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SITE ASSESSMENT PLAN ADDENDUM FOR AREA OF CONCERN 2 WITH TRANSMITTAL

CSS PANAMA CITY FL

7/31/2000

TETRA TECH

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TTNUS/TAL-00-062/7766-3.2

July 31, 2000

Project Number 7766

Commanding Officer
Department of the Navy
Southern Division
Naval Facilities Engineering Command
ATTN: Mr. Nick Ugolini (Code 1843)
Remedial Project Manager
2155 Eagle Drive
North Charleston, South Carolina 29406

Reference: Clean Contract No. N62467-94-D0888
Contract Task Order No. 0047

Subject: Site Assessment Plan Addendum for
AOC2, Coastal Systems Station
Panama City, Florida

Dear Mr. Ugolini:

Tetra Tech NUS, Inc. is pleased to submit for your review and approval the Site Assessment Plan (SAP) Addendum for the subject site at Coastal Systems Station (CSS), Panama City, Florida. This SAP Addendum was prepared by Tetra Tech NUS (TtNUS) under the Comprehensive Long-term Environmental Action Navy (CLEAN III) Contract Number N62467-94-D-0888.

As specified in Statement of Work (SOW) 70, Revision C, dated 3 May 2000, TtNUS will provide preliminary site investigation and reporting to further identify the extent of petroleum contamination at Site AOC2 at CSS. The objective of this investigation is to make a preliminary evaluation of the extent of petroleum contamination to assist with cost and scope planning for next fiscal year. The work will include the installation of DPT soil borings and DPT wells for the collection and analysis of soil and groundwater samples. The work will conclude with a preliminary assessment report for submittal to the State. Areas of possible contamination will be identified for future investigation.

All work will be conducted in accordance with the procedures and processes specified in the April 1998 Site Assessment Plan for Sties 98, 307, 363, and AOC-2/SWMU1, previously submitted by TtNUS.

SITE HISTORY

According to the RCRA Facility Investigation Report (ABB Environmental Services Inc., RCRA Facility Investigation, 1995) AOC2 consists of a former aboveground storage tank and its associated transfer piping. The tank was constructed in 1943 and was originally used to store diesel fuel unloaded from barges at the South Dock. Underground transfer lines were used to distribute fuel from the tank to other vessels. Approximately 50,000 gallons of diesel fuel were lost from the tank system in 1953. The exact location of the leak and whether or not the underground piping had failed was unknown. The former tank was refurbished in 1957 by complete dismantling, cleaning, and reassembly with new bolts and gaskets, and replacement of 28 bottom plates. The tank was then used to store gasoline, aviation fuel, diesel fuel, and waste oil storage. Numerous small leaks, primarily at the tank seams, were reported to have occurred both before and after the tank was refurbished.

In the mid 1960s, an estimated 10,000 gallons of oil was released from ruptured fuel transfer lines located between the dock and storage tank. Following the rupture, seepage of diesel oil was observed in Alligator Bayou at the South Dock's steel bulkhead.

The tank was removed in 1979. Transfer piping from the tank wall to an earthen berm was removed. The earthen berm provided secondary containment at a distance of 60 feet around the tank. The remaining piping was capped and abandoned in place.

In July 1997, a fuel release was detected in Alligator Bayou by CSS personnel. During the investigation of the fuel release, several inches of product was detected in monitoring well PCY-333-MW04 located downgradient of Tank 307. In response to the release, the Remedial Action Contractor and CSS personnel conducted an investigation to mitigate the fuel release from entering Alligator Bayou. Results from their investigation identified a diesel fuel like substance entering a storm sewer drain junction box located upgradient to Site 333 and Site 307. This storm sewer junction box is located downgradient of AOC2. The storm sewer drain pipe runs beneath Site 333 and adjacent to Tank 307 before entering an outfall located within the sea wall at Alligator Bayou.

From May 1998 through September 1998, TtNUS conducted assessment activities in an effort to determine the source of the free product observed in the storm sewer in July 1997. Approximately 29 soil borings, nine monitoring wells and five piezometers were installed and sampled to evaluate the nature and extent of petroleum impacted soil and groundwater in the vicinity of AOC2. The results of the investigation indicated that the CoC concentrations in soil and groundwater exceeded the SCTLs and GCTLs. In addition, free product was detected in one of the monitoring wells.

The preliminary assessment report submitted by TtNUS recommended that additional soil and groundwater assessment be conducted to assess the areal extent of free product, and the areal extent of dissolved TRPH in the groundwater. In the area where free product was detected (PCY-AOC2-MW07), soil samples should be collected for laboratory analysis to evaluate soil quality. The assessment should be conducted to assess the extent of petroleum contamination from the AOC2 fuel distribution lines located in the parking lot of the AOC2/SWMU1 study area and in the grass area south of the parking lot, north of Site 333. In addition, the report recommended that the assessment efforts for Site 333 and AOC2 be combined into one investigation (Site Assessment Report) due to commingled petroleum plumes as identified from DRO-TPH field-screening groundwater concentrations and soil vapor concentrations. The results of the preliminary investigation are summarized on Figure 1.

SCOPE OF PROPOSED ASSESSMENT

As sated in SOW 70, Revision C, the objective of this investigation is to make a preliminary evaluation of the extent of petroleum contamination to assist with cost and scope planning for next fiscal year. The scope of the assessment activities will consist of a soil and groundwater assessment using direct push technology (DPT), such as a Geoprobe, to install soil borings. In conjunction with the DPT soil boring installation, a mobile laboratory will be used to screen soil and groundwater samples. Select soil borings will be converted to permanent piezometers/micro wells. The proposed locations of the DPT soil borings and piezometers are provided on Figure 2.

Soil Investigation

Approximately 20 soil borings will be advanced to the water table to evaluate the horizontal and vertical extent of vadose zone soil contamination. Soil samples from each boring will be screened with an Organic Vapor Analyzer (OVA) - Flame Ionization Detector (FID). One soil sample will be collected from each boring from the interval above the water table that exhibits the highest OVA response. This sample will be screened using an on-site mobile laboratory to analyze for benzene, toluene, ethyl-benzene, xylenes (BTEX); naphthalene and Diesel Range Organics (DRO). In accordance with Rule 62-770.600(3)(e), soil samples will be collected from a minimum of three soil borings for fixed base laboratory analysis to confirm the OVA/mobile lab results. The boring locations and sample intervals will be selected to coincide

with samples that exhibit high, medium and low field screening results during the soil vapor survey. The samples will be analyzed for constituents of the Kerosene Analytical Group as defined in Chapter 62-770, F.A.C. The laboratory analytical methods are provided in Table 1. All soil investigation activities will be conducted in accordance with Section 4.1 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/SMWU 1".

Groundwater Field Screening and Piezometer Installation

Subsequent to collection of soil samples, each soil boring will be advanced approximately 2 to 3 feet into the water table and a groundwater sample collected for on-site mobile laboratory screening for benzene, toluene, ethyl-benzene, xylenes (BTEX); naphthalene and Diesel Range Organics (DRO). In addition, approximately six soil borings will be converted to permanent piezometers/micro wells to evaluate the extent of free product in the vicinity of monitoring well PCY-AOC2-MW07, and to collect groundwater samples to confirm the mobile laboratory screening results. Groundwater field screening and piezometer installation will be conducted in accordance with Section 4.2 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/SMWU 1".

Groundwater Sampling and Groundwater Level Measurements

The permanent piezometers/micro wells will be field surveyed to obtain relative top of casing (TOC) elevations to estimate groundwater flow direction at the site. In addition, groundwater samples will be collected from select piezometers/micro wells for fixed base laboratory analysis to confirm the mobile lab results. The laboratory analytical methods to be used during this investigation are provided in Table 1. Groundwater sampling and groundwater level measurements will be conducted in accordance with Section 4.3 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Equipment Decontamination

Equipment decontamination will be conducted in accordance with Section 4.5 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Waste Handling

Waste handling will be conducted in accordance with Section 4.6 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Sample Handling

Sample handling will be conducted in accordance with Section 4.7 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Sample Identification

Sample identification will be conducted in accordance with Section 4.8 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Sample Packaging and Shipping

Sample packaging and shipping will be handled in accordance with Section 4.9 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Sample Custody

Sample custody will be handled in accordance with Section 4.10 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Quality Control Samples

Quality control samples will be collected in accordance with Section 4.11 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Field Measurements

Field measurements will be collected in accordance with Section 4.12 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Field QA/QC Program

The field QA/QC program will be conducted in accordance with Section 4.13 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Record Keeping

Record keeping will be conducted in accordance with Section 4.14 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

Site Management and Base Support

Site management and Base support will be conducted in accordance with Section 4.15 of the April 1998 "Site Assessment Plan for Sites 98, 307, 363 and AOC2/ SMWU 1".

REPORTING

Subsequent to completion of site investigaiton acitivities, a Preliminary Assessment Report (PAR) will be prepared for submittal to the FDEP. The PAR will provide a brief discussion of the site history, a description of the assessment activities, a summary of the findings and recommendations for future actions.

If you have any questions regarding this plan or require further information, please contact me at (850) 385-9899.

Very truly yours,

Paul E. Calligan, P.G.
Task Order Manager

/pc

Enclosures

c: Mr. Arturo McDonald, CSS
Ms. Debbie Wroblewski (cover letter only)
Mr. Mark Perry (file copy)

TABLE 1

FIELD INVESTIGATION ENVIRONMENTAL SAMPLE SUMMARY
SITE AOC 2
COASTAL SYSTEMS STATION
PANAMA CITY, FLORIDA

Parameter	Method (aqueous/soil)	No. Soils (Env.)	No. Soils (IDW)	No. Soil Dups	No. Aqueous (Env.)	No. Aqueous (IDW)	No. Aqueous Dups	Field Blanks	Rinsate Blanks	Trip Blanks
VOAs, VOHs & MTBE	SW-846 8021B	8	2	2	6	1	1	1	1	2
EDB	SW-846 504.1	0	0	0	6	1	1	1	1	0
PAHs	SW-846 8310	8	2	2	6	1	1	1	1	0
TRPH	FL-PRO	8	2	2	6	1	1	1	1	0
Total Lead	SW-846 6010B/7000A series	0	0	0	6	1	1	1	0	0
RCRA Metals	SW-846 6010B/7000A series	2	2	0	0	0	0	0	0	0

VOA - Volatile Organic Aromatics
VOH - Volatile Organic Halocarbons
MTBE - Methyl Tert Butyl Ether
PAH - Polynuclear Aromatic Hydrocarbons
TRPH - Total Recoverable Petroleum Hydrocarbons
EDB - Ethylene Dibromide

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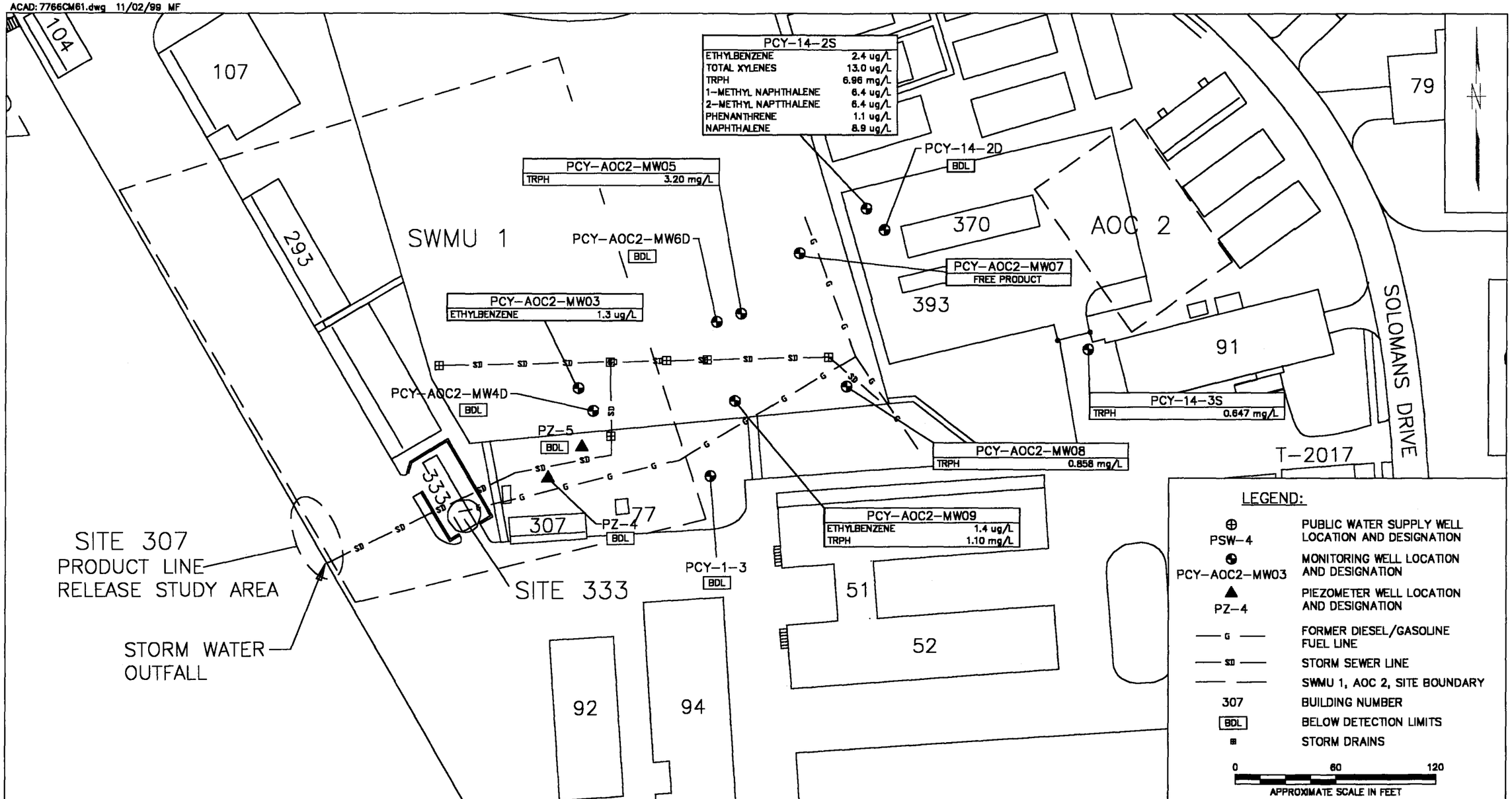

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY MF DATE 11/1/99
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

GROUNDWATER PARAMETER CONCENTRATION MAP
AOC2/SWMU1 GROUNDWATER INVESTIGATION
COASTAL SYSTEMS STATION
PANAMA CITY, FLORIDA

CONTRACT NO. 7766
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 1
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98

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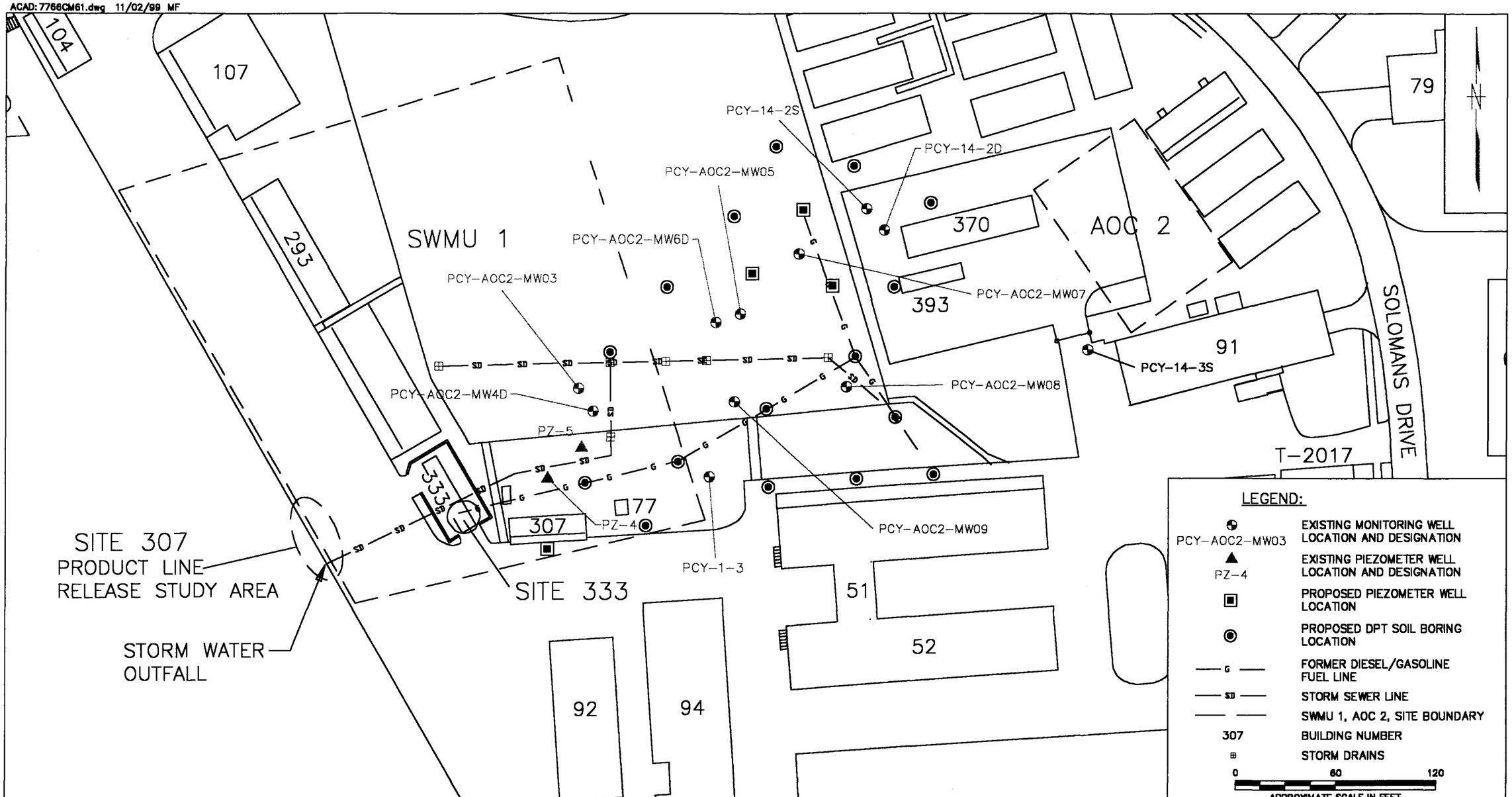

NO.	DATE	REVISIONS	BY	CHKD	APPD	REFERENCES

DRAWN BY DATE 7/15/00
CHECKED BY DATE
COST/SCHED-AREA
SCALE AS NOTED

PROPOSED DPT SAMPLE POINT LOATIONS
AOC2 PRELIMINARY ASSESSMENT
COASTAL SYSTEMS STATION
PANAMA CITY, FLORIDA

CONTRACT NO. 7766
APPROVED BY DATE
APPROVED BY DATE
DRAWING NO. FIGURE 2
REV. 0

FORM CADD NO. SDIV_BH.DWG - REV 0 - 1/20/98