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FINAL GROUNDWATER ASSESSMENT REPORT NAS CORPUS CHRISTI TX
2/1/1994
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**FINAL
GROUNDWATER
ASSESSMENT
REPORT**

**NAS CORPUS CHRISTI
Contract Number:
N62467-89-D-0318
CTO-069**

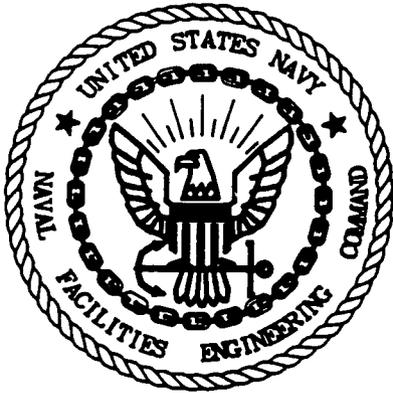
Prepared for:

SOUTHDIV

Prepared by:

E/A&H

February 1994

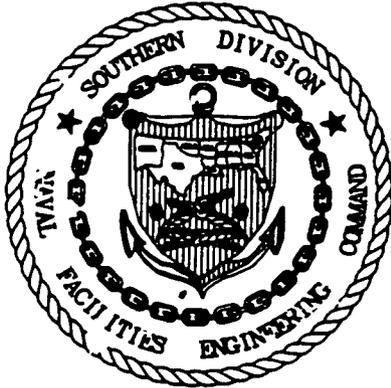


FINAL GROUNDWATER ASSESSMENT REPORT

NAS CORPUS CHRISTI
CORPUS CHRISTI, TEXAS
Contract Number: N62467-89-D-0318
CTO-069

Prepared for:

SOUTHDIVNAVFACENGCOM



Prepared by:

EnSafe/Allen & Hoshall
5720 Summer Trees Drive, Suite 8
Memphis, Tennessee 38134
(901) 383-9115

February 15, 1994

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1.0 INTRODUCTION

EnSafe/Allen & Hoshall was retained by the Department of the Navy to perform a groundwater assessment at Building 8 at the Naval Air Station (NAS) Corpus Christi to investigate the presence of possible groundwater contamination. The assessment included the installation, sampling, and analysis of 15 groundwater monitoring wells in the vicinity of Building 8. All plans for EnSafe's field investigations were approved by the Southern Division Naval Facilities Engineering Command before field activities began.

1.1 Site Description

The Naval Air Station is located in South Texas on the Gulf of Mexico near the city of Corpus Christi, Texas. A site vicinity map is shown in Figure 1. The facility is located on a peninsula surrounded by Laguna Madre to the east, Corpus Christi Bay to the north, and Cayo del Oso Bay to the west. The air station was commissioned in 1941 and is primarily used for Naval air training operations. Building 8 is leased by the Corpus Christi Army Depot (CCAD) which serves under the U.S. Army Material Development and Readiness Command. CCAD's primary operations include performing depot level maintenance of Army aircraft and aeronautical equipment, training military personnel in depot level maintenance, and preparing aircraft for overseas shipment. Various industrial activities are conducted within the Building 8 complex, including plating operations, parts cleaning and degreasing, bulk fuel storage, and painting.

1.2 Previous Investigation

A preliminary site assessment (PSA) performed by EnSafe/Allen & Hoshall in November 1991 involved the collection and analysis of seven groundwater samples in the vicinity of Building 8. A hydraulically actuated hydroprobe was used to collect five samples; two were collected from existing groundwater monitoring wells. Organic contaminants were detected in concentrations below the maximum concentration limits (MCL), except for the area in which monitoring wells ES-3 and ES-4 were placed during this groundwater assessment. Inorganic contaminants were

Figure 1 Site Vicinity Map

detected in concentrations exceeding specific MCLs in areas in which monitoring wells ES-1, ES-2, ES-3, ES-4, ES-5 and ES-12 were placed during this groundwater assessment. Based on the findings of the PSA, EnSafe/Allen & Hoshall recommended further action, which included this groundwater assessment.

1.3 Stratigraphy & Hydrogeology

This section describes the subsurface materials beneath the CCAD facility to a depth of approximately 12 feet. The geologic description of the site is based on the lithology samples collected from the installation of the shallow monitoring wells at Building 8.

The soil at the site is comprised mainly of silty fine sand with varying amounts of clay. Shell fragments and pebbles were observed at various sampling intervals. Color ranged from brown to tan at shallower depths to gray to blue gray as depths increased. The clay content decreased with depth until the uppermost saturated zone was encountered at approximately 3.5 feet. The aquifer consisted of a tan, fine sand with silt to a tan, fine, silty sand. Specific soil data for individual borings can be found in Appendix A.

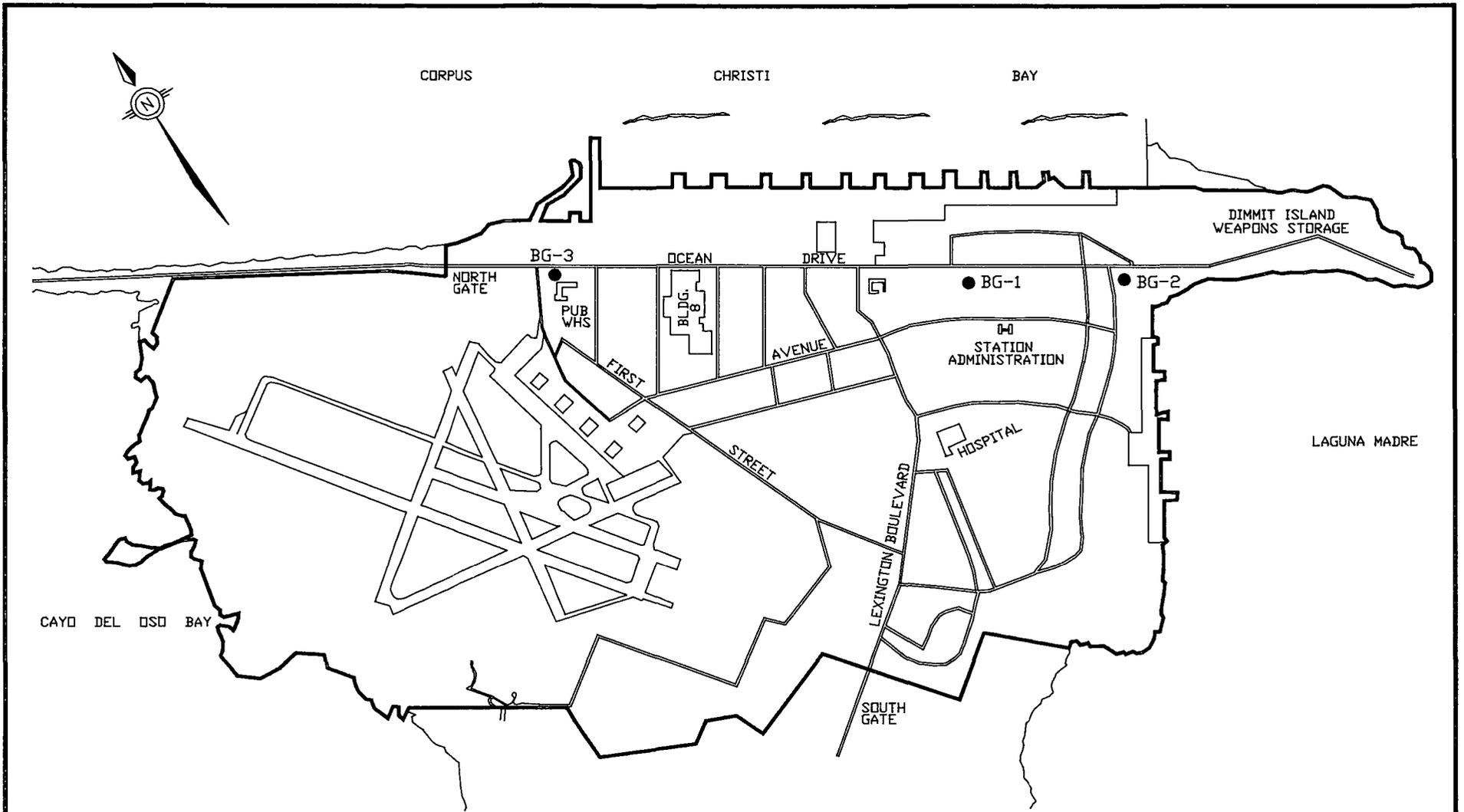
2.0 ASSESSMENT OF FIELD ACTIVITIES

2.1 Monitoring Well Installation

Field work was conducted by EnSafe/Allen & Hoshall from June 8 to October 15, 1993. Fourteen shallow Type II monitoring wells were installed in the uppermost aquifer in the vicinity of Building 8. Activities consisted of drilling 11 groundwater monitoring wells around the perimeter of the building and three background monitoring wells at various locations along Ocean Drive. One additional well was installed on the northern perimeter of the building on October 12, 1993 to fill a data gap. Background monitoring well locations are shown in Figure 2 and Building 8 groundwater monitoring well locations are shown in Figure 3. These wells were installed in the uppermost aquifer of groundwater which varied from 10 to 20 feet in depth.

2.1.1 Monitoring Well Construction

Monitoring wells were constructed in conjunction with soil borings and constructed through the annular space of the 4 1/4-inch ID hollow-stem augers. Monitoring wells were completed at depths between 12 and 15 feet below grade and constructed with 2-inch diameter Schedule 40, PVC riser and 10 feet of 0.010 slotted well screen. The top of each well screen was set between 2 and 5 feet above the first encountered water-bearing unit. The annular space surrounding the monitoring well and the borehole was filled with a 20/40 silica sand pack from the bottom of the borehole to 2 feet above the screened interval. A bentonite pellet seal approximately 2 feet thick was placed above each sand pack. The bentonite seal was hydrated with approximately 2 gallons of distilled water and allowed to hydrate for approximately 8 hours before the remaining borehole annulus was grouted to the surface. Each well was fitted with an expandable, lockable cap securing the PVC riser pipe, and an exterior lock securing the security casing. ES-1, ES-2, ES-3, ES-4, ES-5, ES-9, ES-10, ES-11, & ES-12 were completed with 8-inch diameter steel flush-mounted manhole covers. ES-6, ES-7, ES-8, BG-1, BG-2, & BG-3 were completed with 2-foot steel standup protective casings. Monitoring well construction data are provided in Appendix A. Groundwater elevations are shown in Table 1.



LEGEND

● BACKGROUND SAMPLE LOCATIONS

NOT TO SCALE



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

FIGURE 2
BACKGROUND MONITORING
WELL LOCATIONS
CORPUS CHRISTI, TEXAS

DWG DATE: 08/25/93 | DWG NAME: 069BMW1

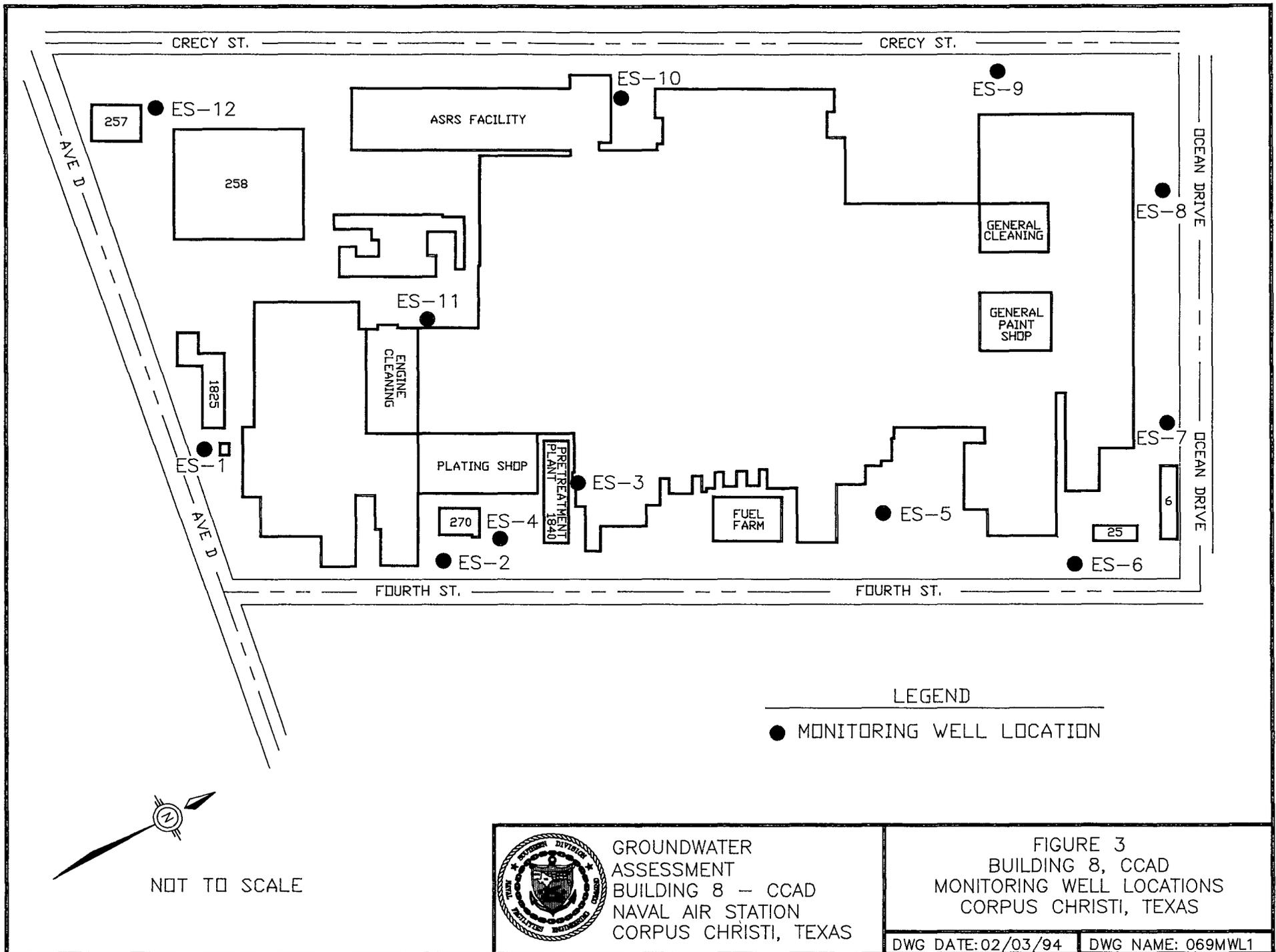


Table 1 Building 8 — CCAD Groundwater Elevations 12 October 1994			
Well ID	TOC Elevation (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)
BG-1	17.20	8.41	8.79
BG-2	14.11	11.79	2.32
BG-3	16.01	11.24	4.77
ES-1	12.95	3.73	9.22
ES-2	12.99	3.11	9.88
ES-3	13.06	3.54	9.52
ES-4	12.89	2.92	9.97
ES-5	13.26	5.52	7.74
ES-6	16.01	7.53	8.48
ES-7	16.00	11.36	4.64
ES-8	15.74	10.75	4.99
ES-9	12.60	4.10	8.50
ES-10	12.66	3.90	8.76
ES-11	13.54	4.01	9.53
ES-12	12.90	3.76	9.14

2.1.2 Well Development

Monitoring wells were developed using 3-foot Teflon bailers. Development continued until the purge water was turbid free and the pH, conductivity, and temperature stabilized. Wells which produced very slow recovery were bailed dry no less than five times before being considered developed. Purged water was containerized in 55-gallon drums and placed in the drum storage area at the end of each day. During well development and later sampling activities, significant

contamination was discovered in the groundwater from ES-3. This water had a pH of 12.7 and was transferred to a plastic drum for storage.

Upon completion and development the 15 monitoring wells were surveyed both horizontally and vertically by a surveyor registered in the State of Texas. Horizontal control was tied to the air base coordinate system and elevations were measured in reference to mean sea level according to U.S. Navy benchmarks. Elevations were measured to the nearest 0.01 foot. The survey data are presented in Appendix B and a piezometric surface map is shown in Figure 4.

2.2 Groundwater Sampling

2.2.1 Initial Groundwater Sampling Event

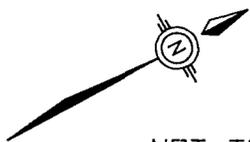
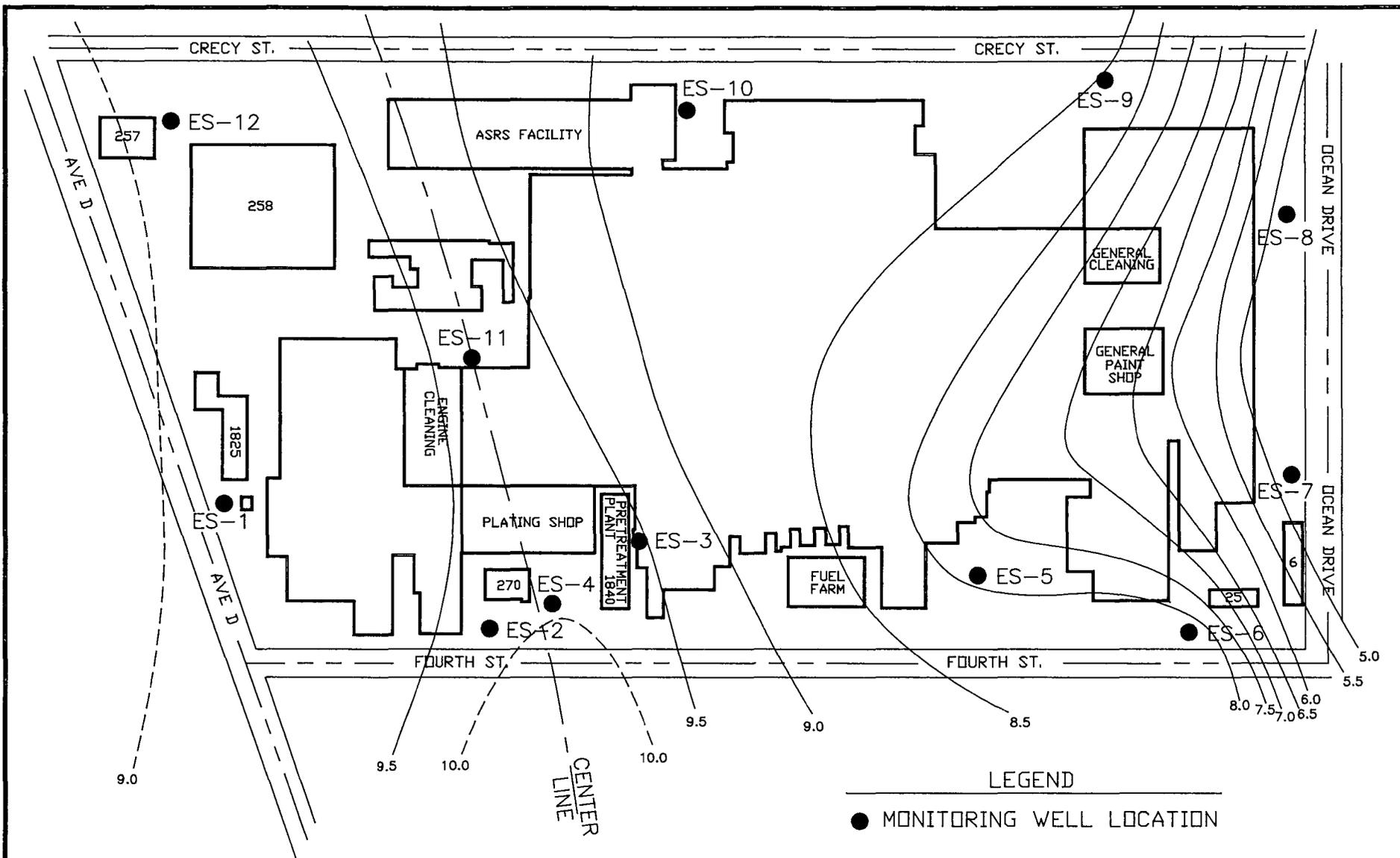
Groundwater samples were collected June 21-22, 1993 at the original 14 monitoring wells installed by EnSafe/Allen & Hoshall. Sampling began at wells which were either upgradient (clean) or wells which are known or believed to be clean, then proceeded to wells which appeared to be increasingly contaminated, and ended with the most contaminated well. This procedure helps to minimize the potential for cross contamination of wells, especially false positives in clean wells due to insufficient decontamination of field sampling equipment.

2.2.2 Second Groundwater Sampling Event

A second groundwater sampling event was conducted October 13-14, 1993. The fourteen original wells were sampled along with the new well (ES-10) installed on October 12, 1993. This sampling event followed the same format as the initial sampling event.

2.2.3 Purging Methodology

Before sampling the monitoring wells, at least three casing volumes of water were removed. Removing three casing volumes eliminated any stagnant water and ensured that the water being sampled was representative of the aquifer immediately surrounding the well. Total well depths were measured with a stainless steel tape measure while water levels were measured with an oil-



NOT TO SCALE



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

FIGURE 4
BUILDING 8, CCAD
PIEZOMETRIC MAP
CORPUS CHRISTI, TEXAS

DWG DATE: 02/09/94

DWG NAME: 069MWL1A

water interface probe to determine the presence of any non-aqueous phase liquids. The depth-to-water measurement subtracted from the total well depth equals the thickness of the water column in the well. This value multiplied by a conversion factor (0.174 gallons/ft. for a 2-inch well) established the volume of water within the casing. Three times the casing volume served as the minimum evacuation required for sampling. Groundwater elevations are as previously shown in Table 1.

2.2.4 Sample Collection

After purging the appropriate volumes of water, the groundwater samples from the monitoring wells were collected with a clean Teflon bailer attached to clean nylon rope. Groundwater was transferred into appropriate pre-cleaned containers immediately after being removed from the well. Three 40-mL Volatile Organic Analysis (VOA) vials were used to contain samples for Volatile Organic Compounds (VOC) analysis, a 1-liter plastic bottle was used to contain samples for the metals analysis, and a 1-liter amber glass bottle was used to contain samples for Total Petroleum Hydrocarbons (TPH) analysis at each well. The samples were handled, preserved, and shipped in the manner described in the following section.

2.2.5 Sample Preservation, Handling, and Shipping

Immediately after collection, all samples were appropriately preserved. Samples collected for VOC analysis were preserved by adding hydrochloric acid until the pH of the sample was less than 2.0. The samples collected for the metals analysis were preserved by adding nitric acid until the pH of the samples was less than 2.0. Samples collected for TPH were preserved with sulfuric acid. After the appropriate preservation, the samples were then placed in a cooler filled with packaged ice and kept at 4°C. Analytical parameters and specifications are listed in Table 2.

Table 2 Building 8 — CCAD Analytical Parameters and Specifications					
Parameter	Method	Container	Volume	Preservative	Holding Time
Volatiles	CLP	(3) VOA vials amber glass	40 mL each	4°C pH < 2 (HCl)	7 days
RCRA Metals	EPA 6010 &/or 7000 Series	(1) Plastic	1 Liter	4°C pH < 2 (HNO ₃)	6 months
Total Petroleum Hydrocarbons	EPA 418.1	(1) amber liter	1 Liter	4°C pH < 2 (H ₂ SO ₄)	28 days

Samples were handled as infrequently as possible and care was taken to ensure that the samples were not contaminated. All samples were shipped to the National Environmental Testing Incorporated laboratory in Bedford, Massachusetts, the day of collection via an overnight express air courier.

To assure that the samples were maintained in a safe and reliable manner, a strict chain-of-custody (COC) procedure was followed. This procedure was implemented in the field and carried out during the entire analytical process. All parties handling the samples signed the COC form which became a part of the permanent records. Sample security seals were used for each individual shipping container. Completed COC forms became part of the laboratory reporting package for data validation. A copy of the COC form is in Appendix C.

2.2.6 Decontamination

All equipment that came in contact with soil was steam cleaned before being used and after each sample was collected. This process minimized potential cross contamination between samples.

Decontamination consisted of the following steps:

1. High pressure, hot tap water and Alconox wash
2. Tap water rinse
3. Two rinses with isopropyl alcohol
4. Two rinses with deionized water

Additional scrubbing was sometimes required to remove encrusted materials.

2.3 Soil Sampling

Soil samples were collected from the 15 soil borings, which were converted into monitoring wells. The samples were collected through 2-foot split-spoon samplers, which were pushed through the lead auger during drilling activities. One sample per boring was collected from the area just above the saturation zone or from the area exhibiting the highest level of contamination, based on visual appearance or high instrumental readings. Soil samples were submitted for the following analyses: CLP VOCs, RCRA Metals, and Total Petroleum Hydrocarbons. Samples submitted for VOC analysis were placed into two 2-ounce jars while samples submitted for TPH and metals were placed into one 16-ounce jar. Soil jars were labeled and kept at 4°C. All soil borings were documented on individual boring logs which included soil types, moisture content, and other relevant field information. Soil borings are shown in Appendix A.

2.4 Waste Containment and Disposal

Auger spoils derived from soil borings and water derived from well development and purging activities were placed into steel 55-gallon drums and stored in a designated location on the base. Water from ES-3 was transferred to a plastic drum at the request of the activity due to a pH of 12.7. Soil and groundwater analytical results have been forwarded to the activity for determination of appropriate disposal of the contained waste.

2.5 Quality Assurance

The following measures were taken or planned to assure that the quality of data obtained in this sampling program matches the intended or required end use of the data.

2.5.1 Field Team Organization

All field work was completed under the direct supervision of an EnSafe professional. Personnel who collected samples were fully trained in proper sampling protocol and were briefed about the plans prepared for this project.

2.5.2 Sampling Protocol

- Following the procedures outlined in Section 2.2.4, all sampling equipment was decontaminated before each sample was collected.
- A clean pair of surgical gloves were worn before each sample was collected.
- When the full bailer was extracted, samples were collected in the appropriate pre-cleaned containers mentioned in Table 2.
- Samples were immediately preserved with the chemicals listed in Table 2 and placed in coolers at 4°C.

A description of monitoring well sampling methodology is outlined in Section 2.2.

2.5.3 Sample Designation System

Samples were identified using specific information which included the following:

- Site number
- Sample type
- Well or boring location number
- Sample interval (when applicable)

The first two digits indicate the Contract Task Order (CTO) number, which is 69 for this specific assessment. The third digit represents the site number from which the sample collected, which is 8 for this specific site. The fourth and/or fifth digits represent the type sample such as soil or water. The next four or five digits represent the well location from which the sample was collected. The last digit of a soil sample represents the interval at which the sample was collected. The following examples will explain the sample identification system.

Example: 698SMW112

CTO#	69
Site#	8
Sample Type	Soil
Sample Location	Monitoring Well 11
Sample Interval	2

Example: 698WMWES4

CTO #	69
Site #	8
Sample Type	Water
Sample Location	Monitoring Well ES4

Duplicate samples have the same sample identification but have the letter D as the last digit. Matrix spikes and matrix spike duplicates also have the same sample identification but have ms/msd as the last digits. Field blank samples were identified as 69-FB. Rinse blank samples were identified as 69-RB. Samples diluted by the laboratory due to high concentrations are identified by a DL at the end of the original sample identification.

2.5.4 Document and Sample Control

Field personnel used bound logbooks for the maintenance of all field records pertaining to all field activities. These records were maintained in the EnSafe/Allen & Hoshall project file and documented all visual observations, calculations and equipment adjustments. Every entry was dated, and the time for each entry was noted. The logbooks are accountable documents that will be properly maintained and retained as part of the project files.

2.5.5 Custody Procedures

To assure that the samples are maintained in a safe and reliable manner, a strict COC procedure was followed. This procedure was implemented in the field and carried out during the entire analytical process. All parties handling the samples signed the COC form and it became a part of the permanent records. Completed COC forms became a part of the laboratory reporting package and part of the data validation criteria. A copy of the COC form used for the samples is presented in Appendix C.

To assess analytical precision, field duplicates for water were obtained at monitoring wells ES-1 and ES-12 near Building 8. A duplicate for soil was also taken from BG-1. These duplicates were handled and analyzed along with all other samples. Further evaluation of precision and accuracy was obtained by analyzing matrix spike samples from BG-2 for soil and from BG-3 for water. The duplicate and matrix spike samples were analyzed for the same parameters as the other samples.

To evaluate the adequacy of decontamination procedures, three rinsate blanks were collected during the investigation. The rinsate blanks were obtained by passing organic free water through the split-spoon soil samplers and collecting the water. The samples were analyzed with the other samples. To ensure that extraneous sources had not contaminated the samples, one trip blank was handled and shipped in each cooler with the other samples which had been collected. The trip blank consisted of a 40-mL VOA sample container filled with organic-free water by the

laboratory. The trip blank was analyzed for volatile organics only and was handled and shipped in the same manner as the other samples.

One field blank was collected per sampling event during this assessment to check for contamination imparted to the samples by the sample containers or other extraneous sources. The field blanks were obtained by filling sample jars from the deionized water and potable water sources used for decontamination. These blanks were handled, shipped, and analyzed with the rest of the samples.

In addition to the other blanks collected and shipped, temperature blanks were shipped with other samples. One temperature blank was shipped with each individual cooler to ensure that samples were received by the laboratory at or below 4°C.

2.6 Health and Safety

A formal plan for the protection of the sampling team and third-party was included in the work plan for this project. All field personnel reviewed the Health and Safety Plan and followed it while in the field.

3.0 ANALYTICAL RESULTS

3.1 Analytical Parameters and Specifications

All samples were analyzed for USEPA Contract Laboratory Program (CLP) Volatiles, Total Petroleum Hydrocarbons (TPH), and the following RCRA Metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver. Table 2 lists these parameters and associated collection and preservation methods. Laboratory data packages for all samples collected are provided in Appendix D and E.

3.2 Analytical Results

Tables 3 and 4 summarize all positive results (above method detection limits) for organic and inorganic analysis on soil samples.

Tables 5, 6, 7, and 8 summarize all positive results (above method detection limits) for organic and inorganic analysis on water samples for both the initial and second sampling event.

3.3 Data Validation

The analytical data generated during the groundwater assessment at Building 8, NAS Corpus Christi, have been reviewed and validated with the appropriate data qualifiers based on data usability. Through the validation process, several results have been qualified as estimated due to minor QA deficiencies. In particular, all TPH results from Sample Delivery Group (SDG) FD893 (laboratory identification) were qualified as estimated and should be considered suspect due to very low matrix spike/matrix spike duplicate recoveries. The analytical data are usable as qualified for the groundwater assessment at Building 8. A complete data validation report can be found in Appendix D. The data qualifiers are as follows:

- U - Compound analyzed for but not detected; value given is quantitation limit.
- J - Compound detected but below quantitation limit; value estimated.
- R - Value is unusable.
- UJ - Compound analyzed for but not detected; value given is estimated quantitation limit.

Table 3
 Organic (Soil Hit)
 (ppb)

Parameter	Reference Conc.*	ES-1	ES-2	ES-3	ES-4	ES-5	ES-6	ES-7	ES-8	ES-9	ES-10	ES-11	ES-12	BG-1	BG-2	BG-3
Acetone	1,020,000	150	68	130	75	240	170	190	4900	14		3300	330	29	950	76
Benzene	500															
2-Butanone	511,000				6				2500		15					
Chlorobenzene	10,000															
1,1 Dichloroethane	1,020,000															
1,2 Dichloroethane	500															
1,1 Dichloroethene	700															
1,2 Dichloroethene	7,000															
Methylene Chloride	500	2							2	3		130		2	3	
1,1,1 Trichloroethane	20,000															
Trichloroethene	500															
Vinyl Chloride	200															

* Concentrations are based on the Risk Reduction Standards in Appendix II of 31TAC335 568 which are considered protective of groundwater at an industrial site under Standard 2.

Table 4
Inorganic (Soil Hits)
(ppb)

Parameter	Reference Conc.*	ES-1	ES-2	ES-3	ES-4	ES-5	ES-6	ES-7	ES-8	ES-9	ES-10	ES-11	ES-12	BG-1	BG-2	BG-3
Arsenic	5,000		600					700							1100	
Barium	200000	9000	35500			17200	6600	12900	15600	3100		7000	2200	2100	4800	9900
Cadmium	500															
Chromium	10000		1800			2700		3400	1700	1700					2200	2500
Lead	1500	760	2200			1300	1400	5100	2300	910		3100	1100	990	2800	2000
Mercury	200															
Selenium	5000														390	
Silver	51100															

* Concentrations are based on the Risk Reduction Standards in Appendix II of 31TAC335.568 which are considered protective of groundwater at an industrial site under Standard 2.

Shaded areas indicate results which exceed the referenced concentrations.

Table 5 Organic (Water Hk)(ppb) Initial Sampling Event															
Parameter	Reference Conc.*	ES-1	ES-2	ES-3	ES-4	ES-5	ES-6	ES-7	ES-8	ES-9	ES-11	ES-12	BG-1	BG-2	BG-3
Acetone	3,650			250	4	45		30	6				5		39
Benzene	5					5									
2-Butanone	1,830														
Chlorobenzene	100			10											
1,1 Dichloroethane	3,650				2	16					6				
1,2 Dichloroethane	5					11			1						
1,1 Dichloroethene	7				8	6					4				
1,2 Dichloroethene	70			450		800		16			12				
Methylene Chloride	5														
1,1,1 Trichloroethane	200				73						3				
Trichloroethene	5					14		2							
Vinyl Chloride	2			62		800									

* Concentrations are based on the Risk Reduction Standards in Appendix II of 31TAC335.568 as maximum concentrations allowed in groundwater under Standard 2.

Shaded areas indicate results which exceed the referenced concentrations.

Table 6
Inorganic (Water Hits)(ppb)
Initial Sampling Event

Parameter	Reference Conc.*	ES-1	ES-2	ES-3	ES-4	ES-5	ES-6	ES-7	ES-8	ES-9	ES-11	ES-12	BG-1	BG-2	BG-3
Arsenic	50	6.9	10.6	51	1530	4.3	3.3	3.3	4.4	5.2	6.4	8.9	12	8.2	3.8
Barium	2000	580	247	35.9	215	369	130	227	191	266	328	716	865	146	304
Cadmium	5										9.1	16.8			
Chromium	100	52.5		106	97.3		12.8	5.3	19.8	33.6	61.2	97.1	56.8	10	35.6
Lead	15	24.7	4.7	53.4	18.4	6.5	9.8		9.8	14.6	31.2	52	39.3		13.2
Mercury	2			6.4									.65		
Selenium	50	3.3	1.6	18.8	7.1	1.2	1.8	1.6		1.8	2.4	6.2	8.5	3.9	2.9
Silver	183														

* Concentrations are based on the Risk Reduction Standards in Appendix II of 31TAC335.568 as maximum concentrations allowed in groundwater under Standard 2.

Shaded area indicate results which exceed the referenced concentrations.

Table 7 Organic (Water Hk)(ppb) Second Sampling Event																
Parameter	Reference Conc.*	ES-1	ES-2	ES-3	ES-4	ES-5	ES-6	ES-7	ES-8	ES-9	ES-10	ES-11	ES-12	SG-1	SG-2	SG-3
Acetone	3,650			380												
Benzene	5															
2-Butanone	1,830															
Chlorobenzene	100			13												
1,1 Dichloroethane	3,650				6	2						20				
1,2 Dichloroethane	5								1							
1,1 Dichloroethene	7				2							28				
1,2 Dichloroethene	70			57	7	390		14				19				
Methylene Chloride	5															
1,1,1 Trichloroethane	200				1							4				
Trichloroethene	5					1		1								
Vinyl Chloride	2			58		84										

* Concentrations are based on the Risk Reduction Standards in Appendix II of 31TAC335.568 as maximum concentrations allowed in groundwater under Standard 3.

Shaded areas indicate results which exceed the referenced concentrations.

Table # Inorganic (Water Hite/ppb) Second Sampling Event																
Parameter	Reference Conc.*	ES-1	ES-2	ES-3	ES-4	ES-5	ES-6	ES-7	ES-8	ES-9	ES-10	ES-11	ES-12	BG-1	BG-2	BG-3
Arsenic	50	3.2	8.8	192	1480	7.2	7	5.3	3.1	4.2	5.8	7.6	8	16	7.4	5.3
Barium	2,000	593	320		879	399	145	196	173	220	181	329	335	844	61.7	308
Cadmium	5															
Chromium	100	56.4	17.1	137	286	20.7	21.5	6.2	7.2	32.1	35.9	59.8	40.2	56.9		31.7
Lead	15	56.4	19.5		104	13	17.6	4	7.2	7	56.4	37.1	21.1	66.7		12.4
Mercury	2	.4		9.7	1.1									.68		
Selenium	50	5.1	2.1		9.8	4						2.6		9.2		5.3
Silver	183															

* Concentrations are based on those which appear in the Risk Reduction Standards in Appendix II of 31TAC335.568

Shaded area indicates results which exceed the referenced concentrations.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Soil: No significant soil contamination was encountered in the groundwater assessment of Building 8.

- Lead was detected in concentrations above the industrial groundwater protection standard but was not significantly higher than the background concentrations.

Groundwater: Inorganic and Organic compounds were detected in the monitoring wells installed at the site during the initial sampling event in July 1993 and the second sampling event in October 1993.

- Concentrations of arsenic, chromium, lead, mercury and vinyl chloride which exceeded Medium Specific Concentrations (MSC's) for groundwater were detected in monitoring well ES-3. Groundwater from this well also exhibited a pH of 12.7.
- Concentrations of arsenic, chromium and lead which exceeded MSC's for groundwater were detected in monitoring well ES-4.
- Concentrations of 1,2 dichloroethene and vinyl chloride which exceeded MSC's for groundwater were detected in monitoring well ES-5.
- Low levels of metals and chlorinated solvents were also detected in monitoring well ES-11, which is adjacent to the Engine Cleaning Shop.

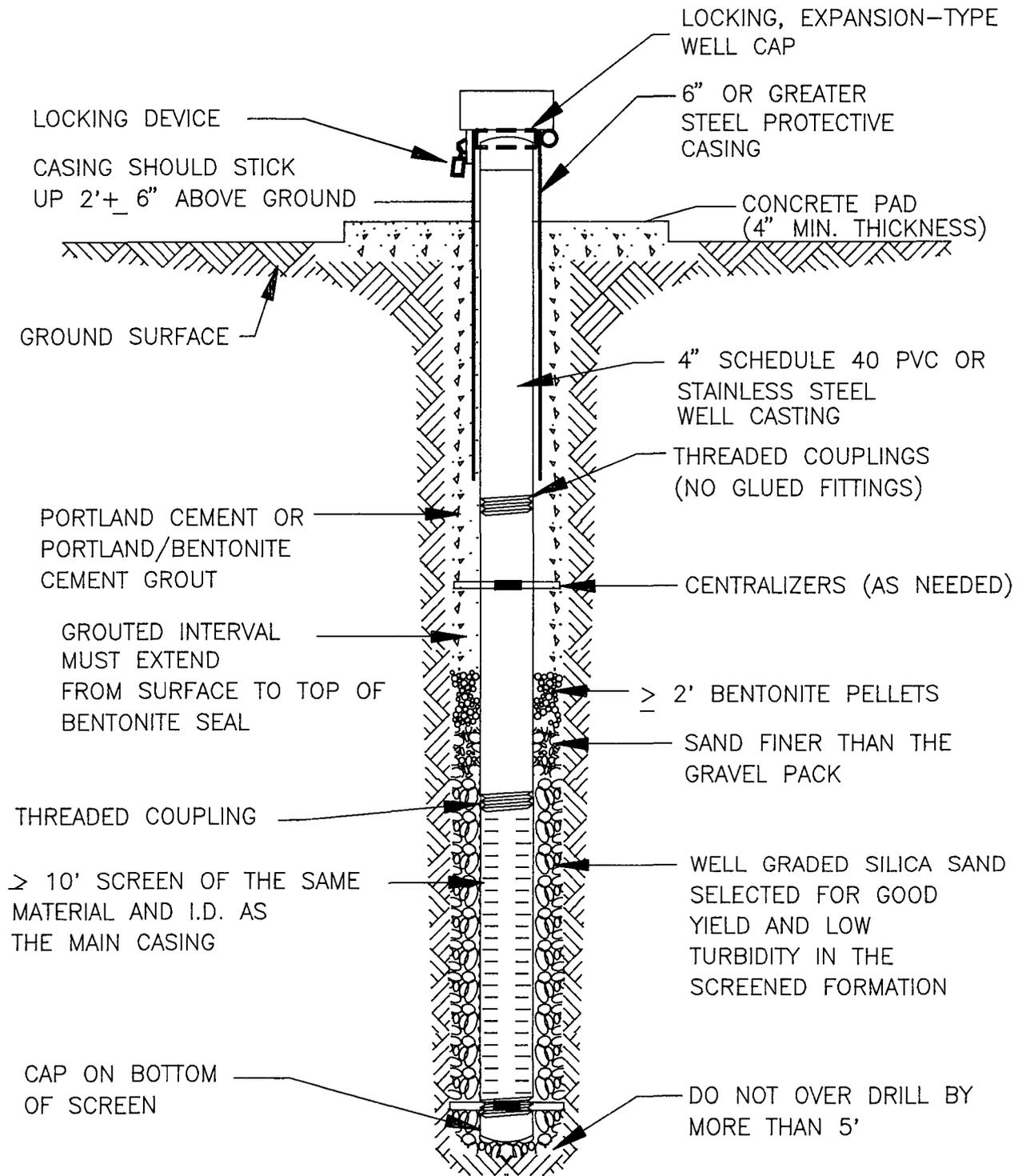
EnSafe/Allen & Hoshall recommends that immediate actions be taken to identify and abate the source of the caustic water detected in monitoring well ES-3. In addition, EnSafe/Allen & Hoshall recommends an aquifer pumping test be conducted to characterize the hydrogeologic

qualities of the site. The pump test will help to determine potential remedial alternatives for groundwater. Objectives of the pump test will be outlined in a follow-up work plan.

APPENDIX A

MONITORING WELL SCHEMATIC BORING LOGS

TYPE II
TYPICAL ILLUSTRATION OF MINIMUM SPECIFICATIONS
FOR MONITORING WELL CONSTRUCTION



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

TYPE II MONITORING
WELL SCHEMATIC
CORPUS CHRISTI, TEXAS

DWG DATE: 08/25/93 | DWG NAME: 069TIWL

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Grass					
8"	SS 71				Very fine grained silty sandy loam with iron staining.
9"					Tan, very fine grained sand. Water at approximately 3.5 feet
5					
10					
15					
20					
25					
5	SS 92				Tan, very fine grained sand. Water at approximately 3.5 feet



GROUNDWATER ASSESSMENT
 BUILDING 8 - CCAD
 NAVAL AIR STATION
 CORPUS CHRISTI, TEXAS

BG-1
 BORING LOG
 CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069BG-1

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION OF SUBSURFACE MATERIALS
--------------	-------------	------------	-----------	-------------	-------------------------------------

Surface Conditions: Grass

5	SS 88				5" - Tan, very fine grained silty sandy loam. 16" - Tan, very fine grained silty sand with shell fragments and pebbles.
	SS 67				16" - Very fine grained silty sand with pebbles, fill material.
10	SS 100				14" - Very fine grained sand, wet. 10" - Very fine grained, silty, clayey sand with orange and white inclusions and shell fragments, moist to wet.
	SS 83				9" - Very fine grained, silty clayey sand. 8" - Orange and tan mottled silty clayey very fine grained sand. 3" - silty clayey, very fine grained sand. Saturated.
15					
20					
25					



GROUNDWATER ASSESSMENT
 BUILDING 8 - CCAD
 NAVAL AIR STATION
 CORPUS CHRISTI, TEXAS

BG-2
 BORING LOG
 CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069BG-2

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Grass					
5	SS	58			7" - Dark brown silty, clayey, sandy loam. Dry. 7" - Very fine grained sand with limestone fragments (caliche).
	SS	88			21" - Very fine grained sand. Dry.
10	SS	71			4" - Blue gray very fine grained sand. 13" - Sandy clay grading to clayey sand. All moist with orange mottling.
	SS	100			Clayey sand, with clay content increasing with depth. Orange mottled. Moist.
	SS	100			22" - Blue gray sandy clay with orange mottling. 2" - Bluish gray clayey sand.
15	SS	58			14" - Bluish gray clayey very fine grained sand. Moist to wet.
20					
25					



GROUNDWATER ASSESSMENT
 BUILDING 8 - CCAD
 NAVAL AIR STATION
 CORPUS CHRISTI, TEXAS

BG-3
 BORING LOG
 CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069BG-3

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface conditions: Concrete - 4"					
0	SS	67			Light tan, fine sand. Slightly moist.
4	SS	33			Light tan, fine sand. Encountered water at 4 feet.
5					
10					
15					
20					
25					



GROUNDWATER ASSESSMENT
 BUILDING 8 - CCAD
 NAVAL AIR STATION
 CORPUS CHRISTI, TEXAS

ES-1
 BORING LOG
 CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-1

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION OF SUBSURFACE MATERIALS
--------------	-------------	------------	-----------	-------------	-------------------------------------

Surface Conditions: Concrete- 0-6"

5	SS 100				Dark brown, sandy silt.
5	SS 88				Dark brown, sandy silt. Moist.
5	SS 92				24" dark brown, sandy silt. Moist. 6" sandy clay, moist. Encountered water at 5 feet.
10					
15					
20					
25					



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

ES-2
BORING LOG
CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-1

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Concrete 0-8"					
-	SS	94			Tan, well sorted, fine grained sand.
-	SS	83			0-13" - Tan, well sorted, fine grained sand. 13-20" - Tannish gray, well sorted fine grained sand. Moist.
5	SS	100			Grayish tan, well sorted fine grained sand, with black organic material throughout. Saturated. Encountered groundwater at 4 feet.
10					
15					
20					
25					



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

ES-3
BORING LOG
CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-3

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Concrete - 0-8"					
0	SS	99			Light brown, fine sand. Moist.
4	SS	83			Medium brown, fine sand. Saturated. Encountered groundwater at 4 feet.
5					
10					
15					
20					
25					



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

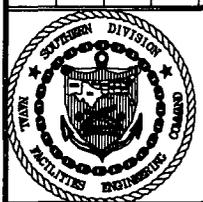
ES-4
BORING LOG
CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-4

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Concrete - 0-8"					
0					
1	SS	79			Tan, well sorted fine grained sand with iron staining.
2					
3	SS	83			Tan well sorted fine grained sand with iron staining. Moist at 2' 10".
4					
5	SS	88			0-7" Well sorted fine grained sand. 7-17" Fine grained sand with increased sand and clay content. 17-24" Fine grained sand with increasing clay content. Encountered groundwater at 4 feet.
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

ES-5
BORING LOG
CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-5

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Grass					
12"	SS	63			12" - Dark brown, silty sandy loam. 3" - Brown, very fine grained sand. Moist.
13"	SS	92			13" - Blue clayey sand with iron staining. Saturated. Encountered groundwater at 4 feet.
5	SS	54			
10					
15					
20					
25					



GROUNDWATER ASSESSMENT
 BUILDING 8 - CCAD
 NAVAL AIR STATION
 CORPUS CHRISTI, TEXAS

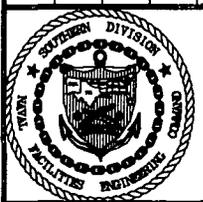
ES-6
 BORING LOG
 CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-6

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Grass					
-	SS	71			6" - Brown, silty sandy loam. 4" - Dark gray, silty clay. 7" - Tan, very fine grained sand with some iron staining. Dry.
-	SS	83			20" - Tan, very fine grained sand with some iron staining. Wet.
5	SS	100			24" - Tan, very fine grained sand grading to bluish gray, clayey sand with heavy iron stain mottling. Moist. Clay content increases with depth.
-	SS	100			20" - Bluish gray, clayey sand with heavy iron stain mottling. Moist. 4" - Light blue clay with orange mottling.
10	SS	100			10" - Light blue clay with orange mottling. 7" - Tan, slightly clayey, very fine grained sand. Saturated. 7" - Light blue clay with orange mottling.
-	SS	100			6" - Light blue clay with orange mottling. 1" - Sand. Wet. 13" - Bluish clay with orange mottling. 2" - Sand. Wet.
15					
20					
25					



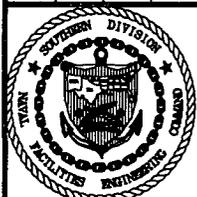
GROUNDWATER ASSESSMENT
 BUILDING 8 - CCAD
 NAVAL AIR STATION
 CORPUS CHRISTI, TEXAS

ES-7
 BORING LOG
 CORPUS CHRISTI, TEXAS

DATE: 08/23/93 DWG NAME: 069ES-7

DESCRIPTION OF SUBSURFACE MATERIALS

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION
Surface Conditions: Grass					
5	SS 83				Dark brown to black silty clay. Very stiff.
	SS 83				4" - Dark brown to black silty clay. Very Stiff. 20" - Light tan silty fine sand. Damp.
	SS 92				12" - Medium gray, silty sand with clay. 10" - Medium gray, fine sandy clay with iron staining. Damp.
	SS 100				10" - Medium gray, fine sandy clay with heavy iron staining. 14" - Gray, fine sandy clay with organics. Light iron staining.
10	SS 100				Gray, fine sandy clay with organics. Light iron staining.
	SS 100				Blue gray fine silty sand. Encountered groundwater at 7.5 feet.
15					
20					
25					



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

ES-8
BORING LOG
CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-8

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION OF SUBSURFACE MATERIALS
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Surface conditions: Asphalt 0-16"

5	SS	92			Tannish gray fine grained sand. Saturated.
9	SS	50			9" - Tannish gray sand. Saturated. 3" - Brownish gray silty sandy clay with orange mottling.
10					
15					
20					
25					



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

ES-9
BORING LOG
CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-9

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	TIME	USCS SYMBOL	DESCRIPTION OF SUBSURFACE MATERIALS	WELL CONSTRUCTION DETAILS
						GROUND SURFACE
0-8'	SS	38	1355		0-8" ASPHALT	<p> ← GROUT ← BENTONITE SEAL ← SAND PACK ← 0.010" CONTINUOUS SLOT, PVC WELL SCREEN </p>
8'-12'					SAND	
1'-3'					LIGHT TAN SAND	
4'	SS	100	1400		WET SAND (WATER TABLE)	
5'					GRAY MOIST SANDY CLAY	
SAMPLED @ 1415 DRILL TO 12' SET WELL (10' SCREEN)						
5						
10						
15						
20						
25						
30						
35						
40						
45						
50						



GROUNDWATER ASSESSMENT
 BUILDING 8 CCAD
 NAS CORPUS CHRISTI
 CORPUS CHRISTI, TX

ES-10
 BUILDING 8 CCAD
 NAS CORPUS CHRISTI
 CORPUS CHRISTI, TX

DATE: 12/22/93 DWG NAME: 069ES-10

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION OF SUBSURFACE MATERIALS
--------------	-------------	------------	-----------	-------------	-------------------------------------

Surface Conditions: 18" concrete and fill material

5	SS 100				18" - Light tan sandy silt. Moist.
	SS 83				6" - Light tan sandy silt. Moist.
	SS 100				15" - Gray sandy silt. Moist.
	SS 100				5" - Gray to brown sandy silt. Saturated at 4'.
10					
15					
20					
25					

	<p>GROUNDWATER ASSESSMENT BUILDING 8 - CCAD NAVAL AIR STATION CORPUS CHRISTI, TEXAS</p>	<p>ES-11 BORING LOG CORPUS CHRISTI, TEXAS</p>
	DATE: 08/23/93	DWG NAME: 069ES-11

DEPTH (FEET)	SAMPLE TYPE	% RECOVERY	BLOWS/FT.	USCS SYMBOL	DESCRIPTION OF SUBSURFACE MATERIALS
--------------	-------------	------------	-----------	-------------	-------------------------------------

Surface Conditions: Asphalt 6"

-	SS 67				12" - Light tan fine grained sand
-	SS 75				Light tan fine grained sand. Saturated.
5					
10					
15					
20					
25					



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

ES-12
BORING LOG
CORPUS CHRISTI, TEXAS

DATE: 08/23/93

DWG NAME: 069ES-12

APPENDIX B

SURVEY DATA

Appendix B

Survey Data

Campbell's

Final Groundwater Assessment Report

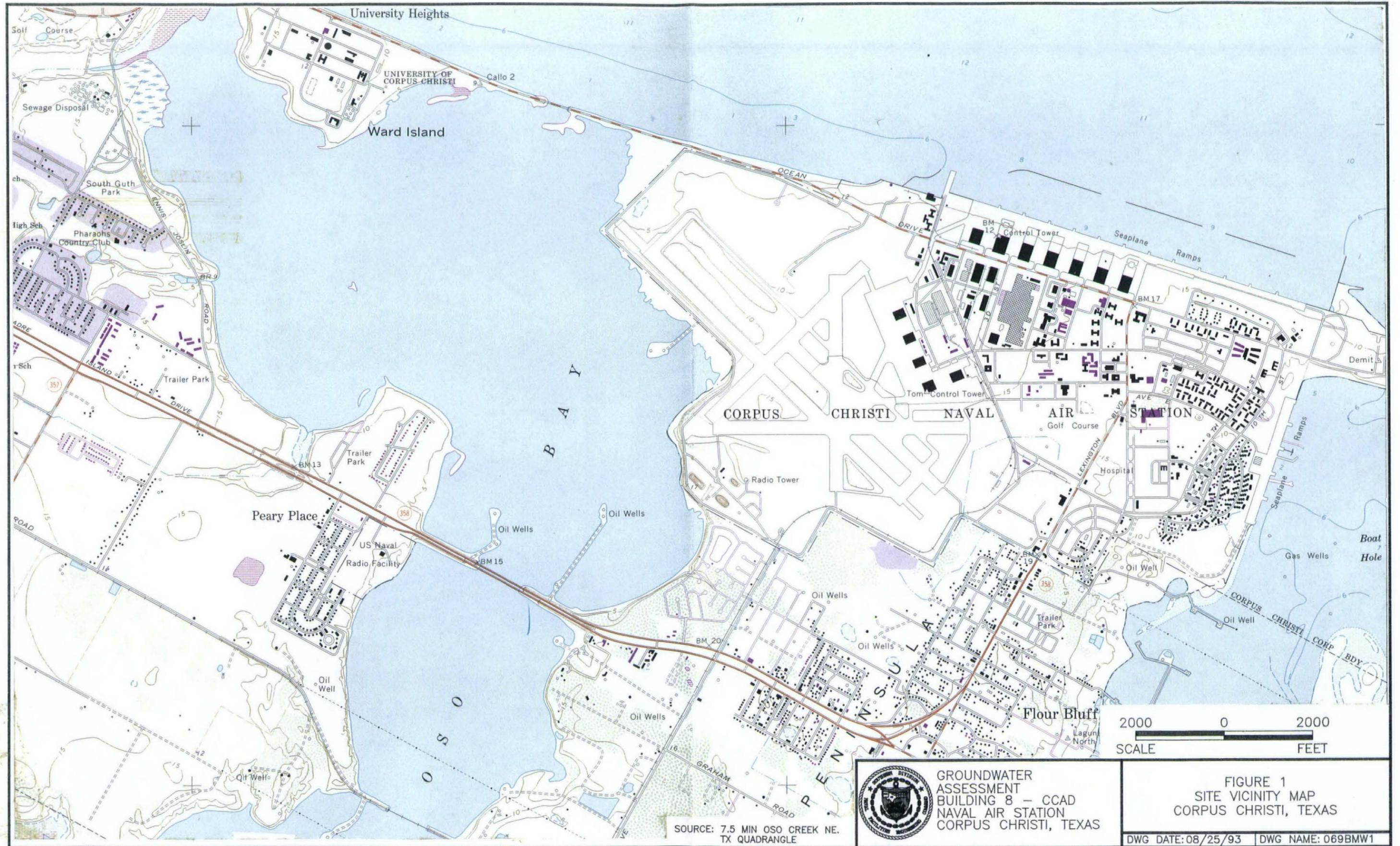
> Building 8

NAS Corpus Christi

Figures 1-4



* Make Sure All Copies
Are Legible!



GROUNDWATER
ASSESSMENT
BUILDING 8 - CCAD
NAVAL AIR STATION
CORPUS CHRISTI, TEXAS

2000 0 2000
SCALE FEET

FIGURE 1
SITE VICINITY MAP
CORPUS CHRISTI, TEXAS

DWG DATE: 08/25/93 DWG NAME: 069BMW1

00049E01Z

APPENDIX C

CHAIN OF CUSTODY



NAVY CLEAN
ENSAFE/ALLEN & HOSHALL
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CLIENT Ensafe/Allen & Hoshall PROJECT MANAGER Jeff Bennett
 ADDRESS 5724 Summer Tree Dr TELEPHONE NO. (901) 372-7962
 PROJECT NAME/NUMBER NAS Composite FAX NO. (901) 372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) [Signature]

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED						REMARKS	
					TEMP.	CHEMICAL		TPU	LEAD	COBALT	IRON	COPPER	ZINC		OTHER
678SMW2-2	1/15/98	1200	Soil	2.5 liter / 100 g	4°C		2	✓	✓	✓					
678SMW5-3	1/15/98	1305	Soil	" "	4°C		2	✓	✓	✓					
678SMW2-2	1/15/98	1545	Soil	" "	4°C		2	✓	✓	✓					
678SMW4-2	1/15/98	0105	Soil	" "	4°C		2	✓	✓	✓					
678SMW2-3	1/15/98	1105	Soil	" "	4°C		2	✓	✓	✓					
678SMW11-2	1/15/98	1530	Soil	" "	4°C		2	✓	✓	✓					
678SMW1-2	1/15/98	1100	Soil	" "	4°C		2	✓	✓	✓					
TS-2	1/15/98	1130	Water	2 liter / 100 ml	4°C		2	✓	✓	✓					
TS-1			Water	1 liter / 100 ml	4°C		2			✓					

RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
---	--------------	---	--------------	---	--------------	---	--------------

METHOD OF SHIPMENT. _____ SHIPMENT NO. _____ SPECIAL INSTRUCTION. _____

COMMENTS: _____

AFTER ANALYSIS, SAMPLES ARE TO BE:
 DISPOSED OF (ADDITIONAL FEE)
 STORED (90 DAYS MAX)
 STORED OVER 90 DAYS (ADDITIONAL FEE)
 RETURNED TO CUSTOMER



NAVY CLEAN
ENSAFE/ALLEN & HOSHALL
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CLIENT Ensafe/Allen & Hoshall PROJECT MANAGER J. A. Ruppert
 ADDRESS 5734 Summer Turn Dr TELEPHONE NO (901) 372-7962
 PROJECT NAME/NUMBER 201 Poplar Church FAX. NO. (901) 372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) [Signature]

RM. 2 - Environmental Assessment (Nov 19 - 10 2011)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
					TEMP.	CHEMICAL		TPH (MIL)	TPH (MKG)	CLP (MKG)	TEMPERATURE		
69RSMW02-3	6/2/93	1510	Soil	200 VDC / 11.00 gal	4°C		3	✓	✓	✓			
69RSMW02-3as B5D	6/2/93	1510	Soil	" "	4°C		3	✓	✓	✓			
69RSMW02-2	6/2/93	1625	Soil	200 VDC / 11.00 gal	4°C		3	✓	✓	✓			
69RSMW02-2B	6/2/93	1625	Soil	" "	4°C		3	✓	✓	✓			
69RSMW03-6	6/9/93	0930	Soil	" "	4°C		3	✓	✓	✓			
69RSMW8-6	6/4/93	1415	Soil	" "	4°C		3	✓	✓	✓			
69RSMW7-5	6/4/93	1556	Soil	" "	4°C		3	✓	✓	✓			
69-RB	6/2/93	1545	Water	900 VDC / 11.00 gal	4°C	HCY / MND	5	✓	✓	✓			

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>[Name]</u> COMPANY <u>[Company]</u> REASON <u>[Reason]</u>	DATE <u>[Date]</u> TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME
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METHOD OF SHIPMENT: _____ SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____

COMMENTS: _____

AFTER ANALYSIS, SAMPLES ARE TO BE:
 DISPOSED OF (ADDITIONAL FEE)
 STORED (90 DAYS MAX)
 STORED OVER 90 DAYS (ADDITIONAL FEE)
 RETURNED TO CUSTOMER



**NAVY CLEAN
ENSAFE/ALLEN & HOSHALL**
(901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

CLIENT En Safe/Allen & Hoshall PROJECT MANAGER Todd Kenneth
 ADDRESS 5704 Summer Trees Dr. TELEPHONE NO. (901) 372-7962
 PROJECT NAME/NUMBER MS Corpus Christi FAX NO. (901) 372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) E Temple, F. P. [unclear]

Site 8 Groundwater Assessment - 40009-10201

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED					REMARKS	
					TEMP.	CHEMICAL		TPH (HPL)	PCMX/PAHs	CLP VOCs	Temperature			
49RS/ML-1	6/10/93	0900	Oil	1/2 Gallon	4°C		2	✓	✓	✓				
49RS/ML-2	6/10/93	1100	Oil	" "	4°C		2	✓	✓	✓				
49-RB	6/10/93	0900	Water	40ml VOC / 1/2 Pint	4°C	HCl / HNO ₃	5	✓	✓	✓				
49-FB	6/10/93	0920	Water	" " "	4°C	HCl / HNO ₃	5	✓	✓	✓				
49-FB-P	6/10/93	0930	Water	" " "	4°C	HCl / HNO ₃	5	✓	✓	✓				
Trip Blank			Water	40ml VOC	4°C	HCl				✓				2 box cooler
Trip Blank			Water	" "	4°C					✓				1 box cooler

RELINQUISHED BY:	DATE	RECEIVED BY:	DATE	RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
SIGNATURE <u>[Signature]</u>	<u>6/10/93</u>	SIGNATURE _____	_____	SIGNATURE _____	_____	SIGNATURE _____	_____
PRINTED _____	TIME _____	PRINTED _____	TIME _____	PRINTED _____	TIME _____	PRINTED _____	TIME _____
COMPANY <u>[Signature]</u>		COMPANY _____		COMPANY _____		COMPANY _____	
REASON <u>[Signature]</u>		REASON _____		REASON _____		REASON _____	

METHOD OF SHIPMENT: Truck COMMENTS: _____
 SHIPMENT NO. _____
 SPECIAL INSTRUCTION: _____
 AFTER ANALYSIS, SAMPLES ARE TO BE:
 DISPOSED OF (ADDITIONAL FEE)
 STORED (90 DAYS MAX)
 STORED OVER 90 DAYS (ADDITIONAL FEE)
 RETURNED TO CUSTOMER



NAVY CLEAN
ENSAFE/ALLEN & HOSHALL
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CLIENT EnSafe/Allen + Hoshall PROJECT MANAGER Jeff Bennett
 ADDRESS 5724 Summer Trees Dr. TELEPHONE NO. (901) 372-7962
 PROJECT NAME/NUMBER NAS Corpus Christi FAX. NO. (901) 372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) G. Temple, G. Pierce
Ride 8 - Groundwater Assessment (W0069-00201)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		OLP/VOCS	RCRA Metals	TPH		
698WIMWES6	6/22/93	0900	Water	1L Plastic 1/2 Liter	4°	HNO ₃ /HCl	4	✓	✓	✓		
698WIMWES9	"	0945	"	" " "	"	" " "	4	✓	✓	✓		
698WIMWES7	"	0950	"	" " "	"	" " "	4	✓	✓	✓		
698WIMWES11	"	0935	"	" " "	"	" " "	4	✓	✓	✓		
698WIMWES12	"	1100	"	" " "	"	" " "	4	✓	✓	✓		
698WIMWES12D	"	1100	"	" " "	"	" " "	4	✓	✓	✓		
698WIMWES3	"	1130	"	" " "	"	" " "	4	✓	✓	✓		→ this sample is very alkali - 12.7 pH
69-FB8	"	1300	"	" " "	"	" " "	4	✓	✓	✓		
69-FB8P	"	1305	"	" " "	"	" " "	4	✓	✓	✓		
Tri. Blank			"	40ml VOA	"	"	2	✓				* 2 per container

RELINQUISHED BY: SIGNATURE <u>G. Temple</u> PRINTED <u>G. Temple</u> COMPANY <u>EnSafe</u> REASON <u>Shipment</u>	DATE <u>6/22/93</u> TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: <u>Fed. Ex</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF (ADDITIONAL FEE) <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS (ADDITIONAL FEE) <input type="checkbox"/> RETURNED TO CUSTOMER
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NAVY CLEAN
 ENSAFE/ALLEN & HOSHALL
 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

CLIENT EnSafe/Allen & Hoshall PROJECT MANAGER Jeff Bennett
 ADDRESS 5724 Sumner Trees Dr. TELEPHONE NO. (901) 372-7962
 PROJECT NAME/NUMBER NAS Corpus Christi FAX. NO. (901) 372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) G. Temple, G. Pickett
Rtd R - Ground Water Assessment (N0069-00261)

NO OF CONTAINERS	ANALYSIS REQUIRED					REMARKS
	CLP/DOC	TPH	RCRA Metals			
4	✓	✓	✓			
4	✓	✓	✓			
5	✓	✓	✓			
5	✓	✓	✓			
4	✓	✓	✓			
4	✓	✓	✓			
5	✓	✓	✓			

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION	
					TEMP.	CHEMICAL
698WMWES1	6/21/93	1030	Water	1L Plastic, 16 mm x 42 mm	4°C	HCl/HNO ₃
698WMWES1D	"	1030	"	" " "	"	" " "
698WMWBC3	"	1130	"	" " "	"	" " "
698WMWBC3ms	"	1130	"	" " "	"	" " "
698WMWBC3msA	"	1130	"	" " "	"	" " "
698WMWES2	"	1140	"	" " "	"	" " "
698WMWES4	"	1325	"	" " "	"	" " "
698WMWBC1	"	1335	"	" " "	"	" " "

RELINQUISHED BY: SIGNATURE <u>G. Temple</u> PRINTED <u>G. Temple</u> COMPANY <u>EnSafe</u> REASON <u>Shipment</u>	DATE <u>6/21/93</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____
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METHOD OF SHIPMENT: <u>F.d. Ex</u> SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____	COMMENTS: _____ _____ _____	AFTER ANALYSIS, SAMPLES ARE TO BE: <input type="checkbox"/> DISPOSED OF (ADDITIONAL FEE) <input type="checkbox"/> STORED (90 DAYS MAX) <input type="checkbox"/> STORED OVER 90 DAYS (ADDITIONAL FEE) <input type="checkbox"/> RETURNED TO CUSTOMER
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 (901) 383-9115

CHAIN OF CUSTODY RECORD

PAGE 2 OF 2

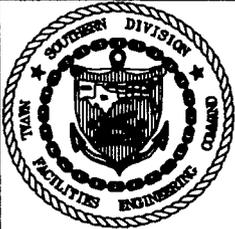
CLIENT EnSafe/Allen & Hoshall PROJECT MANAGER Jeff Bennett
 ADDRESS 5724 Summer Trace Dr TELEPHONE NO (901) 372-7962
 PROJECT NAME/NUMBER NAS Corpus Christi FAX. NO. (901) 372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) S. Temple, G. Pierce

Rida 8 - Groundwater Assessment (N0069-0201)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		MLP/IDC	TPH	PCRB Metals	Temperature	
698W1WBG2	6/21/95	1415	Water	1L Plastic/1L Amber 40 ml VOA	4°C	HCl/HNO ₃ H ₂ SO ₄	5	✓	✓	✓		
698W1WES5	"	1425	"	" " "	"	" " "	4	✓	✓	✓		
698W1WES8	"	1510	"	" " "	"	" " "	4	✓	✓	✓		
Trip Blank			Water	40ml VOA	"		2					*2 per cooler
Temp Blank			Water	"	"		1					*1 per cooler

RELINQUISHED BY: SIGNATURE <u>Alex Temple</u> PRINTED <u>Alex Temple</u> COMPANY <u>EnSafe</u> REASON <u>Shipment</u>	DATE <u>6/21/95</u> TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT. Fed Ex
 SHIPMENT NO. _____
 SPECIAL INSTRUCTION: _____
 COMMENTS: _____
 AFTER ANALYSIS, SAMPLES ARE TO BE:
 DISPOSED OF (ADDITIONAL FEE)
 STORED (90 DAYS MAX)
 STORED OVER 90 DAYS (ADDITIONAL FEE)
 RETURNED TO CUSTOMER



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 (901) 383-9115

CHAIN OF CUSTODY RECORD

CLIENT EnSafe/Allen & Hoshall PROJECT MANAGER Jeff Bennett
 ADDRESS 5724 Summer Trees Dr. TELEPHONE NO. 901/382-7962
 PROJECT NAME/NUMBER NAS Airbus Christi FAX NO. 901/372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) G. Temple C. Mason
Building 8 - Groundwater Assessment (N0069-C6201)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		CLP VOCs	PCRH Metals	TPH		
698SMW10-2	10/12/93	1415	Soil	2oz jar / 4oz plastic	4°		5	✓	✓	✓		
698WMWBG2	10/13/93	0940	Water	40ml VOA / 1L Amber plastic	4°	HCl / HNO3 / H2SO4	6	✓	✓	✓		
698WMWRE1	10/13/93	1000	Water	40ml VOA / 1L Amber plastic	4°	HCl / HNO3 / H2SO4	6	✓	✓	✓		
698WMWBG1D	10/13/93	1000	Water	" " "	"	" " "	6	✓	✓	✓		
698WMWBP3	"	1020	"	" " "	"	" " "	6	✓	✓	✓		
698WMWFSR	"	1150	"	" " "	"	" " "	6	✓	✓	✓		
698WMWES7	"	1225	"	" " "	"	" " "	6	✓	✓	✓		
698WMWES9	"	1335	"	" " "	"	" " "	6	✓	✓	✓		
698WMWES9(mg/ml)	"	1335	"	" " "	"	" " "	6	✓	✓	✓		
698WMWES11	"	1515	"	" " "	"	" " "	6	✓	✓	✓		

RELINQUISHED BY: SIGNATURE _____ PRINTED <u>G. Temple</u> COMPANY <u>EnSafe</u> REASON <u>Client</u>	DATE <u>10/13/93</u> TIME <u>1730</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Fed Ex
 SHIPMENT NO. 6924710672
 SPECIAL INSTRUCTION: _____
 COMMENTS: _____
 AFTER ANALYSIS, SAMPLES ARE TO BE:
 DISPOSED OF (ADDITIONAL FEE)
 STORED (90 DAYS MAX)
 STORED OVER 90 DAYS (ADDITIONAL FEE)
 RETURNED TO CUSTOMER



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CHAIN OF CUSTODY RECORD

CLIENT EnSafe / Allen & Hoshall PROJECT MANAGER Jeff Bennett
 ADDRESS 5724 Summer Trees Dr. TELEPHONE NO. 901/372-7162
 PROJECT NAME/NUMBER NAS Corpus Christi FAX. NO. 901/372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) E. Temple, C. Mason
Building 8 - Groundwater Assessment - (N0069-C0201)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		CLP VOC	PCRA Metals	TPH		
698WVWES12	10/13/98	1545	Water	40ml VOA/1L Plastic 11 Amber	4°C	HCl/HNO ₃ #2 soil	6	✓	✓	✓		
698FB	10/13/98		"	"	"	"	6	✓	✓	✓		
Trip Blank			Water	40ml VOA	4°C		1	✓				
Temp Blank			"	"	4°C		1					Temperature Blank

RELINQUISHED BY: SIGNATURE _____ PRINTED <u>Erica Temple</u> COMPANY <u>Ensafe</u> REASON <u>Shipment</u>	DATE <u>10/13</u> TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE _____ TIME _____
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METHOD OF SHIPMENT: Fed Ex
 SHIPMENT NO. 6924770177
 SPECIAL INSTRUCTION: _____

COMMENTS: _____

AFTER ANALYSIS, SAMPLES ARE TO BE:
 DISPOSED OF (ADDITIONAL FEE)
 STORED (90 DAYS MAX)
 STORED OVER 90 DAYS (ADDITIONAL FEE)
 RETURNED TO CUSTOMER



NAVY CLEAN
ENSAFE/ALLEN & HOSHALL
 (901) 383-9115

CHAIN OF CUSTODY RECORD

CLIENT EnSafe/Allen and Hoshall PROJECT MANAGER Jeff Bennett
 ADDRESS 5724 Summer Trees Dr. TELEPHONE NO. 901-372-7862
 PROJECT NAME/NUMBER NAS Corpus Christi FAX NO. 901-372-2454
 MEDIA STATUS: (A, B, OR C) _____ SAMPLERS: (SIGNATURE) 6 Temple / L. Mason
Building 8 - Groundwater Assessment (Nov 69 - 2011)

FIELD SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	TYPE/SIZE OF CONTAINER	PRESERVATION		NO. OF CONTAINERS	ANALYSIS REQUIRED				REMARKS
					TEMP.	CHEMICAL		CLP	VOCs	RRAs	Metals		IPH
698WMWES1	10/14/93	0835	Water	40ml WAI/L Amber 1 & plastic	4°C	HCl/HNO ₃ H ₂ SO ₄	6	✓	✓	✓		
698WMWES2		0900					6	✓	✓	✓		
698WMWES4		0930					6	✓	✓	✓		
698WMWES6		1020					6	✓	✓	✓		
698WMWES5		1045					6	✓	✓	✓		
698WMWES3		1110					6	✓	✓	✓		
698WMWES10		1355					6	✓	✓	✓		
698WMWES10D		1355					6	✓	✓	✓		
698-FB		1410					6	✓	✓	✓		
698-RB	✓	1420	✓	✓			5	✓	✓	✓		

RELINQUISHED BY: SIGNATURE <u>[Signature]</u> PRINTED <u>Chuck Mason</u> COMPANY <u>E/A & H</u> REASON <u>shipment</u>	DATE <u>10/14/93</u> TIME <u>1730</u>	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RELINQUISHED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME	RECEIVED BY: SIGNATURE _____ PRINTED _____ COMPANY _____ REASON _____	DATE TIME
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METHOD OF SHIPMENT: Fed Ex SHIPMENT NO. _____ SPECIAL INSTRUCTION: _____
 COMMENTS: _____
 AFTER ANALYSIS, SAMPLES ARE TO BE:
 DISPOSED OF (ADDITIONAL FEE)
 STORED (90 DAYS MAX)
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APPENDIX D
INITIAL SAMPLING EVENT
DATA VALIDATION
ANALYTICAL DATA
SOIL AND WATER HITS

DATA VALIDATION

DATA VALIDATION

Data validation has been performed for all analytical data generated during the groundwater assessment at Building 8, NAS Corpus Christi, Texas. The analytical work was conducted by National Environmental Testing Inc., Bedford, MA. The analytical protocols were performed in accordance with the following documents:

- USEPA Contract Laboratory Program, *Statement of Work for Organic Analysis* (CLP SOW 3/90).
- USEPA Contract Laboratory Program, *Statement of Work for Inorganic Analysis* (CLP SOW 3/90).
- USEPA *Methods for Chemical Analysis of Water and Waste*, EPA-600/4-79-020. Revised March 1983.
- NEESA Level C QA/QC guidelines as stated in the *Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation and Restoration Program* (NEESA 20.2-047B).

Fifteen soil samples, sixteen water samples and fifteen blanks (trip, rinsate, and field blanks) were received by the laboratory between June 11 and June 23, 1993. All samples were received in good condition with the proper custody documents and seals intact. Samples were analyzed and reported in four sample delivery groups (SDGs).

Organic Analysis

Samples were submitted and analyzed for volatile organic compounds according to the CLP SOW 3/90 and total petroleum hydrocarbons (TPH) according to EPA Method 418.1. Results were reported according to the format outlined under NEESA Level C guidelines. Holding times from the time of sample collection until the time of sample extraction and/or analysis were found to be in compliance with QC requirements with the following exception:

- Soil sample 698SMW8-6 was originally analyzed for volatile compounds within holding time requirements. The sample required dilution and was reanalyzed as a medium-level sample due to a high concentration of acetone in the sample. The medium-level reanalysis was performed 5 days outside of holding time. Both sets of results are reported and medium-level acetone results are in good agreement with the original analysis results. 2-Butanone was also detected in high levels in the medium-level analysis. Because no 2-butanone was detected in the first analysis of the sample, the concentration detected in the second analysis was determined to be a result of laboratory contamination during dilution and reanalysis. The data obtained from the analysis performed outside of holding time is judged to be usable; however, the positive results for that analysis are qualified as estimated ("J" flagged).
- All samples (with the exception of 698WMWES-3) analyzed for TPH in SDG FD919 were extracted and analyzed 2 to 3 days outside of the 28 day holding time. No positive detections of TPH were reported in the samples. All TPH results for these samples were

qualified as estimated ("UJ" flagged) due to the missed holding times.

Calibration

Criteria for instrument calibration were established to ensure the production of acceptable qualitative and quantitative data. The initial calibration ensures the instrument capabilities prior to the analytical run and the continuing calibrations ensure the instrument capabilities throughout and at the end of each subsequent analytical run.

Historical performance data show that certain volatile compounds (called "poor responders"), show a poor response and/or erratic behavior. Therefore, no contractual requirements are provided for these compounds. For review and validation, however, all compounds were considered for qualification in the volatile analyses when the following criteria were not met:

- Initial/continuing calibration standard relative response factors (RRFs) for all target compounds and surrogates must be greater than or equal to 0.05.
- Percent relative standard deviation (RSD) of the RRFs must not exceed ± 30 percent in the initial calibration.
- Percent difference (%D) of the RRFs must not exceed ± 25 percent in the continuing calibration.

Calibration non-conformances encountered during the review of calibration data for this project are detailed by SDG below:

SDG FD890:

- Vinyl chloride exceeded RSD criteria in the volatile initial calibration performed on June 15, 1993. In addition, the %Ds for vinyl chloride and 1,1,2,2-tetrachloroethane exceeded QC criteria in the continuing calibration performed on June 17, 1993. There were no positive detections of these compounds in the samples analyzed using this calibration sequence. No qualification of the data was judged to be necessary.

SDG FD890B:

- Vinyl chloride exceeded RSD criteria in the volatile initial calibration performed on June 14, 1993. In addition, the %Ds for vinyl chloride were above QC criteria in the continuing calibration performed on June 29, 1993. There were no positive detections of this compound in the samples analyzed using these calibration sequences. No qualification of the data was judged to be necessary.

SDG FD893:

- The %Ds for vinyl chloride were above QC criteria in the continuing calibrations performed on June 25 and June 27, 1993. All positive detections of this compound in the samples analyzed using these calibration sequences were qualified as estimated ("J" flagged).

SDG FD919:

- The %D for vinyl chloride was above QC criteria in the continuing calibration performed on June 27, 1993. All positive detections of this compound in the samples analyzed using this calibration sequence were qualified as estimated ("J" flagged).

Precision

For each analytical method used to analyze environmental samples, there are variations in the reported results that may be due to the random differences in the handling and analysis of that matrix. These variations are referred to as the *precision* or the *reproducibility* of results. To demonstrate reproducibility, the CLP SOW specifies the addition of known quantities of several compounds to two separate aliquots of each sample matrix type. The "spiked" aliquots are referred to as the matrix spike (MS) and the matrix spike duplicate (MSD). These samples are then analyzed using the same preparation and analytical methods used for all samples of similar matrix types. These samples can be used to detect matrix effects in which other sample components interfere with the analysis of the contaminants. Volatile and TPH MS/MSD analysis results that were outside of QC criteria are discussed below:

SDG FD893:

- Sample 698WMWBG3 was utilized for the MS/MSD analysis in this SDG. Recoveries of the TPH MS/MSD analysis were below 15% and far below acceptable QC limits. In addition, the laboratory reported low recovery (35%) during the laboratory control sample (LCS) analysis associated with this SDG. The laboratory verified the quality of the spiking solution and reviewed the extraction procedures with the appropriate laboratory personnel. There were no positive detections of TPH in the samples in this SDG. TPH results for this SDG were qualified as estimated ("UJ" flagged) and should be considered suspect due to the low spike recoveries.

SDG FD919:

- Sample 698SMWES6 was utilized for the MS/MSD analysis in this SDG. The relative percent difference (RPD) for 1,1-dichloroethene was 1% above the QC limit in the volatile MS/MSD analysis. No qualification of the data was determined to be necessary due to the slightly high RPD.

Accuracy

Accuracy is the degree to which a given result agrees with the "true" value. To check the accuracy in volatile analyses, the CLP SOW requires the addition of known amounts of surrogate compounds (compounds which are not likely to be found in the actual samples) and internal standards. If upon analysis of the sample, the percent recovered for the surrogate compounds and/or internal standards are accurate (close to the known concentrations) as defined within the limits set by CLP, then the reported target compound concentrations are considered to be accurate.

The accuracy of the overall measurement system is also an indication of any bias that exists in the environmental laboratory and field sampling/analysis plan. Possible sources of error may be in the sampling process, field or laboratory contamination, preservation, handling and/or from the sample matrix itself.

Blanks assist in determining the presence and magnitude of any contamination resulting from the laboratory or field. If problems are found in any of the blanks, all associated data are evaluated to determine whether there is an inherent variability in the data or if the problem is an isolated occurrence and does not affect the data. The blanks analyzed include trip blanks, equipment rinsate blanks, field blanks and laboratory method blanks.

Under CLP, contaminants detected in the method blanks are handled within the laboratory by qualifying all positive detections of the contaminants in the associated samples with a B-flag. The data validation procedures also evaluate the contaminants by determining possible contamination sources using field QC samples. Detection of an analyte in a blank results in the elevation of the compound quantitation limit to the action level using the 10-times and 5-times rules. The action level is the result of multiplying the blank contaminant compound concentration by 10 for common laboratory solvents or 5 for all other analytes. If an analyte is detected in a sample at a concentration lower than the action level, the analyte concentration in the sample is flagged as undetected. Blank contamination is outlined by SDG below:

SDG FD890:

- Low levels of methylene chloride and acetone were detected in the volatile analysis method blanks. Methylene chloride contamination was also detected in the rinsate, trip, and field blanks. The field blank numbered 69FB-P, taken from a potable water source on base, showed low level concentrations of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

SDG FD890B:

- Low levels of methylene chloride were detected in the rinsate and trip blanks associated with this SDG.

SDG FD893:

- Percent recovery for the surrogate compound toluene-d8 was 5% above QC limits in the volatile analysis of sample 698WMWES-5. The sample was reanalyzed one day later with acceptable surrogate recoveries; however, the results of the second analysis do not agree with the original analysis results. The original analysis resulted in several target compound hits, including high concentrations of vinyl chloride and 1,2-dichloroethene. The reanalysis of the sample resulted in hits of vinyl chloride and 1,2-dichloroethene at concentrations significantly lower than the original analysis. All detected target compound results were qualified as estimated ("J" flagged) in both the original analysis and reanalysis.
- Methylene chloride and acetone were detected in the volatile method blanks of this SDG. The two trip blanks associated with this SDG also displayed low levels of methylene chloride and one positive detection of 1,2-dichloroethane.

SDG FD919:

- A method blank analyzed in this SDG resulted in positive detections of 4-methyl-2-pentanone and 1,1,2,2-tetrachloroethane. One of the trip blanks associated with these samples displayed low level contamination of 1,2-dichloroethane. Both field blanks

showed contamination with methylene chloride, and the field blank labeled 69FB8-P, indicating a potable water source on base, also contained levels of acetone, chloroform, bromodichloromethane, and bromoform.

The 10-times and 5-times rules were applied to all of the above-listed compounds detected in the blanks associated with these groundwater assessment samples. All associated sample concentrations which were below the action levels calculated from the blank contamination were qualified as non-detected ("U" flagged).

Inorganic Analysis

The samples were analyzed for RCRA metals in accordance with the CLP SOW 3/90. All sample results were reported according to NEESA Level C guidelines.

Holding Times

All samples were received by the laboratory in good condition with the proper custody documents and seals intact. From the date of collection to the date of sample digestion/preparation, all sample holding times were found to be within technical QC requirements.

Calibration

The purpose of the initial and continuing calibration is to ensure that the instrument is capable of acceptable and quantitative performance at the beginning of and throughout each analytical run. Initial and continuing calibrations were performed for the inorganics analysis within QC criteria.

Blanks

Blank results are used to determine the presence and magnitude of any contamination problems. Analysis of blanks was performed in compliance with method requirements. Contamination detected in the blanks is outlined below:

SDG FD890:

- Selenium, arsenic, and lead were detected in calibration blanks associated with this SDG. Lead was also detected in the preparation blank analyzed with the samples of this SDG. Action levels for these contaminants were calculated and the sample data was qualified with the appropriate flag.

SDG FD893:

- Selenium and lead contamination was detected in continuing calibration blanks associated with this SDG. Action levels for selenium and lead were calculated and the sample data was qualified with the appropriate flag.

SDG FD919:

- Selenium and lead were detected in calibration and preparation blanks of this SDG. Action levels for selenium and lead were calculated and the sample data was qualified with the appropriate flag.

Laboratory Control Sample Analysis

The laboratory control sample (LCS) analysis serves as a monitor of efficiency and overall performance in all steps of analysis, including the digestion procedures. Laboratory control sample analysis results were found to be within QC criteria for all SDGs associated with this project.

Duplicate/Spike

Duplicate samples are used to determine the precision of analytical methods for each parameter. The spiked samples are designed to provide information about the effects of the sample matrix on the digestion and measurement methodology. Duplicate and spike analysis results found to be outside of QC criteria are listed below:

SDG FD890:

- Spike recoveries of selenium and silver were slightly below the QC recovery limits of 75-125% recovery. Recovery of lead was high (152.2%) in the spike analysis for this SDG. All positive detections of selenium, silver, and lead in this SDG were qualified as estimated ("J" flagged).

SDG FD893:

- Duplicate results for lead were outside of QC criteria. All positive detections of lead were qualified as estimated ("J" flagged).
- Lead and selenium spike recoveries were below QC limits in this SDG. All lead and selenium results were qualified as estimated ("J" or "UJ" flagged).

SDG FD919:

- Spike recoveries of lead, selenium, and silver were below QC limits for this SDG. All lead, selenium, and silver results were qualified as estimated ("J" or "UJ" flagged). Spike recovery of mercury was above QC limits. All positive detections of mercury were qualified as estimated ("J" flagged).

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent the characteristic of a population, parameter variations at a sampling point, or an environmental condition. The field duplicate samples assist in giving an indication of overall (i.e. field and laboratory) precision. In the organics and inorganics analyses, the duplicate results were found to be in acceptable agreement with original results with the following exceptions:

SDG FD893:

- Samples 698WMWES1 and 698WMWES-1D were utilized as the field duplicate pair for this SDG. These samples displayed a percent difference of 79.9% in the lead analysis. All lead results had previously been qualified as estimated, therefore no further qualification was necessary due to the duplicate recoveries.

SDG FD919:

- Samples 698WMWES12 and 698WMWES12D were collected as field duplicates for this

SDG. Chromium results for these samples displayed a percent difference of 33.7%. All positive chromium results for samples in this SDG were qualified as estimated ("J" flagged).

Completeness

Completeness is defined as the percentage of measurements made which are judged to be valid. In all 46 samples analyzed for the groundwater assessment at Building 8, NAS Corpus Christi, all requested parameters were analyzed for and no data was qualified as unusable. The data therefore satisfactorily meet the 90 percent completeness level goal.

Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. To ensure comparability, all samples were collected using EPA Region IV SOPs and were analyzed according to CLP or EPA methods, as appropriate.

Data Assessment

The analytical data generated during the groundwater assessment at Building 8, NAS Corpus Christi, has been reviewed and validated with the appropriate data qualifiers based on data usability. Through the validation process, several results have been qualified as estimated due to QA deficiencies. In particular, all TPH results from SDG FD893 were qualified as estimated and should be considered suspect due to very low matrix spike/matrix spike duplicate recoveries. The analytical data are usable as qualified for the groundwater assessment at Building 8.

The analytical data will be presented in summary form and lists only the positively detected compounds and qualified data critical to the reader.

Data Qualifier Definitions

The following briefly explains the data qualifiers as a result of the validation process:

- U** — The compound was analyzed for, but was not detected above the reported sample quantitation limit.

- J** — The compound was positively detected; however, the reported concentration is considered to approximate the concentration within the sample.

- UJ** — The compound was not detected above the reported sample quantitation limit; however, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.

- R** — The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the compound cannot be verified.

ANALYTICAL DATA

**CORPUS CHRISTI
SOIL SAMPLES**

SAMPLE ID ----->	698SMW23	698SMW32	698SMW42
LAB2 SAMPLE ID --->	83662	83660	83661
RECEIPT DATE ---->	06/18/93	06/18/93	06/18/93

PARAMETER

UNITS

I Arsenic	MG/KG	0.6	J				
I Barium	MG/KG	35.5	J				
I Cadmium	MG/KG	0.72	U				
I Chromium	MG/KG	1.8	J				
I Lead	MG/KG	2.2					
I Mercury	MG/KG	0.12	U				
I Selenium	MG/KG	0.24	U				
I Silver	MG/KG	1.7	U				
V 1,1,1-Trichloroethane	UG/KG	12	U	12	U	12	U
V 1,1,2,2-Tetrachloroethane	UG/KG	12	U	12	U	12	U
V 1,1,2-Trichloroethane	UG/KG	12	U	12	U	12	U
V 1,1-Dichloroethane	UG/KG	12	U	12	U	12	U
V 1,1-Dichloroethene	UG/KG	12	U	12	U	12	U
V 1,2-Dichloroethane	UG/KG	12	U	12	U	12	U
V 1,2-Dichloroethene (total)	UG/KG	12	U	12	U	12	U
V 1,2-Dichloropropane	UG/KG	12	U	12	U	12	U
V 2-Butanone	UG/KG	12	U	12	U	6	J
V 2-Hexanone	UG/KG	12	U	12	U	12	U
V 4-Methyl-2-Pentanone	UG/KG	12	U	12	U	12	U
V Acetone	UG/KG	68		130		75	
V Benzene	UG/KG	12	U	12	U	12	U
V Bromodichloromethane	UG/KG	12	U	12	U	12	U
V Bromoform	UG/KG	12	U	12	U	12	U
V Bromomethane	UG/KG	12	U	12	U	12	U
V Carbon Disulfide	UG/KG	12	U	12	U	12	U
V Carbon Tetrachloride	UG/KG	12	U	12	U	12	U
V Chlorobenzene	UG/KG	12	U	12	U	12	U
V Chloroethane	UG/KG	12	U	12	U	12	U
V Chloroform	UG/KG	12	U	12	U	12	U
V Chloromethane	UG/KG	12	U	12	U	12	U
V Dibromochloromethane	UG/KG	12	U	12	U	12	U
V Ethylbenzene	UG/KG	12	U	12	U	12	U
V Methylene Chloride	UG/KG	12	U	12	U	12	U
V Styrene	UG/KG	12	U	12	U	12	U
V Tetrachloroethene	UG/KG	12	U	12	U	12	U
V Toluene	UG/KG	12	U	12	U	12	U
V Trichloroethene	UG/KG	12	U	12	U	12	U
V Vinyl Chloride	UG/KG	12	U	12	U	12	U
V Xylene (total)	UG/KG	12	U	12	U	12	U
V cis-1,3-Dichloropropene	UG/KG	12	U	12	U	12	U
V trans-1,3-Dichloropropene	UG/KG	12	U	12	U	12	U

**CORPUS CHRISTI
SOIL SAMPLES**

SAMPLE ID ----->	698SMW53	698SMW62	698SMW75
LAB2 SAMPLE ID --->	83659	83307	83304
RECEIPT DATE ---->	06/18/93	06/11/93	06/11/93

PARAMETER	UNITS						

I Arsenic	MG/KG	0.49	U	0.46	U	0.7	J
I Barium	MG/KG	17.2	J	6.6	J	12.9	J
I Cadmium	MG/KG	0.73	U	0.7	U	0.76	U
I Chromium	MG/KG	2.7		1.2	U	3.4	
I Lead	MG/KG	1.3		1.4		5.1	J
I Mercury	MG/KG	0.12	U	0.12	U	0.13	U
I Selenium	MG/KG	0.24	U			0.25	U
I Silver	MG/KG	1.7	U	1.6	U	1.8	U
V 1,1,1-Trichloroethane	UG/KG	12	U	12	U	11	U
V 1,1,2,2-Tetrachloroethane	UG/KG	12	U	12	U	11	U
V 1,1,2-Trichloroethane	UG/KG	12	U	12	U	11	U
V 1,1-Dichloroethane	UG/KG	12	U	12	U	11	U
V 1,1-Dichloroethene	UG/KG	12	U	12	U	11	U
V 1,2-Dichloroethane	UG/KG	12	U	12	U	11	U
V 1,2-Dichloroethene (total)	UG/KG	12	U	12	U	11	U
V 1,2-Dichloropropane	UG/KG	12	U	12	U	11	U
V 2-Butanone	UG/KG	12	U	12	U	11	U
V 2-Hexanone	UG/KG	12	U	12	U	11	U
V 4-Methyl-2-Pentanone	UG/KG	12	U	12	U	11	U
V Acetone	UG/KG	240		170		190	
V Benzene	UG/KG	12	U	12	U	11	U
V Bromodichloromethane	UG/KG	12	U	12	U	11	U
V Bromoform	UG/KG	12	U	12	U	11	U
V Bromomethane	UG/KG	12	U	12	U	11	U
V Carbon Disulfide	UG/KG	12	U	12	U	11	U
V Carbon Tetrachloride	UG/KG	12	U	12	U	11	U
V Chlorobenzene	UG/KG	12	U	12	U	11	U
V Chloroethane	UG/KG	12	U	12	U	11	U
V Chloroform	UG/KG	12	U	12	U	11	U
V Chloromethane	UG/KG	12	U	12	U	11	U
V Dibromochloromethane	UG/KG	12	U	12	U	11	U
V Ethylbenzene	UG/KG	12	U	12	U	11	U
V Methylene Chloride	UG/KG	12	U	12	U	11	U
V Styrene	UG/KG	12	U	12	U	11	U
V Tetrachloroethene	UG/KG	12	U	12	U	11	U
V Toluene	UG/KG	12	U	12	U	11	U
V Trichloroethene	UG/KG	12	U	12	U	11	U
V Vinyl Chloride	UG/KG	12	U	12	U	11	U
V Xylene (total)	UG/KG	12	U	12	U	11	U
V cis-1,3-Dichloropropene	UG/KG	12	U	12	U	11	U
V trans-1,3-Dichloropropene	UG/KG	12	U	12	U	11	U

**CORPUS CHRISTI
SOIL SAMPLES**

SAMPLE ID ----->	698SMW86	698SMW86DL	698SMW91
LAB2 SAMPLE ID--->	83303	83303DL	83306
RECEIPT DATE---->	06/11/93	06/11/93	06/11/93

PARAMETER	UNITS						

I Arsenic	MG/KG	0.46	U			0.48	U
I Barium	MG/KG	15.6	J			3.1	J
I Cadmium	MG/KG	0.68	U			0.72	U
I Chromium	MG/KG	1.7	J			1.7	J
I Lead	MG/KG	2.3	J			0.91	J
I Mercury	MG/KG	0.11	U			0.12	U
I Selenium	MG/KG	0.23	U			0.24	U
I Silver	MG/KG	1.6	U			1.7	U
V 1,1,1-Trichloroethane	UG/KG	12	U	1500	U	12	U
V 1,1,2,2-Tetrachloroethane	UG/KG	12	U	1500	U	12	U
V 1,1,2-Trichloroethane	UG/KG	12	U	1500	U	12	U
V 1,1-Dichloroethane	UG/KG	12	U	1500	U	12	U
V 1,1-Dichloroethene	UG/KG	12	U	1500	U	12	U
V 1,2-Dichloroethane	UG/KG	12	U	1500	U	12	U
V 1,2-Dichloroethene (total)	UG/KG	12	U	1500	U	12	U
V 1,2-Dichloropropane	UG/KG	12	U	1500	U	12	U
V 2-Butanone	UG/KG	12	U	2500	U	12	U
V 2-Hexanone	UG/KG	12	U	1500	U	12	U
V 4-Methyl-2-Pentanone	UG/KG	12	U	1500	U	12	U
V Acetone	UG/KG	4900	J	4400	J	14	U
V Benzene	UG/KG	12	U	1500	U	12	U
V Bromodichloromethane	UG/KG	12	U	1500	U	12	U
V Bromoform	UG/KG	12	U	1500	U	12	U
V Bromomethane	UG/KG	12	U	1500	U	12	U
V Carbon Disulfide	UG/KG	12	U	1500	U	12	U
V Carbon Tetrachloride	UG/KG	12	U	1500	U	12	U
V Chlorobenzene	UG/KG	12	U	1500	U	12	U
V Chloroethane	UG/KG	12	U	1500	U	12	U
V Chloroform	UG/KG	12	U	1500	U	12	U
V Chloromethane	UG/KG	12	U	1500	U	12	U
V Dibromochloromethane	UG/KG	12	U	1500	U	12	U
V Ethylbenzene	UG/KG	12	U	1500	U	12	U
V Methylene Chloride	UG/KG	2	U	1500	U	3	U
V Styrene	UG/KG	12	U	1500	U	12	U
V Tetrachloroethene	UG/KG	12	U	1500	U	12	U
V Toluene	UG/KG	12	U	1500	U	12	U
V Trichloroethene	UG/KG	12	U	1500	U	12	U
V Vinyl Chloride	UG/KG	12	U	1500	U	12	U
V Xylene (total)	UG/KG	12	U	1500	U	12	U
V cis-1,3-Dichloropropene	UG/KG	12	U	1500	U	12	U
V trans-1,3-Dichloropropene	UG/KG	12	U	1500	U	12	U

**CORPUS CHRISTI
SOIL SAMPLES**

SAMPLE ID ----->	698SMW112	698SMW12	698SMW122
LAB2 SAMPLE ID --->	83663	83664	83658
RECEIPT DATE ---->	06/18/93	06/18/93	06/18/93

PARAMETER	UNITS						

I Arsenic	MG/KG	0.45	U	0.5	U	0.53	U
I Barium	MG/KG	7	J	9	J	2.2	J
I Cadmium	MG/KG	0.68	U	0.74	U	0.8	U
I Chromium	MG/KG	1.1	U	1.2	U	1.3	U
I Lead	MG/KG	3.1		0.76		1.1	
I Mercury	MG/KG	0.11	U	0.12	U	0.13	U
I Selenium	MG/KG	0.23	U	0.25	U	0.27	U
I Silver	MG/KG	1.6	U	1.7	U	1.9	U
V 1,1,1-Trichloroethane	UG/KG	1400	U	12	U	60	U
V 1,1,2,2-Tetrachloroethane	UG/KG	1400	U	12	U	60	U
V 1,1,2-Trichloroethane	UG/KG	1400	U	12	U	60	U
V 1,1-Dichloroethane	UG/KG	1400	U	12	U	60	U
V 1,1-Dichloroethene	UG/KG	1400	U	12	U	60	U
V 1,2-Dichloroethane	UG/KG	1400	U	12	U	60	U
V 1,2-Dichloroethene (total)	UG/KG	1400	U	12	U	60	U
V 1,2-Dichloropropane	UG/KG	1400	U	12	U	60	U
V 2-Butanone	UG/KG	1400	U	12	U	60	U
V 2-Hexanone	UG/KG	1400	U	12	U	60	U
V 4-Methyl-2-Pentanone	UG/KG	1400	U	12	U	60	U
V Acetone	UG/KG	3300		150		330	
V Benzene	UG/KG	1400	U	12	U	60	U
V Bromodichloromethane	UG/KG	1400	U	12	U	60	U
V Bromoform	UG/KG	1400	U	12	U	60	U
V Bromomethane	UG/KG	1400	U	12	U	60	U
V Carbon Disulfide	UG/KG	1400	U	12	U	60	U
V Carbon Tetrachloride	UG/KG	1400	U	12	U	60	U
V Chlorobenzene	UG/KG	1400	U	12	U	60	U
V Chloroethane	UG/KG	1400	U	12	U	60	U
V Chloroform	UG/KG	1400	U	12	U	60	U
V Chloromethane	UG/KG	1400	U	12	U	60	U
V Dibromochloromethane	UG/KG	1400	U	12	U	60	U
V Ethylbenzene	UG/KG	1400	U	12	U	60	U
V Methylene Chloride	UG/KG	130	J	2	U	60	U
V Styrene	UG/KG	1400	U	12	U	60	U
V Tetrachloroethene	UG/KG	1400	U	12	U	60	U
V Toluene	UG/KG	1400	U	12	U	60	U
V Trichloroethene	UG/KG	1400	U	12	U	60	U
V Vinyl Chloride	UG/KG	1400	U	12	U	60	U
V Xylene (total)	UG/KG	1400	U	12	U	60	U
V cis-1,3-Dichloropropene	UG/KG	1400	U	12	U	60	U
V trans-1,3-Dichloropropene	UG/KG	1400	U	12	U	60	U

**CORPUS CHRISTI
SOIL SAMPLES**

SAMPLE ID ----->	698SMWBG12	698SMWBG12D	698SMWBG23
LAB2 SAMPLE ID --->	83300	83301	83299
RECEIPT DATE ---->	06/11/93	06/11/93	06/11/93

PARAMETER	UNITS						

I Arsenic	MG/KG	0.49	U	0.47	U	1.1	J
I Barium	MG/KG	2.1	J	2.1	J	14.8	J
I Cadmium	MG/KG	0.73	U	0.71	U	0.71	U
I Chromium	MG/KG	1.2	U	1.2	U	2.2	J
I Lead	MG/KG	0.99	J	0.6	J	2.8	J
I Mercury	MG/KG	0.12	U	0.12	U	0.12	U
I Selenium	MG/KG	0.24	U	0.24	U	0.39	J
I Silver	MG/KG	1.7	U	1.7	U	1.7	U
V 1,1,1-Trichloroethane	UG/KG	12	U	12	U	61	U
V 1,1,2,2-Tetrachloroethane	UG/KG	12	U	12	U	61	U
V 1,1,2-Trichloroethane	UG/KG	12	U	12	U	61	U
V 1,1-Dichloroethane	UG/KG	12	U	12	U	61	U
V 1,1-Dichloroethene	UG/KG	12	U	12	U	61	U
V 1,2-Dichloroethane	UG/KG	12	U	12	U	61	U
V 1,2-Dichloroethene (total)	UG/KG	12	U	12	U	61	U
V 1,2-Dichloropropane	UG/KG	12	U	12	U	61	U
V 2-Butanone	UG/KG	12	U	12	U	61	U
V 2-Hexanone	UG/KG	12	U	12	U	61	U
V 4-Methyl-2-Pentanone	UG/KG	12	U	12	U	61	U
V Acetone	UG/KG	21	U	29	U	950	J
V Benzene	UG/KG	12	U	12	U	61	U
V Bromodichloromethane	UG/KG	12	U	12	U	61	U
V Bromoform	UG/KG	12	U	12	U	61	U
V Bromomethane	UG/KG	12	U	12	U	61	U
V Carbon Disulfide	UG/KG	12	U	12	U	61	U
V Carbon Tetrachloride	UG/KG	12	U	12	U	61	U
V Chlorobenzene	UG/KG	12	U	12	U	61	U
V Chloroethane	UG/KG	12	U	12	U	61	U
V Chloroform	UG/KG	12	U	12	U	61	U
V Chloromethane	UG/KG	12	U	12	U	61	U
V Dibromochloromethane	UG/KG	12	U	12	U	61	U
V Ethylbenzene	UG/KG	12	U	12	U	61	U
V Methylene Chloride	UG/KG	2	U	2	U	61	U
V Styrene	UG/KG	12	U	12	U	61	U
V Tetrachloroethene	UG/KG	12	U	12	U	61	U
V Toluene	UG/KG	12	U	12	U	61	U
V Trichloroethene	UG/KG	12	U	12	U	61	U
V Vinyl Chloride	UG/KG	12	U	12	U	61	U
V Xylene (total)	UG/KG	12	U	12	U	61	U
V cis-1,3-Dichloropropene	UG/KG	12	U	12	U	61	U
V trans-1,3-Dichloropropene	UG/KG	12	U	12	U	61	U

**CORPUS CHRISTI
SOIL SAMPLES**

SAMPLE ID -----> 698SMWBG36
 LAB2 SAMPLE ID---> 83302
 RECEIPT DATE----> 06/11/93

PARAMETER	UNITS		
I Arsenic	MG/KG	0.47	U
I Barium	MG/KG	9.9	J
I Cadmium	MG/KG	0.71	U
I Chromium	MG/KG	2.5	
I Lead	MG/KG	2	J
I Mercury	MG/KG	0.12	U
I Selenium	MG/KG	0.24	U
I Silver	MG/KG	1.7	U
V 1,1,1-Trichloroethane	UG/KG	61	U
V 1,1,2,2-Tetrachloroethane	UG/KG	61	U
V 1,1,2-Trichloroethane	UG/KG	61	U
V 1,1-Dichloroethane	UG/KG	61	U
V 1,1-Dichloroethene	UG/KG	61	U
V 1,2-Dichloroethane	UG/KG	61	U
V 1,2-Dichloroethene (total)	UG/KG	61	U
V 1,2-Dichloropropane	UG/KG	61	U
V 2-Butanone	UG/KG	61	U
V 2-Hexanone	UG/KG	61	U
V 4-Methyl-2-Pentanone	UG/KG	61	U
V Acetone	UG/KG	76	U
V Benzene	UG/KG	61	U
V Bromodichloromethane	UG/KG	61	U
V Bromoform	UG/KG	61	U
V Bromomethane	UG/KG	61	U
V Carbon Disulfide	UG/KG	61	U
V Carbon Tetrachloride	UG/KG	61	U
V Chlorobenzene	UG/KG	61	U
V Chloroethane	UG/KG	61	U
V Chloroform	UG/KG	61	U
V Chloromethane	UG/KG	61	U
V Dibromochloromethane	UG/KG	61	U
V Ethylbenzene	UG/KG	61	U
V Methylene Chloride	UG/KG	61	U
V Styrene	UG/KG	61	U
V Tetrachloroethene	UG/KG	61	U
V Toluene	UG/KG	61	U
V Trichloroethene	UG/KG	61	U
V Vinyl Chloride	UG/KG	61	U
V Xylene (total)	UG/KG	61	U
V cis-1,3-Dichloropropene	UG/KG	61	U
V trans-1,3-Dichloropropene	UG/KG	61	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWBG1	698WMWBG2	698WMWBG3
LAB2 SAMPLE ID --->	83792	83793	83789
RECEIPT DATE ---->	06/22/93	06/22/93	06/22/93

PARAMETER	UNITS						

I Aluminum	UG/L	.	.	.	.	.	.
I Antimony	UG/L	.	.	.	.	.	.
I Arsenic	UG/L	12		8.2	J	3.8	J
I Barium	UG/L	865		146	J	304	
I Beryllium	UG/L	.		.		.	
I Cadmium	UG/L	3	U	3	U	3	U
I Calcium	UG/L	.		.		.	
I Chromium	UG/L	56.8		10	J	35.6	
I Cobalt	UG/L	.		.		.	
I Copper	UG/L	.		.		.	
I Cyanide	UG/L	.		.		.	
I Iron	UG/L	.		.		.	
I Lead	UG/L	39.3	J	10	U	13.2	UJ
I Magnesium	UG/L	.		.		.	
I Manganese	UG/L	.		.		.	
I Mercury	UG/L	0.65		0.2	U	0.2	U
I Nickel	UG/L	.		.		.	
I Potassium	UG/L	.		.		.	
I Selenium	UG/L	8.5	UJ	3.9	UJ	2.9	UJ
I Silver	UG/L	7	U	7	U	7	U
I Sodium	UG/L	.		.		.	
I Thallium	UG/L	.		.		.	
I Vanadium	UG/L	.		.		.	
I Zinc	UG/L	.		.		.	
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	10	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	5	U	10	U	39	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWBG1	698WMWBG2	698WMWBG3
LAB2 SAMPLE ID--->	83792	83793	83789
RECEIPT DATE---->	06/22/93	06/22/93	06/22/93

PARAMETER	UNITS						

V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	10	U	10	U	10	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U

CORPUS CHRISTI WATER SAMPLES

SAMPLE ID ----->	698WMWES1	698WMWES11	698WMWES12
LAB2 SAMPLE ID --->	83787	83864	83865
RECEIPT DATE ---->	06/22/93	06/23/93	06/23/93

PARAMETER	UNITS						

I Aluminum	UG/L	.		.		.	
I Antimony	UG/L	.		.		.	
I Arsenic	UG/L	6.9	J	6.4	J	8.4	J
I Barium	UG/L	580		328		655	
I Beryllium	UG/L	.		.		.	
I Cadmium	UG/L	3	U	9.1		10.6	
I Calcium	UG/L	.		.		.	
I Chromium	UG/L	46.8		61.2	J	69.1	J
I Cobalt	UG/L	.		.		.	
I Copper	UG/L	.		.		.	
I Cyanide	UG/L	.		.		.	
I Iron	UG/L	.		.		.	
I Lead	UG/L	24.7	J	31.2	J	52	J
I Magnesium	UG/L	.		.		.	
I Manganese	UG/L	.		.		.	
I Mercury	UG/L	0.2	U	0.2	U	0.2	U
I Nickel	UG/L	.		.		.	
I Potassium	UG/L	.		.		.	
I Selenium	UG/L	3.3	UJ	2.4	UJ	3	UJ
I Silver	UG/L	7	U	7	U	7	U
I Sodium	UG/L	.		.		.	
I Thallium	UG/L	.		.		.	
I Vanadium	UG/L	.		.		.	
I Zinc	UG/L	.		.		.	
V 1,1,1-Trichloroethane	UG/L	10	U	3	J	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	6	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	4	J	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	12		10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	10	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	10	U	10	U	10	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES1	698WMWES11	698WMWES12
LAB2 SAMPLE ID---->	83787	83864	83865
RECEIPT DATE---->	06/22/93	06/23/93	06/23/93

PARAMETER	UNITS						

V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	10	U	10	U	10	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES12D	698WMWES1D	698WMWES2
LAB2 SAMPLE ID --->	83866	83788	83790
RECEIPT DATE ---->	06/23/93	06/22/93	06/22/93

PARAMETER	UNITS						

I Aluminum	UG/L	.	.	.	.	.	.
I Antimony	UG/L	.	.	.	.	.	.
I Arsenic	UG/L	8.9	J	3	U	10.6	
I Barium	UG/L	716		605		247	
I Beryllium	UG/L	.	.	.	.	.	.
I Cadmium	UG/L	16.6		3	U	3	U
I Calcium	UG/L	.	.	.	.	.	.
I Chromium	UG/L	97.1	J	52.5		5	U
I Cobalt	UG/L	.	.	.	.	.	.
I Copper	UG/L	.	.	.	.	.	.
I Cyanide	UG/L	.	.	.	.	.	.
I Iron	UG/L	.	.	.	.	.	.
I Lead	UG/L	44.5	J	10.6	UJ	4.7	UJ
I Magnesium	UG/L	.	.	.	.	.	.
I Manganese	UG/L	.	.	.	.	.	.
I Mercury	UG/L	0.2	U	0.2	U	0.2	U
I Nickel	UG/L	.	.	.	.	.	.
I Potassium	UG/L	.	.	.	.	.	.
I Selenium	UG/L	6.2	UJ	5	UJ	1.6	UJ
I Silver	UG/L	7	U	7	U	7	U
I Sodium	UG/L	.	.	.	.	.	.
I Thallium	UG/L	.	.	.	.	.	.
I Vanadium	UG/L	.	.	.	.	.	.
I Zinc	UG/L	.	.	.	.	.	.
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	10	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	10	U	10	U	10	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES12D	698WMWES1D	698WMWES2
LAB2 SAMPLE ID---->	83866	83788	83790
RECEIPT DATE----->	06/23/93	06/22/93	06/22/93

PARAMETER	UNITS						

V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	10	U	10	U	10	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES3	698WMWES4	698WMWES5
LAB2 SAMPLE ID---->	83867	83791	83794
RECEIPT DATE----->	06/23/93	06/22/93	06/22/93

PARAMETER	UNITS						

I Aluminum	UG/L	.	.	.	.	.	.
I Antimony	UG/L	.	.	.	.	.	.
I Arsenic	UG/L	51	J	1530		4.3	J
I Barium	UG/L	35.9	J	215		369	
I Beryllium	UG/L	.	.	.	.	.	.
I Cadmium	UG/L	3	U	3	U	3	U
I Calcium	UG/L	.	.	.	.	.	.
I Chromium	UG/L	106	J	97.3		5	U
I Cobalt	UG/L	.	.	.	.	.	.
I Copper	UG/L	.	.	.	.	.	.
I Cyanide	UG/L	.	.	.	.	.	.
I Iron	UG/L	.	.	.	.	.	.
I Lead	UG/L	53.4	J	18.4	J	6.5	UJ
I Magnesium	UG/L	.	.	.	.	.	.
I Manganese	UG/L	.	.	.	.	.	.
I Mercury	UG/L	6.4	J	0.2	U	0.2	U
I Nickel	UG/L	.	.	.	.	.	.
I Potassium	UG/L	.	.	.	.	.	.
I Selenium	UG/L	18.8	J	7.1	UJ	1.2	UJ
I Silver	UG/L	7	U	7	U	7	U
I Sodium	UG/L	.	.	.	.	.	.
I Thallium	UG/L	.	.	.	.	.	.
I Vanadium	UG/L	.	.	.	.	.	.
I Zinc	UG/L	.	.	.	.	.	.
V 1,1,1-Trichloroethane	UG/L	20	U	73		50	U
V 1,1,2,2-Tetrachloroethane	UG/L	20	U	10	U	50	U
V 1,1,2-Trichloroethane	UG/L	20	U	10	U	50	U
V 1,1-Dichloroethane	UG/L	20	U	2	J	16	J
V 1,1-Dichloroethene	UG/L	20	U	8	J	6	J
V 1,2-Dichloroethane	UG/L	20	U	10	U	11	J
V 1,2-Dichloroethene (total)	UG/L	450	J	10	U	4900	J
V 1,2-Dichloropropane	UG/L	20	U	10	U	50	U
V 2-Butanone	UG/L	20	U	10	U	50	U
V 2-Hexanone	UG/L	20	U	10	U	50	U
V 4-Methyl-2-Pentanone	UG/L	20	U	10	U	50	U
V Acetone	UG/L	250	U	4	U	45	U
V Benzene	UG/L	20	U	10	U	5	J
V Bromodichloromethane	UG/L	20	U	10	U	50	U
V Bromoform	UG/L	20	U	10	U	50	U
V Bromomethane	UG/L	20	U	10	U	50	U
V Carbon Disulfide	UG/L	20	U	10	U	50	U
V Carbon Tetrachloride	UG/L	20	U	10	U	50	U
V Chlorobenzene	UG/L	10	J	10	U	50	U
V Chloroethane	UG/L	20	U	10	U	50	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES3	698WMWES4	698WMWES5
LAB2 SAMPLE ID---->	83867	83791	83794
RECEIPT DATE----->	06/23/93	06/22/93	06/22/93

PARAMETER	UNITS						

V Chloroform	UG/L	20	U	10	U	50	U
V Chloromethane	UG/L	20	U	10	U	50	U
V Dibromochloromethane	UG/L	20	U	10	U	50	U
V Ethylbenzene	UG/L	20	U	10	U	50	U
V Methylene Chloride	UG/L	20	U	10	U	50	U
V Styrene	UG/L	20	U	10	U	50	U
V Tetrachloroethene	UG/L	20	U	10	U	50	U
V Toluene	UG/L	20	U	10	U	50	U
V Trichloroethene	UG/L	20	U	10	U	14	J
V Vinyl Chloride	UG/L	62	J	10	U	680	J
V Xylene (total)	UG/L	20	U	10	U	50	U
V cis-1,3-Dichloropropene	UG/L	20	U	10	U	50	U
V trans-1,3-Dichloropropene	UG/L	20	U	10	U	50	U

CORPUS CHRISTI WATER SAMPLES

SAMPLE ID ----->	698WMWES5RE	698WMWES6	698WMWES7
LAB2 SAMPLE ID--->	83794RE	83861	83863
RECEIPT DATE---->	06/22/93	06/23/93	06/23/93

PARAMETER	UNITS						

I Aluminum	UG/L			.		.	
I Antimony	UG/L			.		.	
I Arsenic	UG/L			3.3	J	3.3	J
I Barium	UG/L			130	J	227	
I Beryllium	UG/L			.		.	
I Cadmium	UG/L			3	U	3	U
I Calcium	UG/L			.		.	
I Chromium	UG/L			12.8	J	5.3	J
I Cobalt	UG/L			.		.	
I Copper	UG/L			.		.	
I Cyanide	UG/L			.		.	
I Iron	UG/L			.		.	
I Lead	UG/L			9.8	UJ	2	U
I Magnesium	UG/L			.		.	
I Manganese	UG/L			.		.	
I Mercury	UG/L			0.2	U	0.2	U
I Nickel	UG/L			.		.	
I Potassium	UG/L			.		.	
I Selenium	UG/L			1.8	UJ	1.6	UJ
I Silver	UG/L			7	U	7	U
I Sodium	UG/L			.		.	
I Thallium	UG/L			.		.	
I Vanadium	UG/L			.		.	
I Zinc	UG/L			.		.	
V 1,1,1-Trichloroethane	UG/L	50	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	50	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	50	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	50	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	50	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	50	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	800	J	10	U	16	
V 1,2-Dichloropropane	UG/L	50	U	10	U	10	U
V 2-Butanone	UG/L	50	U	10	U	10	U
V 2-Hexanone	UG/L	50	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	50	U	10	U	10	U
V Acetone	UG/L	50	U	10	U	30	U
V Benzene	UG/L	50	U	10	U	10	U
V Bromodichloromethane	UG/L	50	U	10	U	10	U
V Bromoform	UG/L	50	U	10	U	10	U
V Bromomethane	UG/L	50	U	10	U	10	U
V Carbon Disulfide	UG/L	50	U	10	U	10	U
V Carbon Tetrachloride	UG/L	50	U	10	U	10	U
V Chlorobenzene	UG/L	50	U	10	U	10	U
V Chloroethane	UG/L	50	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES5RE	698WMWES6	698WMWES7
LAB2 SAMPLE ID---->	83794RE	83861	83863
RECEIPT DATE---->	06/22/93	06/23/93	06/23/93

PARAMETER	UNITS						

V Chloroform	UG/L	50	U	10	U	10	U
V Chloromethane	UG/L	50	U	10	U	10	U
V Dibromochloromethane	UG/L	50	U	10	U	10	U
V Ethylbenzene	UG/L	50	U	10	U	10	U
V Methylene Chloride	UG/L	50	U	10	U	10	U
V Styrene	UG/L	50	U	10	U	10	U
V Tetrachloroethene	UG/L	50	U	10	U	10	U
V Toluene	UG/L	50	U	10	U	10	U
V Trichloroethene	UG/L	50	U	10	U	2	J
V Vinyl Chloride	UG/L	130	J	10	U	10	U
V Xylene (total)	UG/L	50	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	50	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	50	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES8	698WMWES9	69FB
LAB2 SAMPLE ID --->	83795	83862	83309
RECEIPT DATE ---->	06/22/93	06/23/93	06/11/93

PARAMETER	UNITS						

I	1,1,1-Trichloroethane	UG/L	.	.	.	10	U
I	1,1,2,2-Tetrachloroethane	UG/L	.	.	.	10	U
I	1,1,2-Trichloroethane	UG/L	.	.	.	10	U
I	1,1-Dichloroethane	UG/L	.	.	.	10	U
I	1,1-Dichloroethane (total)	UG/L	.	.	.	10	U
I	1,1-Dichloroethene	UG/L	.	.	.	10	U
I	1,2-Dichloroethane	UG/L	.	.	.	10	U
I	1,2-Dichloropropane	UG/L	.	.	.	10	U
I	2-Butanone	UG/L	.	.	.	10	U
I	2-Hexanone	UG/L	.	.	.	10	U
I	4-Methyl-2-Pentanone	UG/L	.	.	.	10	U
I	Acetone	UG/L	.	.	.	10	U
I	Aluminum	UG/L	.	.	.	.
I	Antimony	UG/L	.	.	.	.
I	Arsenic	UG/L	4.4	J	5.2	J	2 U
I	Barium	UG/L	191	J	266		3 U
I	Benzene	UG/L	.	.	.	10	U
I	Beryllium	UG/L	.	.	.	.
I	Bromodichloromethane	UG/L	.	.	.	10	U
I	Bromoform	UG/L	.	.	.	10	U
I	Bromomethane	UG/L	.	.	.	10	U
I	Cadmium	UG/L	3	U	3	U	3 U
I	Calcium	UG/L	.	.	.	.
I	Carbon Disulfide	UG/L	.	.	.	10	U
I	Carbon Tetrachloride	UG/L	.	.	.	10	U
I	Chlorobenzene	UG/L	.	.	.	10	U
I	Chloroethane	UG/L	.	.	.	10	U
I	Chloroform	UG/L	.	.	.	10	U
I	Chloromethane	UG/L	.	.	.	10	U
I	Chromium	UG/L	19.8		33.6	J	5 U
I	Cobalt	UG/L	.	.	.	.
I	Copper	UG/L	.	.	.	.
I	Cyanide	UG/L	.	.	.	.
I	Dibromochloromethane	UG/L	.	.	.	10	U
I	Ethylbenzene	UG/L	.	.	.	10	U
I	Iron	UG/L	.	.	.	.
I	Lead	UG/L	9.8	UJ	14.6	UJ	1 U
I	Magnesium	UG/L	.	.	.	.
I	Manganese	UG/L	.	.	.	.
I	Mercury	UG/L	0.2	U	0.2	U	0.2 U
I	Methylene Chloride	UG/L	.	.	.	3	J
I	Nickel	UG/L	.	.	.	.
I	Potassium	UG/L	.	.	.	.
I	Selenium	UG/L	1	U	1.8	UJ	1 U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698MMWES8	698MMWES9	69FB
LAB2 SAMPLE ID--->	83795	83862	83309
RECEIPT DATE---->	06/22/93	06/23/93	06/11/93

PARAMETER	UNITS						
I Silver	UG/L	7	U	7	U	7	U
I Sodium	UG/L	.		.		.	
I Styrene	UG/L					10	U
I Tetrachloroethene	UG/L					10	U
I Thallium	UG/L	.		.		.	
I Toluene	UG/L					10	U
I Trichloroethene	UG/L					10	U
I Vanadium	UG/L	.		.		.	
I Vinyl Chloride	UG/L					10	U
I Xylene (total)	UG/L					10	U
I Zinc	UG/L	.		.		.	
I cis-1,3-Dichloropropene	UG/L					10	U
I trans-1,3-Dichloropropene	UG/L					10	U
V 1,1,1-Trichloroethane	UG/L	10	U	10	U		
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U		
V 1,1,2-Trichloroethane	UG/L	10	U	10	U		
V 1,1-Dichloroethane	UG/L	10	U	10	U		
V 1,1-Dichloroethene	UG/L	10	U	10	U		
V 1,2-Dichloroethane	UG/L	1	U	10	U		
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U		
V 1,2-Dichloropropane	UG/L	10	U	10	U		
V 2-Butanone	UG/L	10	U	10	U		
V 2-Hexanone	UG/L	10	U	10	U		
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U		
V Acetone	UG/L	6	U	10	U		
V Benzene	UG/L	10	U	10	U		
V Bromodichloromethane	UG/L	10	U	10	U		
V Bromoform	UG/L	10	U	10	U		
V Bromomethane	UG/L	10	U	10	U		
V Carbon Disulfide	UG/L	10	U	10	U		
V Carbon Tetrachloride	UG/L	10	U	10	U		
V Chlorobenzene	UG/L	10	U	10	U		
V Chloroethane	UG/L	10	U	10	U		
V Chloroform	UG/L	10	U	10	U		
V Chloromethane	UG/L	10	U	10	U		
V Dibromochloromethane	UG/L	10	U	10	U		
V Ethylbenzene	UG/L	10	U	10	U		
V Methylene Chloride	UG/L	10	U	10	U		
V Styrene	UG/L	10	U	10	U		
V Tetrachloroethene	UG/L	10	U	10	U		
V Toluene	UG/L	10	U	10	U		
V Trichloroethene	UG/L	10	U	10	U		
V Vinyl Chloride	UG/L	10	U	10	U		
V Xylene (total)	UG/L	10	U	10	U		
V cis-1,3-Dichloropropene	UG/L	10	U	10	U		

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	698WMWES8	698WMWES9	69FB
LAB2 SAMPLE ID--->	83795	83862	83309
RECEIPT DATE---->	06/22/93	06/23/93	

PARAMETER	UNITS				

V trans-1,3-Dichloropropene	UG/L	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	69FB8	69FB8P	69FBP
LAB2 SAMPLE ID --->	83868	83869	83310
RECEIPT DATE ---->	06/23/93	06/23/93	06/11/93

PARAMETER	UNITS						

I Aluminum	UG/L	.		.		.	
I Antimony	UG/L	.		.		.	
I Arsenic	UG/L	3	U	3	U	2.8	J
I Barium	UG/L	3	U	62.8	J	82.3	J
I Beryllium	UG/L	.		.		.	
I Cadmium	UG/L	3	U	3	U	3	U
I Calcium	UG/L	.		.		.	
I Chromium	UG/L	5	U	5	U	5	U
I Cobalt	UG/L	.		.		.	
I Copper	UG/L	.		.		.	
I Cyanide	UG/L	.		.		.	
I Iron	UG/L	.		.		.	
I Lead	UG/L	2	U	4.2		1	J
I Magnesium	UG/L	.		.		.	
I Manganese	UG/L	.		.		.	
I Mercury	UG/L	0.2	U	0.2	U	0.2	U
I Nickel	UG/L	.		.		.	
I Potassium	UG/L	.		.		.	
I Selenium	UG/L	1	U	1.6	J	1	J
I Silver	UG/L	7	U	7	U	7	U
I Sodium	UG/L	.		.		.	
I Thallium	UG/L	.		.		.	
I Vanadium	UG/L	.		.		.	
I Zinc	UG/L	.		.		.	
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	10	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	10	U	28		10	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10		6	J
V Bromoform	UG/L	10	U	2	J	4	J
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	69FB8	69FB8P	69FBP
LAB2 SAMPLE ID---->	83868	83869	83310
RECEIPT DATE---->	06/23/93	06/23/93	06/11/93

PARAMETER	UNITS						

V Chloroform	UG/L	10	U	15		4	J
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	7	J
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	10		1	J	10	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	69RB	69RB1	RB698
LAB2 SAMPLE ID --->	83305	83308	83665
RECEIPT DATE ---->	06/11/93	06/11/93	06/18/93

PARAMETER	UNITS						

I Aluminum	UG/L	.		.		.	
I Antimony	UG/L	.		.		.	
I Arsenic	UG/L	2	U	2	U	2	U
I Barium	UG/L	3	U	3	U	3	U
I Beryllium	UG/L	.		.		.	
I Cadmium	UG/L	3	U	3	U	3	U
I Calcium	UG/L	.		.		.	
I Chromium	UG/L	5	U	5	U	5	U
I Cobalt	UG/L	.		.		.	
I Copper	UG/L	.		.		.	
I Cyanide	UG/L	.		.		.	
I Iron	UG/L	.		.		.	
I Lead	UG/L	1.6	J	1	U	1.2	J
I Magnesium	UG/L	.		.		.	
I Manganese	UG/L	.		.		.	
I Mercury	UG/L	0.2	U	0.2	U	0.2	U
I Nickel	UG/L	.		.		.	
I Potassium	UG/L	.		.		.	
I Selenium	UG/L	1	U			1.2	J
I Seleniumm	UG/L			1	U		
I Silver	UG/L	7	U	7	U	7	U
I Sodium	UG/L	.		.		.	
I Thallium	UG/L	.		.		.	
I Vanadium	UG/L	.		.		.	
I Zinc	UG/L	.		.		.	
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	10	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	10	U	10	U	10	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

PARAMETER	UNITS	69RB		69RB1		RB698	
		SAMPLE ID ----->	LAB2 SAMPLE ID--->	RECEIPT DATE---->	69RB	83305	83308	83665
			06/11/93	06/11/93	06/11/93	06/18/93	
V Chloroethane	UG/L	10	U	10	U	10	U
V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	3		3	J	4	J
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	TRIPBLANK	TRIPBLANK1	TRIPBLANK1
LAB2 SAMPLE ID--->	83666	83311	83796
RECEIPT DATE---->	06/18/93	06/11/93	06/22/93

PARAMETER	UNITS							

V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U	10
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U	10
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U	10
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U	10
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U	10
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U	10
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U	10
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U	10
V 2-Butanone	UG/L	10	U	10	U	10	U	10
V 2-Hexanone	UG/L	10	U	10	U	10	U	10
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U	10
V Acetone	UG/L	10	U	10	U	10	U	10
V Benzene	UG/L	10	U	10	U	10	U	10
V Bromodichloromethane	UG/L	10	U	10	U	10	U	10
V Bromoform	UG/L	10	U	10	U	10	U	10
V Bromomethane	UG/L	10	U	10	U	10	U	10
V Carbon Disulfide	UG/L	10	U	10	U	10	U	10
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U	10
V Chlorobenzene	UG/L	10	U	10	U	10	U	10
V Chloroethane	UG/L	10	U	10	U	10	U	10
V Chloroform	UG/L	10	U	10	U	10	U	10
V Chloromethane	UG/L	10	U	10	U	10	U	10
V Dibromochloromethane	UG/L	10	U	10	U	10	U	10
V Ethylbenzene	UG/L	10	U	10	U	10	U	10
V Methylene Chloride	UG/L	2	J	3		1	J	
V Styrene	UG/L	10	U	10	U	10	U	10
V Tetrachloroethene	UG/L	10	U	10	U	10	U	10
V Toluene	UG/L	10	U	10	U	10	U	10
V Trichloroethene	UG/L	10	U	10	U	10	U	10
V Vinyl Chloride	UG/L	10	U	10	U	10	U	10
V Xylene (total)	UG/L	10	U	10	U	10	U	10
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	10

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID ----->	TRIPBLANK1	TRIPBLANK2	TRIPBLANK2
LAB2 SAMPLE ID --->	83870	83313	83800
RECEIPT DATE ---->	06/23/93	06/11/93	06/22/93

PARAMETER	UNITS						

V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	3	J	10	U	1	J
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	10	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	10	U	10	U	10	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U
V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	10	U	3		1	J
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U

**CORPUS CHRISTI
WATER SAMPLES**

SAMPLE ID -----> TRIPBLANK2
 LAB2 SAMPLE ID----> 83871
 RECEIPT DATE-----> 06/23/93

PARAMETER

UNITS

V 1,1,1-Trichloroethane	UG/L	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U
V 1,1,2-Trichloroethane	UG/L	10	U
V 1,1-Dichloroethane	UG/L	10	U
V 1,1-Dichloroethene	UG/L	10	U
V 1,2-Dichloroethane	UG/L	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U
V 1,2-Dichloropropane	UG/L	10	U
V 2-Butanone	UG/L	10	U
V 2-Hexanone	UG/L	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U
V Acetone	UG/L	10	U
V Benzene	UG/L	10	U
V Bromodichloromethane	UG/L	10	U
V Bromoform	UG/L	10	U
V Bromomethane	UG/L	10	U
V Carbon Disulfide	UG/L	10	U
V Carbon Tetrachloride	UG/L	10	U
V Chlorobenzene	UG/L	10	U
V Chloroethane	UG/L	10	U
V Chloroform	UG/L	10	U
V Chloromethane	UG/L	10	U
V Dibromochloromethane	UG/L	10	U
V Ethylbenzene	UG/L	10	U
V Methylene Chloride	UG/L	10	U
V Styrene	UG/L	10	U
V Tetrachloroethene	UG/L	10	U
V Toluene	UG/L	10	U
V Trichloroethene	UG/L	10	U
V Vinyl Chloride	UG/L	10	U
V Xylene (total)	UG/L	10	U
V cis-1,3-Dichloropropene	UG/L	10	U
V trans-1,3-Dichloropropene	UG/L	10	U

**CORPUS CHRISTI
Soil TPH Samples**

SAMPLE ID ----->	698SMW112	698SMW12	698SMW122
LAB SAMPLE ID--->	83663	83664	83658
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/Kg	64	U	68	U	80	U
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**CORPUS CHRISTI
Soil TPH Samples**

SAMPLE ID ----->	698SMW112	698SMW12	698SMW122
LAB SAMPLE ID--->	83663	83664	83658
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/Kg	64	U	68	U	80	U
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**CORPUS CHRISTI
Soil TPH Samples**

SAMPLE ID ----->	698SMW23	698SMW32	698SMW42
LAB SAMPLE ID---->	83662	83660	83661
RECEIPT DATE---->	.	.	.

PARAMETER	UNITS						
Petroleum Hydrocarbons, TPH	mg/Kg	79	U	79	U	73	U

**CORPUS CHRISTI
Soil TPH Samples**

SAMPLE ID ----->	698SMW53	698SMW62	698SMW75
LAB SAMPLE ID--->	83659	83307	83304
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/Kg	81	U	73	U	84	U
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**CORPUS CHRISTI
Soil TPH Samples**

SAMPLE ID ----->	698SMW86	698SMW91	698SMWBG12
LAB SAMPLE ID---->	83303	83306	83300
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/Kg	76	U	78	U	76	U
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**CORPUS CHRISTI
Soil TPH Samples**

SAMPLE ID ----->	698SMWBG12D	698SMWBG23	698SMWBG36
LAB SAMPLE ID--->	83301	83299	83302
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/Kg	78	U	79	U	71	U
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**CORPUS CHRISTI
Water TPH Samples**

SAMPLE ID ----->	698WMWBG1	698WMWBG2	698WMWBG3
LAB SAMPLE ID--->	83792	83793	83789
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH Samples**

SAMPLE ID ----->	698WMWES1	698WMWES11	698WMWES12
LAB SAMPLE ID---->	83787	83864	83865
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH Samples**

SAMPLE ID ----->	698WMWES12D	698WMWES1D	698WMWES2
LAB SAMPLE ID---->	83866	83788	83790
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH Samples**

	SAMPLE ID ----->	698WMWES3	698WMWES4	698WMWES5
	LAB SAMPLE ID--->	83867	83791	83794
	RECEIPT DATE---->	.	.	.
PARAMETER	UNITS			

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH Samples**

SAMPLE ID ----->	698WMWES6	698WMWES7	698WMWES8
LAB SAMPLE ID---->	83861	83863	83795
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH Samples**

SAMPLE ID ----->	698WMWES9	69FB	69FB8
LAB SAMPLE ID---->	83862	83309	83868
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	U	2	UJ
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**CORPUS CHRISTI
Water TPH Samples**

SAMPLE ID ----->	69FB8P	69FBP	69RB
LAB SAMPLE ID---->	83869	83310	83305
RECEIPT DATE---->			

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	U	2	U
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**CORPUS CHRISTI
Water TPH Samples**

SAMPLE ID -----> 69RB (1) RB698
LAB SAMPLE ID---> 83308 83665
RECEIPT DATE---->

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH mg/L 2 U 2 U

SOIL AND WATER HITS

**CORPUS CHRISTI
SOIL HITS**

SAMPLE ID ----->	698SMW23	698SMW32	698SMW42
LAB2 SAMPLE ID--->	83662	83660	83661
RECEIPT DATE---->	06/18/93	06/18/93	06/18/93

PARAMETER	UNITS			

I Arsenic	MG/KG	0.6	J	
I Barium	MG/KG	35.5	J	
I Chromium	MG/KG	1.8	J	
I Lead	MG/KG	2.2		
V 2-Butanone	UG/KG			6 J
V Acetone	UG/KG	68	130	75

**CORPUS CHRISTI
SOIL HITS**

SAMPLE ID ----->	698SMW53	698SMW62	698SMW75
LAB2 SAMPLE ID--->	83659	83307	83304
RECEIPT DATE---->	06/18/93	06/11/93	06/11/93

PARAMETER	UNITS				
I Arsenic	MG/KG	.		.	
I Barium	MG/KG	17.2	J	6.6	J
I Chromium	MG/KG	2.7			3.4
I Lead	MG/KG	1.3		1.4	5.1 J
V Acetone	UG/KG	240		170	190

**CORPUS CHRISTI
SOIL HITS**

	SAMPLE ID ----->	698SMW86	698SMW86DL	698SMW91
	LAB2 SAMPLE ID--->	83303	83303DL	83306
	RECEIPT DATE---->	06/11/93	06/11/93	06/11/93
PARAMETER	UNITS			

I	Barium	MG/KG	15.6	J				3.1	J
I	Chromium	MG/KG	1.7	J				1.7	J
I	Lead	MG/KG	2.3	J				0.91	J
V	Acetone	UG/L	4900	J	4400	J			

**CORPUS CHRISTI
SOIL HITS**

SAMPLE ID ----->	698SMW112	698SMW12	698SMW122
LAB2 SAMPLE ID --->	83663	83664	83658
RECEIPT DATE ---->	06/18/93	06/18/93	06/18/93

PARAMETER

UNITS

I Barium	MG/KG	7	J	
I Lead	MG/KG	3.1		
V Acetone	UG/KG	3300		
V Methylene Chloride	UG/L	130	J	

**CORPUS CHRISTI
SOIL HITS**

SAMPLE ID ----->	698SMWBG12	698SMWBG12D	698SMWBG23
LAB2 SAMPLE ID--->	83300	83301	83299
RECEIPT DATE---->	06/11/93	06/11/93	06/11/93

PARAMETER

UNITS

PARAMETER	UNITS	698SMWBG12	698SMWBG12D	698SMWBG23
I Arsenic	MG/KG	.	.	1.1
I Barium	MG/KG	2.1	2.1	14.8
I Chromium	MG/KG			2.2
I Lead	MG/KG	0.99	0.6	2.8
I Selenium	MG/KG			0.39
V Acetone	UG/KG			950

**CORPUS CHRISTI
SOIL HITS**

SAMPLE ID -----> 698SMWBG36
LAB2 SAMPLE ID---> 83302
RECEIPT DATE----> 06/11/93

PARAMETER

UNITS

I Barium MG/KG 9.9 J
I Chromium MG/KG 2.5
I Lead MG/KG 2 J

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	698WMWBG1	698WMWBG2	698WMWBG3
LAB2 SAMPLE ID --->	83792	83793	83789
RECEIPT DATE ---->	06/22/93	06/22/93	06/22/93

PARAMETER	UNITS				

I Aluminum	UG/L	.	.	.	.
I Antimony	UG/L	.	.	.	.
I Arsenic	UG/L	12	8.2 J	3.8 J	J
I Barium	UG/L	865	146 J	304	
I Beryllium	UG/L	.	.	.	.
I Calcium	UG/L	.	.	.	.
I Chromium	UG/L	56.8	10 J	35.6	
I Cobalt	UG/L	.	.	.	.
I Copper	UG/L	.	.	.	.
I Cyanide	UG/L	.	.	.	.
I Iron	UG/L	.	.	.	.
I Lead	UG/L	39.3 J	.	13.2 UJ	UJ
I Magnesium	UG/L	.	.	.	.
I Manganese	UG/L	.	.	.	.
I Mercury	UG/L	0.65	.	.	.
I Nickel	UG/L	.	.	.	.
I Potassium	UG/L	.	.	.	.
I Selenium	UG/L	8.5 UJ	3.9 UJ	2.9 UJ	UJ
I Sodium	UG/L	.	.	.	.
I Thallium	UG/L	.	.	.	.
I Vanadium	UG/L	.	.	.	.
I Zinc	UG/L	.	.	.	.

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	698WMWES1	698WMWES11	698WMWES12
LAB2 SAMPLE ID --->	83787	83864	83865
RECEIPT DATE ---->	06/22/93	06/23/93	06/23/93

PARAMETER	UNITS						

I Aluminum	UG/L	.		.		.	
I Antimony	UG/L	.		.		.	
I Arsenic	UG/L	6.9	J	6.4	J	8.4	J
I Barium	UG/L	580		328		655	
I Beryllium	UG/L	.		.		.	
I Cadmium	UG/L	.		9.1		10.6	
I Calcium	UG/L	.		.		.	
I Chromium	UG/L	46.8		61.2	J	69.1	J
I Cobalt	UG/L	.		.		.	
I Copper	UG/L	.		.		.	
I Cyanide	UG/L	.		.		.	
I Iron	UG/L	.		.		.	
I Lead	UG/L	24.7	J	31.2	J	52	J
I Magnesium	UG/L	.		.		.	
I Manganese	UG/L	.		.		.	
I Nickel	UG/L	.		.		.	
I Potassium	UG/L	.		.		.	
I Selenium	UG/L	3.3	UJ	2.4	UJ	3	UJ
I Sodium	UG/L	.		.		.	
I Thallium	UG/L	.		.		.	
I Vanadium	UG/L	.		.		.	
I Zinc	UG/L	.		.		.	
V 1,1,1-Trichloroethane	UG/L			3	J		
V 1,1-Dichloroethene	UG/L			4	J		
V 1,2-Dichloroethene (total)	UG/L			12			

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	698WMWES12D	698WMWES1D	698WMWES2
LAB2 SAMPLE ID--->	83866	83788	83790
RECEIPT DATE---->	06/23/93	06/22/93	06/22/93

PARAMETER	UNITS						

I Aluminum	UG/L	.	.	.	.	.	.
I Antimony	UG/L	.	.	.	.	.	.
I Arsenic	UG/L	8.9	J	.	.	10.6	.
I Barium	UG/L	716	.	605	.	247	.
I Beryllium	UG/L	.	.	.	.	.	.
I Cadmium	UG/L	16.6	.	.	.	.	.
I Calcium	UG/L	.	.	.	.	.	.
I Chromium	UG/L	97.1	J	52.5	.	.	.
I Cobalt	UG/L	.	.	.	.	.	.
I Copper	UG/L	.	.	.	.	.	.
I Cyanide	UG/L	.	.	.	.	.	.
I Iron	UG/L	.	.	.	.	.	.
I Lead	UG/L	44.5	J	10.6	UJ	4.7	UJ
I Magnesium	UG/L	.	.	.	.	.	.
I Manganese	UG/L	.	.	.	.	.	.
I Nickel	UG/L	.	.	.	.	.	.
I Potassium	UG/L	.	.	.	.	.	.
I Selenium	UG/L	6.2	UJ	5	UJ	1.6	UJ
I Sodium	UG/L	.	.	.	.	.	.
I Thallium	UG/L	.	.	.	.	.	.
I Vanadium	UG/L	.	.	.	.	.	.
I Zinc	UG/L	.	.	.	.	.	.

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	698WMWES3	698WMWES4	698WMWES5
LAB2 SAMPLE ID --->	83867	83791	83794
RECEIPT DATE ---->	06/23/93	06/22/93	06/22/93

PARAMETER	UNITS						

I Aluminum	UG/L	.		.		.	
I Antimony	UG/L	.		.		.	
I Arsenic	UG/L	51	J	1530		4.3	J
I Barium	UG/L	35.9	J	215		369	
I Beryllium	UG/L	.		.		.	
I Calcium	UG/L	.		.		.	
I Chromium	UG/L	106	J	97.3		.	
I Cobalt	UG/L	.		.		.	
I Copper	UG/L	.		.		.	
I Cyanide	UG/L	.		.		.	
I Iron	UG/L	.		.		.	
I Lead	UG/L	53.4	J	18.4	J	6.5	UJ
I Magnesium	UG/L	.		.		.	
I Manganese	UG/L	.		.		.	
I Mercury	UG/L	6.4	J	.		.	
I Nickel	UG/L	.		.		.	
I Potassium	UG/L	.		.		.	
I Selenium	UG/L	18.8	J	7.1	UJ	1.2	UJ
I Sodium	UG/L	.		.		.	
I Thallium	UG/L	.		.		.	
I Vanadium	UG/L	.		.		.	
I Zinc	UG/L	.		.		.	
V 1,1,1-Trichloroethane	UG/L	.		73		.	
V 1,1-Dichloroethane	UG/L	.		2	J	16	J
V 1,1-Dichloroethene	UG/L	.		8	J	6	J
V 1,2-Dichloroethane	UG/L	.		.		11	J
V 1,2-Dichloroethene (total)	UG/L	450	J	.		4900	J
V Benzene	UG/L	.		.		5	J
V Chlorobenzene	UG/L	10	J	.		.	
V Trichloroethene	UG/L	.		.		14	J
V Vinyl Chloride	UG/L	62	J	.		680	J

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	698WMWES5RE	698WMWES6	698WMWES7
LAB2 SAMPLE ID--->	83794RE	83861	83863
RECEIPT DATE---->	06/22/93	06/23/93	06/23/93

PARAMETER	UNITS				

I Aluminum	UG/L	.	.	.	.
I Antimony	UG/L	.	.	.	.
I Arsenic	UG/L		3.3 J	3.3	J
I Barium	UG/L		130 J	227	
I Beryllium	UG/L	.	.	.	.
I Calcium	UG/L	.	.	.	.
I Chromium	UG/L		12.8 J	5.3	J
I Cobalt	UG/L	.	.	.	.
I Copper	UG/L	.	.	.	.
I Cyanide	UG/L	.	.	.	.
I Iron	UG/L	.	.	.	.
I Lead	UG/L		9.8 UJ	.	.
I Magnesium	UG/L	.	.	.	.
I Manganese	UG/L	.	.	.	.
I Nickel	UG/L	.	.	.	.
I Potassium	UG/L	.	.	.	.
I Selenium	UG/L		1.8 UJ	1.6	UJ
I Sodium	UG/L	.	.	.	.
I Thallium	UG/L	.	.	.	.
I Vanadium	UG/L	.	.	.	.
I Zinc	UG/L	.	.	.	.
V 1,2-Dichloroethene (total)	UG/L	800	J	16	
V Trichloroethene	UG/L			2	J
V Vinyl Chloride	UG/L	130	J		

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	698WMWES8	698WMWES9	69FB
LAB2 SAMPLE ID--->	83795	83862	83309
RECEIPT DATE---->	06/22/93	06/23/93	06/11/93

PARAMETER	UNITS						

I Aluminum	UG/L	.		.		.	
I Antimony	UG/L	.		.		.	
I Arsenic	UG/L	4.4	J	5.2	J	.	
I Barium	UG/L	191	J	266		.	
I Beryllium	UG/L	.		.		.	
I Calcium	UG/L	.		.		.	
I Chromium	UG/L	19.8		33.6	J	.	
I Cobalt	UG/L	.		.		.	
I Copper	UG/L	.		.		.	
I Cyanide	UG/L	.		.		.	
I Iron	UG/L	.		.		.	
I Lead	UG/L	9.8	UJ	14.6	UJ	.	
I Magnesium	UG/L	.		.		.	
I Manganese	UG/L	.		.		.	
I Methylene Chloride	UG/L	.		.		3	J
I Nickel	UG/L	.		.		.	
I Potassium	UG/L	.		.		.	
I Selenium	UG/L	.		1.8	UJ	.	
I Sodium	UG/L	.		.		.	
I Thallium	UG/L	.		.		.	
I Vanadium	UG/L	.		.		.	
I Zinc	UG/L	.		.		.	

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	69FB8	69FB8P	69FBP
LAB2 SAMPLE ID --->	83868	83869	83310
RECEIPT DATE ---->	06/23/93	06/23/93	06/11/93

PARAMETER	UNITS				

I Aluminum	UG/L	.	.	.	
I Antimony	UG/L	.	.	.	
I Arsenic	UG/L	.	.	2.8	J
I Barium	UG/L	.	62.8	J	82.3 J
I Beryllium	UG/L	.	.	.	
I Calcium	UG/L	.	.	.	
I Cobalt	UG/L	.	.	.	
I Copper	UG/L	.	.	.	
I Cyanide	UG/L	.	.	.	
I Iron	UG/L	.	.	.	
I Lead	UG/L	.	4.2	.	1 J
I Magnesium	UG/L	.	.	.	
I Manganese	UG/L	.	.	.	
I Nickel	UG/L	.	.	.	
I Potassium	UG/L	.	.	.	
I Selenium	UG/L	.	1.6	J	1 J
I Sodium	UG/L	.	.	.	
I Thallium	UG/L	.	.	.	
I Vanadium	UG/L	.	.	.	
I Zinc	UG/L	.	.	.	
V Acetone	UG/L	.	28	.	
V Bromodichloromethane	UG/L	.	10	.	6 J
V Bromoform	UG/L	.	2	J	4 J
V Chloroform	UG/L	.	15	.	4 J
V Dibromochloromethane	UG/L	.	.	.	7 J
V Methylene Chloride	UG/L	10	1	J	

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID ----->	69RB	69RB1	RB698
LAB2 SAMPLE ID--->	83305	83308	83665
RECEIPT DATE---->	06/11/93	06/11/93	06/18/93

PARAMETER	UNITS				
I Aluminum	UG/L	.	.	.	.
I Antimony	UG/L	.	.	.	.
I Beryllium	UG/L	.	.	.	.
I Calcium	UG/L	.	.	.	.
I Cobalt	UG/L	.	.	.	.
I Copper	UG/L	.	.	.	.
I Cyanide	UG/L	.	.	.	.
I Iron	UG/L	.	.	.	.
I Lead	UG/L	1.6	J	1.2	J
I Magnesium	UG/L	.	.	.	.
I Manganese	UG/L	.	.	.	.
I Nickel	UG/L	.	.	.	.
I Potassium	UG/L	.	.	.	.
I Selenium	UG/L	.	.	1.2	J
I Sodium	UG/L	.	.	.	.
I Thallium	UG/L	.	.	.	.
I Vanadium	UG/L	.	.	.	.
I Zinc	UG/L	.	.	.	.
V Methylene Chloride	UG/L	3		3	J

**CORPUS CHRISTI
WATER HITS**

PARAMETER	SAMPLE ID -----> LAB2 SAMPLE ID---> RECEIPT DATE----> UNITS	TRIPBLANK 83666 06/18/93	TRIPBLANK1 83311 06/11/93	TRIPBLANK1 83796 06/22/93
<hr style="border-top: 1px dashed black;"/>				
V Methylene Chloride	UG/L	2 J	3	1 J

**CORPUS CHRISTI
WATER HITS**

	SAMPLE ID ----->	TRIPBLANK1	TRIPBLANK2	TRIPBLANK2
	LAB2 SAMPLE ID--->	83870	83313	83800
	RECEIPT DATE---->	06/23/93	06/11/93	06/22/93
PARAMETER	UNITS			

V 1,2-Dichloroethane	UG/L	3	J	.	.	1	J
V Methylene Chloride	UG/L			3		1	J

**CORPUS CHRISTI
WATER HITS**

SAMPLE ID -----> TRIPBLANK2
LAB2 SAMPLE ID----> 83871
RECEIPT DATE-----> 06/23/93

PARAMETER

UNITS

**CORPUS CHRISTI
Soil TPH HITS**

SAMPLE ID ----->	698SMW112	698SMW12	698SMW122
LAB SAMPLE ID--->	83663	83664	83658
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

CORPUS CHRISTI
Soil TPH HITS

SAMPLE ID ----->	698SMW23	698SMW32	698SMW42
LAB SAMPLE ID--->	83662	83660	83661
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

CORPUS CHRISTI
Soil TPH HITS

SAMPLE ID ----->	698SMW53	698SMW62	698SMW75
LAB SAMPLE ID--->	83659	83307	83304
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

**CORPUS CHRISTI
Soil TPH HITS**

SAMPLE ID ----->	698SMW86	698SMW91	698SMWBG12
LAB SAMPLE ID--->	83303	83306	83300
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

**CORPUS CHRISTI
Soil TPH HITS**

SAMPLE ID ----->	698SMWBG12D	698SMWBG23	698SMWBG36
LAB SAMPLE ID--->	83301	83299	83302
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

**CORPUS CHRISTI
Water TPH HITS**

SAMPLE ID ----->	698WMWBG1	698WMWBG2	698WMWBG3
LAB SAMPLE ID--->	83792	83793	83789
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH HITS**

SAMPLE ID ----->	698WMWES1	698WMWES11	698WMWES12
LAB SAMPLE ID--->	83787	83864	83865
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH HITS**

SAMPLE ID ----->	698WMWES12D	698WMWES1D	698WMWES2
LAB SAMPLE ID--->	83866	83788	83790
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH HITS**

SAMPLE ID ----->	698WMWES3	698WMWES4	698WMWES5
LAB SAMPLE ID--->	83867	83791	83794
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
-----------------------------	------	---	----	---	----	---	----

**CORPUS CHRISTI
Water TPH HITS**

SAMPLE ID ----->	698WMWES6	698WMWES7	698WMWES8
LAB SAMPLE ID--->	83861	83863	83795
RECEIPT DATE---->	.	.	.
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH HITS**

SAMPLE ID ----->	698WMWES9	69FB	69FB8
LAB SAMPLE ID---->	83862	83309	83868
RECEIPT DATE---->	.	.	.

PARAMETER

UNITS

Petroleum Hydrocarbons, TPH	mg/L	2	UJ	2	UJ
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**CORPUS CHRISTI
Water TPH HITS**

SAMPLE ID ----->	69FB8P	69FBP	69RB
LAB SAMPLE ID---->	83869	83310	83305
RECEIPT DATE---->			
PARAMETER	UNITS		

Petroleum Hydrocarbons, TPH	mg/L	2	UJ
-----------------------------	------	---	----

CORPUS CHRISTI
Water TPH HITS

SAMPLE ID -----> 69RB (1) RB698
LAB SAMPLE ID---> 83308 83665
RECEIPT DATE----> . . .

PARAMETER

UNITS

APPENDIX E
SECOND SAMPLING EVENT
DATA VALIDATION
ANALYTICAL DATA
WATER HITS

DATA VALIDATION

DATA VALIDATION

Data validation has been performed for all analytical data generated during the second groundwater sampling event at Building 8, NAS Corpus Christi, Texas. The analytical work was conducted by National Environmental Testing Inc., Bedford, MA. The analytical protocols were performed in accordance with the following documents:

- USEPA Contract Laboratory Program, *Statement of Work for Organic Analysis* (CLP SOW 3/90).
- USEPA Contract Laboratory Program, *Statement of Work for Inorganic Analysis* (CLP SOW 3/90).
- USEPA *Methods for Chemical Analysis of Water and Waste*, EPA-600/4-79-020. Revised March 1983.
- NEESA Level C QA/QC guidelines as stated in the *Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation and Restoration Program* (NEESA 20.2-047B).

One soil sample, seventeen water samples and four blanks (rinsate, field, and trip blanks) were received by the laboratory on October 14 and 15, 1993. All samples were received in good condition with the proper custody documents and seals intact. Samples were analyzed and reported in two sample delivery groups (SDGs).

Organic Analysis

Samples were submitted and analyzed for volatile organic compounds according to the CLP SOW 3/90 and total petroleum hydrocarbons (TPH) according to EPA Method 418.1. Sample results were reported according to the format outlined under NEESA Level C guidelines. Holding times from the time of sample collection until the time of sample extraction and/or analysis were found to be in compliance with QC requirements.

Calibration

Criteria for instrument calibration were established to ensure the production of acceptable qualitative and quantitative data. The initial calibration ensures the instrument capabilities prior to the analytical run and the continuing calibrations ensure the instrument capabilities throughout and at the end of each subsequent analytical run.

Historical performance data show that certain volatile compounds (called "poor responders"), show a poor response and/or erratic behavior. Therefore, no contractual requirements are provided for these compounds. During review and validation, however, all compounds were considered for qualification in the volatile analyses when the following criteria were not met:

- Initial/continuing calibration standard relative response factors (RRFs) for all target compounds and surrogates must be greater than or equal to 0.05.

- Percent relative standard deviation (RSD) of the RRFs must not exceed ± 30 percent in the initial calibration.
- Percent difference (%D) of the RRFs must not exceed ± 25 percent in the continuing calibration.

Calibration non-conformances encountered during the review of calibration data for this project are detailed by SDG below:

SDG FD1008:

- The %Ds for chloromethane and chloroethane exceeded QC criteria in the continuing calibration performed on October 26, 1993. There were no positive detections of these compounds in the sample analyzed using this calibration sequence. No qualification of the data was judged to be necessary.

SDG FD1009:

- Acetone exceeded %D criteria in the volatile continuing calibration performed on October 20, 1993. In addition, the %Ds for methylene chloride and acetone were above QC criteria in the continuing calibration performed on October 21, 1993. All positive detections of these compounds in the samples were qualified to be blank contamination, therefore no further qualification of the data was judged to be necessary.

Precision

For each analytical method used to analyze environmental samples, there are variations in the reported results that may be due to the random differences in the handling and analysis of that matrix. These variations are referred to as the *precision* or the *reproducibility* of results. To demonstrate reproducibility, the CLP SOW specifies the addition of known quantities of several compounds to two separate aliquots of each sample matrix type. These aliquots are referred to as the matrix spike (MS) and the matrix spike duplicate (MSD). These samples are then analyzed using the same preparation and analytical methods used for all samples of similar matrix types. These samples can be used to detect matrix effects in which other sample components interfere with the analysis of the contaminants. All volatile and TPH MS/MSD analysis results were within QC criteria.

Accuracy

Accuracy is the degree to which a given result agrees with the true value. To check the accuracy in volatile analyses, the CLP SOW requires the addition of known amounts of surrogate compounds (compounds which are not likely to be found in the actual samples) and internal standards. If upon analysis of the sample the amounts recovered for the surrogate compounds and internal standards are accurate (close to the known concentrations) as defined within the limits set by CLP, then the reported target compound concentrations are considered to be accurate. Surrogate and internal standard recoveries outside of QC control limits are discussed by SDG below:

SDG FD1009:

- Percent recoveries for all three volatile surrogate compounds, toluene-d8, bromofluorobenzene, and 1,2-dichloroethene-d₄, were slightly above QC limits in the volatile analysis of sample 698WMWES-3. The sample was reanalyzed with acceptable surrogate recoveries.

The accuracy of the overall measurement system is also an indication of any bias that exists in the environmental laboratory and field sampling/analysis plan. Possible sources of error may be in the sampling process, field or laboratory contamination, preservation, handling and/or from the sample matrix itself.

Blanks assist in determining the presence and magnitude of any contamination resulting from the laboratory or field. If problems are found in any of the blanks, all associated data are evaluated to determine whether there is an inherent variability in the data or if the problem is an isolated occurrence and does not affect the data. The blanks analyzed include trip blanks, equipment rinsate blanks, field blanks and laboratory method blanks.

Data validation procedures evaluate blank contaminants by determining possible contamination sources using field QC samples and method blanks. Detection of an analyte in any blank results in the elevation of the compound quantitation limit to the action level using the 10-times and 5-times rules. The action level is the result of multiplying the blank contaminant compound concentration by 10 for common laboratory solvents or 5 for all other analytes. If an analyte is detected in a sample at a concentration lower than the action level, the analyte concentration in the sample is flagged as undetected. Blank contamination is outlined by SDG below:

SDG FD1008:

- There was no contamination detected in the method blanks associated with this SDG.

SDG FD1009:

- Low levels of methylene chloride, 2-butanone, 4-methyl-2-pentanone, acetone, and 2-hexanone were detected in the method blanks associated with this SDG.
- Methylene chloride, carbon disulfide, and 2-butanone were detected in the field blank associated with this SDG. Methylene chloride, acetone, and 2-propanol were detected in the rinsate blank associated with the samples in this SDG.
- Methylene chloride and 2-butanone were detected in the trip blanks submitted with this SDG.

The 10-times and 5-times rules were applied to all of the above compounds detected in the blanks. All associated sample concentrations which were below the action levels calculated from the blank contamination were qualified as non-detected ("U" flagged).

Inorganic Analyses

The samples were analyzed for RCRA metals in accordance with the CLP SOW 3/90. All sample results were reported according to NEESA Level C guidelines. All samples were

received by the laboratory in good condition with the proper custody documents and seals intact. From the date of collection to the date of sample digestion/preparation, all sample holding times were found to be within technical QC requirements.

Calibration

The purpose of the initial and continuing calibration is to ensure that the instrument is capable of acceptable and quantitative performance at the beginning of and throughout each analytical run. Initial and continuing calibrations were performed for the inorganics analysis within QC criteria.

Blanks

Blank results are used to determine the presence and magnitude of any contamination problems. Analysis of blanks was performed in compliance with method requirements. Contamination detected in the blanks is outlined below:

SDG FD1008

- Barium was detected in one blank associated with this SDG. The action level for barium were calculated and the sample data was qualified with the appropriate flag.

SDG FD1009:

- Barium and silver contamination was detected in calibration blanks associated with this SDG. Action levels for these contaminants were calculated and the sample data were qualified with the appropriate flag.

Laboratory Control Sample Analysis

The laboratory control sample (LCS) analysis serves as a monitor of efficiency and overall performance in all steps of analysis, including the digestion procedures. Laboratory control sample analysis results were found to be within QC criteria for all SDGs associated with this project.

Duplicate/Spike

Duplicate samples are used to determine the precision of analytical methods for each parameter. The spiked samples are designed to provide information about the effects of the sample matrix on the digestion and measurement methodology. Duplicate and spike analysis results found to be outside of QC criteria are listed below:

SDG FD1009:

- Lead spike recovery was above QC limits in this SDG. Silver spike results were below QC limits. All positive lead detections were qualified as estimated ("J" flagged). All silver results were qualified as estimated ("J" or "UJ" flagged).

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent the characteristic of a population, parameter variations at a sampling point, or an environmental

condition. The field duplicate samples assist in giving an indication of overall (i.e. field and laboratory) precision. In the organics and inorganics analyses, the duplicate results were found to be in acceptable agreement with original results.

Completeness

Completeness is defined as the percentage of measurements made which are judged to be valid. In the 22 samples analyzed for the second groundwater sampling event at Building 8, NAS Corpus Christi, all requested parameters were analyzed for and no data was qualified as unusable. The data therefore satisfactorily meet the 90 percent completeness level goal.

Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. To ensure comparability, all samples were collected using EPA Region IV SOPs and were analyzed according to CLP or EPA methods, as appropriate.

Data Assessment

The analytical data generated during the second groundwater sampling event at Building 8, NAS Corpus Christi, has been reviewed and validated with the appropriate data qualifiers based on data usability. Through the validation process, several results have been qualified as estimated due to QC deficiencies. All analytical data are usable as qualified for groundwater monitoring at Building 8.

Data Qualifier Definitions

The following briefly explains the data qualifiers applied as a result of the validation process:

- U** — The compound was analyzed for, but was not detected above the reported sample quantitation limit.
- J** — The compound was positively detected; however, the reported concentration is considered to approximate the concentration within the sample.
- UJ** — The compound was not detected above the reported sample quantitation limit; however, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the compound in the sample.
- R** — The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the compound cannot be verified.

ANALYTICAL DATA

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

	SAMPLE ID ----->	698SMW102	698FB	698RB
	LAB SAMPLE ID--->	89289	89390	89391
	RECEIPT DATE---->	10/14/93	10/15/93	10/15/93
PARAMETER	UNITS			
I Arsenic	UG/L	0.44	U	2 U
I Barium	UG/L	4.7	J	2 U
I Cadmium	UG/L	0.66	U	3 U
I Chromium	UG/L	1.4	J	4 U
I Lead	UG/L	2.9		2 U
I Mercury	UG/L	0.11	U	0.2 U
I Selenium	UG/L	0.44	U	2 U
I Silver	UG/L	0.88	U	4 U
V 1,1,1-Trichloroethane	UG/L	11	U	10 U
V 1,1,2,2-Tetrachloroethane	UG/L	11	U	10 U
V 1,1,2-Trichloroethane	UG/L	11	U	10 U
V 1,1-Dichloroethane	UG/L	11	U	10 U
V 1,1-Dichloroethene	UG/L	11	U	10 U
V 1,2-Dichloroethane	UG/L	11	U	10 U
V 1,2-Dichloroethene (total)	UG/L	11	U	10 U
V 1,2-Dichloropropane	UG/L	11	U	10 U
V 2-Butanone	UG/L	15		10 U
V 2-Hexanone	UG/L	11	U	10 U
V 4-Methyl-2-Pentanone	UG/L	11	U	10 U
V Acetone	UG/L	11	U	19
V Benzene	UG/L	11	U	10 U
V Bromodichloromethane	UG/L	11	U	10 U
V Bromoform	UG/L	11	U	10 U
V Bromomethane	UG/L	11	U	10 U
V Carbon Disulfide	UG/L	11	U	2 J
V Carbon Tetrachloride	UG/L	11	U	10 U
V Chlorobenzene	UG/L	11	U	10 U
V Chloroethane	UG/L	11	U	10 U
V Chloroform	UG/L	11	U	10 U
V Chloromethane	UG/L	11	U	10 U
V Dibromochloromethane	UG/L	11	U	10 U
V Ethylbenzene	UG/L	11	U	10 U
V Methylene Chloride	UG/L	11	U	2 J
V Styrene	UG/L	11	U	10 U
V Tetrachloroethene	UG/L	11	U	10 U
V Toluene	UG/L	11	U	10 U
V Trichloroethene	UG/L	11	U	10 U
V Vinyl Chloride	UG/L	11	U	10 U
V Xylene (total)	UG/L	11	U	10 U
V cis-1,3-Dichloropropene	UG/L	11	U	10 U
V trans-1,3-Dichloropropene	UG/L	11	U	10 U
X Petroleum Hydrocarbons, TPH	mg/L	160		2 U

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

SAMPLE ID ----->	698WMWBG1	698WMWBG1D	698WMWBG2
LAB SAMPLE ID--->	89278	89279	89277
RECEIPT DATE---->	10/14/93	10/14/93	10/14/93

PARAMETER	UNITS						

I Arsenic	UG/L	16		14.5		7.4	J
I Barium	UG/L	844		832		61.7	J
I Cadmium	UG/L	3	U	3	U	3	U
I Chromium	UG/L	56.9		57.4		4	U
I Lead	UG/L	66.7	J	57.8	J	10	U
I Mercury	UG/L	0.68		0.49		0.2	U
I Selenium	UG/L	7.8		9.2	J	2	U
I Silver	UG/L	4	UJ	4	UJ	4	UJ
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	5	U	10	U	7	U
V 2-Hexanone	UG/L	10	U	10	U	1	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	1	U
V Acetone	UG/L	29	U	26	U	13	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	2	U	2	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U
V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	1	U	1	U	1	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
X Petroleum Hydrocarbons, TPH	mg/L	2	U	2	U	2	U

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

	SAMPLE ID ----->	698WMWBG3		698WMWES1		698WMWES10	
	LAB SAMPLE ID--->	89280		89382		89388	
	RECEIPT DATE---->	10/14/93		10/15/93		10/15/93	
PARAMETER	UNITS						
I Arsenic	UG/L	5.3	J	3.2	J	3.2	J
I Barium	UG/L	308		593		138	J
I Cadmium	UG/L	3	U	3	U	3	U
I Chromium	UG/L	31.7		56.4		21.1	
I Lead	UG/L	12.4	J	56.4	J	56.4	J
I Mercury	UG/L	0.2	U	0.4		0.2	U
I Selenium	UG/L	5.3		5.1		2	U
I Silver	UG/L	4	UJ	4	UJ	4	UJ
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	10	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	12	U	8	U	19	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	2	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U
V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	1	U	7	U	2	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
X Petroleum Hydrocarbons, TPH	mg/L	2	U	2	U	2	U

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

SAMPLE ID ----->	698WMWES10D	698WMWES11	698WMWES12
LAB SAMPLE ID--->	89389	89284	89285
RECEIPT DATE---->	10/15/93	10/14/93	10/14/93

PARAMETER	UNITS						

I Arsenic	UG/L	5.8	J	7.6	J	8	J
I Barium	UG/L	181	J	329		335	
I Cadmium	UG/L	3	U	3	U	3	U
I Chromium	UG/L	35.9		59.8		40.2	
I Lead	UG/L	48.2	J	37.1	J	21.1	J
I Mercury	UG/L	0.2	U	0.2	U	0.2	U
I Selenium	UG/L	2	U	2.6		2	U
I Silver	UG/L	4	UJ	4	UJ	4	UJ
V 1,1,1-Trichloroethane	UG/L	10	U	4	J	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	20		10	U
V 1,1-Dichloroethene	UG/L	10	U	28		10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethene (total)	UG/L	10	U	19		10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	10	U	10	U	2	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	20	U	3	U	9	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	1	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U
V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	2	U	7	U	6	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	10	U	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
X Petroleum Hydrocarbons, TPH	mg/L	2	U	2	U	2	U

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

SAMPLE ID ----->	698WMWES2	698WMWES3	698WMWES3RE
LAB SAMPLE ID--->	89383	89387	89387RE
RECEIPT DATE---->	10/15/93	10/15/93	10/15/93

PARAMETER	UNITS						

I Arsenic	UG/L	8.8	J	192	J		
I Barium	UG/L	320		4	U		
I Cadmium	UG/L	3	U	6	U		
I Chromium	UG/L	17.1		137			
I Lead	UG/L	19.5	J	20	U		
I Mercury	UG/L	0.2	U	9.7			
I Selenium	UG/L	2.1	J	20	U		
I Silver	UG/L	4	UJ	8	UJ		
V 1,1,1-Trichloroethane	UG/L	10	U	50	R	100	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	50	R	100	U
V 1,1,2-Trichloroethane	UG/L	10	U	50	R	100	U
V 1,1-Dichloroethane	UG/L	10	U	50	R	100	U
V 1,1-Dichloroethene	UG/L	10	U	50	R	100	U
V 1,2-Dichloroethane	UG/L	10	U	50	R	100	U
V 1,2-Dichloroethene (total)	UG/L	10	U	19	R	57	J
V 1,2-Dichloropropane	UG/L	10	U	50	R	100	U
V 2-Butanone	UG/L	10	U	50	R	74	U
V 2-Hexanone	UG/L	10	U	50	R	100	U
V 4-Methyl-2-Pentanone	UG/L	10	U	50	R	100	U
V Acetone	UG/L	10	U	220	R	380	J
V Benzene	UG/L	10	U	50	R	100	U
V Bromodichloromethane	UG/L	10	U	50	R	100	U
V Bromoform	UG/L	10	U	50	R	100	U
V Bromomethane	UG/L	10	U	50	R	100	U
V Carbon Disulfide	UG/L	10	U	50	R	100	U
V Carbon Tetrachloride	UG/L	10	U	50	R	100	U
V Chlorobenzene	UG/L	10	U	7	R	13	J
V Chloroethane	UG/L	10	U	50	R	100	U
V Chloroform	UG/L	10	U	50	R	100	U
V Chloromethane	UG/L	10	U	50	R	100	U
V Dibromochloromethane	UG/L	10	U	50	R	100	U
V Ethylbenzene	UG/L	10	U	50	R	100	U
V Methylene Chloride	UG/L	8	U	12	R	100	U
V Styrene	UG/L	10	U	50	R	100	U
V Tetrachloroethene	UG/L	10	U	50	R	100	U
V Toluene	UG/L	10	U	50	R	100	U
V Trichloroethene	UG/L	10	U	50	R	100	U
V Vinyl Chloride	UG/L	10	U	22	R	58	J
V Xylene (total)	UG/L	10	U	50	R	100	U
V cis-1,3-Dichloropropene	UG/L	10	U	50	R	100	U
V trans-1,3-Dichloropropene	UG/L	10	U	50	R	100	U
X Petroleum Hydrocarbons, TPH	mg/L	2	U	2	U		

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

SAMPLE ID ----->	698WMWES4	698WMWES5	698WMWES5DL
LAB SAMPLE ID--->	89384	89386	89386DL
RECEIPT DATE---->	10/15/93	10/15/93	10/15/93

PARAMETER	UNITS						

I Arsenic	UG/L	1460		7.2	J		
I Barium	UG/L	879		399			
I Cadmium	UG/L	3	U	3	U		
I Chromium	UG/L	286		20.7			
I Lead	UG/L	104	J	13	J		
I Mercury	UG/L	1.1		0.2	U		
I Selenium	UG/L	9.8		4	J		
I Silver	UG/L	4	UJ	4	UJ		
V 1,1,1-Trichloroethane	UG/L	1	J	10	U	20	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	20	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	20	U
V 1,1-Dichloroethane	UG/L	6	J	2	J	20	U
V 1,1-Dichloroethene	UG/L	2	J	10	U	20	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	20	U
V 1,2-Dichloroethene (total)	UG/L	7	J	370	R	390	J
V 1,2-Dichloropropane	UG/L	10	U	10	U	20	U
V 2-Butanone	UG/L	2	U	10	U	4	U
V 2-Hexanone	UG/L	10	U	10	U	20	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	20	U
V Acetone	UG/L	11	U	5	U	4	U
V Benzene	UG/L	10	U	10	U	20	U
V Bromodichloromethane	UG/L	10	U	10	U	20	U
V Bromoform	UG/L	10	U	10	U	20	U
V Bromomethane	UG/L	10	U	10	U	20	U
V Carbon Disulfide	UG/L	10	U	10	U	20	U
V Carbon Tetrachloride	UG/L	10	U	10	U	20	U
V Chlorobenzene	UG/L	10	U	10	U	20	U
V Chloroethane	UG/L	10	U	10	U	24	U
V Chloroform	UG/L	10	U	10	U	20	U
V Chloromethane	UG/L	10	U	10	U	20	U
V Dibromochloromethane	UG/L	10	U	10	U	20	U
V Ethylbenzene	UG/L	10	U	10	U	20	U
V Methylene Chloride	UG/L	8	U	2	U	20	U
V Styrene	UG/L	10	U	10	U	20	U
V Tetrachloroethene	UG/L	10	U	10	U	20	U
V Toluene	UG/L	10	U	10	U	20	U
V Trichloroethene	UG/L	10	U	1	J	20	U
V Vinyl Chloride	UG/L	10	U	94		85	J
V Xylene (total)	UG/L	10	U	10	U	20	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	20	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	20	U
X Petroleum Hydrocarbons, TPH	mg/L	2	U	2	U		

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

SAMPLE ID ----->	698WMWES6	698WMWES7	698WMWES8
LAB SAMPLE ID--->	89385	89282	89281
RECEIPT DATE---->	10/15/93	10/14/93	10/14/93

PARAMETER	UNITS						

I Arsenic	UG/L	7	J	5.3	J	3.1	J
I Barium	UG/L	145	J	196	J	173	J
I Cadmium	UG/L	3	U	3	U	3	U
I Chromium	UG/L	21.5		6.2	J	7.2	J
I Lead	UG/L	17.5	J	4	J	7.2	J
I Mercury	UG/L	0.2	U	0.2	U	0.2	U
I Selenium	UG/L	2	U	2	U	2	U
I Silver	UG/L	4	UJ	4	UJ	4	UJ
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U
V 1,2-Dichloroethane	UG/L	10	U	10	U	1	J
V 1,2-Dichloroethene (total)	UG/L	10	U	14		10	U
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U
V 2-Butanone	UG/L	3	U	6	U	5	U
V 2-Hexanone	UG/L	10	U	10	U	10	U
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U
V Acetone	UG/L	15	U	7	U	6	U
V Benzene	UG/L	10	U	10	U	10	U
V Bromodichloromethane	UG/L	10	U	10	U	10	U
V Bromoform	UG/L	10	U	10	U	10	U
V Bromomethane	UG/L	10	U	10	U	10	U
V Carbon Disulfide	UG/L	10	U	10	U	10	U
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U
V Chlorobenzene	UG/L	10	U	10	U	10	U
V Chloroethane	UG/L	10	U	10	U	10	U
V Chloroform	UG/L	10	U	10	U	10	U
V Chloromethane	UG/L	10	U	10	U	10	U
V Dibromochloromethane	UG/L	10	U	10	U	10	U
V Ethylbenzene	UG/L	10	U	10	U	10	U
V Methylene Chloride	UG/L	8	U	10	U	10	U
V Styrene	UG/L	10	U	10	U	10	U
V Tetrachloroethene	UG/L	10	U	10	U	10	U
V Toluene	UG/L	10	U	10	U	10	U
V Trichloroethene	UG/L	10	U	1	J	10	U
V Vinyl Chloride	UG/L	10	U	10	U	10	U
V Xylene (total)	UG/L	10	U	10	U	10	U
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U
X Petroleum Hydrocarbons, TPH	mg/L	2	U	2	U	2	U

**CORPUS CHRISTI
BLDG. 8 WATER SAMPLES**

SAMPLE ID ----->	698MMWES9	TRIPBLANK1	TRIPBLANK2
LAB SAMPLE ID--->	89283	89286	89392
RECEIPT DATE---->	10/14/93	10/14/93	10/15/93

PARAMETER	UNITS							

I Arsenic	UG/L	4.2	J					
I Barium	UG/L	220						
I Cadmium	UG/L	3	U					
I Chromium	UG/L	32.1						
I Lead	UG/L	7	J					
I Mercury	UG/L	0.2	U					
I Selenium	UG/L	2	U					
I Silver	UG/L	4	UJ					
V 1,1,1-Trichloroethane	UG/L	10	U	10	U	10	U	
V 1,1,2,2-Tetrachloroethane	UG/L	10	U	10	U	10	U	
V 1,1,2-Trichloroethane	UG/L	10	U	10	U	10	U	
V 1,1-Dichloroethane	UG/L	10	U	10	U	10	U	
V 1,1-Dichloroethene	UG/L	10	U	10	U	10	U	
V 1,2-Dichloroethane	UG/L	10	U	10	U	10	U	
V 1,2-Dichloroethene (total)	UG/L	10	U	10	U	10	U	
V 1,2-Dichloropropane	UG/L	10	U	10	U	10	U	
V 2-Butanone	UG/L	10	U	10	U	10		
V 2-Hexanone	UG/L	10	U	10	U	10	U	
V 4-Methyl-2-Pentanone	UG/L	10	U	10	U	10	U	
V Acetone	UG/L	5	U	10	U	10	U	
V Benzene	UG/L	10	U	10	U	10	U	
V Bromodichloromethane	UG/L	10	U	10	U	10	U	
V Bromoform	UG/L	10	U	10	U	10	U	
V Bromomethane	UG/L	10	U	10	U	10	U	
V Carbon Disulfide	UG/L	10	U	10	U	10	U	
V Carbon Tetrachloride	UG/L	10	U	10	U	10	U	
V Chlorobenzene	UG/L	10	U	10	U	10	U	
V Chloroethane	UG/L	10	U	10	U	10	U	
V Chloroform	UG/L	10	U	10	U	10	U	
V Chloromethane	UG/L	10	U	10	U	10	U	
V Dibromochloromethane	UG/L	10	U	10	U	10	U	
V Ethylbenzene	UG/L	10	U	10	U	10	U	
V Methylene Chloride	UG/L	8	U	8	J	2	J	
V Styrene	UG/L	10	U	10	U	10	U	
V Tetrachloroethene	UG/L	10	U	10	U	10	U	
V Toluene	UG/L	10	U	10	U	10	U	
V Trichloroethene	UG/L	10	U	10	U	10	U	
V Vinyl Chloride	UG/L	10	U	10	U	10	U	
V Xylene (total)	UG/L	10	U	10	U	10	U	
V cis-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	
V trans-1,3-Dichloropropene	UG/L	10	U	10	U	10	U	

WATER HITS

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

SAMPLE ID ----->	698SMW102	698FB	698RB
LAB SAMPLE ID---->	89289	89390	89391
RECEIPT DATE----->	10/14/93	10/15/93	10/15/93

PARAMETER	UNITS				
I Barium	MG/KG	4.7	J		
I Chromium	MG/KG	1.4	J		
I Lead	MG/KG	2.9			
V 2-Butanone	UG/L	15		12	
V Acetone	UG/L				19
V Carbon Disulfide	UG/L			2	J
V Methylene Chloride	UG/L			2	J
X Petroleum Hydrocarbons, TPH	mg/Kg	160			

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

	SAMPLE ID ----->	698WMWBG1		698WMWBG1D		698WMWBG2
	LAB SAMPLE ID---->	89278		89279		89277
	RECEIPT DATE----->	10/14/93		10/14/93		10/14/93
PARAMETER	UNITS					
I Arsenic	UG/L	16		14.5		7.4 J
I Barium	UG/L	844		832		61.7 J
I Chromium	UG/L	56.9		57.4		
I Lead	UG/L	66.7	J	57.8	J	
I Mercury	UG/L	0.68		0.49		
I Selenium	UG/L	7.8		9.2	J	
I Silver	UG/L	4	UJ	4	UJ	4 UJ

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

	SAMPLE ID ----->	698WMWBG3		698WMWES1		698WMWES10
	LAB SAMPLE ID---->	89280		89382		89388
	RECEIPT DATE----->	10/14/93		10/15/93		10/15/93
PARAMETER	UNITS					
I Arsenic	UG/L	5.3	J	3.2	J	3.2 J
I Barium	UG/L	308		593		138 J
I Chromium	UG/L	31.7		56.4		21.1
I Lead	UG/L	12.4	J	56.4	J	56.4 J
I Mercury	UG/L			0.4		
I Selenium	UG/L	5.3		5.1		
I Silver	UG/L	4	UJ	4	UJ	4 UJ

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

	SAMPLE ID ----->	698WMWES10D	698WMWES11	698WMWES12
	LAB SAMPLE ID---->	89389	89284	89285
	RECEIPT DATE----->	10/15/93	10/14/93	10/14/93
PARAMETER	UNITS			
I Arsenic	UG/L	5.8 J	7.6 J	8 J
I Barium	UG/L	181 J	329	335
I Chromium	UG/L	35.9	59.8	40.2
I Lead	UG/L	48.2 J	37.1 J	21.1 J
I Selenium	UG/L		2.6	
I Silver	UG/L	4 UJ	4 UJ	4 UJ
V 1,1,1-Trichloroethane	UG/L		4 J	
V 1,1-Dichloroethane	UG/L		20	
V 1,1-Dichloroethene	UG/L		28	
V 1,2-Dichloroethene (total)	UG/L		19	

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

SAMPLE ID ----->	698WMWES2	698WMWES3	698WMWES3RE
LAB SAMPLE ID---->	89383	89387	89387RE
RECEIPT DATE----->	10/15/93	10/15/93	10/15/93

PARAMETER	UNITS						
I Arsenic	UG/L	8.8	J	192	J		
I Barium	UG/L	320					
I Chromium	UG/L	17.1		137			
I Lead	UG/L	19.5	J				
I Mercury	UG/L			9.7			
I Selenium	UG/L	2.1	J				
I Silver	UG/L	4	UJ	8	UJ		
V 1,1,1-Trichloroethane	UG/L			50	R		
V 1,1,2,2-Tetrachloroethane	UG/L			50	R		
V 1,1,2-Trichloroethane	UG/L			50	R		
V 1,1-Dichloroethane	UG/L			50	R		
V 1,1-Dichloroethene	UG/L			50	R		
V 1,2-Dichloroethane	UG/L			50	R		
V 1,2-Dichloroethene (total)	UG/L			19	R	57	J
V 1,2-Dichloropropane	UG/L			50	R		
V 2-Butanone	UG/L			50	R		
V 2-Hexanone	UG/L			50	R		
V 4-Methyl-2-Pentanone	UG/L			50	R		
V Acetone	UG/L			220	R	380	J
V Benzene	UG/L			50	R		
V Bromodichloromethane	UG/L			50	R		
V Bromoform	UG/L			50	R		
V Bromomethane	UG/L			50	R		
V Carbon Disulfide	UG/L			50	R		
V Carbon Tetrachloride	UG/L			50	R		
V Chlorobenzene	UG/L			7	R	13	J
V Chloroethane	UG/L			50	R		
V Chloroform	UG/L			50	R		
V Chloromethane	UG/L			50	R		
V Dibromochloromethane	UG/L			50	R		
V Ethylbenzene	UG/L			50	R		
V Methylene Chloride	UG/L			12	R		
V Styrene	UG/L			50	R		
V Tetrachloroethene	UG/L			50	R		
V Toluene	UG/L			50	R		
V Trichloroethene	UG/L			50	R		
V Vinyl Chloride	UG/L			22	R	58	J
V Xylene (total)	UG/L			50	R		
V cis-1,3-Dichloropropene	UG/L			50	R		
V trans-1,3-Dichloropropene	UG/L			50	R		

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

SAMPLE ID ----->	698WMWES4	698WMWES5	698WMWES5DL
LAB SAMPLE ID---->	89384	89386	89386DL
RECEIPT DATE----->	10/15/93	10/15/93	10/15/93

PARAMETER	UNITS	698WMWES4		698WMWES5		698WMWES5DL	

I Arsenic	UG/L	1460		7.2	J		
I Barium	UG/L	879		399			
I Chromium	UG/L	286		20.7			
I Lead	UG/L	104	J	13	J		
I Mercury	UG/L	1.1					
I Selenium	UG/L	9.8		4	J		
I Silver	UG/L	4	UJ	4	UJ		
V 1,1,1-Trichloroethane	UG/L	1	J				
V 1,1-Dichloroethane	UG/L	6	J	2	J		
V 1,1-Dichloroethene	UG/L	2	J				
V 1,2-Dichloroethene (total)	UG/L	7	J	370	R	390	J
V Trichloroethene	UG/L			1	J		
V Vinyl Chloride	UG/L			94		85	J

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

SAMPLE ID ----->	698MMWES6	698MMWES7	698MMWES8
LAB SAMPLE ID--->	89385	89282	89281
RECEIPT DATE---->	10/15/93	10/14/93	10/14/93

PARAMETER	UNITS						

I Arsenic	UG/L	7	J	5.3	J	3.1	J
I Barium	UG/L	145	J	196	J	173	J
I Chromium	UG/L	21.5		6.2	J	7.2	J
I Lead	UG/L	17.5	J	4	J	7.2	J
I Silver	UG/L	4	UJ	4	UJ	4	UJ
V 1,2-Dichloroethane	UG/L					1	J
V 1,2-Dichloroethene (total)	UG/L			14			
V Trichloroethene	UG/L			1	J		

**CORPUS CHRISTI
BLDG. 8 WATER HITS**

SAMPLE ID ----->	698MMWES9	TRIPBLANK1	TRIPBLANK2
LAB SAMPLE ID---->	89283	89286	89392
RECEIPT DATE---->	10/14/93	10/14/93	10/15/93

PARAMETER	UNITS				
I Arsenic	UG/L	4.2	J		
I Barium	UG/L	220			
I Chromium	UG/L	32.1			
I Lead	UG/L	7	J		
I Silver	UG/L	4	UJ		
V 2-Butanone	UG/L				10
V Methylene Chloride	UG/L			8 J	2 J