

August 1, 2000
AESI Project No. BV97016D

CORPORATE OFFICE
911 Fifth Avenue, Suite 100
Kirkland, Washington 98033
(425) 827-7701
FAX (425) 827-5424

Mr. John Wietfeld
Mr. Roger Nye
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, Washington 98008-5452

- Subject: **Ground Water Study**
Seattle-Tacoma International Airport
- A. Quarterly Ground Water Level Measurements
C1 (Qva) Monitoring Well Network
 - B. Ground Water Study Database
 - C. Updated Ground Water Study Schedule

Dear Mr. Wietfeld and Mr. Nye:

John, thank you for talking with Paul Agid and I on July 12, 2000. On behalf of the Port of Seattle, Associated Earth Sciences, Inc. (AESI) is providing with this letter the information and deliverables we discussed.

A. Quarterly Ground Water Level Measurements

The attached submittal package A contains the first, second, third, and fourth quarter of ground water level measurements collected from select wells completed in the C1 (Qva) aquifer at Seattle-Tacoma International Airport (STLA). Table 1 through Table 4 contains the four quarterly ground water level measurements. Figure 1 through Figure 4 are maps showing the direction of ground water flow in the Qva aquifer in the area of the Aircraft Operations and Maintenance Area (AOMA).

The first and second quarter data were previously submitted to Ecology (Mr. Roger Nye) on January 31, 2000. The third and fourth quarter data, which were collected on March 22, 2000 and June 23, 2000, respectively, are contained in this submittal. This submittal conforms to the reporting requirements of Agreed Order #97TC-N122, Section IV - Work to be Performed,

Item 2. The reporting requirements under Item 2 can be considered complete based on the data attached to this letter.

Quarterly or more frequent water level data were obtained from the following wells, the locations of which are shown on the ground water flow direction maps (Figure 1 through Figure 4).

<u>Well</u>	<u>Well Owner</u>	<u>Study Area</u>	<u>Measurement Method</u>
MW-E	United Airlines	United Airlines (UAL) Fuel Farm	Manual
CMW-7	Port of Seattle	UAL Former Hanger Site	Manual & Transducer
CMW-8	Port of Seattle	UAL Former Hanger Site	Manual & Transducer
HZ-13	RAC	RAC Auto Facility	Manual
HZ-16	RAC	RAC Auto Facility	Manual
MW-2	Budget Rental	Budget Rental	Manual
MW-7	Budget Rental	Budget Rental	Manual
MW-6	Port of Seattle	Gate B-2	Manual & Transducer
MW-2A	Northwest Airlines	Northwest Airlines Hanger Tanks	Manual
MW-1	North West Airlines	Northwest Airlines Fuel Farm	Manual
SSW-2	North West Airlines	Northwest Airlines Hydrant Line	Manual
MW-3	Port of Seattle	Pan American Fuel Farm	Manual & Transducer
DEL-15	Delta Airlines	Delta Airlines Auto-Gas Cluster Tanks	Manual
MWE-05	Port of Seattle	IWS Lagoon 1 & 2	Manual & Transducer
MWE-07	Port of Seattle	IWS Lagoon 1 & 2	Manual
HC99_B-32	Port of Seattle	3 rd Runway	Manual
HC99_B-33	Port of Seattle	3 rd Runway	Manual
HC99_B-41	Port of Seattle	3 rd Runway	Manual
HC99_B-46	Port of Seattle	3 rd Runway	Manual & Transducer

As required by Section IV, Item 2 of the Agreed Order, Mr. Roger Nye approved the proposed monitoring well network in mid-September 1999 prior to the first quarterly measurement event that occurred on September 23, 1999. Our records indicate that a map showing the proposed ground water level monitoring well network for this study was submitted to Mr. Nye on September 16, 1999. Mr. Nye approved of the well location network via a telephone call with Mr. John Strunk, AESI on September 17, 1999.

The rationale for selection of the monitoring well network for water level monitoring purposes included the following:

- 1) Ground water monitoring wells proposed for water level measurements must be completed in the shallow regional aquifer known locally as the advance outwash or Qva aquifer. For purposes of the STIA Ground Water Study, the Qva aquifer was assigned a hydrostratigraphic nomenclature of C1, which represents the first coarse-grained unit of regional

significance. Ground water monitoring wells completed in the Qva aquifer, and located at or near the airport and compiled in the database for the project were identified and plotted on a base map to determine the geographic location of the existing wells within STIA.

- 2) The monitoring well must be in place and operational between the time period of September 1999 through June 2000 in order to complete a full year of quarterly water level measurements. A review of construction projects at the airport was conducted as part of the monitoring well network selection process. Monitoring wells that were located in areas of the airport that would be impacted by construction activities (such as wells around Concourse A impacted by STEP) were excluded as candidates for water level measurements for logistical reasons and the likelihood that the well would be abandoned during the monitoring period.
- 3) Monitoring wells were chosen based on their location within the AOMA, as directed in the Agreed Order Section IV, Item 2. Thirteen (13) wells within the AOMA were used for quarterly ground water flow measurements. In addition, four (4) wells completed for the third Runway project, located near the northwest section of the airfield, were also used for quarterly level measurements. The wells within the AOMA were used to construct ground water flow direction maps from contoured water level elevation data. In addition, any monitoring wells located off airport property must be demonstrated to be in usable condition and reasonably accessible.
- 4) Documentation of all monitoring wells used in this investigation must include well logs that indicate the aquifer screened and well construction details.

Six pressure transducers were installed in select wells located within the AOMA and have been collecting water level data every six hours since September 29, 1999. The hydrographs for these six wells are shown in Figure 5. Figure 6 is a compilation of the four quarterly measurements superimposed on the long-term pressure transducer hydrographs.

B. Ground Water Study Database

We have enclosed as Attachment B a CD that provides the contents of the database developed in satisfaction of Agreed Order Section IV, Item 1.c.

Note:

- Data is in a flat file representation (Excel spreadsheets) of data stored in a relational database manner. If Ecology wants the Access database, we can provide that file format if necessary.
- Files with a 'dt' start to their name indicate data storage files, whereas those with a 'rt' indicate reference data.

Mr. John Wietfeld
Mr. Roger Nye
AESI Project No. BV97016D
August 1, 2000
Page 4

- The file <dt_location.xls> is the central table in the relational structure, describing over 3,000 location's logistical information.
- <sys_loc_code> is the unique identifier in the logistical description files.

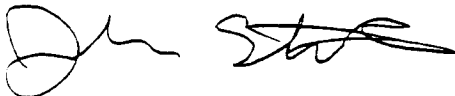
C. Schedule

We have also enclosed as Attachment C our updated study schedule. Note that we have identified September 8, 2000 as our preferred date for presenting to Ecology the study fate and transport conceptual model. We will run and calibrate the model once Ecology provides approval, consistent with Agreed Order Section IV, Item 3.

Mr. John Wietfeld
Mr. Roger Nye
AESI Project No. BV97016D
August 1, 2000
Page 5

If you have any questions regarding the data or information provided here, or require additional information please call me at (206) 780-9370.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
West Sound Office



John Strunk
Associate Geologist

Cc: Paul Agid, Port of Seattle

Attachment A:

- Table 1 - First Quarter Ground Water Level Measurements
- Table 2 - Second Quarter Ground Water Level Measurements
- Table 3 - Third Quarter Ground Water Level Measurements
- Table 4 - Fourth Quarter Ground Water Level Measurements
- Figure 1 - First Quarter Ground Water Flow Direction Map
- Figure 2 - Second Quarter Ground Water Flow Direction Map
- Figure 3 - Third Quarter Ground Water Flow Direction Map
- Figure 4 - Fourth Quarter Ground Water Flow Direction Map
- Figure 5 - Ground Water Elevation Measurements (Transducer) Plot
- Figure 6 - Measured Ground Water Elevations (Transducer & Manual Readings) Plot

Attachment B:

CD containing Ground Water Study Database

Attachment C:

Updated Ground Water Study Schedule

AR 045482

TABLE 1
STIA Ground Water Study
Ground Water Level Monitoring Well Network
1st Quarterly Water Level Monitoring Event
September 23, 1999

Well ID	Database ID	Study Area	Well Owner	Date & Time	Reference Elevation (ft)	SWL Depth (ft)	SWL Elevation (ft)	Comments
MW-E	UNFUF_MW-E_1001	United Airlines Fuel Farm	United Airlines	09/23/1999 9:30	373.71	64.44	309.27	
CMW-7	UNFHS_CMW-7_0756	United Airlines Former Hanger Site	Port of Seattle	09/23/1999 12:00	391.93	63.66	308.25	
CMW-8	UNFHS_CMW-8_0759	United Airlines Former Hanger Site	Port of Seattle	09/23/1999 15:15	392.22	63.64	308.58	
HZ-13	RACFT_HZ-13_0970	RAC Auto Facility (Hertz/National/Avist)	RAC	09/23/1999 12:40	349.29	34.35	314.94	
HZ-16	RACFT_HZ-16_0970	RAC Auto Facility (Hertz/National/Avist)	RAC	09/23/1999 13:00	351.23	42.42	308.81	
MW-2	BDGPL_MW-2_0863	Budget Auto Facility	Budget Rental	09/23/1999 10:05	343.89	35.77	308.12	
MW-7	BDGPL_MW-7_0863	Budget Auto Facility	Budget Rental	09/23/1999 10:15	349.74	43.81	305.93	
MW-8	GATB2_MW-8_0825	Gate B2	Port of Seattle	09/23/1999 11:25	378.50	73.02	305.48	
MW-2A	NWPHIT_MW-2A_0679	Northwest Airlines Hanger Tanks	Northwest Airlines	09/23/1999 12:18	377.91	57.19	320.72	
MW-1	NWBFF_MW-1_0650	North West Airlines Fuel Farm	Northwest Airlines	09/23/1999 12:30	377.53	53.82	323.71	
SSW-2	NWHSZ_SSW-2_0699	North West Airlines Hydrant Line	Northwest Airlines	09/23/1999 11:40	375.71	58.74	316.97	
MW-3	PAFFF_MW-3_0713	Pan American Fuel Farm	Port of Seattle	09/23/1999 11:05	360.76	49.40	312.36	
DEL-15	DELAG_DEL-15_0610	Delta Airlines Auto-Gas Cluster Tanks	Delta Airlines	09/23/1999 10:54	368.15	49.84	321.31	
MWE-05	HWLSG_MWE-5_2001	Industrial Waste System Lagoon 1 & 2	Port of Seattle	09/23/1999 14:45	357.59	52.81	304.78	
MWE-07	HWLSG_MWE-7_2001	Industrial Waste System Lagoon 1 & 2	Port of Seattle	09/23/1999 14:33	329.10	26.78	302.32	
HC99_B-32	3RDRW_B32_2087	3rd Runway	Port of Seattle	09/23/1999 14:15	269.40	5.15	264.25	
HC99_B-33	3RDRW_B33_2087	3rd Runway	Port of Seattle	09/23/1999 14:00	262.80	4.02	258.78	
HC99_B-41	3RDRW_B41_2087	3rd Runway	Port of Seattle	09/23/1999 13:32	309.00	24.25	284.75	
HC99_B-46	3RDRW_B46_2087	3rd Runway	Port of Seattle	09/23/1999 13:45	330.80	24.92	305.88	

TABLE 2
STIA Ground Water Study
Ground Water Level Monitoring Well Network
2nd Quarterly Water Level Monitoring Event
December 21, 1999

Well ID	Database ID	Study Area	Well Owner	Date & Time	Reference Elevation (ft)	SWL Depth (ft)	SWL Elevation (ft)	Comments
MW-E	UNFUF_MW-E_1001	United Airlines Fuel Farm	United Airlines	12/21/1999 9:30	373.71	64.58	309.13	
CMW-7	UNFHS_CMW-7_0756	United Airlines Former Hanger Site	Port of Seattle	12/21/1999 11:10	391.93	83.65	308.28	5 Sided Nut on Flush Monument
CMW-8	UNFHS_CMW-8_0756	United Airlines Former Hanger Site	Port of Seattle	12/21/1999 11:20	392.22	64.18	308.04	5 Sided Nut on Flush Monument
HZ-13	RACFT_HZ-13_0970	RAC Auto Facility (Hertz/National/Avia)	RAC	12/21/1999 10:08	348.28	34.54	314.75	Total Depth = 88.65 ft, Slickup = 0.32 ft bgs
HZ-16	RACFT_HZ-16_0970	RAC Auto Facility (Hertz/National/Avia)	RAC	12/21/1999 9:58	351.23	41.47	309.76	Total Depth = 56.3 ft, Slickup = 0.4 ft bgs
MW-2	BDCPL_MW-2_0863	Budget Auto Facility	Budget Rental	12/21/1999 9:40	343.88	35.92	307.97	
MW-7	BDCPL_MW-7_0863	Budget Auto Facility	Budget Rental	12/21/1999 9:50	349.74	43.88	305.86	
MW-6	GATBZ_MW-6_0625	Gate B2	Port of Seattle	12/21/1999 11:03	379.56	73.06	306.50	
MW-2A	NWHT_MW-2A_0879	Northwest Airlines Hanger Tanks	Northwest Airlines	12/21/1999 10:28	377.91	57.38	320.53	Total Depth = 69.3 ft, Slickup = 0.4 ft bgs
MW-1	NWBFF_MW-1_0650	North West Airlines Fuel Farm	Northwest Airlines	12/21/1999 10:21	377.53	54.06	323.47	Total Depth = 64.78 ft, Slickup = 0.72 ft bgs
SSW-2	NWHSZ_SSW-2_0699	North West Airlines Hydrant Line	Northwest Airlines	12/21/1999 10:53	375.71	57.06	318.65	
MW-3	PAFF_MW-3_0713	Pan American Fuel Farm	Port of Seattle	12/21/1999 10:46	360.76	48.71	312.05	
DEL-15	DELAG_DEL-15_0610	Delta Airlines Auto Gas Cluster Tanks	Delta Airlines	12/21/1999 11:38	368.15	47.29	320.86	
MWE-05	WLSG_MWE-5_2001	Industrial Waste System Lagoon 1 & 2	Port of Seattle	12/21/1999 15:24	357.59	52.72	304.87	
MWE-07	WLSG_MWE-7_2001	Industrial Waste System Lagoon 1 & 2	Port of Seattle	12/21/1999 15:15	329.10	26.87	302.43	
HC99_B-32	3RDRW_B32_2087	3rd Runway	Port of Seattle	12/21/1999 13:20	289.40	3.56	285.84	2 inch monitoring well, Total Depth = 20.75 ft, PVC slickup = 3.25 ft bgs
HC99_B-33	3RDRW_B33_2087	3rd Runway	Port of Seattle	12/21/1999 13:15	282.80	1.86	280.94	4 inch monitoring well, Total Depth = 21.65 ft, PVC slickup = 2.75 ft bgs
HC99_B-41	3RDRW_B41_2087	3rd Runway	Port of Seattle	12/21/1999 13:34	309.00	22.72	286.28	2 inch monitoring well, Total Depth = 37.15 ft, PVC slickup = 3.25 ft bgs
A197_B59	GTRUN_B59_2063	3rd Runway	Port of Seattle	12/21/1999 14:25	314.31	14.66	299.65	?
HC99_B-46	3RDRW_B46_2087	3rd Runway	Port of Seattle	12/21/1999 13:40	330.80	23.88	306.92	2 inch monitoring well, Total Depth = 38.9 ft, PVC slickup = 1.6 ft bgs

TABLE 3
STIA Ground Water Study
Ground Water Level Monitoring Well Network
3rd Quarterly Water Level Monitoring Event
March 22, 2000

Well ID	Database ID	Study Area	Well Owner	Date & Time	Reference Elevation (ft)	SWL Depth (ft)	SWL Elevation (ft)	Comments
MW-E	UNFUF_MW-E_1001	United Airlines Fuel Farm	United Airlines	03/22/2000 9:58	373.71	64.18	309.53	
CMW-7	UNFHS_CMW-7_0758	United Airlines Former Hanger Site	Port of Seattle	03/22/2000 11:45	391.93	83.29	308.64	
CMW-8	UNFHS_CMW-8_0758	United Airlines Former Hanger Site	Port of Seattle	03/22/2000 11:41	392.22	83.84	308.38	
HZ-13	RACFT_HZ-13_0970	RAC Auto Facility (Hertz/National/Avis)	RAC	03/22/2000 10:34	346.29	34.16	315.13	
HZ-16	RACFT_HZ-16_0970	RAC Auto Facility (Hertz/National/Avis)	RAC	03/22/2000 10:27	351.23	41.23	310.00	
MW-2	BDGFL_MW-2_0863	Budget Auto Facility	Budget Rentel	03/22/2000 10:14	343.89	35.62	308.27	
MW-7	BDGFL_MW-7_0863	Budget Auto Facility	Budget Rentel	03/22/2000 10:20	349.74	43.69	306.05	
MW-6	GATB2_MW-6_0825	Gate B2	Port of Seattle	03/22/2000 11:30	379.56	72.70	306.86	
MIW-2A	NWFIH1_MW-2A_0679	Northwest Airlines Hanger Tanks	Northwest Airlines	03/22/2000 10:57	377.91	57.06	320.83	
MW-1	NWBFF_MW-1_0650	North West Airlines Fuel Farm	Northwest Airlines	03/22/2000 10:47	377.53	53.62	323.91	
SSW-2	NWHS2_SSW-2_0699	North West Airlines Hydrant Line	Northwest Airlines	03/22/2000 11:16	375.71	56.75	318.96	
MW-3	PAFFF_MW-3_0713	Pan American Fuel Farm	Port of Seattle	03/22/2000 11:07	360.76	47.91	312.85	
DEL-15	DELAG_DEL-15_0610	Delta Airlines Auto Gas Cluster Tanks	Delta Airlines	03/22/2000 12:42	368.15	46.55	321.60	
MWE-05	IWLSG_MWE-5_2001	Industrial Waste System Lagoon 1 & 2	Port of Seattle	03/22/2000 12:26	357.59	52.41	305.18	
MWE-07	IWLSG_MWE-7_2001	Industrial Waste System Lagoon 1 & 2	Port of Seattle	03/22/2000 12:22	329.10	26.27	302.83	
HC99_B-32	3RDRW_B32_2087	3rd Runway	Port of Seattle	03/22/2000 13:10	269.40	3.17	266.23	
HC99_B-33	3RDRW_B33_2087	3rd Runway	Port of Seattle	03/22/2000 13:15	267.80	1.42	261.38	
HC99_B-41	3RDRW_B41_2087	3rd Runway	Port of Seattle	03/22/2000 13:22	309.00	22.66	286.32	
A197_B59	GTRUN_B59_2063	3rd Runway	Port of Seattle	03/22/2000 12:58	314.31	14.57	299.74	
HC99_B-46	3RDRW_B46_2087	3rd Runway	Port of Seattle	03/22/2000 13:26	330.80	23.07	307.73	

TABLE 4
STIA Ground Water Study
Ground Water Level Monitoring Well Network
4th Quarterly Water Level Monitoring Event
June 23, 2000

Well ID	Database ID	Study Area	Well Owner	Date & Time	Reference Elevation (ft)	SWL Depth (ft)	SWL Elevation (ft)	Comments
MW-E	UNFUF_MW-E	United Airlines Fuel Farm	United Airlines	06/23/2000 11:30	373.71	64.34	309.37	
CMW-7	UNFHS_CMW-7	United Airlines Former Hanger Site	Port of Seattle	06/23/2000 12:55	391.93	83.51	308.42	
CMW-8	UNFHS_CMW-8	United Airlines Former Hanger Site	Port of Seattle	06/23/2000 13:05	392.22	83.87	308.35	
HZ-13	RACFT_HZ-13	RAC Auto Facility (Hertz/National/Avis)	RAC	06/23/2000 12:10	349.29	34.74	314.55	
HZ-16	RACFT_HZ-16	RAC Auto Facility (Hertz/National/Avis)	RAC	06/23/2000 12:07	351.23	41.25	309.98	
MW-2	BDGPTL_MW-2	Budget Auto Facility	Budget Rental	06/23/2000 11:55	343.89	35.87	308.22	
MW-7	BDGPTL_MW-7	Budget Auto Facility	Budget Rental	06/23/2000 11:45	348.74	43.73	308.01	
MW-6	GATBZ_MW-6	Gate B2	Port of Seattle	06/23/2000 12:42	378.56	72.85	308.81	
MW-2A	NWFHT_MW-2A	Northwest Airlines Hanger Tanks	Northwest Airlines	06/23/2000 12:23	377.91	57.35	320.56	
MW-1	NWBF_F_MW-1	North West Airlines Fuel Farm	Northwest Airlines	06/23/2000 12:30	377.53	54.07	323.48	
SSW-2	NWMS2_SSW-2	North West Airlines Hydrant Line	Northwest Airlines	06/23/2000 12:36	375.71	56.87	318.84	
MW-3	PAFF_F_MW-3	Pen American Fuel Farm	Port of Seattle	06/23/2000 13:15	360.76	48.52	312.24	
DEL-15	DELAG_DEL-15	Delta Airlines Auto Gas Cluster Tanks	Delta Airlines	n/a	n/a	n/a	n/a	destroyed / abandoned
MWE-05	IWLSG_MWE05	Industrial Waste System Lagoon 1 & 2	Port of Seattle	06/23/2000 13:36	357.59	52.70	304.89	
MWE-07	IWLSG_MWE07	Industrial Waste System Lagoon 1 & 2	Port of Seattle	06/23/2000 13:42	329.10	28.83	302.47	
HC99_B-32	3RDRW_B32	3rd Runway	Port of Seattle	06/23/2000 15:46	289.40	4.63	284.77	
HC99_B-33	3RDRW_B33	3rd Runway	Port of Seattle	06/23/2000 15:42	282.80	2.83	259.97	
HC99_B-41	3RDRW_B41	3rd Runway	Port of Seattle	06/23/2000 15:15	309.00	23.82	285.18	
A197_B59	GTRUN_B59	3rd Runway	Port of Seattle	06/23/2000 15:05	314.31	15.53	298.78	
HC99_B-46	3RDRW_B46	3rd Runway	Port of Seattle	n/a	n/a	n/a	n/a	abandoned

911 5th Avenue, Suite 100
 Fairfax, VA 22031
 (425) 827-7701
 FAX: (425) 827-5424

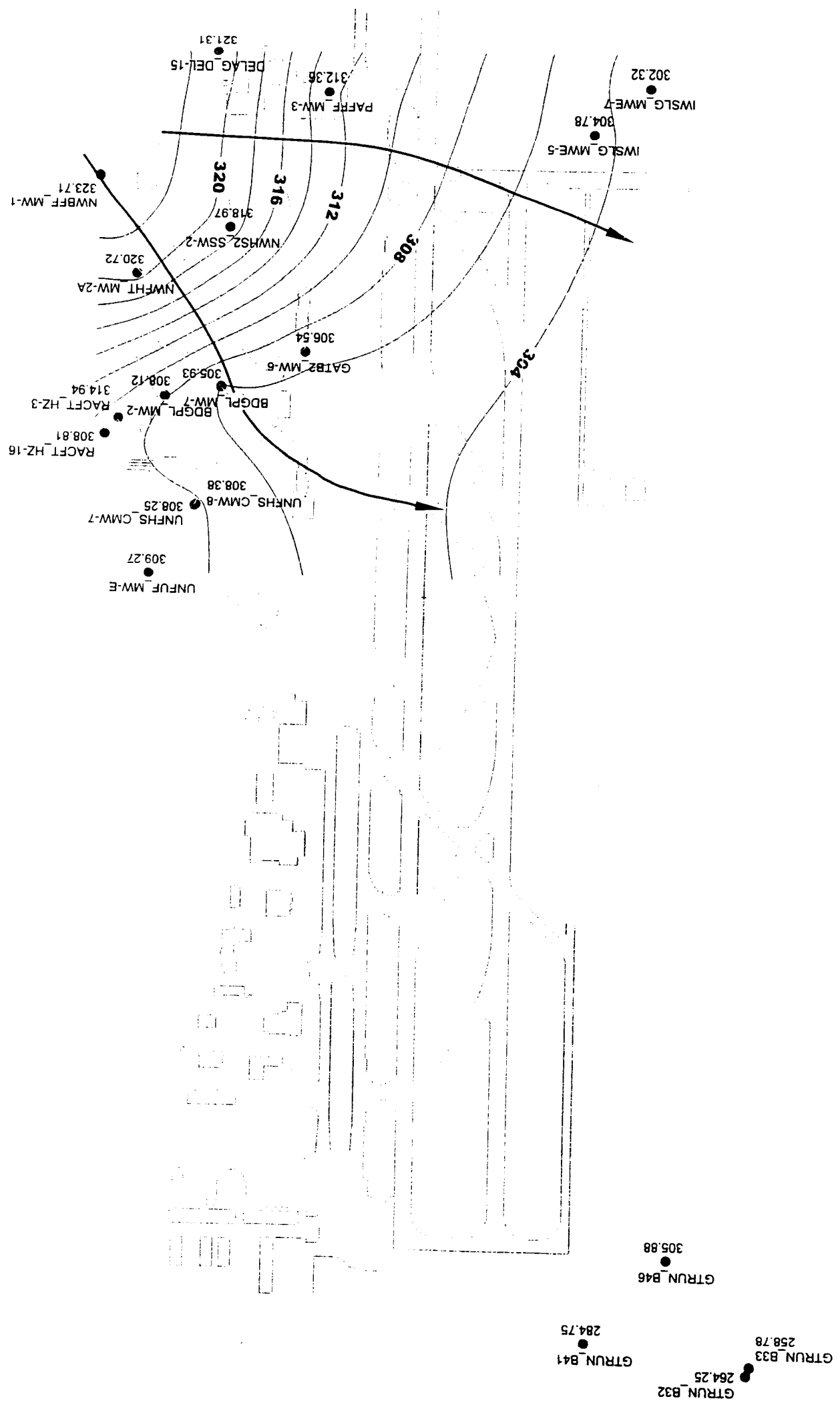
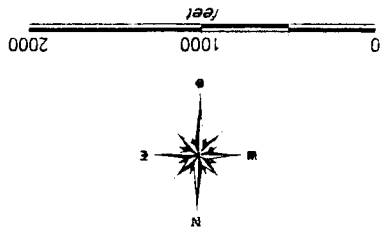
179 Middleburg Lane, North
 Manassas, VA 20108
 (703) 790-8370
 FAX: (703) 790-9438

1st Quarter Groundwater Flow Direction -
Qva (C1) Well Network (9/23/99)
 STIA Ground Water Study

PROJECT NO.	DATE	SCALE	DESIGNED BY	DRAWN BY	FILENAME
BV97016	07/12/00	1" = 1000'	JJS	HXT, JJR	STIA0999.dwg
FIGURE NO.					
1					

LEGEND

- 3RDRW_B33 Groundwater Elevation (feet, STIA Datum) measured on 09/23/99
- Groundwater Flow Directions
- 304 Groundwater Elevation Contour



AR 045488

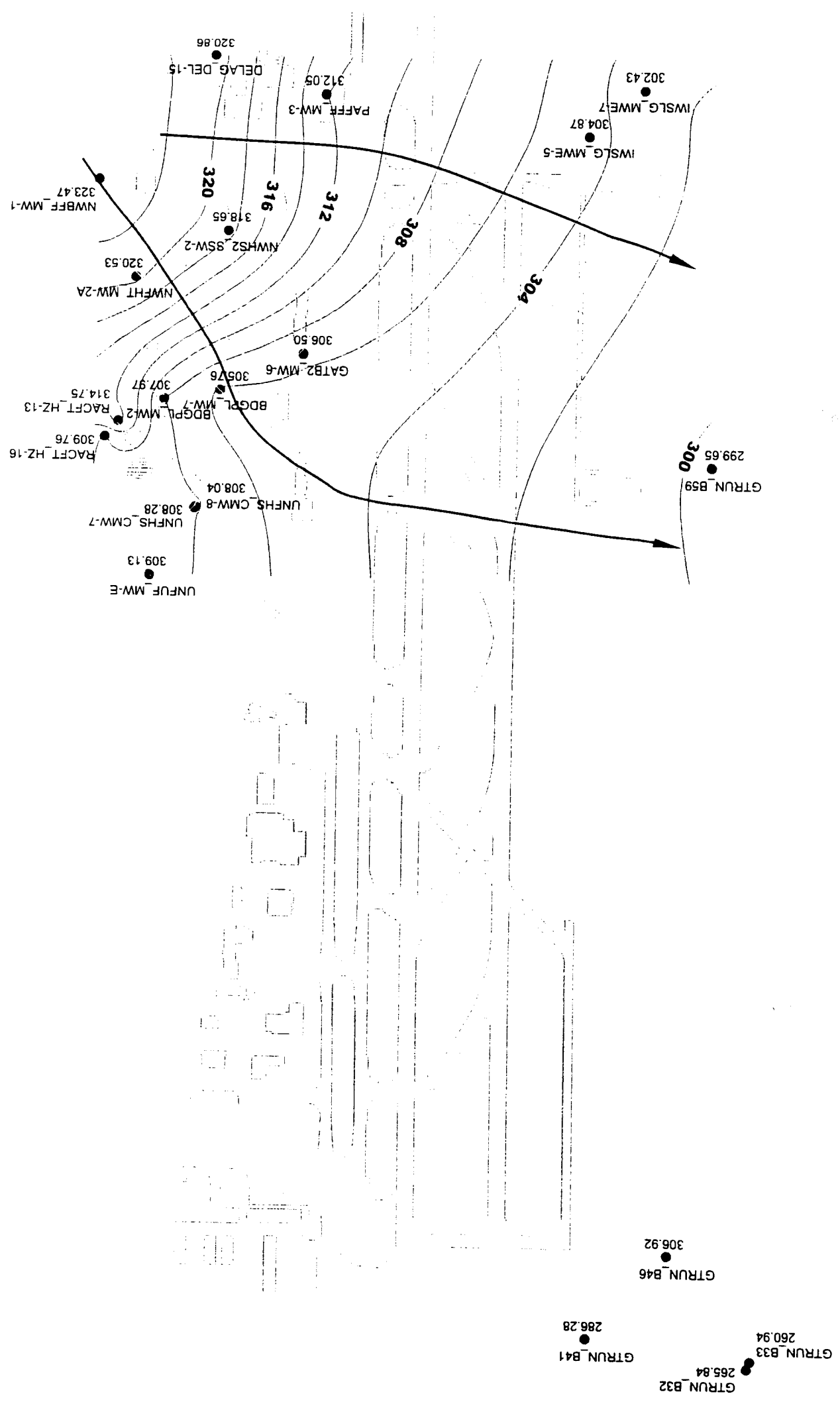
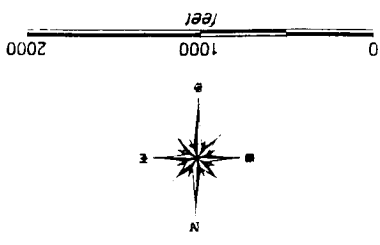
311 5th Avenue, Suite 100
 Fairfax, VA 22034
 (425) 827-7701
 FAX (425) 827-5424
 3400 Old Lee Road
 Alexandria, VA 22304
 (703) 790-8370
 FAX (703) 790-9438

2nd Quarter Groundwater Flow Direction -
STIA Ground Water Study
Qva (C1) Well Network (12/21/99)

DATE	07/12/00	SCALE	1" = 1000'
DESIGNED BY	JJS	REVISED	
DRAWN BY	HXT, JJR	FILE NAME	STIA1299.dwg

PROJECT NO. BV97016
 FIGURE NO. 2

LEGEND
 ● 3RDRW_B33
 261.38
 Groundwater Elevation (feet, STIA Datum)
 measured on 12/21/99
 ↗ Groundwater Flow Directions
 - - - - - 304
 Groundwater Elevation Contour



AR 045490

311 5th Avenue, Suite 100
 Kensington, VA 22084
 Phone: (703) 827-7701
 Fax: (703) 827-5424

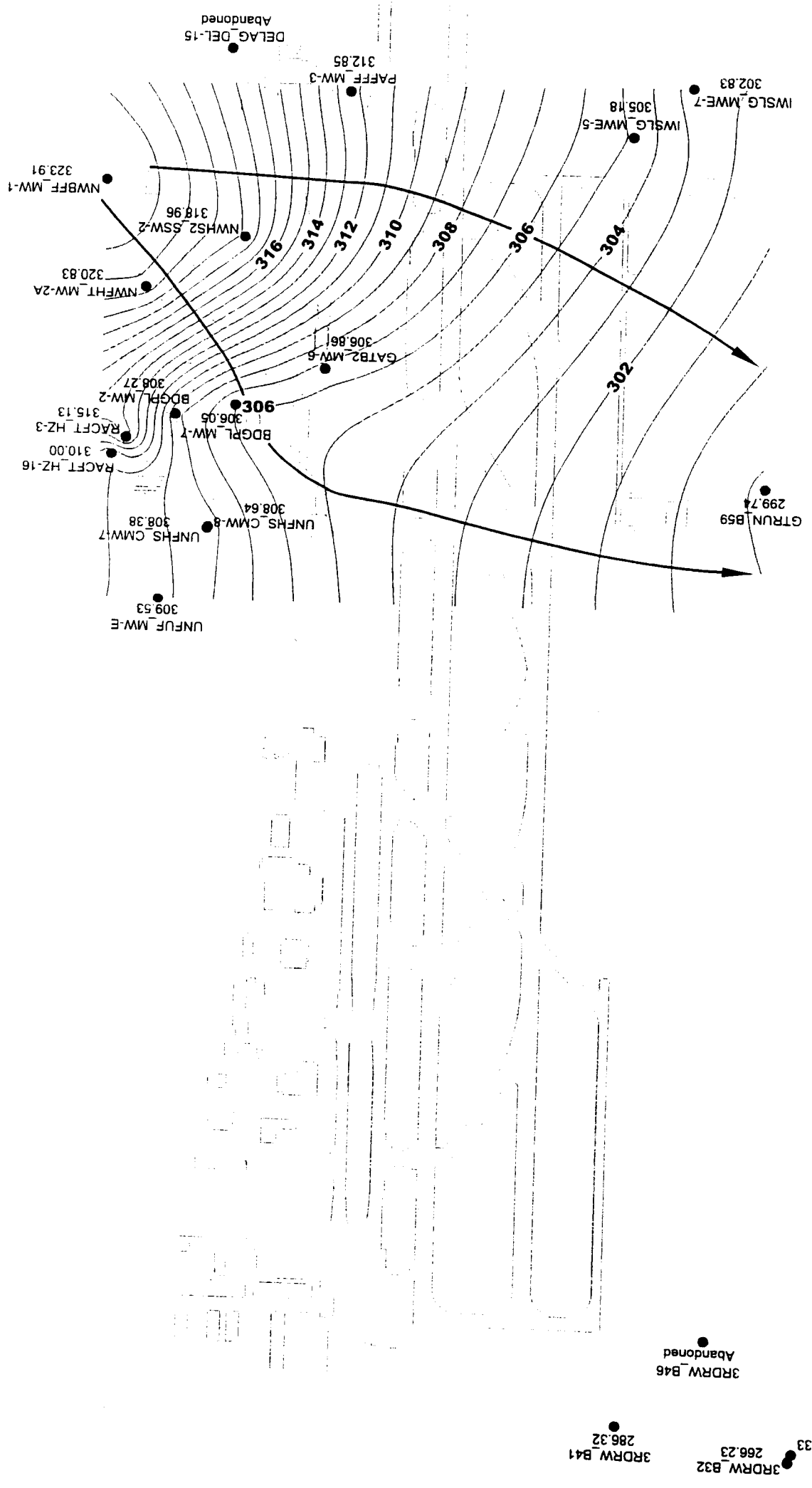
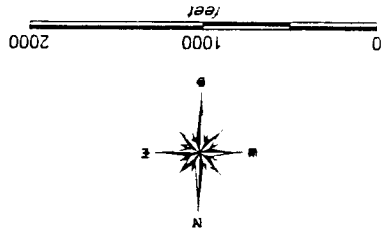
119 Madison Lane North
 Richmond, VA 23110
 Phone: (804) 780-8370
 Fax: (804) 780-8438

**4th Quarter Groundwater Flow Direction -
 Qva (C1) Well Network (6/23/00)**
 STA Ground Water Study

PROJECT NO.	BV97016
FIGURE NO.	4
DATE	07/12/00
SCALE	1" = 1000'
DESIGNED BY	JJS
REVIEWED	
DRAWN BY	HXT, JJR
FILE NAME	STIA0600.dwg

LEGEND

- Groundwater Elevation (feet, STA Datum)
 261.38 measured on 06/23/00
- Groundwater Flow Directions
- 304 --- Groundwater Elevation Contour

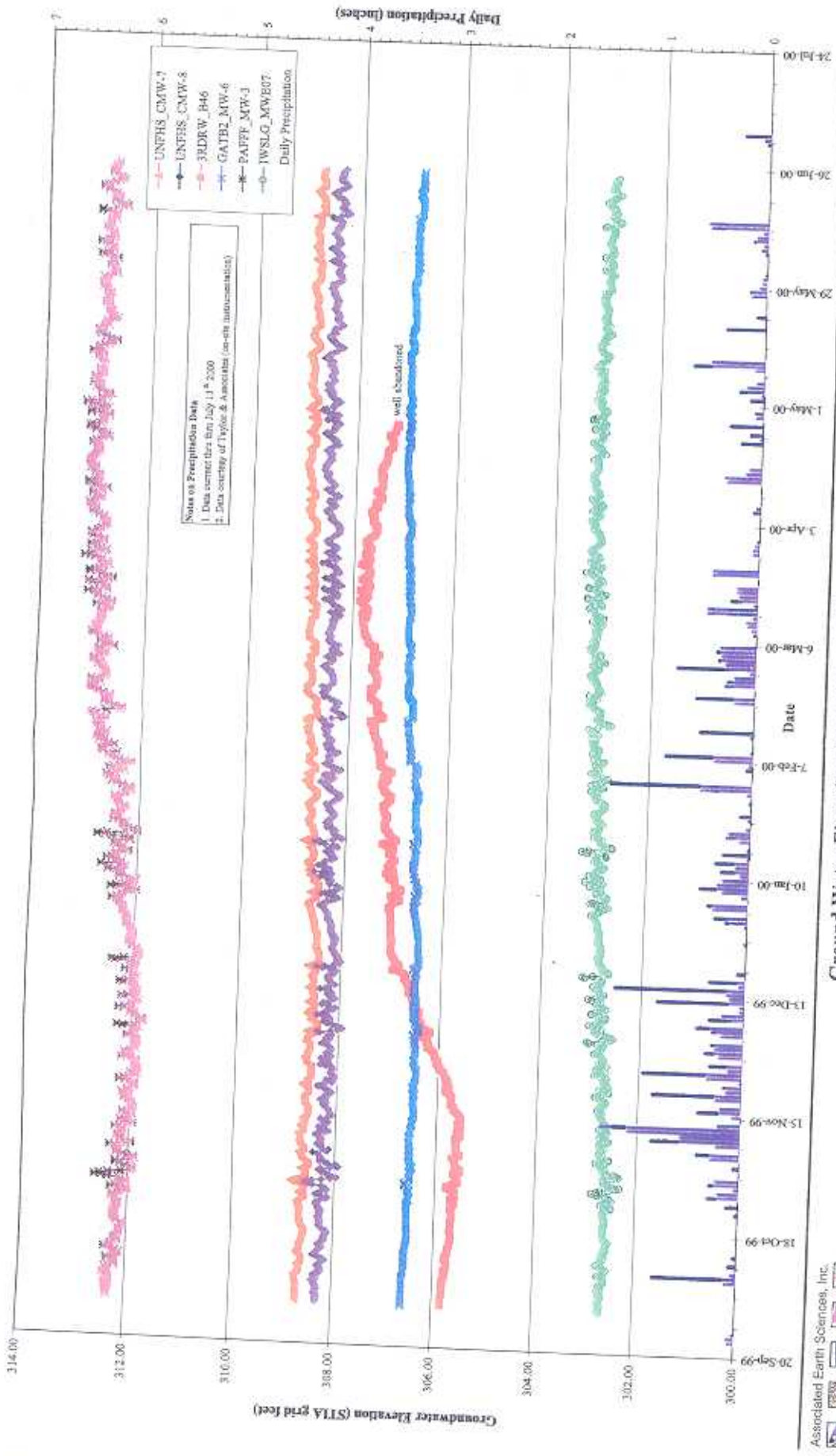


Abandoned
 3RDRW_B46

3RDRW_B41 286.32

3RDRW_B32 266.23

3RDRW_B33 261.38

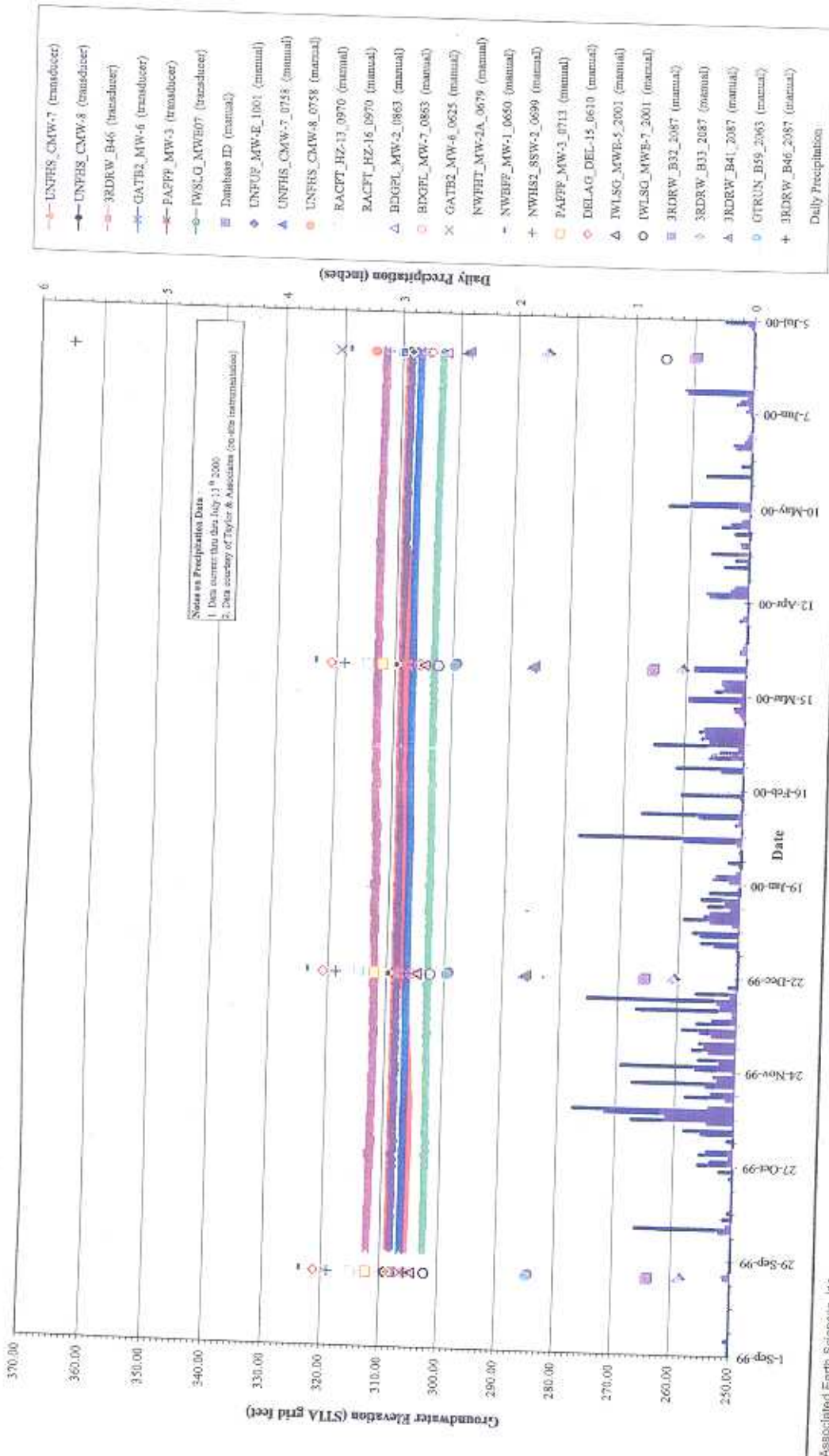


72400

Figure 5
Ground Water Elevation Measurements (Transducer)
Seattle-Tacoma International Airport Ground Water Study

P:\Stage_V807\BWS\T\ref\cont\c05a.dwg - Groundwater Elevations (TROLL)

AR 045491



Measured Ground Water Elevations (Transducer & Manual Readings)
 Seattle-Tacoma International Airport Ground Water Study

Figure 6

P:\Stage_V88715\work\TIA\damoiseidk.dwg - Groundwater Elev. (TRCUL & me)

AR 045492



729400

Ground Water Study – Draft Schedule for Study Milestones
 - 7/31/00 update -

The following schedule is a conceptual estimate, and will be corrected and updated as we progress.

- 11/12/99.....receive airline comments on ground water flow model
- 12/3/99.....address airline comments
- 12/8/99.....present to Ecology
- 12/22/99.....receive and address Ecology comments
- 1/3/00 – 2/4/00.....run and calibrate ground water flow model

- 1/3/00 – 3/3/00.....develop fate and transport conceptual model and ground water contamination plume maps
- 3/8/00.....present to airlines
- 3/29/00.....receive airline comments
- 4/12/00.....address airline comments
- 4/12/00.....receive PGG comments regarding geologic interpretation
- 5/11/00.....respond to PGG comments

- completed to date —

- 5/11/00 - 7/31/00.....revise geologic model surfaces based on PGG review & update ground water flow model
- 4/12/00 – 8/10/00.....fill fate and transport model data gaps
- 8/11/00.....review new information with Airlines
- 9/8/00.....present to Ecology
- 9/21/00.....receive and address Ecology comments
- 9/21/00 – 10/26/00.....run and calibrate fate and transport model

- 11/2/00.....present study results to airlines
- 11/9/00.....receive airline comments
- 11/16/00.....present study results to Ecology
- 12/7/00.....receive Ecology comments

- 1/15/01.....present Draft Phase 1 Ground Water Study report to airlines
- 2/28/01.....receive airline comments
- 3/13/01.....present Draft Phase 1 Ground Water Study report to Ecology
- 4/5/01.....receive Ecology comments
- 4/26/01.....complete report