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TRANSMITTAL LETTER FOR EVALUATION OF BASELINE ENVIRONMENTAL CONDITIONS
CNC CHARLESTON SC
05/24/1996
GENERAL ENGINEERING LABORATORIES

GENERAL ENGINEERING LABORATORIES
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OPTIONAL FORM 99 (7-90) This concerns CPW doing environmental testing prior to lease. Charleston Public Works
FAX TRANSMITTAL # of pages ▶ 8

To Paul Bergstrand	From D L Fontenot
Dept./Agency SCDHEC	Phone # 803 820-5607
Fax # 896-4002	Fax # 803 820-5663

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION
Need to your feedback by 30 May 96.

May 24, 1996

Richard L. Tapp, Jr., Esquire
McNair Law Firm, P.A.
140 East Bay Street
Charleston, South Carolina 29402

AP #10551 CI — LO — Paul Issued MW Approval 6/4/96

Re: Evaluation of Baseline Environmental Conditions
Proposed CPW Lease Areas
Naval Base Charleston
North Charleston, South Carolina

Dear Mr. Tapp:

We appreciate the opportunity to submit this workplan to determine baseline environmental conditions at the referenced sites. The purpose of this project is to determine the presence or absence of impact to soils and groundwater on the proposed lease sites resulting from former operations on the subject and adjacent sites. We have also included necessary testing to evaluate potential environmental liabilities associated with the buildings and equipment. Presented below is a summary of the project information, and a proposed scope of services.

PROJECT INFORMATION

The Naval Base Charleston was developed and used as a naval shipyard from the early 1900s until April 1996. During its use as a shipyard, a wide variety of industrial activities were conducted at the base. These activities resulted in releases of constituents of potential concern (COPC) at numerous locations on the base. The Navy is presently evaluating the extent and severity of environmental degradation to the base as a whole.

Although its evaluation of environmental conditions is not complete, the Navy has begun to lease portions of the base property for redevelopment. The Commissioners of Public Works of the City of Charleston South Carolina (CPW) intend to lease two tracts for use as vehicle maintenance and equipment/materials storage facilities. The locations of the two tracts are shown on Figures 1 and 2.

Figure 1 shows the parcel located on Hobson Avenue, which includes Buildings 122, 240, 242, 1172, and 1175. The parcel includes facilities formerly used by the Navy for vehicle and equipment maintenance and storage. Figure 2 shows the proposed lease tract on Bainbridge Avenue. This tract includes building 1838 and was formerly used by the Navy for materials storage.

To prepare this workplan, General Engineering Laboratories, Inc. (GEL) reviewed readily available information concerning these parcels. Based on this review, we identified potential sources of environmental degradation to each parcel. The Scope of Services presented below includes all of the intrusive evaluations we believe will be necessary to conclusively determine the presence or absence of impact from the identified former on-site and off-site potential sources. We are continuing to gather additional existing data on site

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(803) 55

Post-it™ Fax Note 7671	Date 4 June 96	# of pages ▶ 18
To Tim Matthews	From Paul Bergstrand	
Co./Dept.	Co.	
Phone #	Phone # 6-4016	
Fax #	Fax #	

JUN 04 '96 08:33AM SC DHEC BSHWM P.1

conditions, which may allow us to forego some of the planned sampling activities. Furthermore, should you determine that a less thorough evaluation will meet CPW's needs, we can reduce the Scope of Work by eliminating some of the proposed sample locations or reducing the amount of analyses.

SCOPE OF SERVICES

To evaluate the baseline environmental conditions of the proposed lease parcels, GEL will install monitoring wells and collect groundwater, soil, asbestos, lead-based paint (LBP), and poly-chlorinated biphenyls (PCBs) wipe samples. GEL's staff includes numerous South Carolina Registered Professional Engineers, Geologists, and Certified Well Drillers. We also have an experienced staff of individuals who have received all appropriate certifications related to the collection of asbestos and LBP samples. All individuals who will perform work on the site have received 40-hour Occupational Safety and Health Administration training and are current with their annual 8-hour updates. All monitoring well installation procedures and sample collection procedures, including decontamination methods, will be performed in accordance with accepted Environmental Protection Agency (EPA) protocols and Department of Health and Environmental Control (DHEC) regulations.

To collect the necessary samples, we will perform the following tasks:

Task 1: Submit a request for the installation of on site groundwater monitoring wells to DHEC as required by South Carolina Well Standards and Regulations, 61-71 – All of the wells will be installed into the uppermost aquifer underlying the site by a Certified Well Driller under the supervision of an on-site geologist. As part of the well installation request, we will identify the specific well locations on a scaled site map. We will review available site geologic data and care will be taken to not puncture any aquitards underlying the site. To insure that underground utilities are not cut and that no personnel are injured, we assume that a representative of the Redevelopment Authority will be available to mark all underground utilities and approve all well/soil boring locations prior to initiation of drilling.

The wells will be permanent and constructed of 2-inch PVC casing and screen. The wells can be completed either at grade or above grade, depending on CPW's preference. Use of permanent wells, rather than temporary wells or direct push technologies, is planned so that confirmatory samples can be collected by GEL or Navy personnel. Furthermore, if desired by CPW or the Navy, periodic sampling of the wells can be performed in the future to determine if groundwater quality changes over time. Consistent with regulatory agency protocols, the wells will be sampled no sooner than two days after installation and development. All soil cuttings and purge water which display physical indications of impact will be placed in 55-gallon drums, labeled, and left on site pending disposal.

Task 2: Install groundwater monitoring wells and collect samples of the various matrixes noted above – We will initiate collection of all samples, except groundwater, immediately upon approval of this workplan. Groundwater samples will not be collected until after receipt of regulatory agency approval for installation of the wells. Following is a summary of the potential on-site and off-site sources of environmental impact we have identified and our planned investigations.

The potential on-site sources of environmental impact are discussed below. The planned evaluations of these sources are discussed below and summarized on Table 1, which identifies the anticipated soil boring and monitoring well installation activities as well as a summary of the laboratory analysis planned for each sample.

Table 1
Summary of Subsurface Investigation Activities

Investigation Area	Potential Source of Impacts	Proposed Scope of Work	Analytical Parameters
Building 1175	Lead Based Paint Asbestos Containing Materials Fill Material Off-site ASTs	Lead Survey Asbestos Survey Install 2 soil borings, check for fill 2 wells between building and railroad tracks	Lead Asbestos TPH, TCL-V(only if suspect fill is identified) TPH, TCL-V, TCL-BN, P/H
Service Station	Underground Fuel Storage Tanks	11 soil samples 1 well	BTEX, Nap, PAH BTEX, Nap, PAH, MTBE
Building 249	Oil/Water Separator Oil/Water Separator	Sample 3 existing wells Install 2 wells & sample	TPH, TCL-V, TCL-BN, RCRA Metals, P/H TPH, TCL-V, TCL-BN, RCRA Metals, P/H
Building 122	Lead Based Paint Asbestos Containing Materials	Lead Survey Asbestos Survey	Lead Asbestos
Building 242	Floor Drains Waste Oil Collections 3 Hydraulic Lifts Oil/Water Separator Wash Racks	4 soil borings around periphery of building 4 soil borings inside building 1 soil boring per lift = 3 1 well 1 well	TPH, TCL-V TPH, TCL-V TPH, TCL-V TPH, TCL-V TPH, TCL-V
Building 1172	Lead Based Paint Asbestos Containing Materials Old equipment Oil Spill Run-off areas	Lead Survey Asbestos Survey 15 PCB swipes 2 wells north of building 4 soil borings	Lead Asbestos PCBs TPH, TCL-V, TCL-BN, P/H PCBs
11th Street	Off-site industrial activities and galvanizing operations, including above ground storage tanks	2 wells along southern property near the southwest corner	TPH, TCL-V, TCL-BN, RCRA Metals, P/H
Former building between 242 and 255	Former train repair and maintenance activities	2 wells east of 242 1 well north of 255	TPH, TCL-V, TCL-BN, RCRA Metals, P/H TPH, TCL-V, TCL-BN, RCRA Metals, P/H
Building 1838 (Lay Down Area)	Material storage	Sample 2 existing shallow monitoring wells Install 3 wells along periphery Install 5 soil borings	TCL-V, TCL-B/N, TCL-AC, TCL-P/P, RCRA metals TCL-V, TCL-B/N, TCL-AC, TCL-P/P, RCRA metals TCL-V, TCL-B/N, TCL-AC, TCL-P/P, RCRA metals

Notes:
TCL-V = Target Compound List-Volatile Organic Compounds (EPA Method 8260)
TCL-BN = Target Compound List Base/Neutral Extractable Compounds (EPA Method 8270)
TCL-P/P = Target Compound List - Pesticides/PCB Compounds (EPA Method 8280)
TPH = Total Petroleum Hydrocarbons (EPA Method 9071)
BTEX = Benzene, toluene, ethyl benzene, total xylenes (EPA Method 8020)
Nap = Naphthalene (EPA Method 8020)
MTBE = Methyl tert-butyl ether (EPA Method 8020)
RCRA metals = Arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver (EPA Method 6010A)
P/H = Pesticides and Herbicides (EPA Method 8080 and 8150)
PCB = Poly-chlorinated biphenyls

• Building 1175 – Building 1175 is a single story structure, which was built in 1942. This facility has mainly been used as a maintenance shop and for storage of tires, oil dry, forklifts, concrete, and petroleum products. It was originally built and used during World War II as a bath house/restroom for base personnel. Due to the age of the building, asbestos containing materials (ACMs) and LBP are potentially present in the structure. In fact, the exterior paint is peeling badly such that painting over the existing paint without scraping or sanding would likely be impractical. Therefore, a LBP evaluation of this building may be particularly important relative to future maintenance costs. To perform the ACM and LBP surveys, we will need access to all rooms within the structure. All ACM surveys will be conducted in accordance with the Asbestos Hazardous Emergency Response Act (AHERA) guidelines.

The floor of the interior of the building is badly warped due to significant settling of the structure. It is not clear if this settling is a result of poor site preparation/poor construction of the original structure or if the structure is built on fill material. Therefore, we have included installation of two soil borings to evaluate the soil quality. If suspect fill materials are encountered, samples will be analyzed for the parameters specified on Table 1. The borings will be installed along the southeastern perimeter of the building where settling is most pronounced.

• On-site service station – An underground storage tank (UST) system consisting of two 10,000-gallon unleaded gasoline USTs and one 10,000-gallon diesel UST is present west of Building 1175 as shown on Figure 1. Three dispenser islands are also present less than 30 feet from the USTs. This system was installed in the late 1930s and will be transferred to CPW as part of the lease; therefore, a "Change-in-Ownership" assessment will be performed in accordance with the South Carolina Underground Storage Tank Regulations. The assessment will include the installation and sampling of 11 soil borings and one groundwater monitoring well.

• Building 240 – Building 240 was built in 1984. The facility is used as a wash area for vehicles and is constructed with a concrete slab floor and a sheet metal roof with open sides. Two floor drains are present in the building for the collection of wastewater. Two oil/water separators are located in the vicinity of building 240. These separators received effluent from a wash area as well as discharges of a variety of waste materials from Building 242 as discussed below. A 5,000-gallon waste oil UST is present in conjunction with one of the oil/water separators. The groundwater underlying this UST/separator was previously assessed by the installation of three groundwater monitoring wells. To assess this area, we will sample these three existing wells, and install and sample two new wells near the second separator. We will need to obtain access to the on-site wells from the Navy during sampling activities. Due to the variety of waste products potentially discharged to the separators and industrial activities previously conducted on nearby sites as discussed below, these samples will be analyzed for a wide variety of COPC.

• Building 122 – Building 122 was constructed in 1945 as a single story structure. Historically, the building has been used for grounds maintenance. Due to the age of the building and CPW's tentative plan to gut its interior, an evaluation of ACMs and LBP is recommended.

• Building 242 – Building 242 was constructed in 1987 and has been used as a vehicle and equipment maintenance facility. The building is constructed with a cement floor, concrete block interior walls, and metal siding and roof. Due to the relatively

recent construction of this building, ACMs and LBP are not a concern. Floor drains are present along the length of the building. These floor drains are connected via underground lines to an oil/water separator which is located near building 240. In addition, two waste oil collection drains and eight hydraulic lifts are present inside the structure. Two open wash areas for equipment cleaning are present on the eastern exterior of the building. There are drains in the center of each wash area which drain into the oil/water separator system.

To evaluate potential impact from these sources, we will install 8 soil borings at locations next to the drain systems to evaluate soil impact. We will also install a boring next to each hydraulic lift to evaluate if hydraulic oil releases have occurred. Finally, we will install one groundwater monitoring well next to the wash racks and one well next to the oil/water separator. Groundwater samples from these wells will be analyzed for the parameters shown on Table 1.

- Building 1172 – Building 1172 was constructed in 1942 and was used by the Navy as an electrical shop. Due to the age of the building, ACMs and LBP are potentially present in the structure. Although we have identified reports of a kerosene fired boiler formerly located in the structure, our review of historical drawings indicates that this may be erroneous. However, an oil release occurred in 1986 from an abandoned fuel line near the eastern end of the structure. A variety of used equipment is present in the building.

To evaluate potential impacts in the area of Building 1172, we will conduct an ACM and LBP survey. PCB wipe samples will be collected on suspect building and equipment surfaces since this building is a former electrical shop where PCB oils may have been used. Four soil samples will be collected in run-off areas immediately outside the building and tested for PCBs. Finally, two groundwater monitoring wells will be constructed north of the building to evaluate impact from the pipeline release. Table 1 shows the parameters planned for analysis of the groundwater.

- Former Train Repair Facility (Building 1169) – A train repair and maintenance facility was formerly located at the site of the current building 242. Several pits and hydraulic lifts were used in the repair and maintenance operations at this former facility. To evaluate potential impacts from this facility, we propose to install two wells east of Building 242 and one well west one Building 255, and test the wells for the analytes specified in Table 1.

GEL will also inspect the three on-site oil/water separators and associated piping to determine if cleaning of the systems is necessary.

Off-site potential sources of environmental impact in the area of the Hobson Street facilities are offsite ASTs and Industrial Activities. Approximately eight large ASTs are located south-southeast of building 1175. A galvanizing operation and other industrial operations were conducted to the east of building 1175. Industrial operations were also conducted north of building 240. Potential releases from these storage tanks and other industrial activities represent a potential source of environmental impact to the subject site. To evaluate this potential off-site source, we will install two wells near the southwestern corner of the facility. Primarily though, we will rely on data gathered from other wells installed near the property boundaries to evaluate impact from these off-site sources.

The second lease parcel includes only one building, 1838, which is a single story structure built in 1979. The area surrounding building 1838 was formerly marsh land which has been filled with a variety of materials, potentially including waste products. Since being filled, the land has been used for storage of transformers, paint, lure oil, battery acid, scrap metal, and solvents. In addition, a potassium chromate AST and several scrap tanks were previously located on the site. The site presently has two shallow and one deep groundwater monitoring wells. To obtain adequate data to evaluate baseline conditions, we will sample the two existing shallow wells, install up to three additional wells around the periphery of the site, and collect and analyze up to five shallow soil samples.

Task 3: Upon completion of all field activities and analyses, we will provide you with a verbal report of our findings and conclusions. Following your approval, we will prepare a final report of our findings. The report will document the presence or absence of environmental degradation on the parcels that CPW plans to lease.

We are assuming that you will be the ultimate recipient of the report and we will not distribute the report to any other party without prior approval from you. Additionally, all findings will be held in confidence by us and not disclosed to any person without your approval. However, as required by SC Well Standards and Regulations 61-71, groundwater analytical data, monitoring well schematics, and lithologic logs will be submitted to DHEC.

CLOSURE

If, in your judgment, the scope discussed above needs to be modified to better meet your needs, please inform us and we will adjust the scope of services accordingly. We anticipate that the report can be submitted to you within six weeks of your approval. If a quicker schedule is needed, please let us know, and we will make every effort to meet your schedule.

We appreciate the opportunity to submit this workplan and assure you we will provide you with high quality, cost effective services performed by knowledgeable and experienced personnel. If you have any questions or need additional information, please call us at (803) 769-7378.

Sincerely,

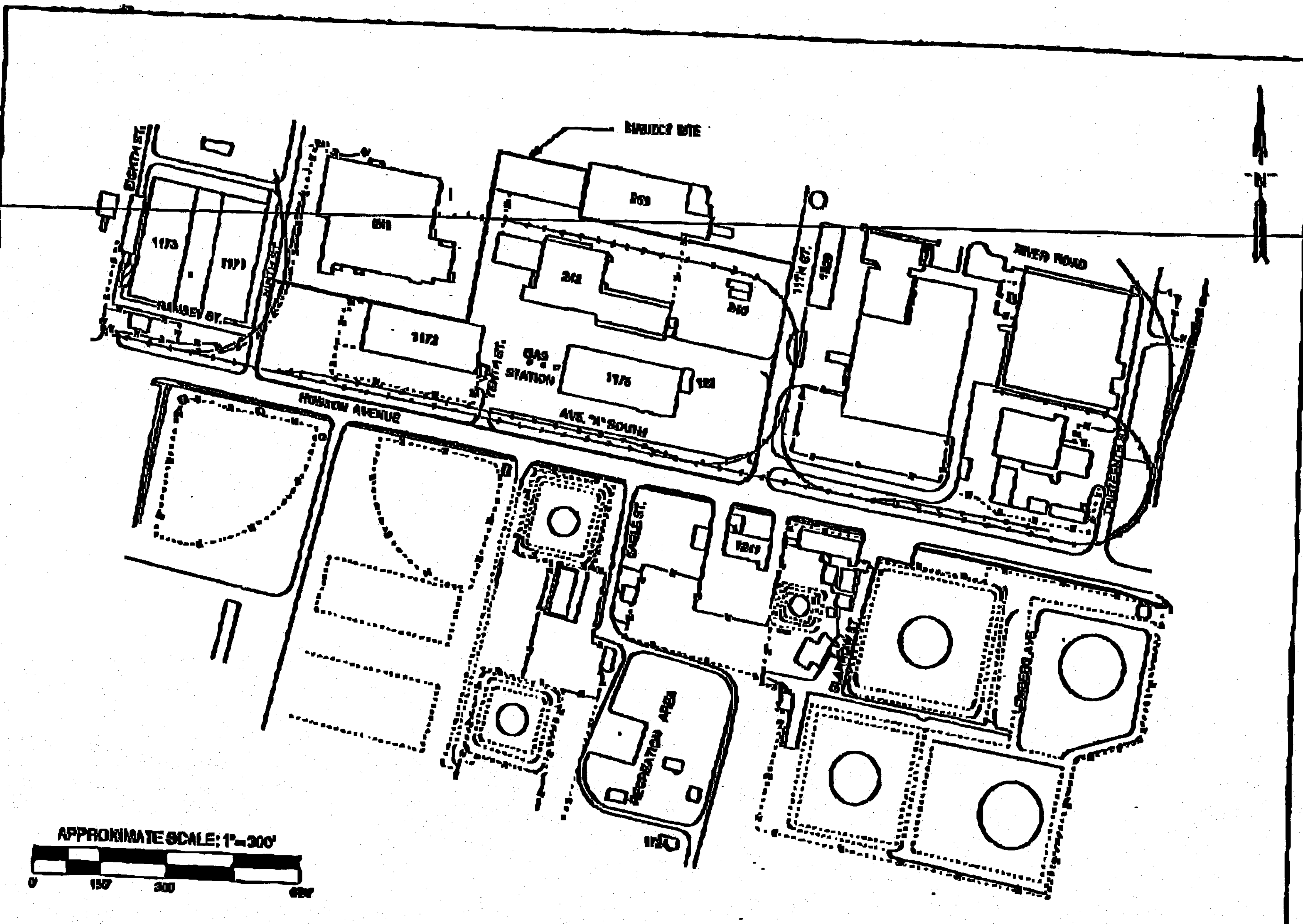
Tracy D. Jones
Hydrogeologist II

Thomas D.W. Hutto, P.G.
Senior Hydrogeologist

Approval for Execution:

Mr. Richard L. Tapp, Jr.

fc: cpwc00196.wkpln.052396



GENERAL ENGINEERING LABORATORIES, INC.

PROJECT:

SUBSURFACE INVESTIGATION WORKPLAN
10.? ACRE TRACT
CHARLESTON NAVY BASE
CHARLESTON, SOUTH CAROLINA

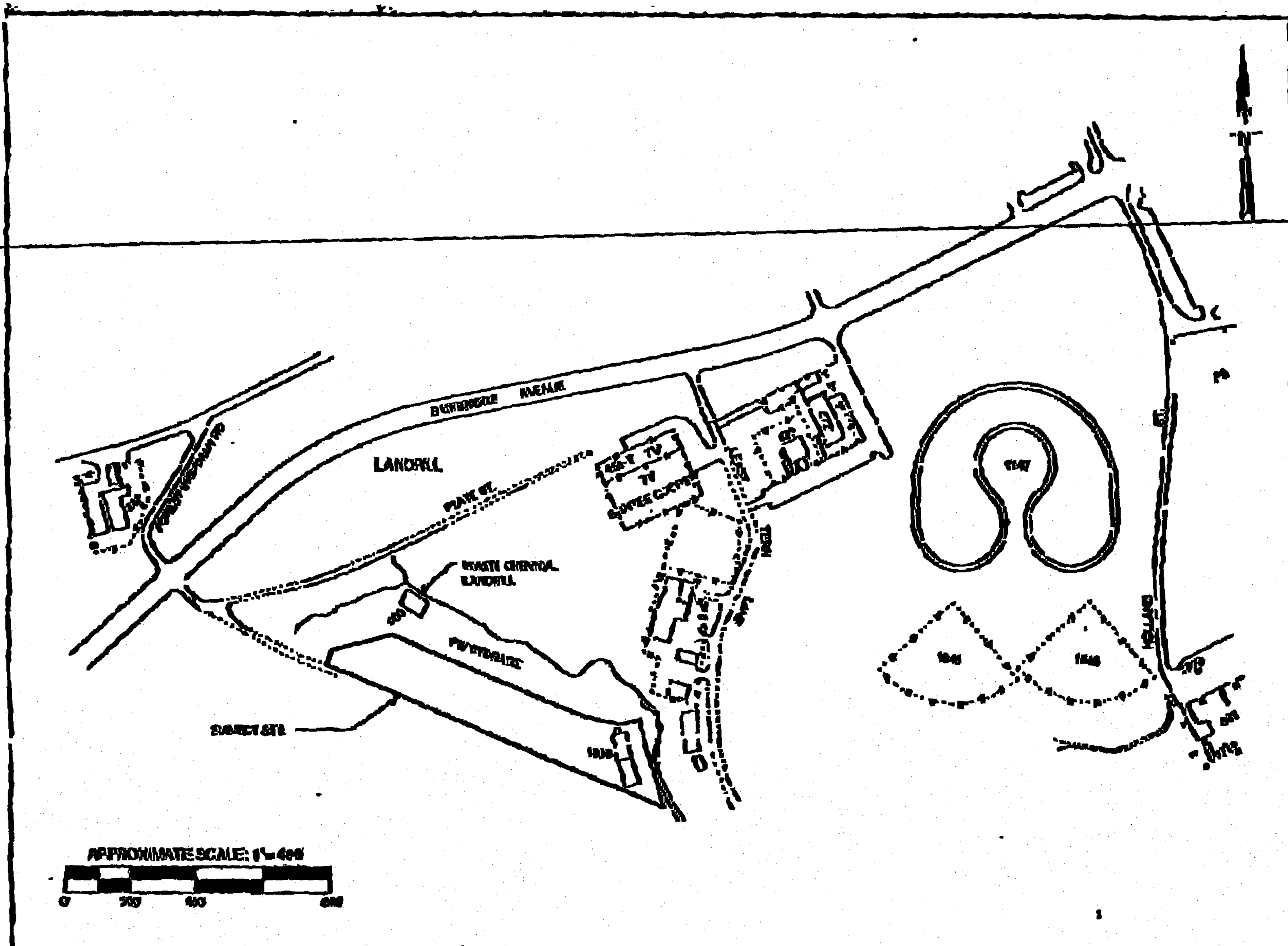
DATE: May 23, 1996

SITE MAP WITH SURROUNDING PROPERTIES

FIGURE 1

DRAWN BY: GMY

APPRV. BY: ABE



GENERAL ENGINEERING LABORATORIES, INC.

CHARLESTON, SOUTH CAROLINA

SITE MAP WITH SURROUNDING PROPERTIES

FIGURE 2

DATE:

APPRV BY: ADS

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201-1708

FAX MEMORANDUM

TO: Daryle Fontenot 803-743-9947
Southern Division
Naval Facilities Engineering Command
Code 18B1

FROM: Paul M. Bergstrand
Division of Hydrogeology
Bureau of Solid and Hazardous Waste Management

DATE: May 30, 1996

RE: Environmental Evaluation Works Proposed by General Engineering Laboratories at Naval Base Charleston Dated May 24, 1996

The following comments are provided in accordance with your request for review on the proposed environmental work by General Engineering Laboratories (GEL) at Naval Base Charleston for the Commissioner of Public Works of the City of Charleston, South Carolina. These comments are provided as a courtesy and are not to be considered as an "approval" of the independent environmental investigation. Mr. Doyle Brittain of the Environmental Protection Agency (EPA) requested that his comments (numbers 1 - 9) be incorporated with my comments (numbers 10 - 13). Since this environmental work includes the installation of a monitoring well(s) at a underground storage tanks site, I have requested that GEL fax a copy of the proposed investigation to Mr. Tim Mettlen at DHEC for his information.

1. In 1993 when the BRAC environmental investigation process started, it was recognized that major companies desiring to move to Naval Base Charleston will likely choose to conduct their own environmental assessment. Further, it was recognized that financial institutions might require such an

assessment before a loan is made or money is invested. Thus, the subject environmental assessment is the first of what we expect to be many to follow.

2. Therefore, documents as RFA and EBS, and subsequent RFI were intentionally designed so that any company conducting such an environmental assessment at Naval Base Charleston will find no surprise.

3. On Page 1 of the GEL document, the first and fifth paragraphs use the term "workplan". The fifth paragraph uses the term "Scope of Services." We consider the document to be more a "Scope of Services" than a "workplan."

4. On Page 1, paragraph 5, mention is made regarding the review of "readily available information" without identifying what that information is. The BRAC Cleanup Team (BCT) has put a lot of time and effort into developing a complete and accurate RFA and EBS for all property at Naval Base Charleston. FOSLs have been developed and approved for most of the Naval Base Charleston. The FOSLs are very thorough making use of the RFA, EBS and RFI Workplans.

   While GEL mentions the review of "readily available information," we believe that such information should be specifically identified. Further, we suggest that the results of the review be summarized and the benefit to be gained by GEL doing an environmental assessment specifically stated.

5. Page 2 refers to sampling and analysis. It refers to groundwater monitoring well installation. Yet, no mention is made regarding the use of EPA approved sampling and analysis procedures, or of EPA and SCDHEC approved laboratories. Please note that there is no requirement for the use of EPA approved sampling and analysis procedures or laboratories unless the data are to be used by EPA for decision making purposes. If so, there is.

   Mention is made of the installation of permanent groundwater monitoring wells, but no mention is made regarding disposition of the wells after use. This needs to be stated.

6. On page 2, Task 1, mention is made that "cuttings and purge water which display physical indications of impact will be placed in 55-gallon drums, labeled, and left on site pending disposal." Please note that regulations commonly referred to as "Land Disposal Restrictions" apply also to environmental media which do not "display physical indications of impact."

7. Table 1 identifies "Investigation Areas." No mention is made of hazardous waste sites located at or near these investigation areas. These sites are well documented in the RFA, EBS, RFI Workplans, and FOSLs. Are these sites of interest to GEL?

8. On page 4, Building 240, mention is made of GEL using existing groundwater monitoring wells. It is very important that Naval Base Charleston preserve the integrity of the existing wells by approving in advance the sampling procedures to be used and being present during all sampling.

9. Finally, the Naval Base Charleston BCT has been very thorough in identifying potential areas of contamination, and in investigating those areas. We intended to be equally thorough in environmental cleanup. As long as people realize that we are not through with this process, we welcome potential lessees conducting their own environmental assessment.

10. This environmental investigation is an agreement between the Naval Base Charleston and the interested party. It is suggested the BCT develop guidelines for future independent environmental assessments of this type that they may proceed without unnecessary delays.

11. This office requests early notification if monitoring wells are anticipated as part of an independent environmental assessment. Furthermore, monitoring well ownership, installation quality standards, numbering, maintenance, sampling availability, disclosure of results, and closure responsibility should be clearly defined before the monitoring well request is submitted.

12. The Naval Base Charleston has developed an Investigative Derived Waste (IDW) Disposal Protocol. It is suggested that

this protocol be followed for the disposal of all IDW generated during independent environmental investigations.

13. The Department expects a copy of the final report of findings from independent environmental investigations.