Information:

SAMPLE ID
One character per box.
(A–Z, 0–9 / -)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
WATER	WT
SOIL	SL
OIL	OL
WIPE	WP
AIR	AR
TISSUE	TS
OTHER	OT

ITEM #	SAMPLE ID	MATRIX CODE	DATE COLLECTED (mm / dd / yy)	TIME COLLECTED (hh: mm a/p)	# Containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	App 1	Remarks / Lab ID
1	MW-1R	WT	11/14/00	15:45	5							X	921377420
2	MW-2R		11/15/00	11:50									438
3	MW-3R			8:00									446
4	MW-4R			10:45									453
5	MW-5			16:50									461
6	MW-6R		11/14/00	15:00									479
7	MW-7		11/15/00	10:00									487
8	MW-8			9:15									495
9	TRIP BLANK												503
10	EQUIPMENT BLANK		11/15/00	12:00	5								511
11													
12													

Sample Condition		Sample Notes	Item No.	Relinquished By / Company	Date	Time	Accepted By / Company	Date	Time
Temp in °C:	1.7			Chris Randazzo / HDR	12/15/00	4:[illegible]	[illegible]	12/15/00	[illegible]
Received on ICE:	(Y) / N								
Sealed Cooler:	Y / (N)								
Samples Intact:	(Y) / N								

Additional Comments:
Store bought distilled water used in 40ml vials and plastic for EQUIPMENT BLANK.

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Chris Randazzo
SIGNATURE of SAMPLER: [signature]
DATE Signed: (MM / DD / YY) 12/15/00

SEE REVERSE SIDE FOR INSTRUCTIONS

Pace Analytical Services, Inc. Form COC01 02/00

3

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM C&D
WELL NUMBER MW-1R
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 63 FEET
LENGTH OF GRAVEL PACK — FEET
DIAMETER OF GRAVEL PACK — INCHES

PROJECT NUMBER 00167-128-018
DATE 12/14/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	39.75				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	4	8	12	
WELL VOLUMES REMOVED	0	1.06	2.11	3.17	
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	14.7	14.9	15.2	15.1	
SAMPLE (pH)	4.80	4.75	4.85	4.82	
SAMPLE CONDUCTIVITY (umhos/cm)	70	75	78	75	
BUFFER BEFORE	4	4	4	4	
BUFFER AFTER	4	4	4	4	
ODOR	NONE	"	"	"	
COLOR	CLEAR	BROWN	"	"	
OTHER					

COMMENTS

SAMPLED: 15:45

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 63 (WELL DEPTH) − 39.75 (DEPTH TO WATER) = 23.25 FT = h
3.14 × 0.0833 (r^2) × h = 0.51 FT^3 × 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 3.79

WELLPURG.DWG

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM CSD
WELL NUMBER MW-2R
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 24.70 FEET
LENGTH OF GRAVEL PACK — FEET
DIAMETER OF GRAVEL PACK — INCHES

PROJECT NUMBER 00162-128-018
DATE 12/14/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	11.21				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	2	4	7	
WELL VOLUMES REMOVED	0	0.91	1.82	3.18	
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	15.2	14.9	15.0	15.1	
SAMPLE (pH)	4.60	4.72	4.70	4.71	
SAMPLE CONDUCTIVITY (umhos/cm)	70	82	80	84	
BUFFER BEFORE	4	4	4	4	
BUFFER AFTER	4	4	4	4	
ODOR	CLEAR	BROWN	"	"	
COLOR					
OTHER				DRY	

COMMENTS

SAMPLED: 11:50

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 24.70 (WELL DEPTH) − 11.21 (DEPTH TO WATER) = 13.49 FT = h
3.14 x 0.0833 (r^2) x h = 0.29 FT^3 x 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 2.20

WELLPURG.DWG

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM LSD
WELL NUMBER MW-3R
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 30.70 FEET
LENGTH OF GRAVEL PACK – FEET
DIAMETER OF GRAVEL PACK – INCHES

PROJECT NUMBER 20162-128-018
DATE 12/15/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	23.95				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	2	4		
WELL VOLUMES REMOVED	0	1.81	3.64		
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	15.7	15.8	15.9		
SAMPLE (pH)	5.15	5.12	5.10		
SAMPLE CONDUCTIVITY (umhos/cm)	175	160	155		
BUFFER BEFORE	4	4	4		
BUFFER AFTER	4	4	4		
ODOR	NONE	"	"		
COLOR	CLOUDY	BROWN	"		
OTHER			DRY		

COMMENTS

SAMPLED: 8:00

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 30.70 (WELL DEPTH) – 23.95 (DEPTH TO WATER) = 6.75 FT = h
3.14 X _____ (r^2) X h = 0.15 FT^3 X 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 1.10

WELLPURG.DWG

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM C'D
WELL NUMBER MW-4R
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 22.30 FEET
LENGTH OF GRAVEL PACK – FEET
DIAMETER OF GRAVEL PACK – INCHES

PROJECT NUMBER 00162-128-018
DATE 12/15/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	10.12				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	2	4	7	
WELL VOLUMES REMOVED	0	1.00	2.01	3.52	
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	15.2	15.1	15.3	15.2	
SAMPLE (pH)	5.80	5.95	5.90	5.92	
SAMPLE CONDUCTIVITY (umhos/cm)	190	200	200	210	
BUFFER BEFORE	4	4	4	4	
BUFFER AFTER	4	4	4	4	
ODOR	NONE	"	"	"	
COLOR	BROWN	"	"	"	
OTHER			TURBID	TURBID	

COMMENTS

SAMPLED: 10:45

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 22.30 (WELL DEPTH) – 10.12 (DEPTH TO WATER) = 12.18 FT = h
3.14 x 0.0833 (r^2) x h = 0.27 FT^3 x 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 1.99

WELLPURG.DWG

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM C&D
WELL NUMBER MW-5R
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 32.10 FEET
LENGTH OF GRAVEL PACK – FEET
DIAMETER OF GRAVEL PACK – INCHES

PROJECT NUMBER 00162-128-018
DATE 12/14/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	12.50				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	4	8	10	
WELL VOLUMES REMOVED	0	1.25	2.51	3.13	
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	16.0	15.9	15.8	15.7	
SAMPLE (pH)	5.75	5.80	5.82	5.85	
SAMPLE CONDUCTIVITY (umhos/cm)	180	175	172	175	
BUFFER BEFORE	4	4	4	4	
BUFFER AFTER	4	4	4	4	
ODOR	NONE	"	"	"	
COLOR	CLOUDY	BROWN	"	"	
OTHER			MEDIO	TURBID	

COMMENTS

SAMPLED: 16:50

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 32.10 (WELL DEPTH) – 12.50 (DEPTH TO WATER) = 19.60 FT = h
3.14 x 0.0833 (r^2) x h = 0.43 FT^3 x 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 3.19

WELLPURG.DWG

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM CCD
WELL NUMBER MW-6R
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 62.60 FEET
LENGTH OF GRAVEL PACK — FEET
DIAMETER OF GRAVEL PACK — INCHES

PROJECT NUMBER 00162-128-018
DATE 12/14/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	51.05				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	2	4	6	
WELL VOLUMES REMOVED	0	1.06	2.13	3.19	
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	14.1	14.2	14.3	14.1	
SAMPLE (pH)	5.50	5.60	5.45	5.50	
SAMPLE CONDUCTIVITY (umhos/cm)	50	65	60	62	
BUFFER BEFORE	4	4	4	4	
BUFFER AFTER	4	4	4	4	
ODOR	NONE	"	"	"	
COLOR	CLEAR	BROWN	"	"	
OTHER		TURBID	"	"	

COMMENTS

SAMPLED: 15:00

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 62.60 (WELL DEPTH) − 51.05 (DEPTH TO WATER) = 11.55 FT = h
3.14 X 0.0833 (r^2) X h = 0.35 FT^3 X 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 1.88

WELLPURG.DWG

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM CSD
WELL NUMBER MW-7
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 49.60 FEET
LENGTH OF GRAVEL PACK – FEET
DIAMETER OF GRAVEL PACK – INCHES

PROJECT NUMBER 00162-128-018
DATE 12/15/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	36.90				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	3	5	7	
WELL VOLUMES REMOVED	0	1.45	2.42	3.38	
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	14.8	14.5	14.6	14.7	
SAMPLE (pH)	5.65	5.70	5.60	5.65	
SAMPLE CONDUCTIVITY (umhos/cm)	90	85	82	85	
BUFFER BEFORE	4	4	4	4	
BUFFER AFTER	4	4	4	4	
ODOR	NONE	"	"	"	
COLOR	CLOUDY	BROWN	"	"	
OTHER		TURBID	"	"	

COMMENTS

SAMPLED: 10:20

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 49.60 (WELL DEPTH) – 36.90 (DEPTH TO WATER) = 12.70 FT = h
3.14 x 0.0833 (r^2) x h = 0.276 FT^3 x 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 2.07

WELLPURG.DWG

HDR
HDR Engineering, Inc.

PRE-SAMPLING WELL PURGING

PROJECT WINSTON-SALEM C&D
WELL NUMBER MW-8
WELL INSIDE DIAMETER 2 INCHES
DEPTH OF BOTTOM 30.00 FEET
LENGTH OF GRAVEL PACK – FEET
DIAMETER OF GRAVEL PACK – INCHES

PROJECT NUMBER 00162-128-018
DATE 12/15/00 PAGE 1 OF 1
AIR TEMPERATURE (FAHRENHEIT)
WEATHER CONDITIONS SUNNY
HNU/OVA READING NA
METHOD OF EVACUATION AND TYPE OF EQUIPMENT USED
BAILER

WITHDRAWAL OF WELL VOLUMES

	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME	WELL VOLUME
FLUSHING					
WATER LEVEL BEFORE	17.20				
WATER LEVEL AFTER	NA				
TIME BEGIN FLUSHING					
TIME END FLUSHING					
ESTIMATED VOLUME FLUSHING (gal)	0	2	4	7	
WELL VOLUMES REMOVED	0	0.96	1.91	3.35	
FIELD ANALYSIS					
WATER TEMPERATURE (°C)	15.2	15.0	14.9	15.0	
SAMPLE (pH)	5.65	5.70	5.63	5.69	
SAMPLE CONDUCTIVITY (umhos/cm)	100	90	95	90	
BUFFER BEFORE	4	4	4	4	
BUFFER AFTER	4	4	4	4	
ODOR	NONE	"	"	"	
COLOR	CLOUDY	BROWN	BROWN	"	
OTHER		TURBID	"	"	

COMMENTS

SAMPLED: 9:15

WELL VOLUME CALCULATIONS (1cf = 7.48 gal)
$\pi r^2 \times h$ = WELL VOLUME IN FT^3
π = 3.14

r = RADIUS IN INCHES/12 = RADIUS IN FEET
h = HEIGHT OF WATER COLUMN IN WELL IN FEET
CONVERSION FROM FT^3 TO GALLONS = 7.48 gal/ft^3

WELL RADIUS = 1.0 IN/12 = 0.0833 FT
h = 30.00 (WELL DEPTH) – 17.20 (DEPTH TO WATER) = 12.80 FT = h
3.14 x 0.0833 (r^2) x h = 0.28 FT^3 x 7.48 gal/FT^3 = 1 WELL VOLUME IN GAL = 2.09

WELLPURG.DWG

PERIMETER GAS PROBE MONITORING
FIELD DATA FORM

FORM 1

Date: 12/14/00	Inspectors: C. Randazzo	Site Name: Winston-Salem C&D Landfill	Instrument (%)-S/No.: Gas Port Instrument (%)-M/No.:

Temperature @ Start :40°F Weather: Cloudy, Cold, Damp

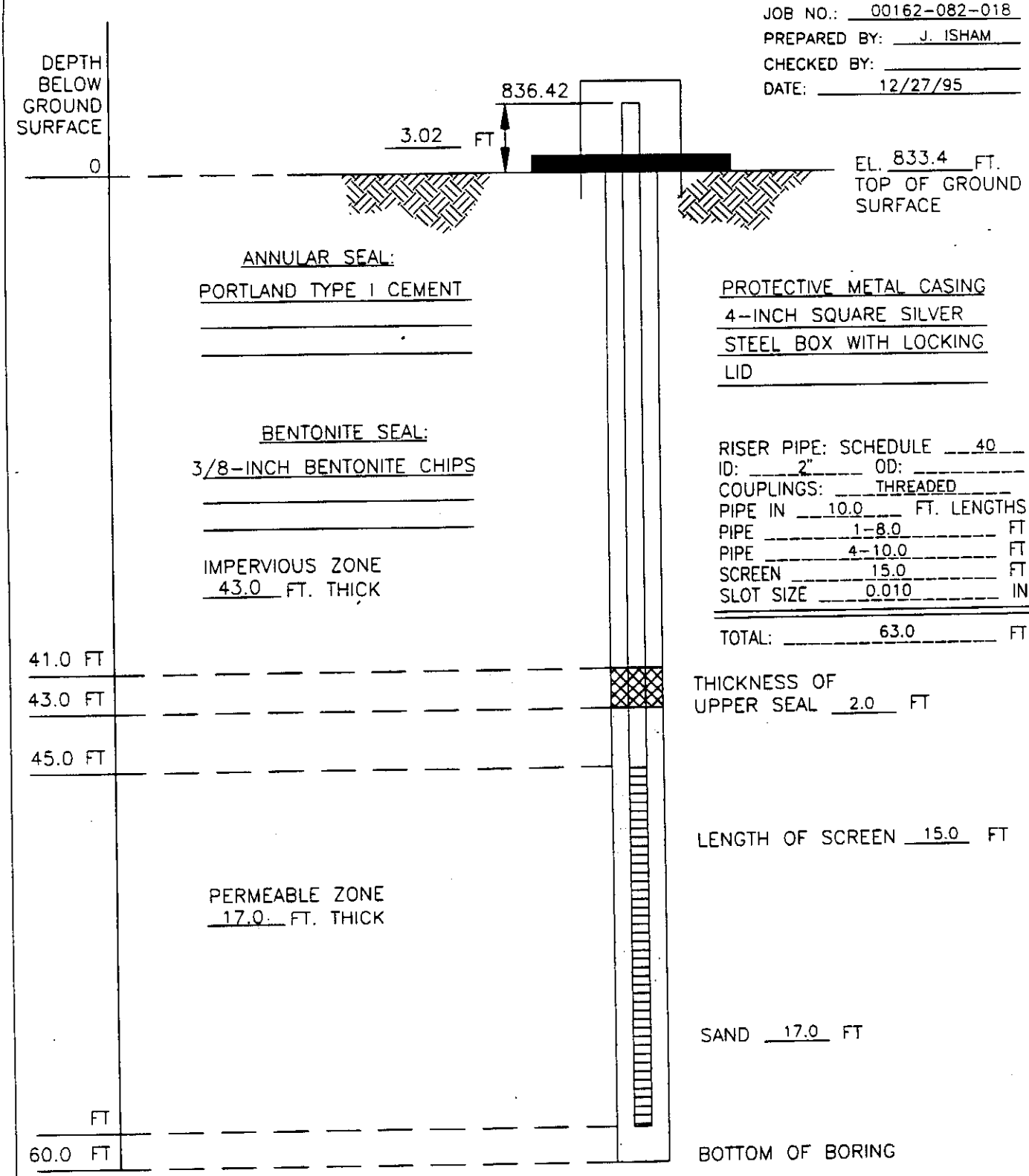
Temperature @ End :45°F Barometric Pressure: NA

Legend: T = Trace CO = Carbon monoxide
W = Water NA = No reading taken
ppm = Parts per million
LEL = Lower explosive limit

MM #	Time	Static Pressure	Methane (%/ppm)	Oxygen (%)	Acceptable Reading (Yes or No)	Remarks
1	14:05	NA	0/0	NA	Yes	0 ppm CO
2S	12:50	NA	0/0	NA	Yes	0 ppm CO
2D	12:55	NA	0/0	NA	Yes	0 ppm CO
3	13:55	NA	0/0	NA	Yes	0 ppm CO
4S	13:10	NA	0/0	NA	Yes	0 ppm CO
4D	13:40	NA	0/0	NA	Yes	0 ppm CO
5	13:30	NA	0/0	NA	Yes	1 ppm CO
6	13:13	NA	0/0	NA	Yes	0 ppm CO

MONITORING WELL INSTALLATION DIAGRAM

LOCATION: WINSTON-SALEM C&D
WELL NO.: MW-1R
BORING NO.:
JOB NO.: 00162-082-018
PREPARED BY: J. ISHAM
CHECKED BY:
DATE: 12/27/95



REMARKS: ALL MEASUREMENTS TO THE NEAREST 0.1 FT.

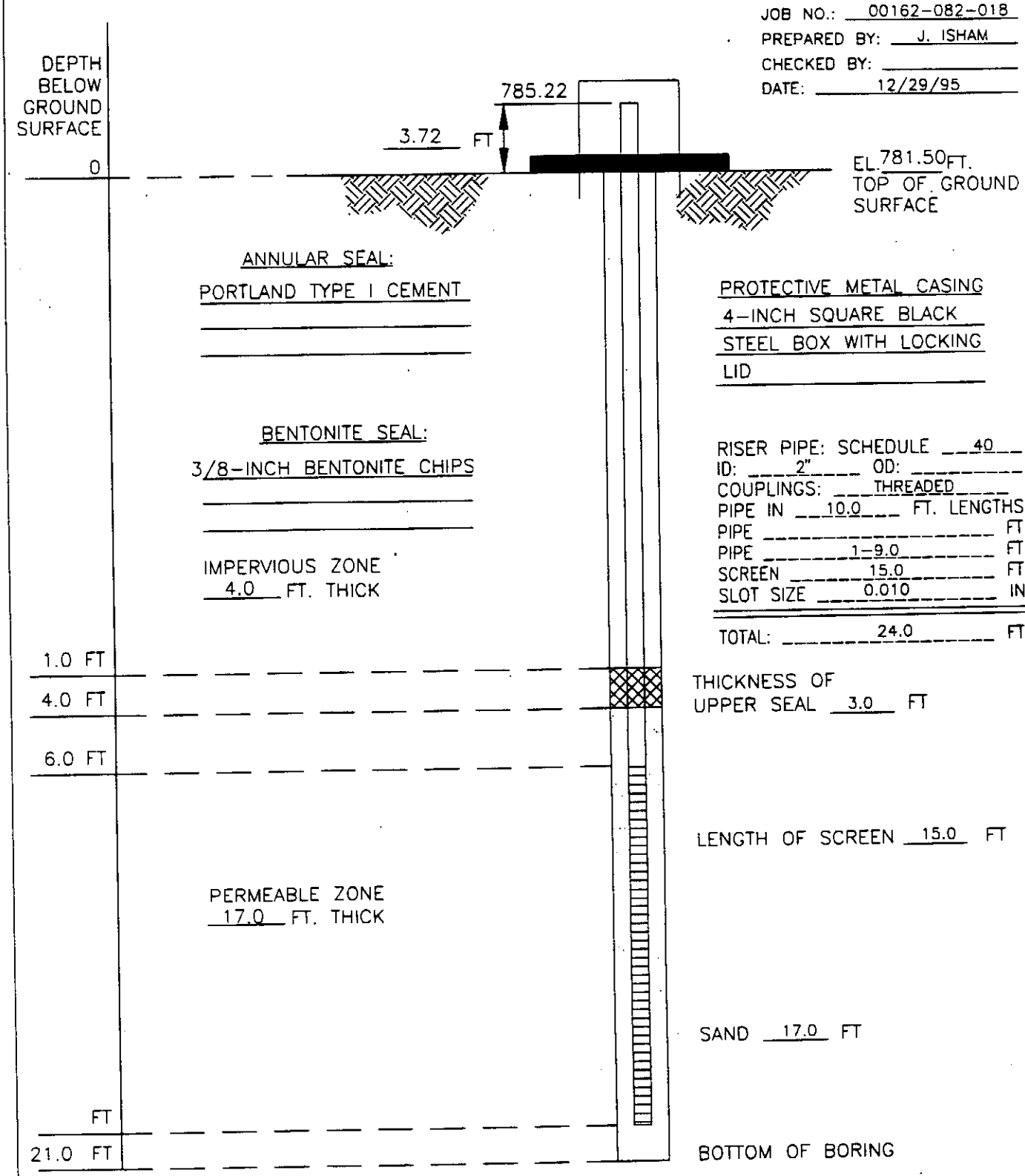
HDR

HDR Engineering, Inc.

FILENAME: MONITOR

MONITORING WELL INSTALLATION DIAGRAM

LOCATION: WINSTON-SALEM C&D
WELL NO.: MW-2R
BORING NO.:
JOB NO.: 00162-082-018
PREPARED BY: J. ISHAM
CHECKED BY:
DATE: 12/29/95



REMARKS: ALL MEASUREMENTS TO THE NEAREST 0.1 FT.

HDR

HDR Engineering, Inc.

FILENAME: MONITOR

Project No: 00162-090-018

Project: Winston-Salem C&D Landfill

Client: City of Winston-Salem

Location: Old Salisbury Road

Geologist Log B-3R (MW-3R)

Ground Elevation: 772.9' MSL

Geologist: John R. Isham, PG.

HDR

SUBSURFACE PROFILE				SAMPLE						
Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft 20 40 60 80	Well Data	Remarks
0		Ground Surface	0							
		RESIDUUM Dark to medium brown, micaceous silty clayey sand, slightly plastic, slightly moist, organics mixed, rooted.	773 / 1 / 772							
1–6		***CLAYEY SAND (SC)*** Orange-brown to tan, micaceous clayey sand, fine to medium-grained, some quartz granules, slightly plastic, moist.	7 / 766	1		8	40%			Portland Type I Cement with 3% Bentonite; 3/8-inch Bentonite Chips
7–17		***SANDY CLAY (CL)*** Gray, soft, plastic, micaceous, mottled with orange-brown iron oxide staining, medium to coarse-grained quartz grains, very moist.	17.5 / 755	2		5	40%			Old Creek Deposits
				3		8	40%			
18–20										Granitic Saprolite

Drilled By: Engineering Tectonics, PA.

Drill Method: 4.25-inch ID HSA

Drill Date: July 7, 1999

HDR Engineering, Inc. of the Carolinas
128 S. Tryon Street
Suite 1400
Charlotte, NC. 28202

Hole Size 8-inch Diameter

Top-of-Casing 776.6' MSL

Sheet: 1 of 2

Project No: 00162-090-018

Project: Winston-Salem C&D Landfill

Client: City of Winston-Salem

Location: Old Salisbury Road

Geologist Log B-3R (MW-3R)

Ground Elevation: 772.9' MSL

Geologist: John R. Isham, PG.

SUBSURFACE PROFILE				SAMPLE						
Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft 20 40 60 80	Well Data	Remarks
21				4		9	50%			
22		***SILTY SAND (SM)*** Gray, white, and black, micaceous, medium-dense, fine to medium-grained, mottled with iron oxide staining, weak mineral alignment, very moist.								2-inch Diameter SCH 40 PVC 0.010-inch Slots
23										
24										
25										
26				5		18	50%			
27		End of Borehole	27 / 746							
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										

Drilled By: Engineering Tectonics, PA.

Drill Method: 4.25-inch ID HSA

Drill Date: July 7, 1999

HDR Engineering, Inc. of the Carolinas
128 S. Tryon Street
Suite 1400
Charlotte, NC. 28202

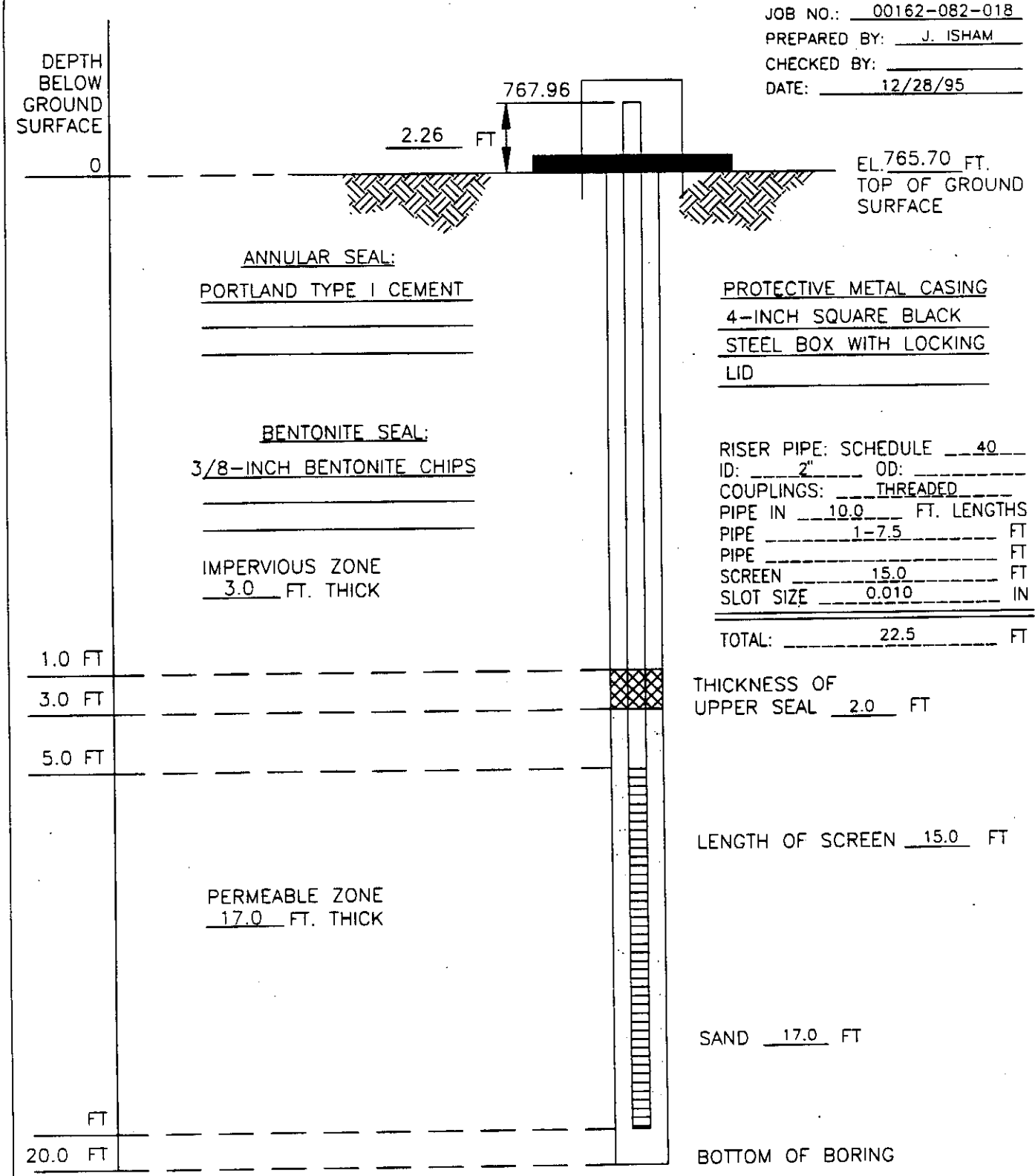
Hole Size 8-inch Diameter

Top-of-Casing 776.6' MSL

Sheet: 2 of 2

MONITORING WELL INSTALLATION DIAGRAM

LOCATION: WINSTON-SALEM C&D
WELL NO.: MW-4R
BORING NO.:
JOB NO.: 00162-082-018
PREPARED BY: J. ISHAM
CHECKED BY:
DATE: 12/28/95



REMARKS: ALL MEASUREMENTS TO THE NEAREST 0.1 FT.

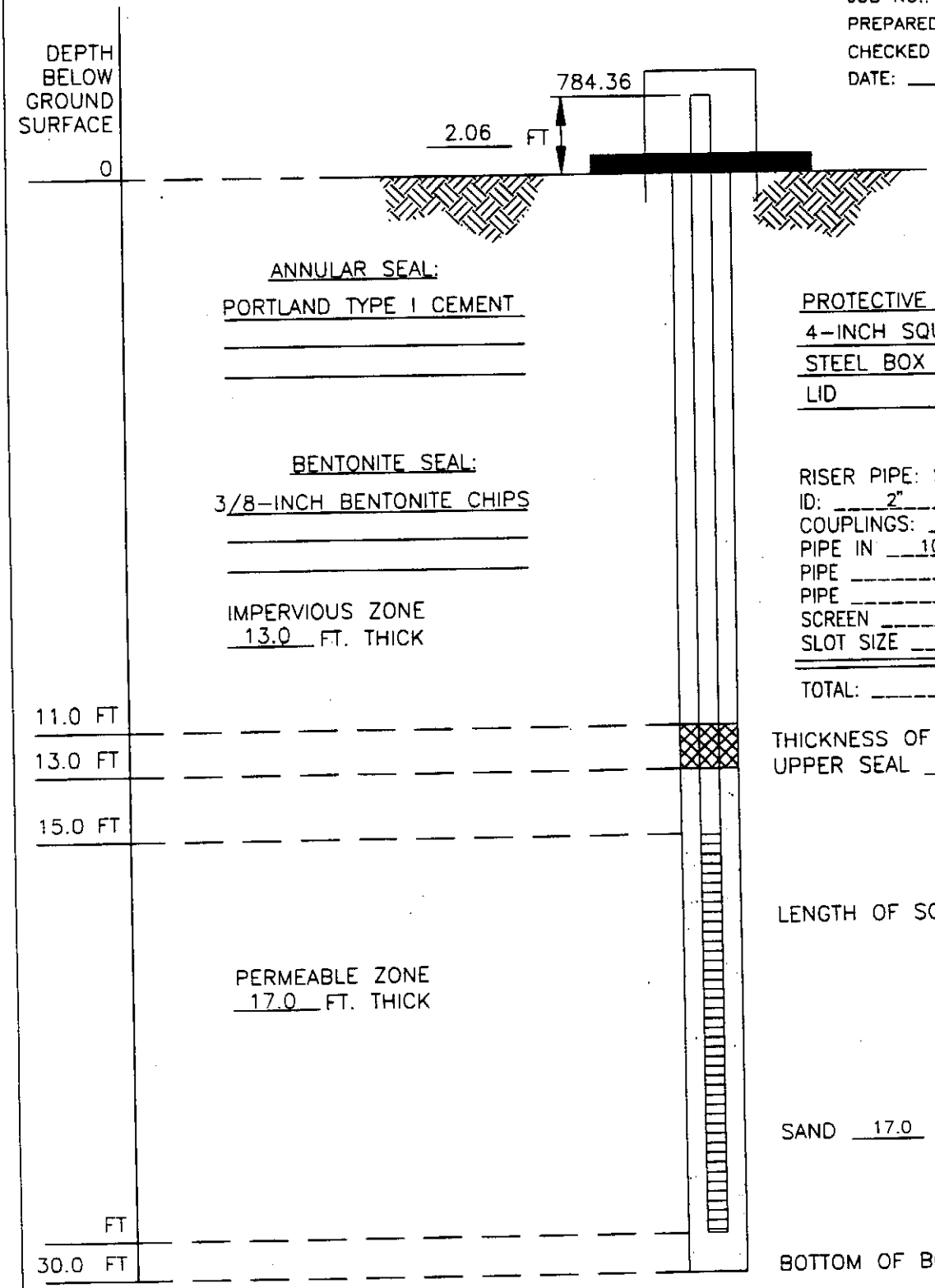
HDR

HDR Engineering, Inc.

FILENAME: MONITOR

MONITORING WELL INSTALLATION DIAGRAM

LOCATION: WINSTON-SALEM C&D
WELL NO.: MW-5R
BORING NO.:
JOB NO.: 00162-082-018
PREPARED BY: J. ISHAM
CHECKED BY:
DATE: 12/29/95



PROTECTIVE METAL CASING
4-INCH SQUARE BLACK STEEL BOX WITH LOCKING LID

RISER PIPE: SCHEDULE 40
ID: 2" OD:
COUPLINGS: THREADED
PIPE IN 10.0 FT. LENGTHS
PIPE 1-7.5 FT
PIPE 1-10.0 FT
SCREEN 15.0 FT
SLOT SIZE 0.010 IN
TOTAL: 32.5 FT

THICKNESS OF UPPER SEAL 2.0 FT

LENGTH OF SCREEN 15.0 FT

SAND 17.0 FT

BOTTOM OF BORING

REMARKS: ALL MEASUREMENTS TO THE NEAREST 0.1 FT.

HDR

HDR Engineering, Inc.

FILENAME: MONITOR

Project No: 00162-090-018

Project: Winston-Salem C&D Landfill

Client: City of Winston-Salem

Location: Old Salisbury Road

Geologist Log B-6R (MW-6R)

Ground Elevation: 817.8' MSL

Geologist: John R. Isham, PG.

HDR

SUBSURFACE PROFILE				SAMPLE						
Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft 20 40 60 80	Well Data	Remarks
		Ground Surface	0							
0		***RESIDUUM*** Tan to light brown sandy loam.	818							
1										
2		***SANDY SILT (ML)*** Orange-brown, micaceous, fine-grained quartz grains, dry.								
3			3.5							
4			814							
5										
6				1		8	60%			
7										
8										
9										
10										Portland Type I Cement with 3% Bentonite
11				2		7	75%			
12		***SILTY SAND (SM)*** Tan to yellow-brown, micaceous, fine to coarse-grained quartz grains, weak mineral alignment (horizontal), iron oxide staining, mottled, dry.								
13										
14										
15										
16				3		8	75%			
17										
18										
19										
20										

Drilled By: Engineering Tectonics, PA.

Drill Method: 4.25-inch ID HSA

Drill Date: July 8, 1999

HDR Engineering, Inc. of the Carolinas
128 S. Tryon Street
Suite 1400
Charlotte, NC. 28202

Hole Size 8-inch Diameter

Top-of-Casing 820.4' MSL

Sheet: 1 of 3

Project No: 00162-090-018

Project: Winston-Salem C&D Landfill

Client: City of Winston-Salem

Location: Old Salisbury Road

Geologist Log B-6R (MW-6R)

Ground Elevation: 817.8' MSL

Geologist: John R. Isham, PG.

HDR

SUBSURFACE PROFILE				SAMPLE						
Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft 20 40 60 80	Well Data	Remarks
21		***SILTY SAND (SM)*** Tan to yellow-brown, micaceous, fine to coarse-grained quartz grains, weak mineral alignment (horizontal), iron oxide staining, mottled, dry.		4		12	80%			
22										
23			23 / 795							
24										Granitic Saprolite
25										
26				5		15	75%			
27										
28		***SILTY SAND (SM)*** Same as above, becoming mixed with partially weathered rock lenses, dry.								
29										
30										Portland Type I Cement with 3% Bentonite
31				6		27	75%			
32										
33										
34		***SILTY SAND w/ GRAVEL*** White, to light gray and tan, micacous, mottled with iron oxide staining, fine to coarse-grained quartz, feldspar, mica, weak foliation as mineral alighment, dry.	34 / 784							
35										
36				7		48	85%			
37										
38										
39										
40										

Drilled By: Engineering Tectonics, PA.

Drill Method: 4.25-inch ID HSA

Drill Date: July 8, 1999

HDR Engineering, Inc. of the Carolinas
128 S. Tryon Street
Suite 1400
Charlotte, NC. 28202

Hole Size 8-inch Diameter

Top-of-Casing 820.4' MSL

Sheet: 2 of 3

Project No: 00162-090-018

Project: Winston-Salem C&D Landfill

Client: City of Winston-Salem

Location: Old Salisbury Road

Geologist Log B-6R (MW-6R)

Ground Elevation: 817.8' MSL

Geologist: John R. Isham, PG.

HDR

SUBSURFACE PROFILE				SAMPLE						
Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft 20 40 60 80	Well Data	Remarks
41		***SILTY SAND w/ GRAVEL*** White, to light gray and tan, micacous, mottled with iron oxide staining, fine to coarse-grained quartz, feldspar, mica, weak foliation as mineral alighment, dry.		8		84	75%			3/8-inch Bentonite Chips
42										
43										#2 Silica Sand Pack
44										
45										
46				9		90	10%			
47										
48		***PWR*** Gray, white and tan, micacous granite saprolite with partially weathered rock lenses, fine to coarse-grained.	48 / 770							Partially Weathered Rock @ 48'
49										
50										
51			51 / 767	10		90	1%			Auger Refusal @ 51'
52					G					
53					G					
54					G					2-inch Diameter SCH 40 PVC 0.010-inch Slots
55		***PWR*** As above, visual identification based on cuttings from air hammer drilling from 51 to 60'.		11	G					
56					G					
57					G					
58					G					
59					G					
60			60 / 758		G					

Drilled By: Engineering Tectonics, PA.

Drill Method: 4.25-inch ID HSA

Drill Date: July 8, 1999

HDR Engineering, Inc. of the Carolinas
128 S. Tryon Street
Suite 1400
Charlotte, NC. 28202

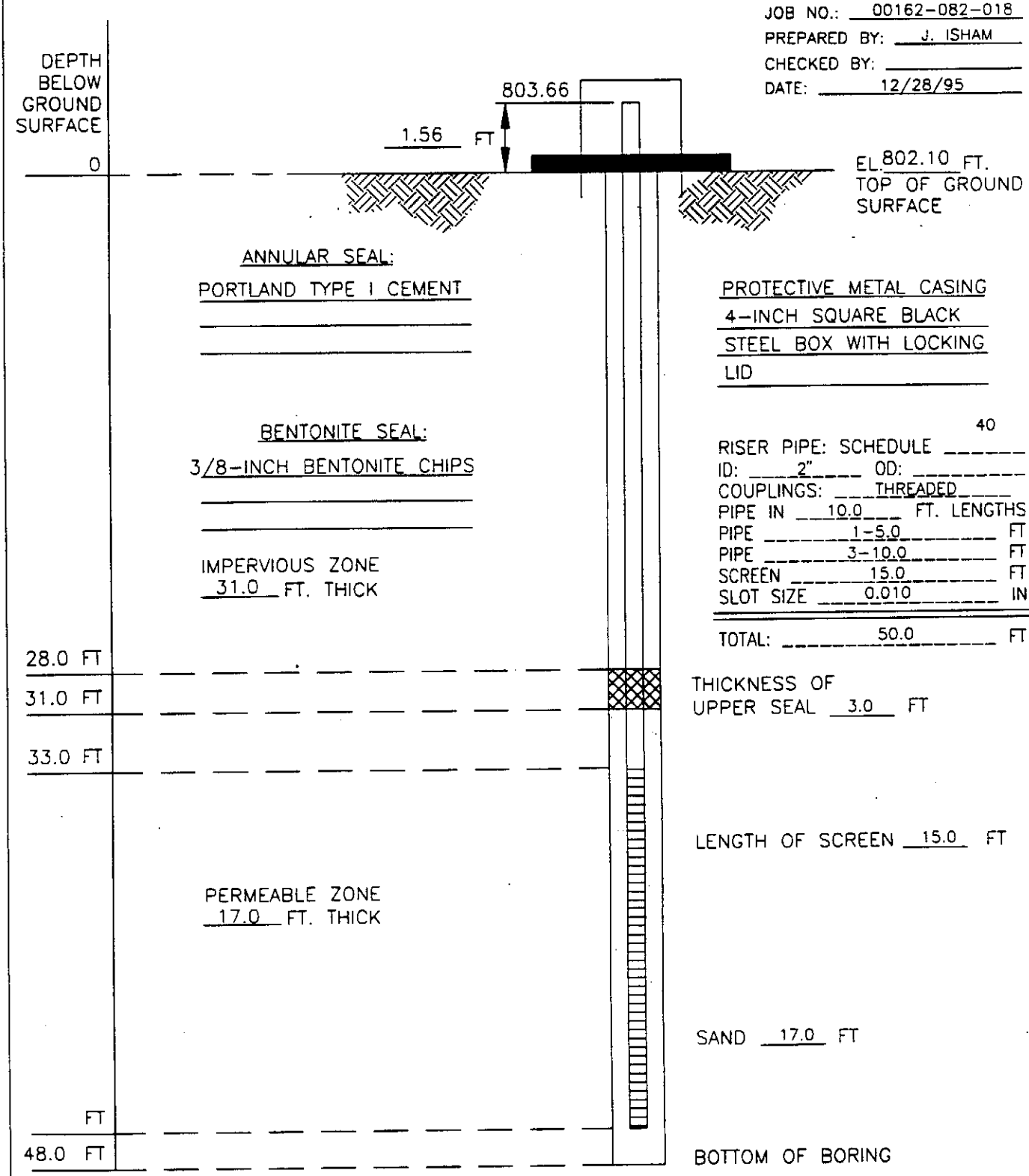
Hole Size 8-inch Diameter

Top-of-Casing 820.4' MSL

Sheet: 3 of 3

MONITORING WELL INSTALLATION DIAGRAM

LOCATION: WINSTON-SALEM C&D
WELL NO.: MW-7
BORING NO.:
JOB NO.: 00162-082-018
PREPARED BY: J. ISHAM
CHECKED BY:
DATE: 12/28/95



RISER PIPE: SCHEDULE 40
ID: 2" OD:
COUPLINGS: THREADED
PIPE IN 10.0 FT. LENGTHS
PIPE 1-5.0 FT
PIPE 3-10.0 FT
SCREEN 15.0 FT
SLOT SIZE 0.010 IN
TOTAL: 50.0 FT

REMARKS: ALL MEASUREMENTS TO THE NEAREST 0.1 FT.

HDR

HDR Engineering, Inc.

FILENAME: MONITOR

Project No: 00162-090-018

Project: Winston-Salem C&D Landfill

Client: City of Winston-Salem

Location: Old Salisbury Road

Geologist Log B-8 (MW-8)

Ground Elevation: 759.8' MSL

Geologist: John R. Isham, PG.

HDR

SUBSURFACE PROFILE				SAMPLE						
Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft 20 40 60 80	Well Data	Remarks
0		Ground Surface	0							
		TOPSOIL	760							
1		Brown silty sandy loam, rooted, organic-rich.	1							
			759							
2		***SANDY SILT (ML)*** Tan to yellow-brown.								
3										
4		***CLAYEY SAND (SC)*** Yellow-brown to tan, micaceous, fine to coarse-grained quartz grains, mottled with iron oxide staining, very moist.								Portland Type I Cement with 3% Bentonite
5										
6				1		24	80%			
7										
8			8							
			752							3/8-inch Bentonite Chips
9										
10										
11		***SANDY CLAY (CL)*** Gray and tan, fine to very coarse-grained quartz grains, iron oxide staining, no mica, plastic, sticky, very moist.		2		12	75%			Old Creek Deposits 8-23.5'
12										
13										
14			14.5							
			745							2-inch Diameter SCH 40 PVC 0.010-inch Slots
15										
16				3		9	100%			
17		***CLAYEY SAND (SC)*** Tan to yellow-brown, slightly plastic, fine to coarse-grained quartz grains, no structure, very moist to wet.								
18										
19										
20										

Drilled By: Engineering Tectonics, PA.

Drill Method: 4.25-inch ID HSA

Drill Date: July 7, 1999

HDR Engineering, Inc. of the Carolinas
128 S. Tryon Street
Suite 1400
Charlotte, NC. 28202

Hole Size 8-inch Diameter

Top-of-Casing 762.5' MSL

Sheet: 1 of 2

Project No: 00162-090-018

Project: Winston-Salem C&D Landfill

Client: City of Winston-Salem

Location: Old Salisbury Road

Geologist Log B-8 (MW-8)

Ground Elevation: 759.8' MSL

Geologist: John R. Isham, PG.

HDR

SUBSURFACE PROFILE				SAMPLE						
Depth	Symbol	Description	Depth/Elev.	Number	Type	Blows/ft	Recovery	Shear Strength blows/ft 20 40 60 80	Well Data	Remarks
			21	4		14	100%			2-inch Diameter SCH 40 PVC 0.010-inch Slots
21		***CLAYEY GRAVEL (GM)*** Yellow-brown to tan, poorly graded, large angular quartz gravel, limonite staining, very wet.	739							
22										
23			23.5							
24		***SILTY SAND (SM)*** Brown, white and tan, micaceous, fine to very coarse-grained quartz grains, weak horizontal mineral alignment, pegmatite zone at base, wet.	736							Granitic Saprolite @ 23.5'
25										
26				5		14	90%			
27			27							
		End of Borehole	733							
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										

Drilled By: Engineering Tectonics, PA.

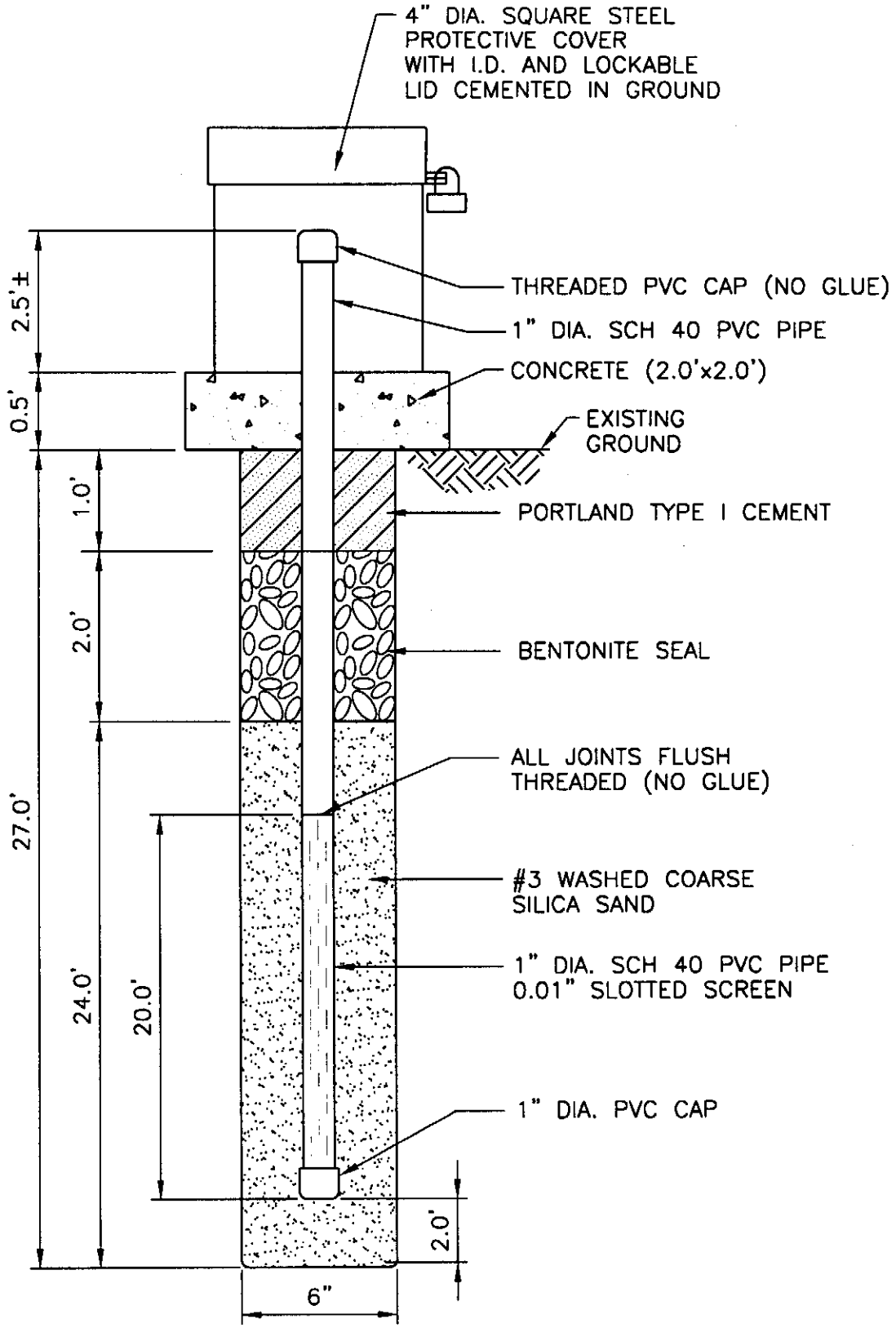
Drill Method: 4.25-inch ID HSA

Drill Date: July 7, 1999

HDR Engineering, Inc. of the Carolinas
128 S. Tryon Street
Suite 1400
Charlotte, NC. 28202

Hole Size 8-inch Diameter

Top-of-Casing 762.5' MSL



NO SCALE

MM-1

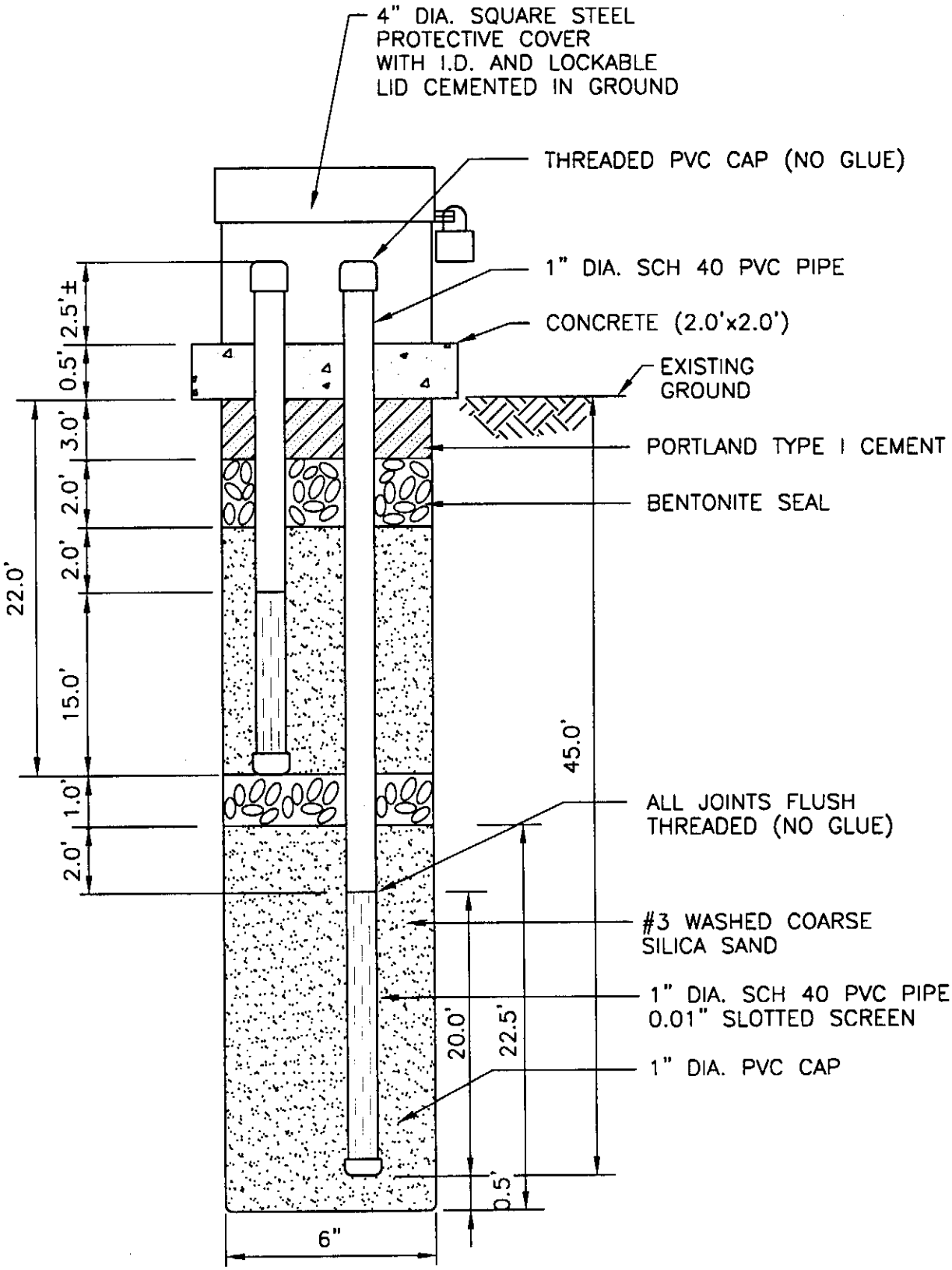
HDR Engineering, Inc. of the Carolinas
Suite 1400
128 S. Tryon Street
Charlotte, NC 28202-5001
(704) 338-1800

OLD SALISBURY ROAD C & D LANDFILL METHANE MONITORING PROBE DETAIL

Date 9/1999

Figure 1

P:\WINSLCD\METH-F1.DWG



NO SCALE

MM-2S/2D

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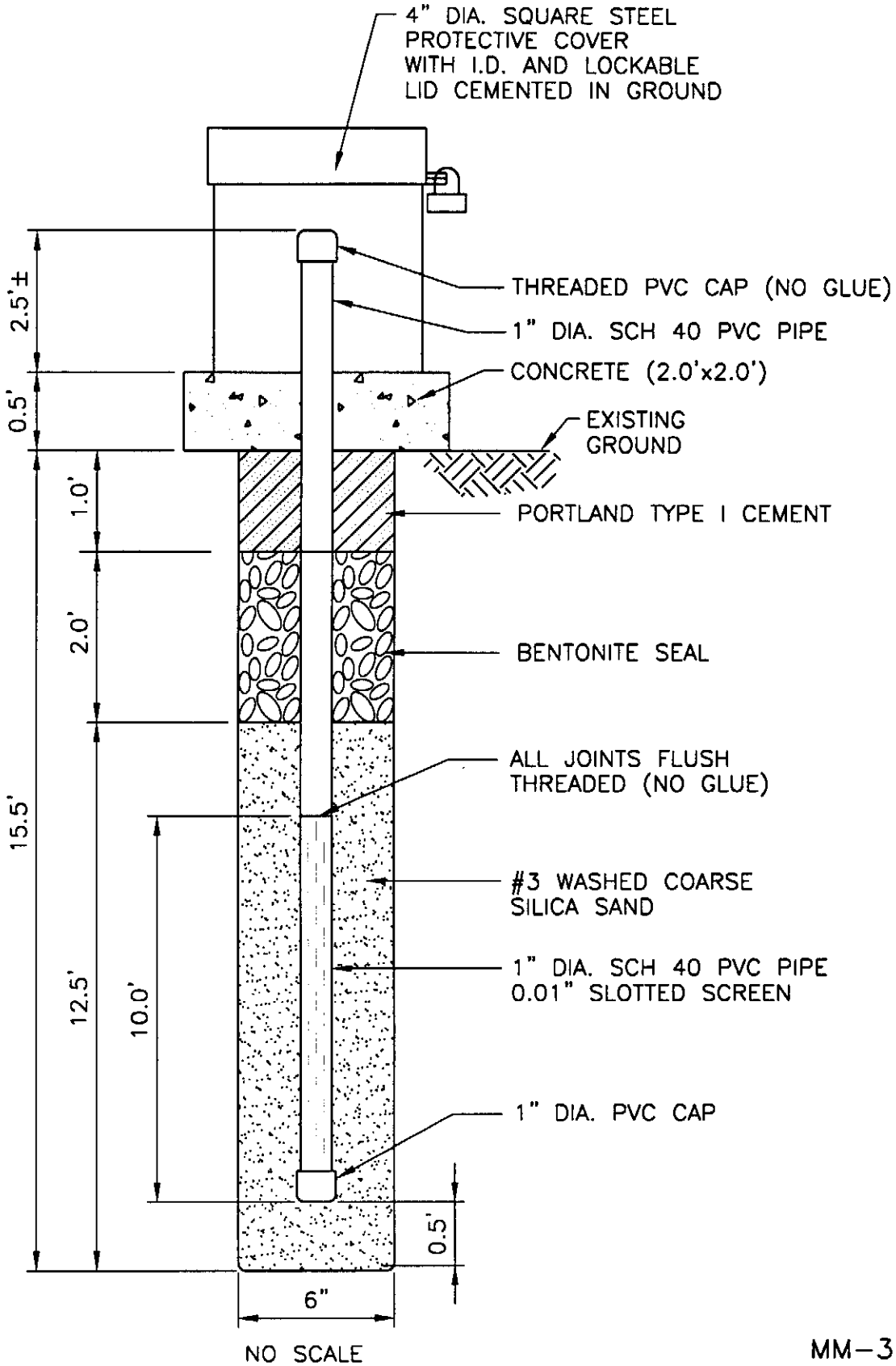
Suite 1400
128 S. Tryon Street
Charlotte, NC 28202-5001
(704) 338-1800

OLD SALISBURY ROAD C & D LANDFILL METHANE MONITORING PROBE DETAIL

Date 9/1999

Figure 2

P:\WINSL-CD\METH-F2.DWG



NO SCALE

MM-3

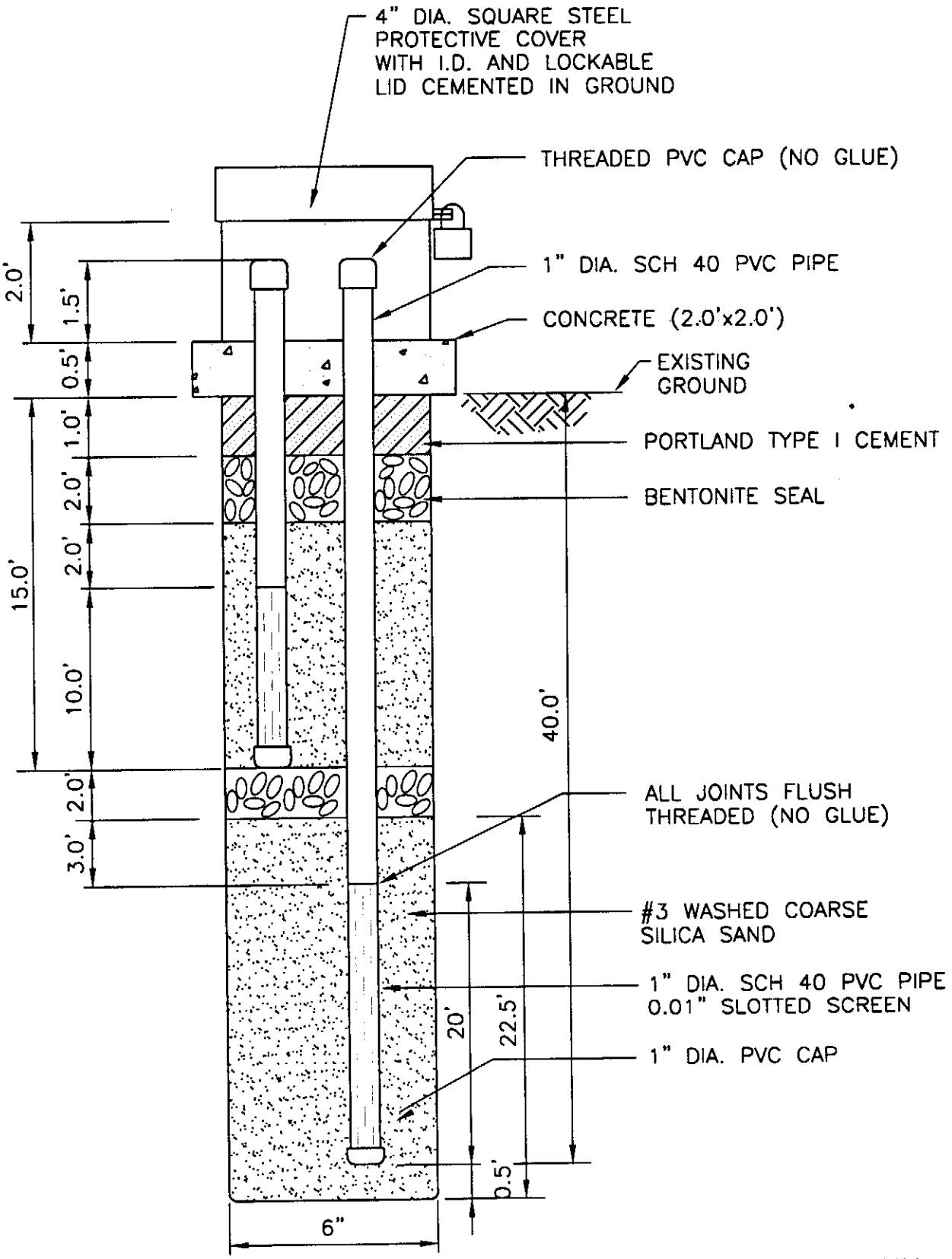
HDR Engineering, Inc. of the Carolinas
Suite 1400
128 S. Tryon Street
Charlotte, NC 28202-5001
(704) 338-1800

OLD SALISBURY ROAD C & D LANDFILL METHANE MONITORING PROBE DETAIL

Date 9/1999

Figure 3

P:\WINSLCD\METH-F3.DWG



NO SCALE

MM-4S/4D

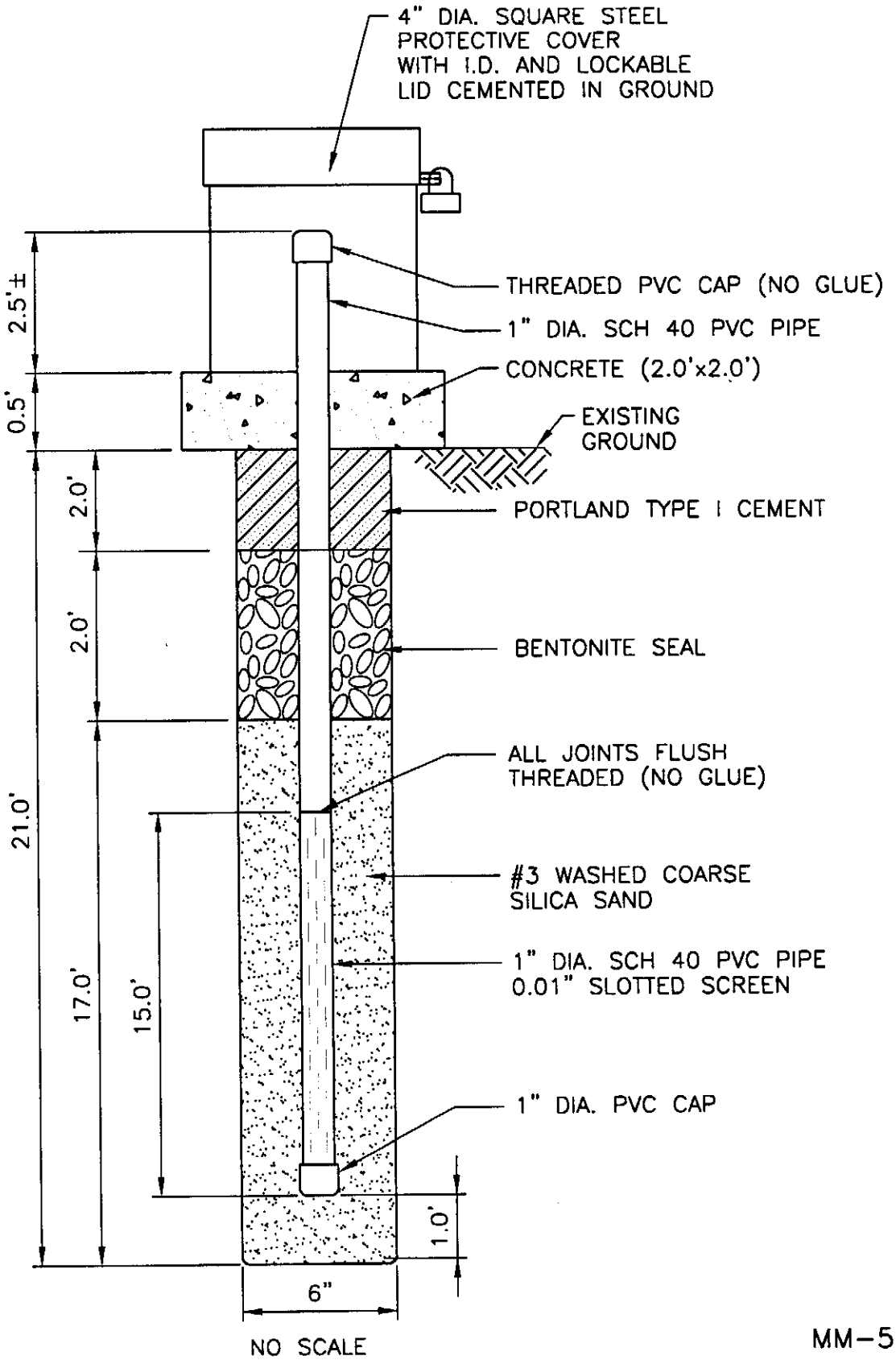
HDR Engineering, Inc. of the Carolinas
Suite 1400
128 S. Tryon Street
Charlotte, NC 28202-5001
(704) 338-1800

OLD SALISBURY ROAD C & D LANDFILL METHANE MONITORING PROBE DETAIL

Date 9/1999

Figure 4

P:\WINSL-CD\METH-F4.DWG



NO SCALE

MM-5

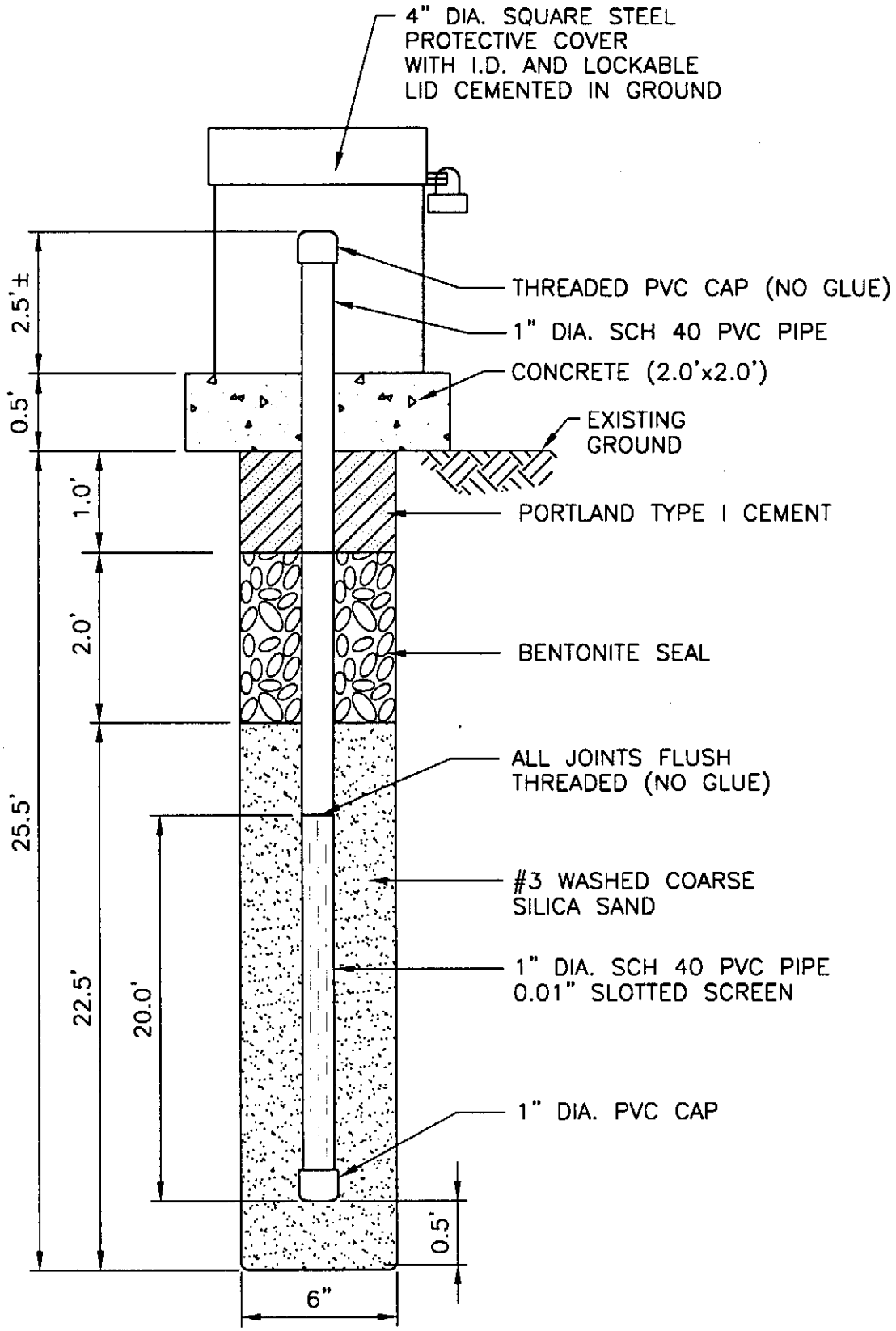
HDR Engineering, Inc. of the Carolinas
Suite 1400
128 S. Tryon Street
Charlotte, NC 28202-5001
(704) 336-1800

OLD SALISBURY ROAD C & D LANDFILL METHANE MONITORING PROBE DETAIL

Date 9/1999

Figure 5

P:\WINSLCD\METH-F5.DWG



NO SCALE

MM-6

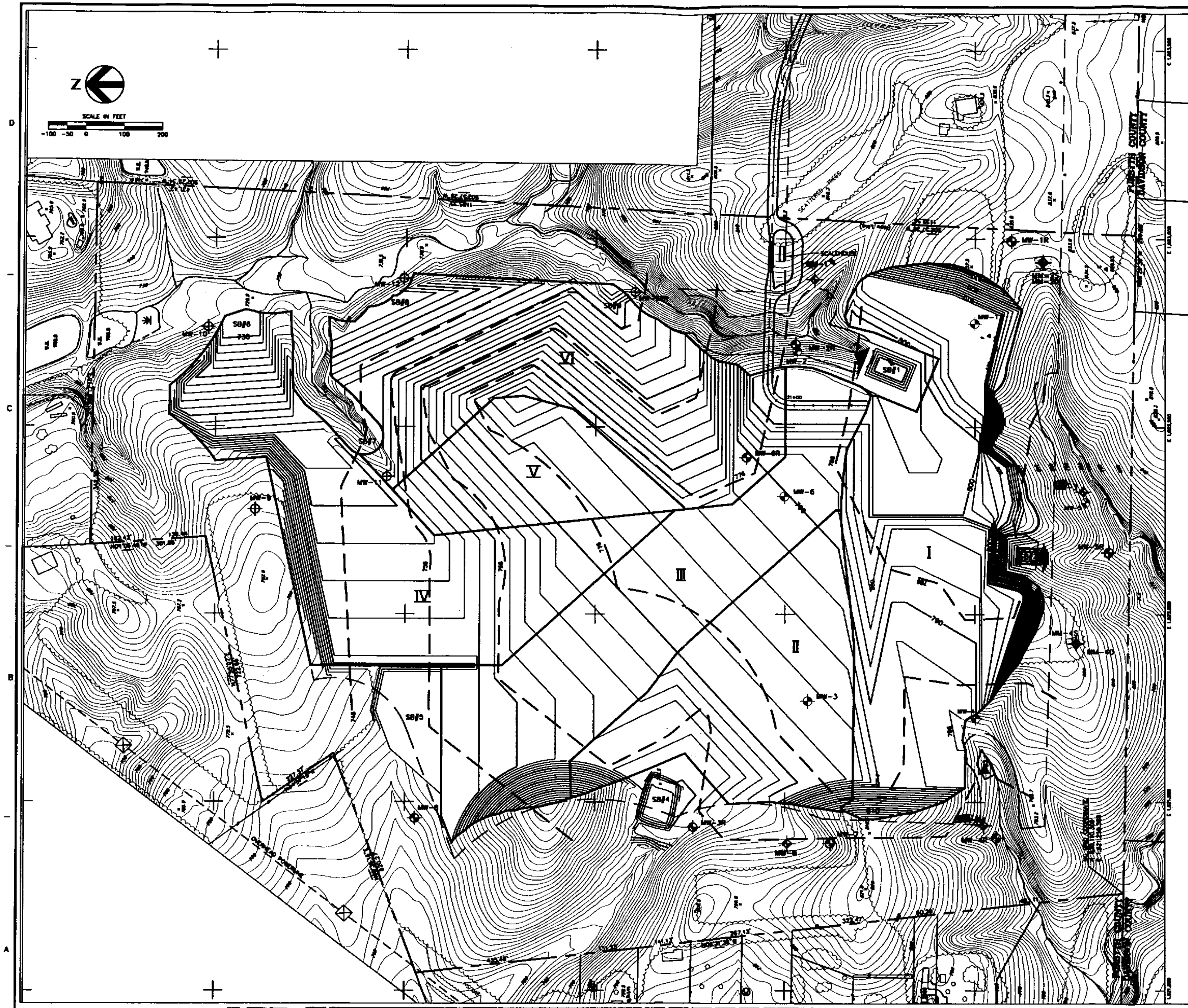
HDR Engineering, Inc. of the Carolinas
Suite 1400
128 S. Tryon Street
Charlotte, NC 28202-5001
(704) 338-1800

OLD SALISBURY ROAD C & D LANDFILL METHANE MONITORING PROBE DETAIL

Date 9/1999

Figure 6

P:\WINSLCD\METH-F6.DWG



LEGEND

——780——	PROPOSED CONTOURS
——810——	EXISTING CONTOURS
—— — — ——	PROPERTY BOUNDARY
—— — ——	COUNTY LINE
~~	STREAM
— — — —	POTENTIAL EXTENT OF WASTE
————	PROPOSED PHASING BOUNDARY
— — — —	SEASONAL HIGH GROUND-WATER CONTOURS
	EXISTING GROUND-WATER MONITORING WELL
	EXISTING METHANE GAS MONITORING PROBE
	PROPOSED GROUND-WATER MONITORING WELL ("R" - DENOTES REPLACEMENT WELL)
	ABANDONED MONITORING WELLS
	PRIVATE WATER SUPPLY WELL
SB#2	SEDIMENTATION BASIN

NOTES

1. TOPOGRAPHIC INFORMATION PROVIDED BY CARTOGRAPHIC AERIAL MAPPING DATED NOVEMBER 12, 1993.
2. PROPERTY SURVEY TAKEN FROM DATA SUPPLIED BY BRADY SURVEYING, INC. DATED MARCH 15, 1994.
3. THIS DRAWING SHOWS ABANDONED, EXISTING AND PROPOSED MONITORING WELLS, AND METHANE GAS MONITORING PROBES.
4. S - DEPICTS SHALLOW
D - DEPICTS DEEP

HDR

HDR Engineering, Inc. of the Carolinas
Suite 1400
128 S. Tryon Street
Charlotte, NC 28202-5001
(704) 338-1800

Rev. No.	Description	Date	By
C	ADDED METHANE GAS PROBES MM-1 TO MM-6	5/22/99	CRH
B	ADDED MW-3R, MW-6, AND MW-6R	5/14/99	CRH
A	ISSUED FOR APPROVAL		

Project Manager: J.C. READLING, P.E.
E.A. WRIGHT, P.E.
Drawn By: J. OHA

OLD SALISBURY ROAD
CONSTRUCTION AND DEMOLITION LANDFILL
PHASE II AND III
CONSTRUCTION PLAN APPLICATION
WINSTON-SALEM NORTH CAROLINA

EXIST. AND PROP. GROUND-WATER MONITORING WELL AND METHANE GAS PROBE LOCATIONS

Date: APRIL 1999
Scale: 1"=100'
Project No.: 0162-090-018
Dwg. No.: C-5
Issue: C