

**Naval Air Warfare Center, Aircraft Division
Trenton, New Jersey**

Decision Document

for

Installation Restoration

Site 8 Soil

28 October 1998

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DECLARATION STATEMENT

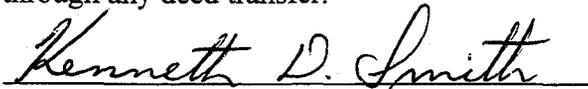
This decision document presents the basis for the selected alternative to address soil at Site 8 at the Naval Air Warfare Center, Aircraft Division, Trenton (NAWCADTRN). This decision is based on information contained in the Barometric Well Decommissioning Post-Remediation Letter Report (Foster Wheeler, June 5, 1998), Environmental Baseline Survey (EBS) (EA, 1997), Remedial Investigation (RI) Report (IT, 1994), the Site Inspection (SI) Study (IT, 1989), and the Initial Assessment Study (IAS) (RGH, 1986). These reports and other information used in the remedy selection process are part of the facility's Administrative Record, located in the Environmental Office at NAWCADTRN. A document repository has also been established at the Mercer County Library, 61 Scotch Road, Ewing, NJ to provide a place for public review of NAWCADTRN environmental documents.

This document provides background information on the Site, presents the selected alternative, and reviews the public's response to the Decision Document.

Under the Navy's Installation Restoration (IR) Program, suspected sites of environmental contamination at the Naval Air Warfare Center, Aircraft Division, Trenton (NAWCADTRN) (formerly the Naval Air Propulsion Center (NAPC)), New Jersey were investigated to verify the presence or absence of alleged contamination. Site 8 has been investigated and found to require no further action for soil under the IR Program.

On the basis of investigative results, and in accordance with the requirements of the Navy IR Program, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and its related laws and regulations, it is the Navy's decision, in consultation with the New Jersey Department of Environmental Protection (NJDEP) and US Environmental Protection Agency (EPA), that no further response actions for soil are warranted at Site 8.

If the New Jersey Soil Cleanup Criteria (NJSCC) are not met at a site, New Jersey requires that an institutional control be implemented. Engineering controls may also be required. For Site 8 this will take the form of a Declaration of Environmental Restriction (DER) which provides notice of the contamination remaining at the property, the restrictions that apply, and any other institutional and/or engineering controls required. The DER will accompany the property through any deed transfer.



Ken Smith
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Trenton, New Jersey

25 SEP 98
(Date)

1.0 INTRODUCTION

This decision document summarizes the findings and selected alternative to address soil contamination at Site 8 at NAWCADTRN. Figure 1 shows the general location of NAWCADTRN, while Figure 2 shows the location of Site 8 on the installation.

Investigations performed at this site included sampling and analysis of both soil and groundwater for assessing the presence or absence of contamination which could pose a threat to human health and/or the environment. The results of the sampling are found in the Barometric Well Decommissioning Post-Remediation Letter Report (Foster Wheeler, June 5, 1998), Environmental Baseline Survey (EBS) (EA, 1997), Remedial Investigation Report (IT, 1994), and the Site Inspection (SI) Study (IT, 1989) which are part of the NAWCADTRN Administrative Record and are available for viewing in the document repository located at the Mercer County Library, 61 Scotch Road, Ewing, NJ.

Based on the findings of previous investigations, no further action is required for soil at Site 8. Groundwater at this site is being investigated and will be addressed as a separate site-wide Operable Unit and Decision Document. The soil at the other eight IR Program sites (1, 2, 3, 4, 5, 6, 7, and 9) was addressed in separate Decision Documents.

Constituents in soil at NAWCADTRN are compared to Residential Direct Contact, Non-residential Direct Contact, and Impact to Groundwater New Jersey Soil Clean-up Criteria (NJSCC). The NJSCC are not Applicable or Relevant and Appropriate Requirements (ARARs), but rather criteria to be considered (TBC). If the NJSCC are not met at a site, New Jersey requires that an institutional control be implemented. Engineering controls may also be required. If the NJSCC are not met for Site 8, a Declaration of Environmental Restriction (DER) will be prepared which provides notice of the contamination remaining at the property, the restrictions that apply, and any other institutional and/or engineering controls required. The DER will accompany the property through any deed transfer.

2.0 BACKGROUND

2.1 Facility Description

NAWCADTRN, a former testing facility for military aircraft engine performance, is located on approximately 66 acres in Ewing Township, Mercer County, New Jersey (see Figure 1). The site is five (5) miles northwest of Trenton, NJ, thirty (30) miles northeast of Philadelphia, PA, and two (2) miles north-northeast of the Delaware River.

Trenton-Mercer County Airport borders most of the northern portion of the NAWCADTRN property. A railroad borders the site on the east and separates the NAWCADTRN Administration Building from the remainder of the facility. The southern boundary of the NAWCADTRN property is Parkway Avenue. Several commercial properties are located across Parkway Avenue. East of the railroad is a manufacturing plant that produces automobile components. East of the manufacturing site is Gold Run Creek and associated ponds.

Residential, agricultural, commercial, and light-industrial areas are located further south and southwest of NAWCADTRN. A large portion of the land between the Delaware River and NAWCADTRN is owned by the State of New Jersey, including the State Police Headquarters and the Marie S. Katzenbach State School for the Deaf.

Three large buildings comprised the NAWCADTRN experimental engine laboratory: The Blower Wing (B-40), the Test Wing (B-41), and the Exhauster Wing (B-42). The Test Wing was composed of ten (10) engine test cells and control rooms that provided experimental atmospheric conditions for engine performance testing. The cells provided high altitude, low altitude, and sea-level simulations. Helicopter transmission testing was also conducted in the Test Wing. The Blower Wing generated simulated atmospheric conditions and the Exhauster Wing received the engine exhaust gas and simulated altitude conditions.

The NAWCADTRN testing complex was fully serviced by an on-site industrial wastewater treatment plant, a high-capacity water cooling tower, a paint shop, a sheet metal shop, a machine shop, a woodworking shop, fuel and lubrication laboratories, a general chemistry laboratory, and various engineering and administrative offices. A 600 foot on-site potable water well was sealed in October 1993; the facility is now served by Trenton Water Works. Industrial wastewater from the site operations was diverted through a central piping system to a 52-foot-deep gravity basin, known as the Barometric Well. The Barometric Well, Site 8, is located between the Test and Exhauster Wings (see Figure 2). Floor drains existed in most NAWCADTRN buildings and shops. The drains led to the Barometric Well which served as a collection and holding area for various types of industrial discharges generated on site. The industrial wastewater from the Barometric Well was diverted to the on-site industrial wastewater treatment plant and then reused as cooling water and discharged to the sanitary sewer. Sanitary wastewater generated at the facility goes directly to the municipal sewer. Stormwater runoff from the facility goes directly to Gold Run. In 1995, a groundwater treatment facility was installed to pump and treat groundwater contamination at the southwest corner of the NAWCADTRN property. In the summer of 1995, a sump pit was installed to eliminate groundwater infiltration into the West-end Drainage Ditch. The groundwater from this sump pit was pumped to the Barometric Well. In early 1998, the Barometric well was decommissioned and the groundwater from the sump pit was pumped directly to the on-site groundwater treatment facility.

As part of the Base Realignment and Closure Act of 1993, the NAWCADTRN was designated for closure in 1998.

2.2 Physical Characteristics

A summary of the physical characteristics of the facility is provided in the following sections. More detailed information is provided in the RI report and other referenced documents which are available for review as part of the Administrative Record.

Site Topography

The NAWCADTRN facility is located within a sub-unit of the Piedmont known as the Northern Triassic Lowland. The topographic relief of this sub-province is characterized by undulating ridges and nearly-level to gentle slopes. The elevation of the topographic surface at the NAWCADTRN site ranges from 176 feet above mean sea level in the northern portion of the property to 132 feet above mean sea level in the southeastern portion, along Parkway Avenue. The NAWCADTRN site is located at latitude 43°13' north and longitude 74°46' west.

Site Hydrology

There are no streams, creeks, or lakes located on the site. Three significant streams are located within the vicinity of the NAWCADTRN site: Gold Run Creek, the western branch of Shabakunk Creek, and Jacobs Creek, all of which drain into the Delaware and Raritan Canal and the Delaware River. The only local stream that receives runoff directly from NAWCADTRN is Gold Run, a shallow north-to-south flowing stream located south of Parkway Avenue and east of NAWCADTRN. An intermittent spring located to the west of the facility forms the ancestral West Branch of Gold Run. The inflow to the culvert is at the intersection of Parkway Ave. and Decou Ave. (Figure 3). The culvert carries flow under Parkway Ave. eastward about 2,800 ft. to an exit culvert located east of the facility. The Hydrogeologic Framework, Water Levels, and Trichloroethylene Contamination Report prepared by the U.S. Geological Survey (November 3, 1997) provides additional information concerning the site hydrology.

Site Overburden Geology

The unconsolidated overburden at and around NAWCADTRN consists of natural alluvial deposits and in-situ weathered rock. Much of the shallow subsurface in residential and industrial areas consists of material that has been mixed by excavation, filling, construction, and other disturbances such that the original shallow stratigraphy has been destroyed. The natural alluvial deposits are a discontinuous Quaternary unit deposited by interglacial meltwater streams. This unit, the Pennsauken Formation, is composed mainly of silt with intermixed clay, sand, and

gravel. The alluvium ranges in color from orange-brown to dark brown. These dense meltwater deposits exhibit poor vertical permeability and influence local surface water runoff and infiltration.

The overburden is thickest, approximately 22 feet, on the northwest end of the NAWCADTRN site, near the Cooling Towers (Figure 2) and decreases to six (6) feet in the southern portion of the site. In some places at Site 1, the buildings, footings, utilities and roadways lie directly on top of the bedrock.

2.3 Site 8, Barometric Well

The NAWCADTRN Barometric Well (Barowell) was located between the Test and Exhauster Wings (Buildings 42 and 41) (Figure 2). The Barometric Well was a 52-foot deep concrete sealed sump pit 12 feet in diameter. A copper floor seal extended 15 feet up from the base of the concrete walls. It was constructed in 1957/1958 to collect exhaust cooling water as part of a Detonation Suppression System. Detonation Spray Water was sprayed into the exhaust stream of an engine to quench the flame front. The system was designed to allow contact cooling water to drain from subatmospheric conditions through underground piping to the barowell.

While initially designed for Detonation Suppression Water, other building drains, sinks, tank containments, sumps and roof runoff were routed to the barowell. The well was fed by 21 main lines constructed of steel, ranging in diameter from two inches to ten inches, and one eight inch line constructed of transite. The barowell functioned as a central lift station. The collected liquid was pumped to the primary clarifier at the head of the NAWCADTRN Wastewater Treatment Plant. Level switches controlled and regulated the flow to the treatment plant and the fluctuation between high and low liquid level (approximately five feet). The liquid level in the well was maintained at 40-50 feet below grade (40 feet below the surface of the surrounding groundwater).

The barometric well is registered as an emergency sump under the NJDEP Underground Storage Tank (UST) Program (Facility Registration # 0060482, Tank I.D. M02).

A project to decommission the barometric well was conducted from October 1997 to May 1998. The project consisted of 1) removal of sediment and/or liquid from the traps of all floor drains that discharged to the barometric well, 2) pressure flushing of all drains until visibly clean, and 3) decommissioning of the barometric well. Starting in October 1997, the floor drains in Buildings 21, 27, 40, 41, 42, 43, 44, 45, 46, and 47 were pressure flushed, and sealed with grout. Drains above the ground level were cut off where they entered the drain system to prevent any discharge from entering the barowell. Flushed water was observed to be clean at various locations on route to the barowell (at the Bldg. 42 sump, at Bldg. 44 Brine House, and at sumps that discharge to the barowell).

On March 9, 1998, interior structural removal of the barowell began. The influent pipes were cut to within one foot of the barowell interior wall. On March 31, 1998, the influent pipes were plugged with grout. Sediment at the bottom of the barowell was vacuumed utilizing a vacuum truck and placed into 55 gallon drums for proper disposal. On April 1, 1998, the interior of the barowell was pressure washed. The water generated was tested and then sent to the on-site groundwater treatment system with ultimate discharge to the sanitary sewer system following treatment.

A visual inspection of the barowell indicated that no groundwater was infiltrating and there was no evidence of cracks or damage to the interior walls. Backfilling of the barowell commenced on April 21, 1998 and was completed on May 4, 1998. Crushed stone (No. 10 screenings) was used as a backfill material. An 8 inch thick concrete cap was poured on top of the barowell on May 5, 1998. A 4 inch slotted PVC pipe (with solid 4 inch PVC riser pipe and cap) was installed through the entire depth of the barowell to determine if groundwater enters the barowell in the future.

3.0 ENVIRONMENTAL INVESTIGATION SUMMARY

In this section, the data collected and analyzed during the IAS, SI, RI, EBS, and Barometric Well Decommissioning efforts is reviewed and summarized for Site 8. The reader is referred to the Work Plan for the Barometric Well Decommissioning (Foster Wheeler, July 29, 1997), Barometric Well Decommissioning Post-Remediation Letter Report (Foster Wheeler, June 5, 1998), Environmental Baseline Survey (EBS) Phase II Supplemental Findings Report (EA, 1998), Environmental Baseline Survey (EBS) Phase II Report for Parcel B (EA, 1997), Remedial Investigation (RI) Report (IT, 1994), the Site Inspection (SI) Study (IT, 1989), and the Initial Assessment Study (IAS) (RGH, 1986) for a full description of the data summarized here.

The sampling results are compared to the NJ Soil Cleanup Criteria (NJSCC) which are risk-based contaminant specific cleanup levels. The NJSCC are not Applicable or Relevant and Appropriate Requirements, but rather criteria to be considered (TBC). Although the NJSCC are not promulgated standards, they were developed in accordance with New Jersey statutes which promulgate a minimum soil remediation criteria resulting in an additional cancer risk of one in one million for carcinogens and for non-carcinogens limiting the Hazard Index for any given effect to a value not exceeding one.

Soil results were compared to all three types of NJSCC: Residential Direct Contact, Non-Residential Direct Contact and Impact to Groundwater. The NJSCC are used for guidance purposes only; other site-specific factors, including but not limited to, environmental impacts and

background conditions must also be considered in establishing clean-up criteria. The soil clean-up criterion for beryllium for the NAWCADTRN site is the maximum beryllium value detected in background soil borings (5.6 mg/kg).

3.1 Overview

The first environmental investigation at NAWCADTRN was an Initial Assessment Study (IAS) conducted by Rogers, Golden and Halpern (RGH) to identify any areas of potential environmental concern at the site. Results of the study were submitted to the Naval Energy and Environmental Support Activity (NEESA) in May 1986 (RGH, 1986). The IAS study was limited to an environmental reconnaissance project, which did not involve any environmental sampling. However, the study identified seven areas of potential concern which were recommended for further investigation.

A subsequent environmental investigation, the Site Inspection (SI) study, was conducted at NAWCADTRN from October 1988 to April 1989 by IT Corporation (IT, 1989a). The objective of the SI was to confirm the presence or absence of contamination in soils and groundwater at the seven sites identified in the IAS and at two additional sites identified by the Navy and New Jersey Department of Environmental Protection (NJDEP). Eight of the nine sites investigated during the SI were recommended for further study and contaminant delineation. The only site recommended for no action after the SI was Site 2, the fire fighting area. Sites 3, 6, and 9 were proposed for further contaminant delineation in both soil and groundwater. Sites 1, 4, 5, and 8 were recommended for additional groundwater investigation only. Soil sampling and underground storage tank removal were proposed for Site 7.

A Remedial Investigation (RI) was performed for NAWCADTRN in two phases by IT Corporation from April 1992 through December 1993. The RI was conducted to determine the nature and extent of contaminants identified during previous investigations and determine if remediation was necessary. The RI Report was completed in 1994 and distributed in November 1994.

NAWCADTRN is scheduled for closure in December 1998 under the Base Realignment and Closure Act (BRAC) of 1993. An Environmental Baseline Survey (EBS) was conducted to support the Navy's compliance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Section 120 as amended by Public Law 102-46, the Community Environmental Response Facilitation Act (CERFA), and state and local real property transfer disclosure notification regulations. The survey was conducted in two phases. Phase I was conducted from October to December 1993 and Phase II was performed in April and May 1995. A total of 74 areas of concern (AOCs) were identified during the EBS. The AOCs were evaluated to decide which areas required additional investigation sampling. An EBS Phase II

Investigation of the sites was conducted from August 1996 to March 1997. Based on the results of this investigation, additional sampling activities were recommended for several AOCs. An EBS Phase II Supplemental Investigation was conducted from October to December 1997. The results of the EBS investigations can be found in the Environmental Baseline Survey (EBS) Phase II Report (EA, 1997) and the Environmental Baseline Survey (EBS) Phase II Supplemental Findings Report (EA, 1998).

3.2 Site 8 Summary, Barometric Well

Site Inspection and Remedial Investigation Results

No soil samples were taken at Site 8 during the SI.

During the RI, two soil samples were collected from one soil boring (MW-17BR[0-2',2-4']) (see Figure 3). These samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and inorganics.

VOC and SVOC results for the soil samples collected during the RI were non-detectable or well below all NJSCC.

During the RI inorganic sampling, antimony was detected above the residential NJSCC of 14 mg/kg in both samples (0-2' - 29.1 mg/kg, 2-4' - 57.2 mg/kg) but did not exceed the non-residential NJSCC of 340 ug/kg in either sample.

Environmental Baseline Survey (EBS)

Free-phase hydrocarbon product was encountered in shallow monitoring well BRP-1 (Figure 3) following pumping during an aquifer test conducted in August 1995. The product was pumped from the well and has not been observed in BRP-1 since this event. Monitoring well MW-47BR was installed to further evaluate the presence of free-phase product in the vicinity of BRP-1. During groundwater sampling conducted by EA in June 1997, an oily sheen was observed on water collected from MW-47BR. Sample results indicated the presence of chlorinated solvents (1,2-dichloroethene, trichloroethene, and vinyl chloride). The EBS recommended that additional investigation be performed to evaluate the nature and extent of impacted soil, if any, in the vicinity of monitoring wells BRP-1 and MW-47BR.

For ease of investigation, a direct-push soil vapor assessment (SVA) was conducted for an expanded area around Site 1. The area of investigation included the area between buildings 40 and 41, as well as the area between buildings 41 and 42, where the barowell is located. Soil vapor samples were analyzed using a field gas chromatograph for selected volatile organic

compounds (VOCs), including benzene, toluene, ethylbenzene, and total xylenes (BTEX), cis- and trans-1,2-dichloroethene (1,2-DCE), 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), and tetrachloroethene (PCE). Several SVA samples were taken in the vicinity of Site 8 to address concerns of residual TCE in the soil. Sampling was conducted from 25 September to 10 October 1996. No elevated concentrations of VOCs were detected at Site 8 during this sampling event. The maximum level detected was 2.89 mg/kg (IRP-SV56). The results of this survey were reported in the EBS Phase II Report for Parcel B (EA, 1997). The EBS Phase II soil vapor sampling locations and results are shown on Figure 4. Further investigation/action was recommended to address the residual chlorinated VOC concentrations identified in the Phase II EBS Report and Phase II EBS Supplemental Findings Report. The recommendations in these two reports were implemented and summarized in the subsequent Site 1 Source Sampling Report. The product located in this area will be addressed as part of EBS Area of Concern (AOC) No. 72.

Source Sampling

In February and March 1998, a passive soil vapor survey, followed by confirmatory soil sampling was performed to: 1) reassess soil vapor VOC concentrations detected during the initial SVA survey, 2) assess soil vapor VOC concentrations in the vicinity of monitoring wells where historic groundwater analytical results indicate elevated concentrations of VOCs, 3) verify SVA data with soil sampling, and 4) assess the source (soil or groundwater) of VOCs in soil vapor.

Several soil vapor samples were collected in the vicinity of Site 8. Soil vapor samples were collected from 2-3 ft. below the ground surface and analyzed for VOCs. The maximum level detected was 42.87 ug/kg (PSV-41). The results of this survey were reported in the Installation Restoration Program Site 1 Source Sampling Report (EA, 1998). The passive soil vapor sampling locations and results are shown on Figure 5.

The results of this soil vapor sampling event and the results of the initial SVA survey conducted during the EBS Phase II Investigation were evaluated to select soil sampling locations. In general the soil vapor sample locations that exhibited elevated concentrations of TCE and/or 1,2-DCE were targeted for soil sampling. The samples were analyzed for VOCs and total petroleum hydrocarbons (TPH). The soil sampling locations and results above any NJSCC are shown on Figure 6.

Two soil samples (SB-53(4-5'), SB-54(3-3.5)) taken in the vicinity of the barometric well at the northeast side of building 48 indicated elevated levels of chlorinated VOCs. The maximum VOC level detected was 12,780 ug/kg in sample SB-54. However, these levels are believed to be related to leaks from overhead trichloroethene lines that extended from Site 1 to the south side of building 48 (Figure 3) and not to the barowell.

Transite Pipe Removal

On March 25 and 26, 1998, approximately 200 feet of eight inch diameter transite pipe which ran east of building 41 to the barowell was removed. Four samples (BWTP-01, BWTP-02, BWTP-03, BWTP-04) were collected at 50 foot intervals along the area of excavation (Figure 7). Each sample was collected approximately seven feet below grade, one foot below the location of the transite pipe. Sample BWTP-04 was collected at approximately eight feet below grade because the transite pipe was encountered at an increased depth at this location, possibly due to the presence of a small rock outcropping. The samples were analyzed for volatile organic compounds (VOCs), base neutrals (B/Ns), inorganics, and TPH. All VOC sampling was conducted using methanol extraction. No VOCs were detected in any of the samples. The only B/N detected was fluoranthene (427ug/kg) in sample BWTP-01 at a level well below the NJSCC. No inorganics were detected at levels above any NJSCC. Total petroleum hydrocarbons were only detected in sample BWTP-01 at a level of 612 mg/kg. Based on the sampling results, the excavated soil was used to backfill the trench.

Barometric Well Decommissioning Results

To characterize the soil adjacent to the barowell, three soil samples (BW-CS01(9-13'), BW-CS02(8-10.5'), BW-CS03(9-13')) from three soil borings were collected on February 4, 1998. These soil borings were located from 5 to 8 feet away from the barowell at a depth corresponding to the influent pipes (approximately 8 to 10 feet below the ground surface). The three samples were analyzed for VOCs, base neutrals (BNs), inorganics, and total petroleum hydrocarbons (TPH). Figure 8 shows the sampling locations.

Two of the three samples did not exceed any NJSCC. The arsenic result (22.2 mg/kg) from the soil sample (BW-CS02(8-10.5')) collected north of the barowell exceeded the residential and non-residential NJSCC for arsenic (20 mg/kg). This soil is at depth and would not be contacted unless digging is conducted. The elevated level of arsenic at this location is not impacting groundwater, since arsenic in groundwater does not exceed New Jersey groundwater quality standards.

Dual Phase Extraction Pilot Test

From 17 June to 27 June 1998, Battelle conducted a dual phase extraction pilot test in order to capture the product that was encountered in the vicinity of Site 8 in the past. Three new product recovery wells (EW-1, EW-2, EW-3) were installed around the barowell as part of the pilot test (Figure 3). Dual phase extraction from the three new wells, MW-47BR and BRP-1 did not

recover any product. The following table provides the groundwater recovery rates during the dual phase extraction pilot test.

**Dual Phase Extraction Pilot Test
Groundwater Recovery Rates**

Pump Test Description	Test Duration (hours)	Volume of Groundwater Recovered (gallons)	Average Groundwater Recovery Rate (gal/day)
Standard mode - recovery from oil/water interface			
Drawdown mode - recovery from 2 to 4.8 feet below the groundwater table			
Standard mode at EW-3	44	5520	3030
Standard mode at EW-2	48	5180	2580
Drawdown mode at EW-2	48	6490	3270
Drawdown mode at EW-1, EW-2, and EW-3	32	6460	4790
Drawdown mode at MW-47	23	660	690
Drawdown mode at BRP-1	22	3450	3730

4.0 DECLARATION OF FINDINGS AND DECISIONS

On the basis of investigative results, and in accordance with the requirements of the Navy Installation Restoration Program, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Superfund Amendments and Reauthorization Act (SARA), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and its related laws and regulations, it is the Navy's decision, in consultation with the New Jersey Department of Environmental Protection (NJDEP) and US Environmental Protection Agency (EPA), that no further response actions for soil are warranted at Site 8.

The NJSCC are not Applicable or Relevant and Appropriate Requirements (ARARs), but rather criteria to be considered (TBC). Although the NJSCC are not promulgated standards, they were developed in accordance with New Jersey statutes which promulgate a minimum soil remediation criteria resulting in an additional cancer risk of one in one million for carcinogens and limiting the Hazard Index for any given effect to a value not exceeding one for non-carcinogens.

If the NJSCC are not met at a site, New Jersey requires that an institutional control be implemented. Engineering controls may also be required.

For Site 8, both soil samples taken at MW-17BR[0-2',2-4'] exceeded the residential NJSCC for antimony. Soil also exceeded the residential and non-residential NJSCC for arsenic in sample BW-CS02 (8-10.5') collected north of the barowell. This location, however, is at depth and would not be contacted unless digging is conducted. The elevated level of metals at Site 8 are not impacting groundwater, since metals in groundwater do not exceed New Jersey groundwater quality standards. Therefore, institutional controls in the form of a Declaration of Environmental Restriction (DER) will be prepared to provide notice of the contamination remaining at the property, the restrictions that apply, and any other institutional and/or engineering controls required. The DER will accompany the property through any deed transfer.

In making this decision, the Navy's opinion is that the selected remedy complies procedurally and substantively with New Jersey rules and regulations and all applicable or relevant and appropriate requirements of the Installation Restoration Program, CERCLA Section 120, the NCP, and associated laws, guidelines, rules, regulations, and criteria.

5.0 COMMUNITY INVOLVEMENT

The Community Relations Plan (CRP) for NAWCADTRN (September 1995) establishes procedures to guide the flow of information from the Navy to federal, state, and local government officials, interested groups, and residents relative to environmental investigation and clean-up activities at NAWCADTRN. The CRP is intended to keep local government officials and residents informed of environmental activities conducted at the facility and provide opportunities for involvement in the investigation and clean-up process. The CRP as well as all other documents used to prepare this document are contained in the facility's Administrative Record, located in the Environmental Office at NAWCADTRN. A document repository has also been established at the Mercer County Library, 61 Scotch Road, Ewing, NJ to provide a place for public review of NAWCADTRN environmental documents.

A public notice indicating that the Decision Document for Site 8 soil is available for public review in the document repository at the Mercer County Library was placed in the Trenton Times and Trentonian on 23 and 30 August 1998. The announcement also identified the time and location of the meeting and specified a public comment period, and the address to which public comments could be sent. Public comments for the Site 8 decision were accepted from 2 September to 2 October 1998. During this time comments relative to the decision for Site 8 soil could be submitted to the Base Environmental Coordinator: Ken Smith, PO Box 7176, Ewing, NJ 08628-0176. The following Responsiveness Summary addresses comments that were received.

A public meeting to present the decision for Site 8 soil was held on 9 September 1998 at 8:00 a.m. at the Ewing Township Municipal Building, 2 Municipal Drive, Ewing, NJ. At this meeting representatives from the Navy, USEPA and NJDEP were available to answer questions concerning Site 8 soil. The attendance list from the Public Meeting is provided as Appendix A.

6.0 RESPONSIVENESS SUMMARY

The purpose of this section is to review public response to the Draft Decision Document for Site 8 soil. It also documents the Navy's answers to any verbal or written comments raised during the public meeting or public comment period.

Written Comments

During the public comment period from 2 September through 2 October 1998 no written comments were received from the public pertaining to Site 8 soil.

Public Meeting Comments

During the Public Meeting, the following question was asked.

Question: What was the barometric well filled with when it was decommissioned?

Answer: Crushed stone (No. 10 screenings) was used as a backfill material. An 8 inch thick concrete cap was poured on top of the crushed stone.

7.0 REFERENCES

Battelle, August 18, 1998, Technical Report, Free Product Recovery Testing at Environmental Baseline Survey Area of Concern 72, Naval Air Warfare Center, Aircraft Division, Trenton, NJ.

EA Engineering, Science, and Technology, Inc., April 1998, Installation Restoration Program Site 1 Source Sampling Report for Naval Air Warfare Center, Aircraft Division, Trenton, NJ.

EA Engineering, Science, and Technology, Inc., January 1998, Draft Environmental Baseline Survey (EBS) Phase II Supplemental Findings Report, Naval Air Warfare Center, Aircraft Division, Trenton, NJ.

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EA Engineering, Science, and Technology, Inc., January 1996, Final Basewide Area Classification Report, Naval Air Warfare Center, Aircraft Division, Trenton, NJ.

Foster Wheeler Environmental Corporation, July 29, 1997, Work Plan for the Barometric Well Decommissioning, Naval Air Warfare Center, Aircraft Division, Trenton, NJ.

Foster Wheeler Environmental Corporation, June 5, 1998, Barometric Well Decommissioning Post-Remediation Letter Report, Naval Air Warfare Center, Aircraft Division, Trenton, NJ.

Foster Wheeler Environmental Corporation, April 7, 1998, Soil Sampling for Transite Pipe Removal, Naval Air Warfare Center, Aircraft Division, Trenton, NJ (Memorandum from Meg Watson to Dan Kopcow).

IT Corporation, November 1989, Final Site Inspection Report: Naval Air Propulsion Center, Navy Assessment and Control of Installation Pollutants Program, 3 vols., Naval Air Propulsion Center, Trenton, NJ.

IT Corporation, July 1994, Draft Remedial Investigation Report; Installation Restoration Program (6 vols.), Naval Air Warfare Center, Aircraft Division, Trenton, NJ.

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Rogers, Golden and Halpern, 1986, Initial Assessment Study/Preliminary Assessment, Naval Air Propulsion Center, Trenton, NJ.

8.0 ACRONYMS

AOC - Area of Concern
ARARs - Applicable or Relevant and Appropriate Requirements
B/N - Base Neutrals
BRAC - Base Realignment and Closure Act
BTEX - benzene, toluene, ethylbenzene, xylenes
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act
CERFA - Community Environmental Response Facilitation Act
CRP - Community Relations Plan
DCE - Dichloroethene
DER - Declaration of Environmental Restriction
EBS - Environmental Baseline Survey
EPA - U.S. Environmental Protection Agency
IAS - Initial Assessment Study
IR - Installation Restoration
NAPC - Naval Air Propulsion Center
NAWCADTRN - Naval Air Warfare Center, Aircraft Division, Trenton
NCP - 40 CFR 300, National Oil and Hazardous Substances Contingency Plan
NEESA - Naval Energy and Environmental Support Activity
NJDEP - New Jersey Department of Environmental Protection
NJSCC - New Jersey Soil Clean-up Criteria
PCE - Tetrachloroethene
RI - Remedial Investigation
SARA - Superfund Amendments and Reauthorization Act
SI - Site Investigation Study
SVA - Soil Vapor Assessment
SVOC - Semi-Volatile Organic Compound
TBC - To Be Considered
TCE - Trichloroethene
TPH - Total Petroleum Hydrocarbons
UST - Underground Storage Tank
VOC - Volatile Organic Compound

Appendix A

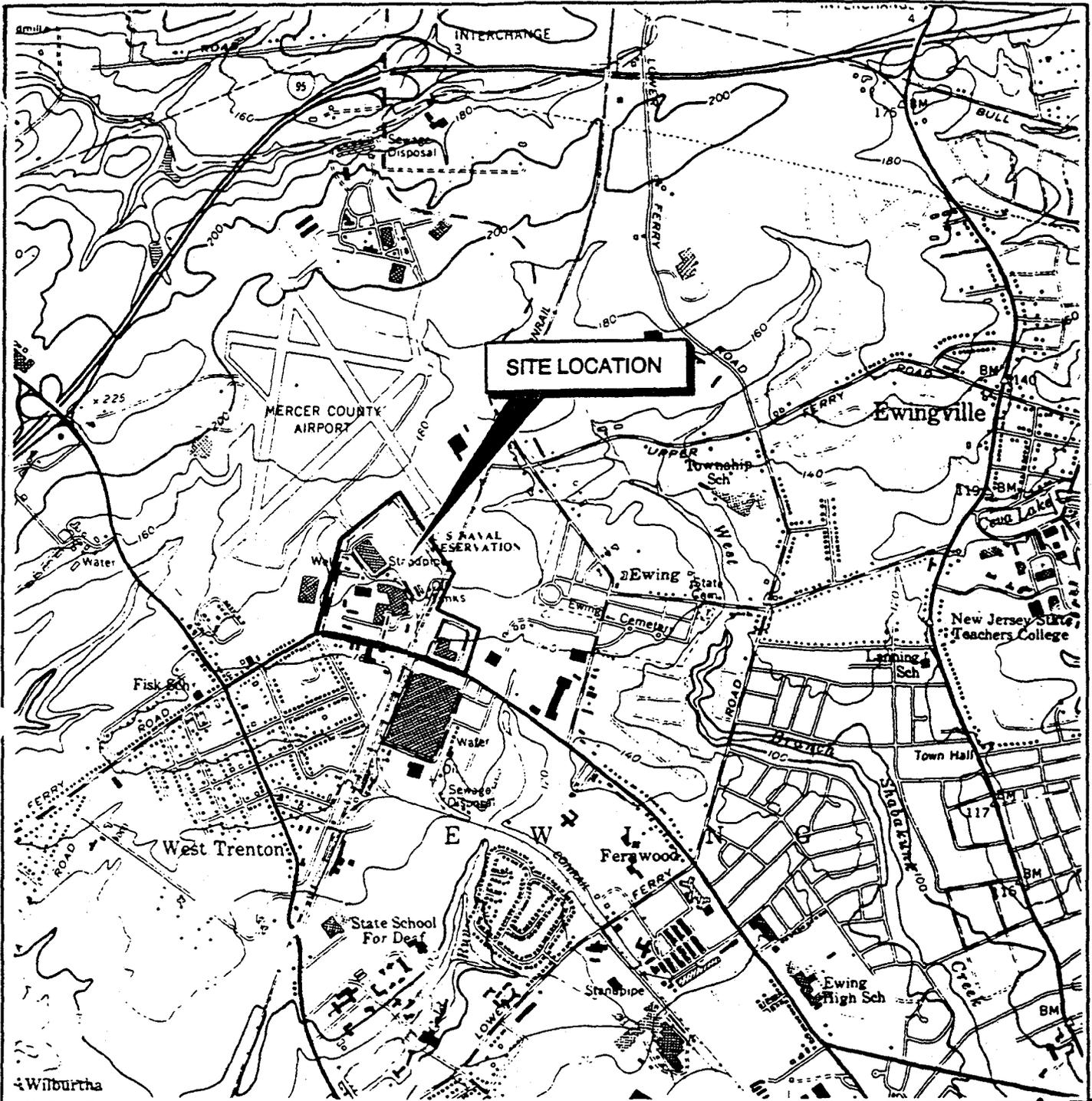
Public Meeting Attendance

MEETING ATTENDANCE RECORD

SUBJECT: PUBLIC MEETING FOR IRP SITE #8 and
 RESTORATION ADVISORY BOARD MEETING
 EWING TOWNSHIP, MERCER COUNTY, NEW JERSEY

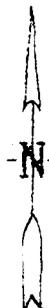
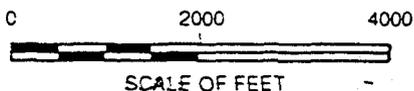
DATE: 8:00 AM 9 SEPT 98

NAME	ORGANIZATION	PHONE	FAX
Ken Smith	NAWCADTRN, BEC		
Mike Figura	NAES Lakehurst		
JEFF DALE	NORTH DIV		
Robert Gordon	Ewing Twp RAB		
JOHN H. HARRISON	EWING RAB		
William Lawler	US EPA		
STEVE FELDMAN	EA ENGINEERING		
RON HARWOOD	EA ENGINEERING		
Vince Orwin	RAB CO CHAIR		
Barry Barclay	NAWC		
DAVID WARREN	GENERAL MOTORS		
Donna L Griffin	NJDEP		
BILL HANRAHAN	NJDEP / BGWPA		
ED BOYLE	NORTH DIV		
Chester Cohen	EWING		



SOURCE

USGS 7 5 Minute Series Topographic Map,
 Quadrangle Pennington New Jersey
 Photorevised 1981



REV No	DATE	DESCRIPTION OF REVISION	REV BY	ENGR	CHKD BY	APPVD BY
PROJECT MANAGER		B VOGEL	DRAWN BY		T MARTOS	DATE 4-8-94



FIGURE 1
 REGIONAL SITE LOCATION MAP
 NAVAL AIR WARFARE CENTER
 AIRCRAFT DIVISION TRENTON, NEW JERSEY
 Prepared for:
 NAVAL FACILITIES ENGINEERING COMMAND
 NORTHERN DIVISION
 LESTER, PENNSYLVANIA

PROJECT No	FILE No	CHKD	DRAWING NUMBER	REV No
529658	APR-94	ENGR	NAWC-23 P-1	
		APPVD		

NAWC-23 (10 A) 1 4/94 1 M

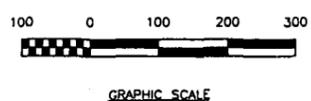
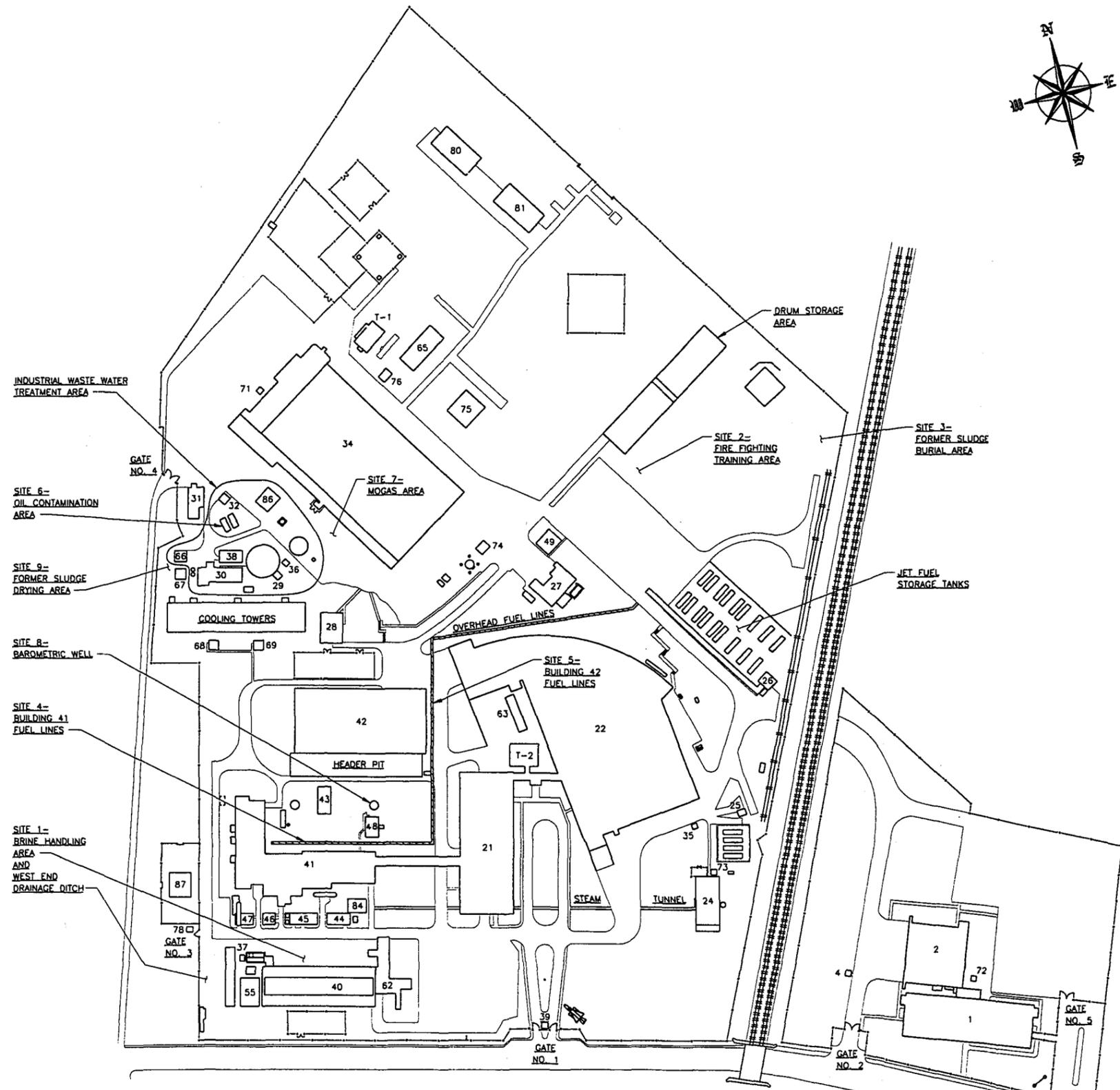
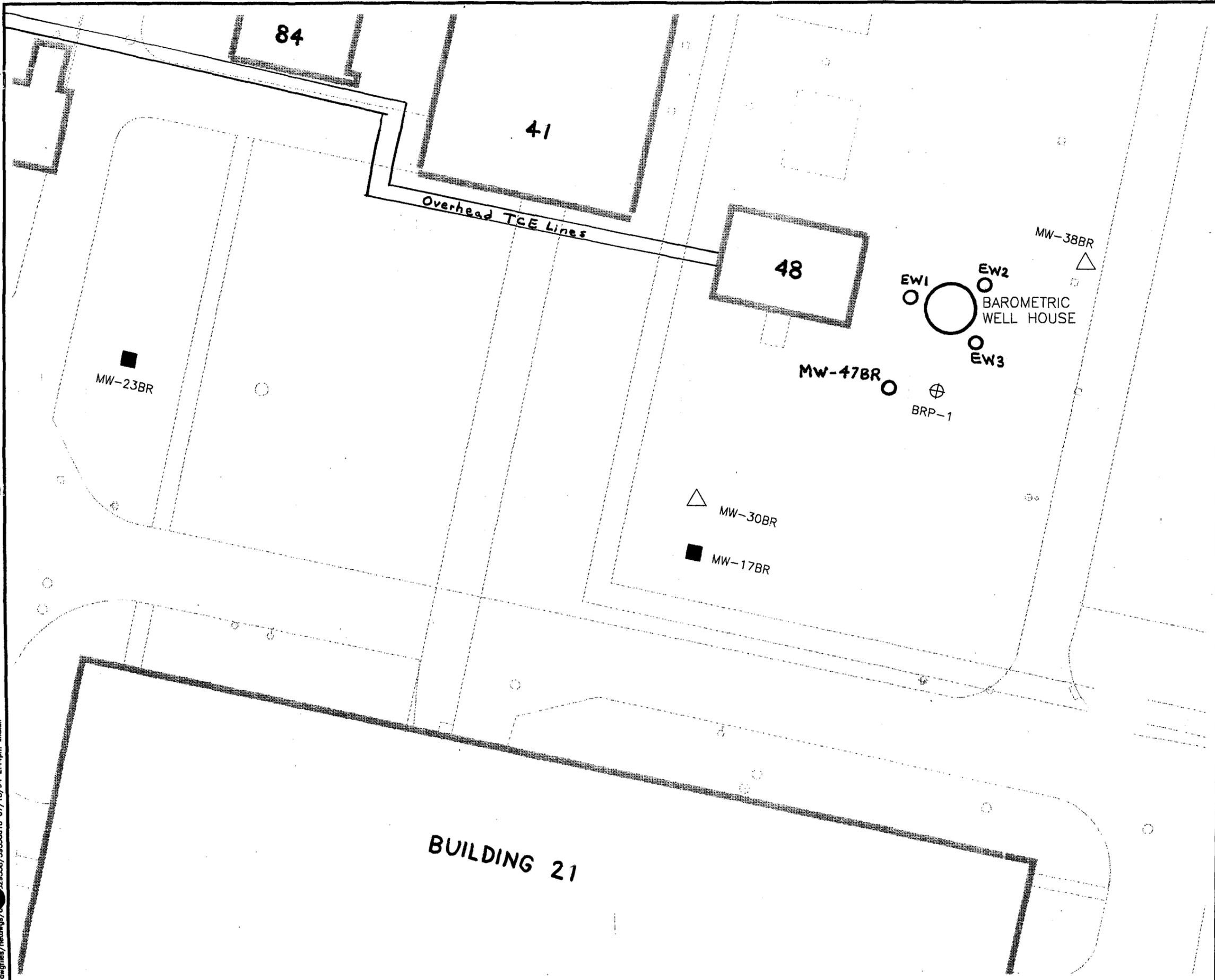


FIGURE 2

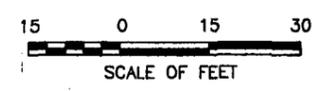
ZONE	LTR	DESCRIPTION	DATE	APPROVED
REVISIONS				
P.W. DWG. NO. 59000		DEPARTMENT OF THE NAVY, NAVAL FACILITIES ENGINEERING COMMAND		
MECH. CIVIL		NAVAL AIR WARFARE CENTER, AIRCRAFT DIVISION		
ELEC. ARCH.		TRENTON, NEW JERSEY		
DRAWN: MRM DATE: 9-25-97		STATION MAP		
S.M. F.C.		SHOWING		
PROJ. MAN. SUPV.		INSTALLATION RESTORATION		
D.P.W.O.		SITE LOCATIONS		
APPROVED	DATE	SIZE	CODE IDENT. NO.	NAVFAC. DRAWING NO.
PUBLIC WORKS OFFICER		F	80091	2
SATISFACTORY TO				CONTR. CONTR. NO.
				SCALE: GRAPHIC SPEC. SHEET 1 OF 1



- LEGEND:**
- ⊕ BEDROCK MONITORING WELL (INSTALLED 1990)
 - PHASE I BEDROCK MONITORING WELL (INSTALLED 1992)
 - △ PHASE II BEDROCK WELL (INSTALLED 1993)

NOTE:
 MW-38BR SAMPLING RESULTS ADDRESSED IN SITE 1 (CH.6).

- SOURCES:**
1. WAYNE W. BURGETT, PLS, PP
 PLAN OF SURVEY-NAVAL AIR WARFARE CENTER
 TRENTON, NEW JERSEY.
 2. SITE PLAN AND SITE LOCATION MAP
 NAVAL AIR PROPULSION CENTER, TRENTON,
 NEW JERSEY, NAVFAC NORTHDIV
 PHILA., PA.



0	6/10/94	A TO B SHEET CHANGE	M.S.M.			
REV. NO.	DATE	DESCRIPTION OF REVISION	REV. BY	ENG	CHKD BY	APPVD BY
		B. VOGEL		DNB		DATE: 5/5/94

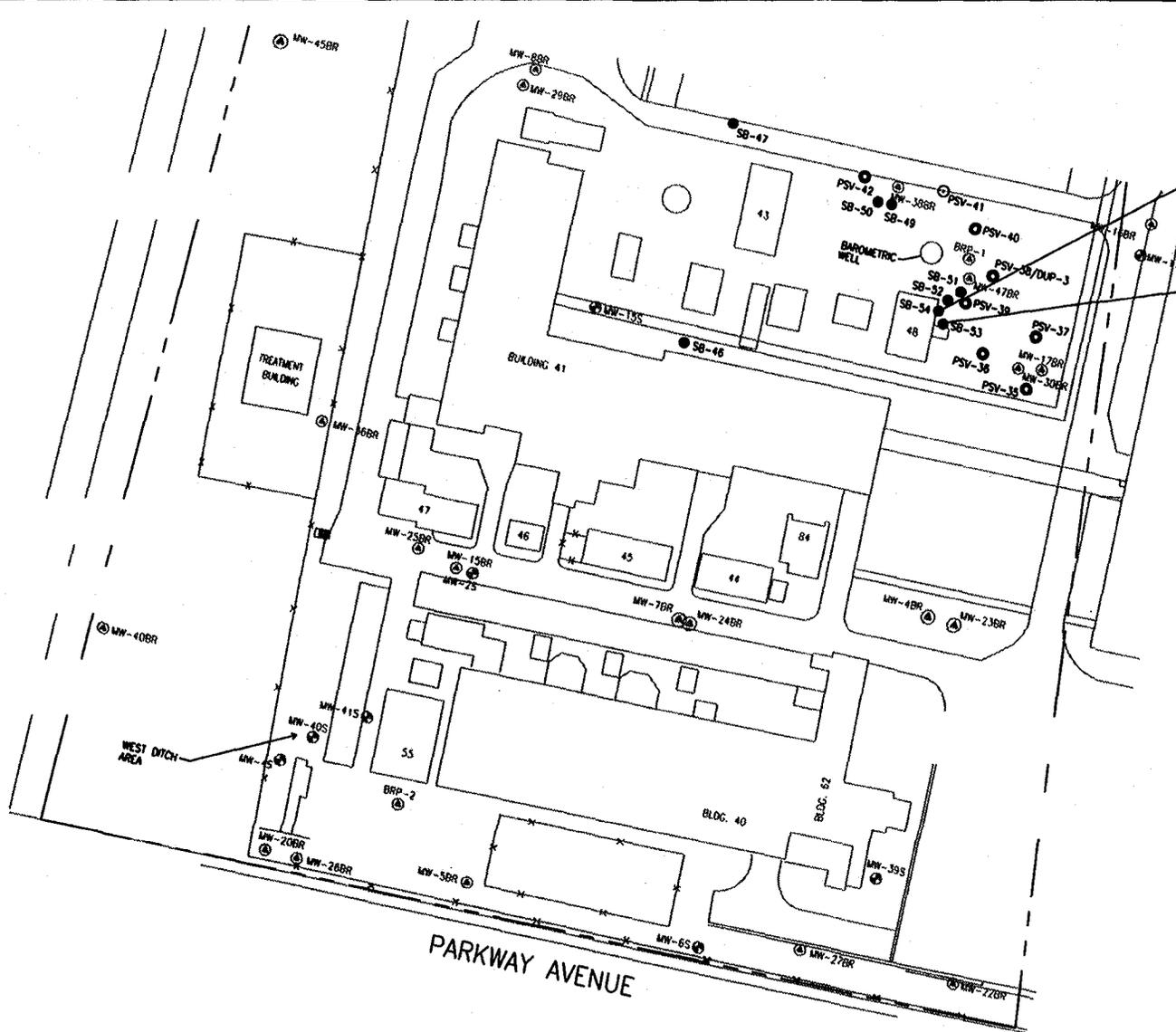


FIGURE 3
 SITE 8-BAROMETRIC WELL
 NAVAL AIR WARFARE CENTER
 AIRCRAFT DIVISION
 TRENTON, NEW JERSEY

Prepared For:
 NAVAL FACILITIES ENGINEERING COMMAND
 NORTHERN DIVISION
 LESTER, PENNSYLVANIA

PROJECT NO.	FILE NO.	CHK'D	DRAWING NUMBER	REV. NO.
529538	A10	ENG.	529538-A10	0
		APPVD.		

/dwgfiles/netdwgs/29538/59538010 07/18/94 2:44pm M.S.M.



SB-54 (3.0-3.5 ft bgs)		CRITERIA EXCEEDED
TCE	8,400 ug/kg	IGW
1,2-DCE, Total	2,700 ug/kg	IGW

SB-53 (4.5-5.0 ft bgs)		CRITERIA EXCEEDED
TCE	1,700 ug/kg	IGW

- LEGEND**
- ⊕ OVERBURDEN MONITORING WELL
 - ⊙ BEDROCK MONITORING WELL
 - ⊙ PASSIVE SOIL VAPOR SAMPLE LOCATION
 - ⊙ PASSIVE SOIL VAPOR SAMPLE AND SOIL BORING SAMPLE LOCATION
 - SOIL BORING SAMPLE LOCATION
 - IGW NJDEP IMPACT TO GROUND WATER CRITERIA



FOSTER WHEELER ENVIRONMENTAL CORPORATION

BY MM DATE _____ SHEET _____ OF _____
 CHKD. BY _____ DATE _____ OFS NO. _____ DEPT. NO. _____
 CLIENT North Dn
 PROJECT Transite Pipe Excavation
 SUBJECT _____

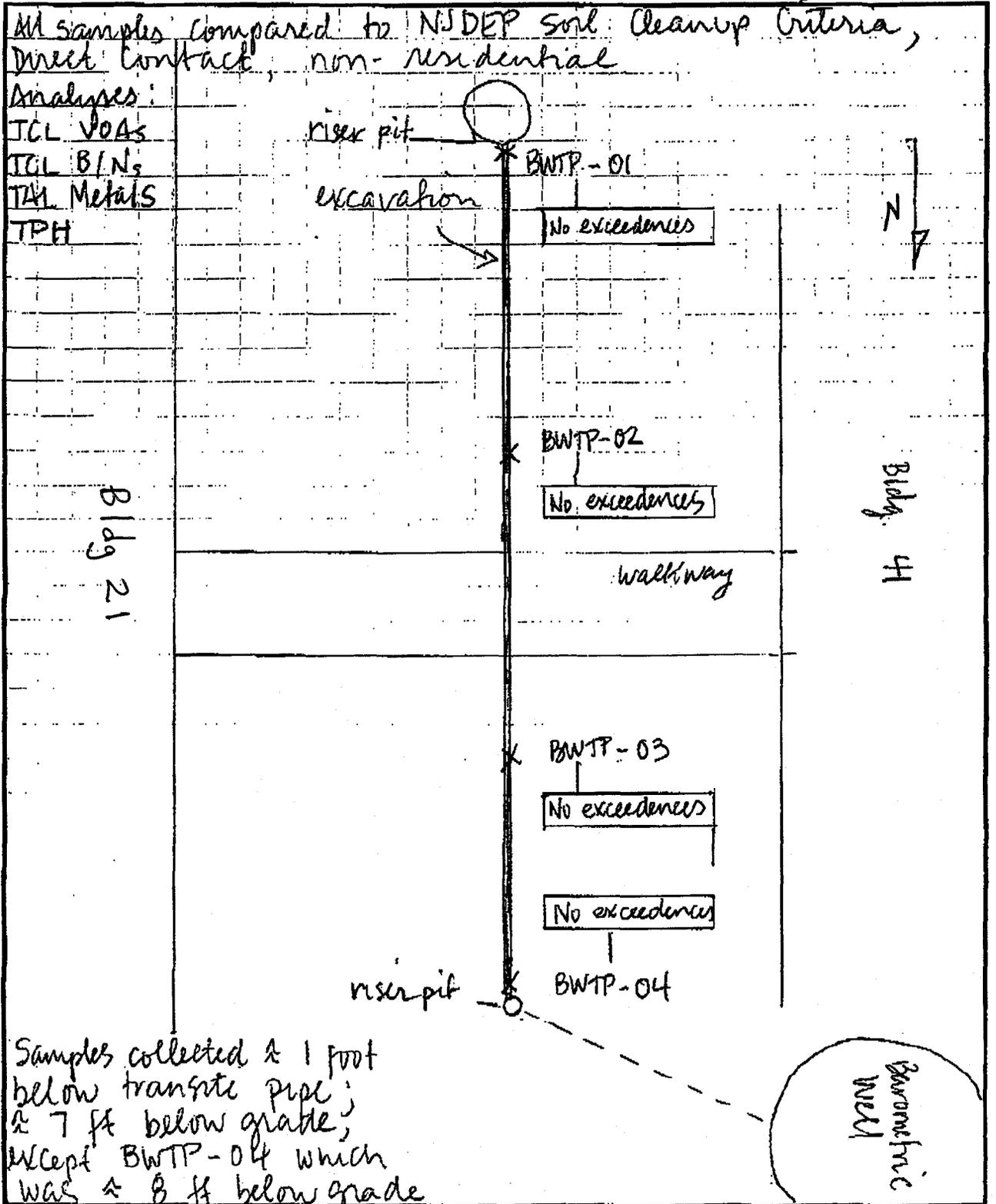


Figure 7

BY _____ DATE _____

SHEET _____ OF _____

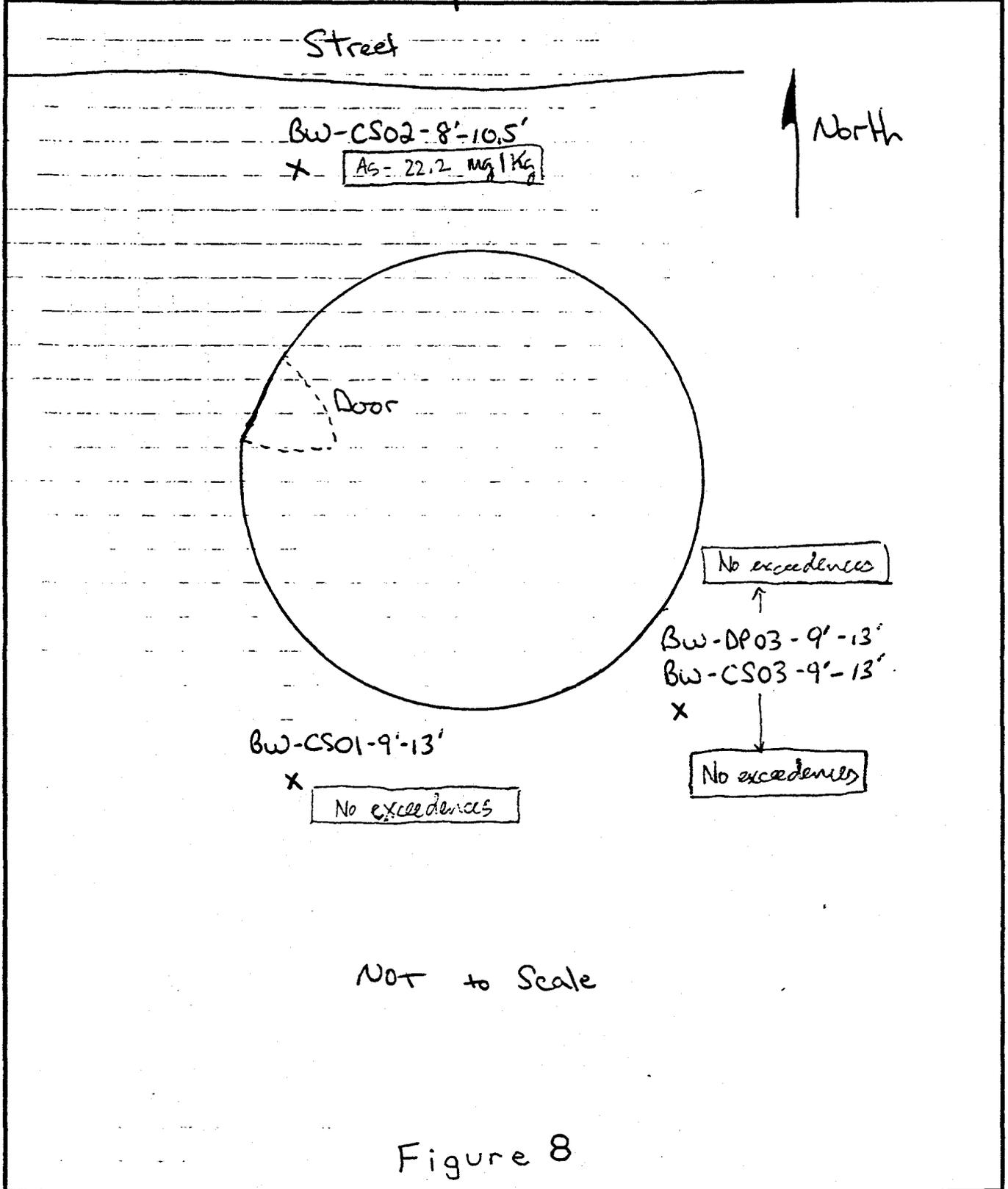
CHKD. BY _____ DATE _____

OFS NO. _____ DEPT. NO. _____

CLIENT North DIV

PROJECT NAWE Trenton

SUBJECT Barometric Well Sample Results



NOT to Scale

Figure 8