OPNAV 5216/144 (REV. 6-70)
S/N 0107-LF-778-8099

DEPARTMENT OF THE NAVY

Memorandum

MAIN/DDS/th
6240
DATE: 31 Aug 1982

FROM Director, Natural Resources and Environmental Affairs Branch

TO Base Maintenance Officer

SUBJ Sitter Service Facility, Bldg 712; chemical contamination of

Ref: (a) ABMO memo of 18 Aug 1982
(b) AC/S FAC memo of 30 Jul 1982
(c) BO 6240.5

Encl: (1) Excerpts from Initial Assessment Study of Camp Lejeune of 9 Aug 1982

1. A review of references (a) and (b) and information contained in the attached package indicate that a decision has been made to reopen the Sitter Service Facility, Bldg 712 as soon as the upper four inches of contaminated soil in the playground area are removed and replaced. Also, it appears that Preventive Medicine Unit, Naval Regional Medical Center, guidance on how to accomplish decontamination of the subject facility and surrounding grounds is vague and fails to address post cleanup testing to determine adequacy of decontamination of the area.

2. NREAB recommends that the subject facility and grounds not be reopened until inspected and certified by appropriate Navy or public health agency to be suitable for use as a Day Care Center. The enclosure provides recommendation on testing at the subject site.

3. Mr. Jerry Wallmeyer, LANTDIV, advised by phone on 27 August 1982 that the contaminated soil at Bldg 712 will have to be disposed of as hazardous waste. There are no authorized disposal areas on base. The contaminated soil should be disposed of in accordance with reference (c). Mr. King advised that while DPDO may be able to assist with arranging a contract, base would be responsible for all funding.

4. State public health personnel have expressed a willingness to visit Camp Lejeune to discuss decontamination of the Sitter Service building and grounds and the possibility of on base disposal of the subject soil. It is recommended the state public health personnel be invited to visit the base and advise on the Sitter Service problem.

J. I. Wooten

J. I. WOOTEN

Rec'd 8-13-8
#2
DJW

Excerpts From

AUGUST 1982

INITIAL ASSESSMENT STUDY OF MARINE CORPS BASE CAMP LEJEUNE NORTH CAROLINA

DRAFT

NEESA 13--010

NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY
Port Hueneme, California 93043

NOT FOR PUBLIC RELEASE

Excerpts From

Site No. 2: Nursery/Day-Care Center at Building 712

Problem: This building was formerly the pesticide storage and handling facility. Residual pesticides in soils and the building may pose health risks to supervisory personnel and small children. Preliminary sampling results are shown in Table 2-2. An adjacent drainage creek (ditch) probably received washout and spills. A playground, an old wash pad, an old mixing area, and an old storage area are involved.

Goal: Determine types and amounts of pesticides in the playground area and building, remainder of area, and in creek sediments. Determine if pesticides have migrated to nearby wells.

Approach: Collect cores from three sites in the playground. Conduct a thorough inspection of other outdoor areas (both inside and outside fence) where mixing and handling occurred and obtain three additional soil samples. Examine building thorougly and sample for pesticide residue or volatile Chlordane. Sample creek sediments. Collect samples from water supply wells nearby.

Wells: Existing Well Nos. 645, 646, 647, 616

Samples: In playground, take 18-inch-deep cores of soils from three separate locations. In other outdoor areas (washing, mixing, and storing), take one 18-inch-deep core from each (See Section 4.4.1). From building, sample air for volatiles plus, from most used rooms, the residue samples from places likely to harbor fugitive substances, e.g., behind moldings. In creek, take sediment samples at four places: immediately downstream of site, about 1,400 feet downstream near Well No. 646, about 4,000 feet downstream above confluence with Overs Creek, and in Overs Creek upstream of creek widening at Northeast Creek. In wells, sample each well.

Frequency: In sediments and soils, sample once. In wells, sample twice, separated by three months. If residuals are present,

then further intensive sampling to determine extent and distribution of contamination is needed.

Analyses: For soils, sediments, well, and residues, test for organochlorine pesticides, including DDT-R, phenoxy alkanoic acid herbicides (including 2,4,5-T), malathion, diazinon. For air, test for volatile Chlordane.

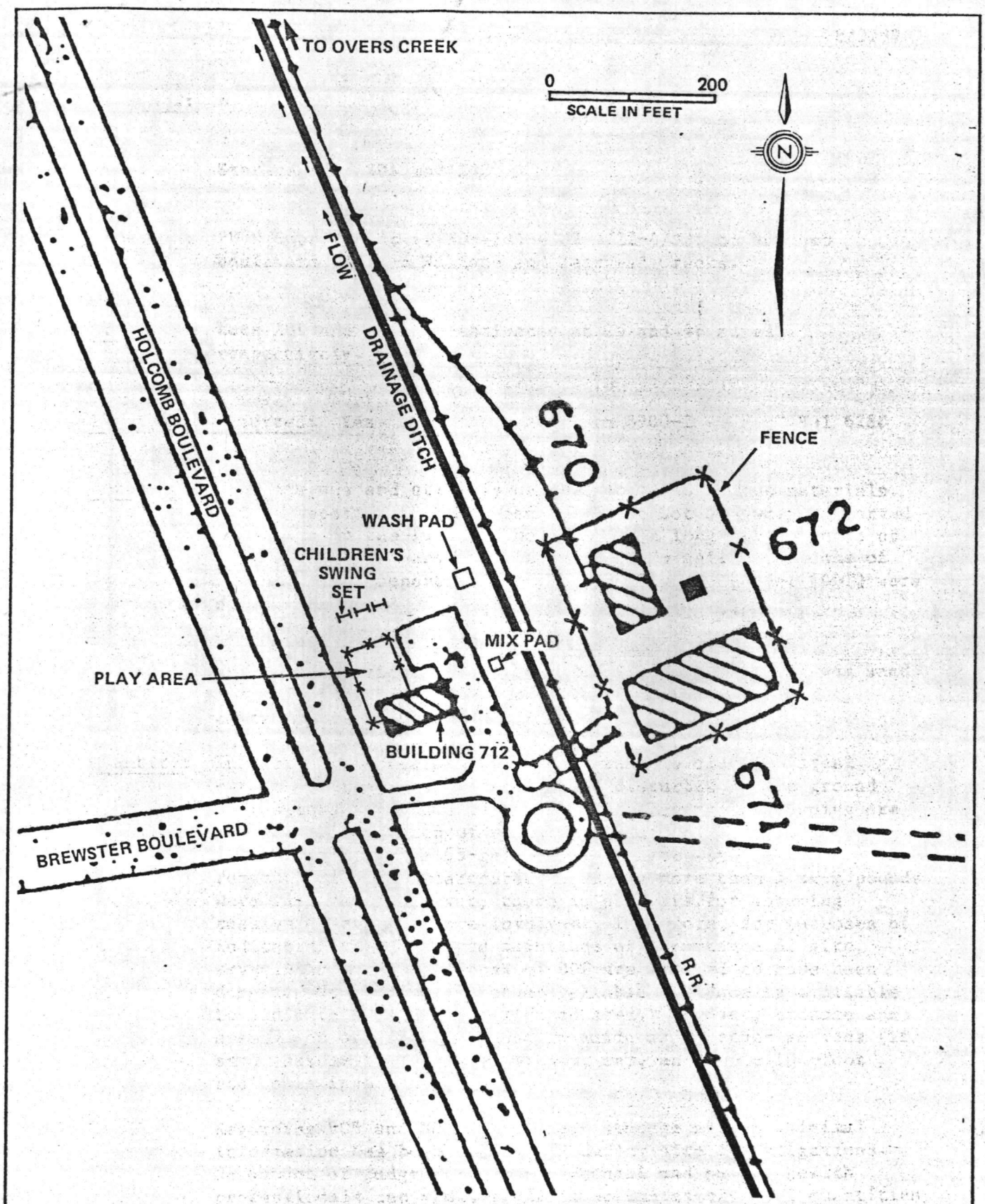


FIGURE 6–4
Detail of Site No. 2, Nursery/Day Care Center

SOURCE: BASE PUBLIC WORKS DEVELOPMENT MAP, SHEET 5 OF 24, JUNE 30, 1979.

MAIN/DDS/th
6240

SEP 14 1982

Mr. O. W. Strickland, Head
Solid and Hazardous Waste Management Branch
Environmental Health Section
Division of Health Services
Post Office Box 2091
Raleigh, North Carolina 27602-2091

Dear Sir:

The purpose of this letter is to request technical assistance of your agency with the removal and disposal of DDT contaminated soil from the grounds of the Camp Lejeune Sitter Service, Building 712. This matter was discussed with Mr. Keith Lawson of your office on 3 September 1982. The enclosed information, requested by Mr. Lawson, was excerpted from a draft of a study prepared by Water and Air Research of Gainesville, Florida.

Questions regarding this matter should be forwarded to Mr. Julian Wooten, Director of Natural Resources and Environmental Affairs Branch, Base Maintenance Division at telephone (919) 451-5003.

Sincerely,

B. W. ELSTON
Acting Base Maintenance Officer
By direction of the Commanding General

Encl

BCC:
CO, NRMC

Rec'd 8-13-8
#2
gl-10

Excerpts From

AUGUST 1982

INITIAL ASSESSMENT STUDY OF MARINE CORPS BASE CAMP LEJEUNE NORTH CAROLINA

DRAFT

NEESA 13-010

NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY
Port Hueneme, California 93043

ENCLOSURE 1

Table 2-1. Pesticide Levels in Soil at Camp Lejeune Day-Care Center (in ppm, mg/kg), 1982

Station No.	DDE	DDD	DDT	Chlordane	Remarks
1	0.022	0.240	6.30	0.170	Front play area
2	0.805	0.850	6.70	0.105	Rear play area
3	27.36	83.10	518.7	36.42	Wash pad
4	68.68	643.60	7,500	45.68	Mixing area
5	0.021	0.100	0.061	0.060	Storage area

Source: Wallace Eakes, 2 June 1982.

Note: Data reported as received without regard for significant digits.

Site No. 2: Nursery/Day-Care Center at Building 712

Problem: This building was formerly the pesticide storage and handling facility. Residual pesticides in soils and the building may pose health risks to supervisory personnel and small children. Preliminary sampling results are shown in Table 2-2. An adjacent drainage creek (ditch) probably received washout and spills. A playground, an old wash pad, an old mixing area, and an old storage area are involved.

Goal: Determine types and amounts of pesticides in the playground area and building, remainder of area, and in creek sediments. Determine if pesticides have migrated to nearby wells.

Approach: Collect cores from three sites in the playground. Conduct a thorough inspection of other outdoor areas (both inside and outside fence) where mixing and handling occurred and obtain three additional soil samples. Examine building thorougly and sample for pesticide residue or volatile Chlordane. Sample creek sediments. Collect samples from water supply wells nearby.

Wells: Existing Well Nos. 645, 646, 647, 616

Samples: In playground, take 18-inch-deep cores of soils from three separate locations. In other outdoor areas (washing, mixing, and storing), take one 18-inch-deep core from each (See Section 4.4.1). From building, sample air for volatiles plus, from most used rooms, the residue samples from places likely to harbor fugitive substances, e.g., behind moldings. In creek, take sediment samples at four places: immediately downstream of site, about 1,400 feet downstream near Well No. 646, about 4,000 feet downstream above confluence with Overs Creek, and in Overs Creek upstream of creek widening at Northeast Creek. In wells, sample each well.

Frequency: In sediments and soils, sample once. In wells, sample twice, separated by three months. If residuals are present,

then further intensive sampling to determine extent and distribution of contamination is needed.

Analyses: For soils, sediments, well, and residues, test for organochlorine pesticides, including DDT-R, phenoxy alkanoic acid herbicides (including 2,4,5-T), malathion, diazinon. For air, test for volatile Chlordane.

DRAFT

[IAS-CLJ.2]SITE/RPT.2
8/9/82

Site No.: 2

Name: Nursery/Day-Care Center

Location: PWDM Coordinates 5, K10; Building 712 on Holcomb Boulevard at Brewster Boulevard.

Size: See comments section.

Previously Reported: No

Activity: Building 712 formerly was used for pesticide storage and mixing. Current use as a day-care center may pose health risks to young children and supervisory staff.

Materials Involved: Chlordane, DDT, Diazinon, Dieldrin, Lindane, Malathion, Mirex, 2,4-D, 2,4,5-T, Silvex, Dalapon, Dursban

Quantity: Contamination would have occurred as result of small spills, washout, and excess disposal. During 15-year use, it is reasonable to assume several gallons per year were involved. Therefore, estimated quantity involved is on the order of 100 to 500 gallons of various strength liquids. Solid residues in cracks and crevasses may total 1 to 5 pounds. Caution: Quantity estimates are not based on reliable data and are provided for order of magnitude guidance only. Disposal to creek is undocumented.

When: 1945 to 1958

Photo: Yes

Comments: In late 1957 or 1958, pesticide storage and mixing were moved to Building 1105. Chemical use is reported to have been: Baygon--unknown, but considered to be minor; Chlordane--100 gallons of 40-percent powder per year; DDT--750 to 1,000 gallons per day of 5- to 15-percent material; Diazinon--25 gallons per month; Dieldrin--less than 100 pounds per year; Dursban--stored but not used; Lindane--less than 10 gallons of 1-percent material per year; Malathion--100 gallons per year; Mirex--stored but not used; Silvex (2,4,5-TP)--stored but not used; 2,4-D--1,000 gallons per year of 1 to 100 dilution of concentrate; 2,4,5-T--50 gallons per year--used for 1 year only. The contaminated areas are the fenced playground, approximately 6,300 square feet; the mixing pad covering approximately 100 square feet; the wash pad, approximately 225 square feet; and possibly, the railroad tracks drainage ditch that is a tributary of Overs Creek. Contamination of ground water or movement of pesticides in ground water or surface water is as yet undefined. See Figures 6-3b and 6-4.

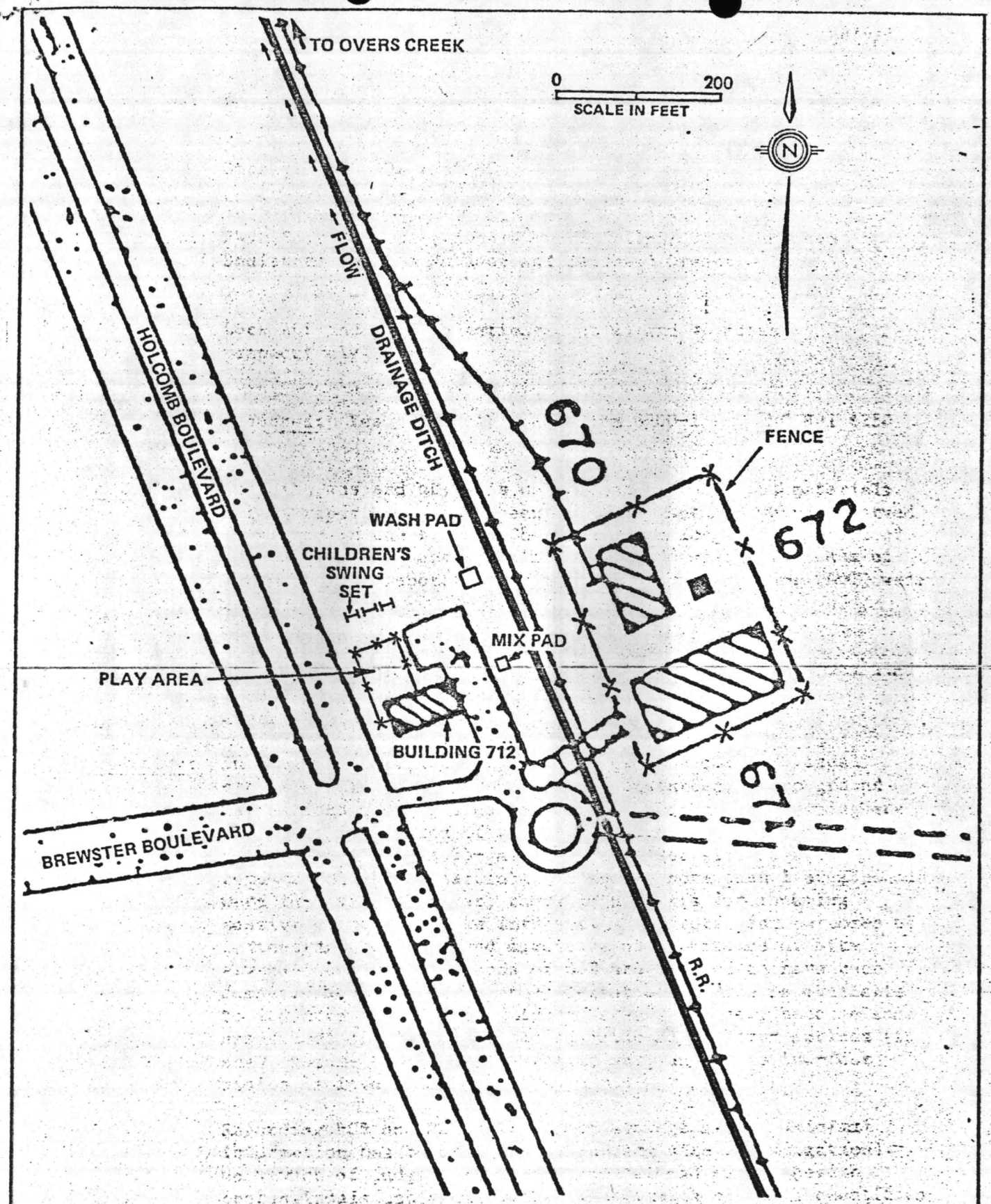


FIGURE 6–4
Detail of Site No. 2, Nursery/Day Care Center

SOURCE: BASE PUBLIC WORKS DEVELOPMENT MAP, SHEET 5 OF 24, JUNE 30, 1979.

Danny, DD

See paragraph 3

Have Betsy get ready to assist in sample collection

DD

FAC/REA/hf
6280
6 Dec 1982

From: Commanding General
To: Commanding Officer, Naval Regional Medical Center, Camp Lejeune, NC 28542

Subj: Camp Lejeune Sitter Service, Bldg. 712

Encl: (1) N.C. Div of Health Services ltr dtd 7 Oct 82

1. As described in the enclosure, additional investigation of pesticide contamination at the Sitter Service is required. The NCDHS is concerned about the potential exposure of children to dioxin compounds 2, 4-D and 2, 4, 5-T. We request your assistance in resolving these concerns and more specifically, in determining the concentrations in the soils in greater detail.

2. Our most immediate need is your assistance in collection of soil samples using previously-established methods. Depending on the documentation of dioxin compounds in the soil samples, a thorough inspection should follow of Bldg. 712 including analyses of ambient air inside the facility. Ultimately, an appropriate medical assessment of these data may be warranted. This may include your evaluation of the possibility of significant dioxin exposure to children and staff in the past and with recommendations for follow-up action.

3. The Natural Resources and Environmental Affairs Division will inform you of the desired date for soil sample collection with at least 48 hours notice. NREA personnel will be on site to assist in sample collection and quality control. A copy of the laboratory analyses will be forwarded to you upon receipt by the Assistant Chief of Staff, Facilities.

4. Your conti[redacted]ssistance in this matter is appreciated.

J. T. MARSHALL
By direction

Blind Copy to:
NREA
SJA
AC/S, PersSvcs

Ronald H. Levine, M.D., M.P.H.
STATE HEALTH DIRECTOR

DIVISION OF HEALTH SERVICES
P.O. Box 2091
Raleigh, N.C. 27602-2091

October 7, 1982

Commanding General
U. S. Marine Corps Base
Camp LeJeune, North Carolina 28542

Attention Assistant Chief of Staff Facilities

Dear Sir:

Pursuant to a letter requesting technical assistance from this agency in removal and disposal of pesticide contamination from the grounds of the Camp LeJeune Sitter Service (Building 712), we respond. Phone conversations on October 4 and 5 between our office (Dr. Greg Smith and Bill Williams) and Mr. Julian Wooten, Director of Natural Resources and environmental Affairs Branch of Camp LeJeune indicate that this agency needs better information in order to render appropriate assessment and advice on disposal. Additionally, the issue has raised our curiosity about the extent and possible adverse human exposure that may have occurred at the sitter service.

The material supplied with the letter of request included some background via copy of part of a draft report apparently prepared by a consulting environmental engineering firm out of Gainesville, Florida. Table 2-1 of that report indicated soil residual levels of DDT and its metabolites and Chlordane. Elsewhere in the draft, eight other chemicals were cited to be involved. Specifically Diazinon, Dieldrin, Lindane, Malathion, Mirex, 2,4-D, 2,4,5-T, Silvex, Dalapon, and Dursban were mentioned. We need to know first if any of these chemicals were included in sample analyses and at what levels they were found. If they have not been screened for and were stored or used there, we would request such additional analyses.

Secondly, we would suggest that if there are any potable water wells within 300 feet of this location that they also be screened for possible contamination by pesticides.

Third, and of especial interest to us, would be as complete a report as you could supply as to the dates of operation of the pesticide mixing and storage facility, the quantities and specific pesticides involved, and a description including dates of the subsequent day-care operation there. If there has been any health assessment relative to pesticides of the children or staff involved, we would also appreciate such narrative as might be available.

ENCL 2

Once more complete information is received, we can then discuss the issue with our Solid and Hazardous Waste Branch to formulate disposal recommendations. We may be contacted for information or clarification of requests at (919) 733-3410.

Sincerely,

Charles Gregory Smith, M.D.

Charles Gregory Smith, M.D.
Medical Epidemiologist

W.A. Williams

W. A. Williams
Pesticide Epidemiologist

WAW:ng

cc: O. W. Strickland
Solid and Hazardous Waste Branch

Dan

Note & Return for file

DVS

UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO

FAC/REA/hf
6280
7 Dec 1982

Ronald H. Levine, M.D., M.P.H.
State Health Director
N. C. Division of Health Services
P. O. Box 2091
Raleigh, NC 27602-2091

Re: Camp Lejeune Sitter Service

Dear Sir:

This letter responds to Dr. Smith's and Mr. Williams' October 7, 1982 request for additional information on the pesticide contamination at the Camp Lejeune Sitter Service, Building 712. All the existing data on the pesticide levels in soils are shown on the enclosure. We are taking action to obtain additional data on contaminant levels as listed in your letter. Laboratory results are anticipated on or about December 31, 1982. This site is being formally addressed through the Navy Assessment and Control of Installation Pollutants (NACIP), which represents the DOD implementation of the Superfund Act.

We share your concerns for potential exposure of children to the contaminants mentioned above. We believe that determining the concentrations in the playground soil and areas adjacent to the sitter service is the initial step in an effective plan of action for the site and previous occupants. To the best of our knowledge, there have been no assessments relative to pesticides exposure by children or staff since the sitter service opened in 1967. Prior to its opening, the pesticide facility, which closed in 1958, underwent renovation and cleaning which would have limited the direct exposure of the children. The sitter service has been discontinued and currently no plans exist for a child care facility at the site. However, we are proceeding to obtain an appropriate medical assessment of the facility, its operation, and the effects on the occupants.

Your continued interest in addressing these concerns is appreciated. We will forward these additional data to you as soon as possible. The point-of-contact for this matter is Mr. Bob Alexander, telephone 919-451-2544.

Sincerely,

J. T. MARSHALL
Colonel, U.S. Marine Corps
Assistant Chief of Staff, Facilities
By direction of the Commanding General

Encl

Copy to:
NEESA (112N)
LANTDIV (114)
CO, NRMC (Lt Winter)

Blind Copy to:
SJA
AC/S, PersSvcs
NREA

RESPONSES TO N.C. DIVISION OF HEALTH SERVICES

7 OCTOBER 1982 LETTER

CAMP LEJEUNE SITTER SERVICE

I. Pesticide levels in soils, 1982, reported in parts-per-billion (PPB).

STATION NUMBER	DDE[a]	DDD[a]	DDT[a]	Chlordane[a]	Malathion[a,b]
1. Playground adjacent to Bldg 712					
May 1982	22	240	6,300	170	N.D.
June 1982	48	31	70	389	-
2. Open playground adj to Holcomb Blvd.					
May 1982	805	850	6,700	105	N. D.
June 1982	5	2	21	24	-
3. Fenced playground adj to Holcomb Blvd.					
May 1982	-	-	-	-	-
June 1982	118	18	201	<100	-
4. Wash Pad					
May 1982	27,360	83,100	518,700	36,420	N. D.
June 1982	-	-	-	-	-
5. Storage area across tracks					
May 1982	21	100	61	60	N. D.
June 1982	-	-	-	-	-
6. Mix Pad					
May 1982	68.68	643.60	7,500	46	N. D.
June 1982	-	-	-	-	-

NOTES: a. May 1982 samples depth 6" to 12"
June 1982 samples 0" to 2"

b. Malathion not detectible in May samples.

c. Data at Stations 2 and 3 represent analyses of a composite sample obtained from 10 samples collected at random from a 100 square grid at each site.

II. There are no potable water wells within 300' of the site.

ENCLOSURE (1)

BASE MAINTENANCE DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

8/18/82

From: Assistant Base Maintenance Officer
To: NREA

Subj:

Are contaminant levels at or above the level which constitutes a hazardous waste? If so, lets try DPAO. If not, why not remove and place in a lesser used area? Please advise.

BWR

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS BRANCH
BASE MAINTENANCE DIVISION
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

8-16-82
Date

From: Director
To: BMO

BMO —
ABMO —

Subj: DDT, DDE, Chlorodane -- at Setter Service Bldg 712

1. Mr Dillon called this A.M. concerning status of cleanup of Subj area.

State Rep (Terry Dover) 8-5-82 stated the contaminated soil could not go in the Base Landfill and recommend disposal at S.C.A. Pinewood, South Carolina or other approved Haz Waste site. Recommend no action until Preventive Medicine Units provide guidelines for decontamination of Bldg 712 and grounds.

Jolson

ROUTING SLIP

	ACTION	INFO	INITIAL
BMO		✓	C
ABMO		✓	BWR
ADMIN		✓	
ENVIOR AFF		✓	
F&A SEC			
MAINT NCO			
M&R			
OPNS	✓		
PROP			
UMACS			
UTIL			
SECRETARY			

COMMENTS:

Gms,
Prepare job order to remove soil & replace, reseed, etc. Coordinate w/ NKEA on where to put soil, etc. Advise if any problems.
Where do we dispose?
BWR

ASSISTANT CHIEF OF STAFF, FACILITIES
HEADQUARTERS, MARINE CORPS BASE

DATE 30 July 82

TO:

BASE MAINT O

PUBLIC WORKS O

COMM-ELECT O

DIR, FAMILY HOUSING

DIR, UNACCOMPANIED PERS HSG

BASE FIRE CHIEF

ATTN: LT. Col. Calla

1. Attached is forwarded for info/action.

Ron: your for action per Col Millice's note.

2. Please initial, or comment, and return all papers to this office.

3. Your file copy

J. H. Fitzgerald
By direction

"LET'S THINK OF A FEW REASONS
WHY IT CAN BE DONE"

MCBCL 5216/21 (REV. 2-81)

John

Attached is all the dope on the sitter service contamination.

Let's send a memo to BMO telling him to ~~excavate~~ excavate (9") around the entire area at the sitter service, fill and reseed.

KPM

Col. Millerie,

1. If we take the recommendation made in par 4 and remove the soil, we should be able to return the service to normal operations.

2. Problem is w/ disposal of contaminated soil. I think we could put in landfill. Unable to contact Sharpe or Wooten to get an opinion from them.

F

Lt Winters
OPMS

DEPARTMENT OF THE NAVY
NAVY ENVIRONMENTAL HEALTH CENTER
NAVAL STATION
NORFOLK, VIRGINIA 23511

342:DMW:naf
6000/6250
Ser 07236
26 Jul 1982

From: Commanding Officer, Navy Environmental Health Center
To: Commanding Officer, Naval Regional Medical Center, Camp Lejeune, North Carolina 28542

Subj: Medical evaluation of soil samples analysis results

Ref: (a) CO NAVREGMEDCEN Camp Lejeune ltr 62-dlm 6260 dtd 28 May 1982

1. In accordance with reference (a), results of pesticide analysis of soil samples from five areas adjacent to the Sitter Service at Camp Lejeune were evaluated.

2. The levels of pesticide residue found in the samples from the two playgrounds were felt to present no acute toxic hazards to children playing in the area. However, no definitive studies have been done in this area and possible long-term effects, if any, are not known.

3. Although no known hazards exist, prudence might dictate that measures be instituted to eliminate or limit any possible contact with the soil from either the playground or the other more heavily contaminated areas sampled.

4. The recommended control measure is to remove the upper 4 inches of contaminated soil from the areas where children play, replace it with uncontaminated soil and reseed or resod the area. It should be noted that contaminated soil disposal should be done in an area where no threat to waterfowl or other wildlife would exist.

J.J. Edwards

J.J. EDWARDS, Jr.
By direction

DPO

SCA SERVICES

SCA CHEMICAL SERVICES, INC.
SCSCA SERVICES
Route 1, Box 255
(803) 452-5003
Pinewood, South Carolina 29125

August 6, 1982

Mr. George Turner
Base Maintenance
Planner and Estimator Branch
Camp Lejeune, North Carolina 28542

Dear Mr. Turner:

In response to your recent inquiry, I am enclosing information regarding South Carolina SCA Services for your review.

Please complete this Authorization Request Form and forward it along with a one-pint sample to the attention of the Sales Department.

Upon receipt of the sample and Authorization Request Form, our Technical Department will evaluate your material and submit the information to the South Carolina Department of Health and Environmental Control (DHEC) for their supplemental permit approval. A letter of authorization will be sent to you following DHEC's approval.

If you should have any questions, please feel free to contact me.

We appreciate your interest in South Carolina SCA Services and hope to have the privilege of servicing your industrial waste processing needs in the very near future.

Sincerely,

Thomas W. Davis/kh

Thomas W. Davis
Technical Sales Representative

TWD/kh

Enclosures

SALESMAN _____

S.C. SCA CODE _____

PLANT LOCATION _____

SOUTH CAROLINA DEPARTMENT OF HEALTH
AND ENVIRONMENTAL CONTROL
SOLID AND HAZARDOUS WASTE MANAGEMENT DIVISION
2600 BULL STREET, COLUMBIA, SC 29201
PHONE: (803) 758-5681

AUTHORIZATION REQUEST FORM

A. Generator Information:

(1) Name _____ (2) I.D. NUMBER _____

Address _____ City _____ State _____ Zip _____

Official Contact _____ Title _____ Phone _____

B. Treatment, Storage or Disposal Facility Information:

(1) Name S. C. SCA Services, Inc. (2) I.D. Number EPA No. SCD07-037-5985

Address Rt. 1 Box 55 City Pinewood State S.C. Zip 29125

C. Description of Hazardous Waste (1) Waste Code Number _____

(2) Waste Type (3) Process Producing Waste

(4) Method of Storage by Generator	(5) Volume (pounds/year)	(6) Frequency of Disposal	(7) Packaging for Shipment	(8) Method of Transportation
		☐ ONE TIME ☐ ____ Times per month ☐ ____ Times per year Other (Specify) _____	☐ In Drums (size) ____ ☐ In Bulk	☐ Railroad tanker ☐ Truck ☐ Other (Specify) _____

MARK OR COMPLETE APPROPRIATE INFORMATION

Physical State of Waste @ 70°F	Viscosity @ 70°F	Layering	Specific Gravity @ 70°F
Solid Liquid Semisolid	Low Medium High	None Bilayered Multilayered	<0.8 0.8-1.0 1.0-1.2 1.2-1.4 1.4-1.7 >1.7 exact if known _____

Suspended Solids	Dissolved Solids by Weight	Thousands of BTU's/lb
<5% 5-20% >20% by Weight Volume Exact if known _____	<5% 5-20% 20% Exact if known _____	<1 1-5 5-9 9-12 12-16 16-20 Exact if known _____

Flash Point (cc)	Organically Bound Sulfur (wt. %)	Organically Bound Chlorine (wt. %)
<60°F 60-140°F >140°F None Exact if known _____	None <0.5% 0.5-5% >5% Exact if known _____	None <1% 1-10% 10-30% >30% Exact if known _____

Organically Bound Nitrogen (wt. %)	Toxicity	Ash %	Affinity for Water	Ph (if hydrophilic)
	High Medium Low Unknown		Hydrophilic Lipophilic	

Volatile Organics	%	%	%	%
Non Volatile Organics	%	%	%	%
Acids or Alkalis	%	%	%	%
Salts	%	%	%	%

Instructions for completing this Form on reverse side.

General Instructions

1. This form is to be used as required by the Department.

2. All definitions contained in the South Carolina Hazardous Waste Management Act (Section 44-56-10 et seq. of the 1976 South Carolina Code of Laws) and Regulation 61-79 shall apply to this form.

3. If a question arises as to how to complete a particular item of this Form, please contact the Solid and Hazardous Waste Management Division for assistance at the telephone number or address given on the front of this Form.

4. If additional space is needed to complete any item, attach a separate sheet to each copy to complete the item. Clearly identify on the separate sheet which item is being continued on that sheet.

5. Type or print in ink all items of this Form except the signature required in D, which must be signed in ink.

6. All items of the Authorization Request Form must be fully completed.

Specific Instructions

A. (1) Fully complete by entering: the generator's name and mailing address at it should appear on the approval; the title of the individual designated as the official contact for the generator and the telephone number at which he or she may be contacted.

(2) Enter I.D. Code Number. If you were assigned an I.D. Number by the EPA, enter that number. If you were not issued a number by the EPA enter your Dun's number; this number may be obtained by contacting the nearest office of Dun and Bradstreet. In South Carolina you may write or call at Dun's Marketing Services at 6923 Trenholm Road, Suite 102, Columbia, SC 29206, Phone: (803) 787-7470 - Operations Division Contact Jim Wingard or Jerry Brown.

B. (1) Name and location of the treatment, storage, or disposal facility for which authorization is being requested.

(2) Enter the I.D. Number of the facility designated.

C. (1) Enter the Waste Code Number for this waste. The Waste Code Number consists of the following: your I.D. Code Number, which was discussed above; and the EPA Hazardous Waste Number. The first waste you have in each EPA Hazardous Waste Number should be identified as 001 following the I.D. Code Number and the EPA Hazardous Waste Number. Each additional waste with the same EPA Hazardous Waste Number should identified consecutively (i.e. 002, 003, etc.)

Example of Waste Code Number

/I.D. Code Number/	EPA Hazardous Waste Number/	Identifier
000000000	D004	001

EPA Hazardous Waste Numbers are published in the Federal Register Vol. 45 No. 98 pages 33122-33127.

Metallic (ppm)	ppm As	ppm Ba	ppm Cd	ppm Cr^{+3}	ppm Cr^{+6}
	ppm Pb	ppm Se	ppm Ag	ppm Fe	ppm Mn
	ppm Cu	ppm Zn	ppm Ni	ppm Sb	ppm Co
	ppm Tl	ppm	ppm	ppm	ppm

Cyanides, Pesticides, Carcinogens, other Toxics	ppm	ppm	ppm	ppm	ppm

Total Organic Carbon (TOC)		Water %	Waste is not Compatible with

Other Information

Hazardous Waste Characteristics

Ignitable Corrosive Reactive Toxic Listed

D. Certification

I hereby certify (or declare) that the information provided herein is complete and correct to the best of my knowledge. I am authorized to sign official documents for the Applicant in A above.

Date Submitted _____

Signature _____ Print Name _____

Title _____

Instructions for completing this Form on reverse side.

A copy of this publication may be obtained, free of charge, by writing or telephoning:

Solid Waste Publications
U.S. Environmental Protection Agency
26 W. St. Clair Street
Cincinnati, Ohio 45268

(2) Give a specific name to the waste you are treating, storing, or disposing.
(3) Briefly describe the process by which the waste is produced. Be specific.
(4) Method of storage by the generator. Example drums, bulk, tank, etc.
(5) Total volume in pounds/year to be treated, stored, or disposed.
(6) Frequency of disposal; check one. If other specify what frequency.
(7) Packing for shipment; check one. Indicate the size of the drum.
(8) Method of transportation; check one. Please specify if others.

Physical State of Waste @ 70°F - check one
Viscosity - check one
Layering - check one
Specific gravity @ 70°F - check one or list exact value if known.
Suspended solids - check one or list exact value if known.
Dissolved solids by weight - check one or list exact value if known.
Thousands of BTU's/lb - check one; list exact value if known.
Flash point - check one or list exact value if known. The flash point must be checked or listed in order to approve request.
Organically bound sulfur - check one or list exact value if known.
Organically bound chlorine - check one or list exact value if known.
Organically bound nitrogen - give a value in percentage. A small range in percentage is allowable.
Toxicity - check one.
Ash % - give a value in percentage. A small range in percentage is allowable.
Ph - hydrophilic refers to having a strong affinity for binding or absorbing water. Lipophilic refers to a stong affinity to fats. Give exact value and the hydrophilic or lipophilic characteristic if known.
For volatile organics through salts: list specific chemical name and the value in percentage. A small range in percentages is allowable.
For metallics through TOC: list specific chemical and metallic names and the value in percentage. Also list all chemicals and metals that are not included on list.
Water % - make sure that all percentages total 100%. Balance water may be used to make up the remainder of the composition if it applies.
Waste is not compatible with - list any categories of chemical compounds that the referenced waste will react with.
Other information - self-explanatory.
Hazardous Waste Characteristics - these are listings of waste characteristics as described in the Federal Register and the South Carolina Hazardous Waste Management Regulations. Check the one that applies to your waste.

D. Certification - signature and date. Make sure name is printed or typed along side the signature.

SHIPMENT PREPARATION AND ORDERING PROCEDURE

A. Preparation for Shipment

1) Drum Inspection - Inspect all drums 24 hours prior to scheduling a pick-up or delivery to determine if the drums are sound and not leaking. Any rainwater collected on the drum tops should be drained prior to loading onto the transportation equipment.

2) Manifest Form - Each shipment must be accompanied by a Hazardous Waste Manifest form. Since you are required to file an annual report with EPA, be sure to enter your generator identification number and the waste code number on the Manifest. Once completed, make four (4) copies and distribute as follows:

   a) Copy # 1 - retain for your records for three (3) years
   b) Copy # 2 - send to DHEC (address in upper left corner)
   c) Copies # 3 and 4 - and the original - send with shipment

3) Drum Labelling (South Carolina Generators Only) - Each storage/transport container must contain the following information as provided on Page 26 of the South Carolina regulations:

   a) The statement: "HAZARDOUS WASTE - SOUTH CAROLINA REGULATIONS PROHIBIT IMPROPER STORAGE OR DISPOSAL"
   b) Date generated
   c) Manifest number
   d) SCA code number
   e) Generator's EPA identification number
   f) DOT labels as necessary

4) Drum Labelling (Out-of-State Generators Only) - Each storage/transport container (i.e. drums) must contain the following information as provided on Page 33143, Section 262.32 of the May 19, 1980, Federal Register (Vol. 45, No. 98):

   a) The statement: "HAZARDOUS WASTE - FEDERAL LAW PROHIBITS IMPROPER DISPOSAL. IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY."
   b) Generator's name and address
   c) Manifest number
   d) Date generated
   e) SCA code number
   f) DOT labels as necessary

B. Ordering Procedure

1) To schedule a shipment to our site, please call (803) 452-5003, and tell the operator that you would like to schedule a shipment. Please schedule at least 72 hours prior to shipment and be prepared to give the following information:

   a) Invoice address
   b) Caller's name and telephone number
   c) Purchase order number
   d) Waste description and SCA code number(s)
   e) Quantities of each code and container type
   f) Date of shipment arrival or desired pick-up

2) If you must alter the schedule for any reason, please notify us and advise of the new date and time.

SCSCA PERMITTING GUIDE

1) Complete Authorization Request Form (ARF)

This form should be completed and returned to South Carolina SCA (not DHEC). A one-pint sample of each waste stream should be sent under separate cover.

2) Laboratory Evaluation

Our laboratory will review all information and issue a SCA product code number. The code number will be sent with our price quotation.

3) Department of Health and Environmental Control (DHEC) Evaluation

Upon completion of our lab evaluation, the ARF's are hand delivered to DHEC weekly for their approval.

4) Final Approval

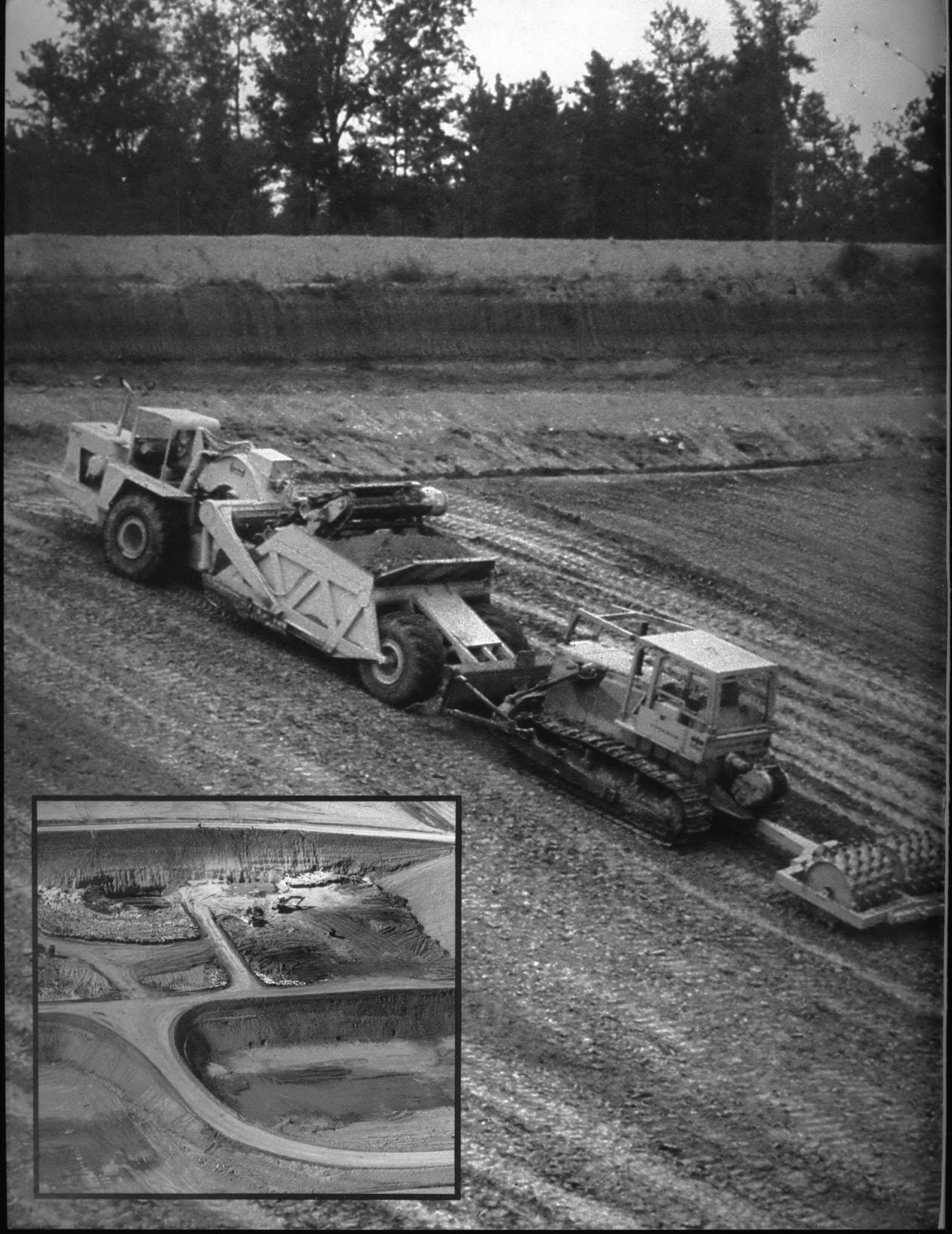
DHEC has instituted a fifteen (15) day comment period for each waste stream beginning the day the information is received. If you are not contacted for more information within that period, you will receive a letter from SCSCA showing the date submitted to DHEC, the disposal approval date, the SCA code number, and product description. You are now approved to use our site.

South Carolina SCA Services

Pinewood, South Carolina

A facility for the treatment and disposal of hazardous waste

Any industrialized society
committed to productivity
for a better life,
must find new and better ways
to dispose of the by-products
of its growing industrial maturity.



South Carolina SCA Services, Inc.

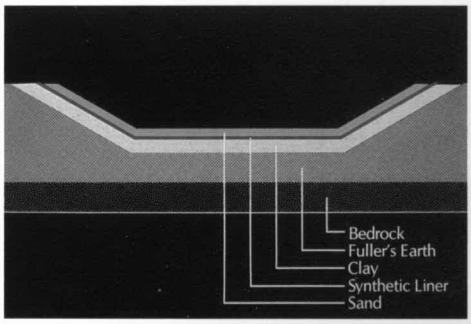
The Service. To help industry become more compatible with its environment, South Carolina SCA Services offers secure chemical landfill capabilities at Pinewood, South Carolina.

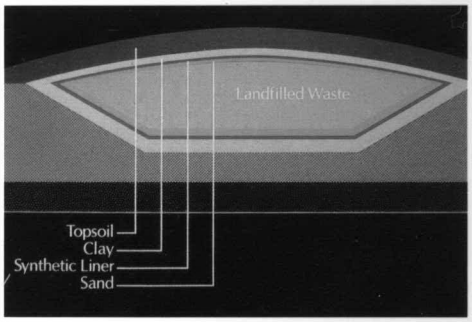
At this facility, SCA utilizes approved landfill techniques, and incorporates proprietary procedures often exceeding regulatory requirements for the interment of hazardous materials.

Every effort is made to assure the customer, the regulatory agencies, and the public, that the burden of managing industry's waste by-products is always under control.

The Company. South Carolina SCA Services is part of SCA Chemical Services, Inc., the technology leader in the collection, transportation, treatment, and disposal of chemical waste.

The parent company, SCA Services, Inc., was founded in 1969 and has grown to become a $300 million company operating solid and chemical waste disposal facilities in 32 states and the District of Columbia.





The Landfill Base. The key consideration in the selection of Pinewood as a location on which to build a secure chemical landfill was the presence of a thick layer of opalite clay known commercially as Fuller's Earth.

The presence of opalite clay, which has remained in place undisturbed for 100 million years, is unique to the Pinewood area. This clay forms the base of the landfill and, because of its very low permeability, provides an extra measure of protection.

When mined, crushed and dried, Fuller's Earth is sold as industrial absorbent and cat litter. This highly absorbent material is ideally suited for use in on-site clean-up operations.

The Primary Barrier and Synthetic Liner. A five-foot layer of highly impermeable, variegated clay is placed on top of the Fuller's Earth base to provide the primary protective barrier for the secure landfill. A 30-mil reinforced synthetic liner is then placed on top of the variegated clay followed by a two-foot layer of sand.

This durable synthetic liner, with the clay below, provides a "double liner" protection. The second layer of sand on top of the liner serves the dual function of a protective cover for the liner, and facilitates the movement of liquids to the sumps.

The "double liner" safeguard built into the SCA facility goes beyond both current and proposed EPA regulations for the safe, stable interment of chemical waste.

Three Landfill Cells. As a further safety precaution, SCA maintains a controlled chemical environment throughout the landfill area by segregating incompatible wastes from one another in three distinct, isolated cells separated by berms made from compacted clay and covered with a synthetic liner.

Acid, alkaline, and organic wastes are segregated within the landfill. In this way SCA prevents reactions and assures a secure chemical landfill in compliance with all regulations.

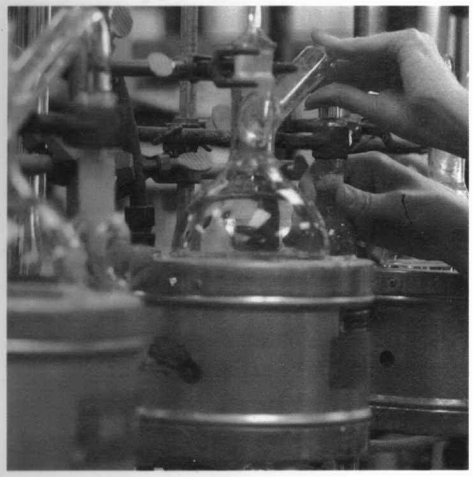
Landfill Leachate Collection and Monitoring System. An elaborate leachate management system consisting of standpipes and pumps is permanently installed within the landfill to facilitate the collection, reprocessing, and disposal of any liquids. In this manner the landfill remains free of liquids during operation and following closure.

Landfill Closure. Once chemical wastes are deposited into the appropriate section and cells are filled to capacity, the entire site is permanently sealed. The landfill is closed by covering with a foot of sand and covering the sand with additional synthetic material. A two-foot layer of compacted variegated clay is then placed on top of the cover. Next, several feet of topsoil is sown with grass seed. These measures are designed, along with slope grading, to prevent precipitation from entering the closed cells.

(Left) A synthetic liner provides an extra measure of protection for the secure landfill.

(Inset) Wastes are segregated for compatibility into cells during operation of the landfill.

(Above) Diagrams show how SCA's secure landfills are constructed and closed.



Operating Procedures for the Facility. At Pinewood, the Lab Manager must first approve all requests for disposal prior to the customer's submitting an Authorization Request Form to the South Carolina Department of Health and Environmental Control. Only after SCA has approved disposal and the customer has received permission from the State, can material be shipped to Pinewood. When waste material arrives at Pinewood, SCA chemists perform quality control checks on the contents to insure that the waste conforms to specifications previously agreed upon. The material cannot be accepted for disposal until it passes SCA's quality control test procedures.

Collection and Transportation. SCA offers a complete fleet of trucks designed to pick up and transport customer waste materials to Pinewood. These vehicles include: vacuum trucks for sludges and liquid waste; flatbed trucks for drums; conical-shaped tankers for sludgy waste; stainless steel tankers for acidic fluids; and dump trucks for solids.

SCA also provides drop boxes which allow customers to collect contaminated bags, clothing, pallets or other items for pick-up and disposal by SCA. Drop boxes also serve as a convenient receptacle for filter cake sludges.

Major On-Site Clean-Up and Restoration. SCA is equipped to help you solve some of the most difficult on-site problems of dealing with today's industrial hazardous waste: inactive lagoons, closed landfill sites, contaminated soils, unidentified waste, and spill containment.

Working with sophisticated equipment, experienced crews can be dispatched to remote locations to analyze for unidentified constituents in drums or solids; identify and repackage wastes in approved containers; segregate materials for proper disposal; clean out a lagoon, or make it suitable for reuse; or use Fuller's Earth to mop up after a spill.

SCA also maintains completely equipped mobile laboratories from which chemists can perform a wide range of analyses on unknown materials.

Additional SCA Chemical Services. In the emerging area of hazardous waste disposal, SCA Chemical Services, Inc., at its five other locations, offers a wide range of sophisticated, technically and environmentally acceptable chemical waste services including incineration, resource recovery, detoxification and aqueous treatment, tank and pipe cleaning, and high pressure jet cleaning.

In addition, South Carolina SCA Services provides customers with detailed consulting and professional/technical assistance in the proper completion of forms according to federal, state, and local regulations. For additional information, contact the Sales Manager, South Carolina SCA Services, Inc., PO Box 55, Pinewood, SC 29125 or call 803-452-5003.

(Top) A quality control laboratory is an integral part of the SCA facility.

(Middle) An SCA clean-up operation at a customer's site.

(Bottom) Unique to this site is the exclusive use of industrial absorbent as cover.

SCA CHEMICAL SERVICES

CORPORATE HEADQUARTERS:
SCA Chemical Services, Inc.
60 State Street
Boston, MA 02109
(617) 367-8300
Telex 94-0473

South Carolina
SCA Services, Inc.
P.O. Box 55
Pinewood, SC 29125
(803) 452-5003

EPA #SCD070375985

Sir,

① Facilities called and said to go ahead and scrape Sitter Service area and clean playground Equipment and put it back in place.

② When all is done please notify only Mr. Norman Kelly of AC/S Personnel Services at Ext # 2524. This is only notification required.

R/S

Bldg 712
VEH Chg

71 — 104
72 — 39

PAINT
INTERIOR
712
CHECK

FILL IN AROUND
MERRY GO
ROUND

OPNAV 5216/144 (REV. 6-70)
S/N 0107-LF-778-8097

DEPARTMENT OF THE NAVY

Memorandum

DATE:

FROM:

Jerry Dover

TO:

SUBJ:

SCA Services, Inc.
Charles Routtree
Rt. 1 Box 255
Pinewood, S.C. 29125

86-1-803-452-5003

after Aug 16

Bulk (trucks) versus (containers)

Cholaine
DDT DDD DDE
Interside

86-803-

86-803 452-5003

86-877-5011 452-5003

Lt Winters
OPMS

DEPARTMENT OF THE NAVY
NAVY ENVIRONMENTAL HEALTH CENTER
NAVAL STATION
NORFOLK, VIRGINIA 23511

342:DMW:naf
6000/6250
Ser 07236
26 Jul 1982

From: Commanding Officer, Navy Environmental Health Center
To: Commanding Officer, Naval Regional Medical Center, Camp Lejeune, North Carolina 28542

Subj: Medical evaluation of soil samples analysis results

Ref: (a) CO NAVREGMEDCEN Camp Lejeune ltr 62-dlm 6260 dtd 28 May 1982

1. In accordance with reference (a), results of pesticide analysis of soil samples from five areas adjacent to the Sitter Service at Camp Lejeune were evaluated.

2. The levels of pesticide residue found in the samples from the two playgrounds were felt to present no acute toxic hazards to children playing in the area. However, no definitive studies have been done in this area and possible long-term effects, if any, are not known.

3. Although no known hazards exist, prudence might dictate that measures be instituted to eliminate or limit any possible contact with the soil from either the playground or the other more heavily contaminated areas sampled.

4. The recommended control measure is to remove the upper 4 inches of contaminated soil from the areas where children play, replace it with uncontaminated soil and reseed or resod the area. It should be noted that contaminated soil disposal should be done in an area where no threat to waterfowl or other wildlife would exist.

J.J. Edwards

J.J. EDWARDS, Jr.
By direction

DPO

20 south ~~Sumter~~ Sumpter, S.C

HOLD

send me paper work

3.5¢ per lb for disposal along

140

$800-900 per truck 18 20 cu yd transport cost
poly liner the truck

8 load @ $850 $6800 (transportation cost) $6800

2430 lb per cu yds x 140 CY x .035 = $11,907

$18,707

~~Tommy Davis~~

tommy Davis

pay for sayer over night

request
from Authorization
95% dirt 5% Concrete

Tommy Davis

10 hour day

Supervisor $35 @ 10 hour 350

S & large 65

(250 miles) 8 trucks @ transportation 7000

140 cu yds @ 2500 per cu yds $350,000 @ .35 = 10,500

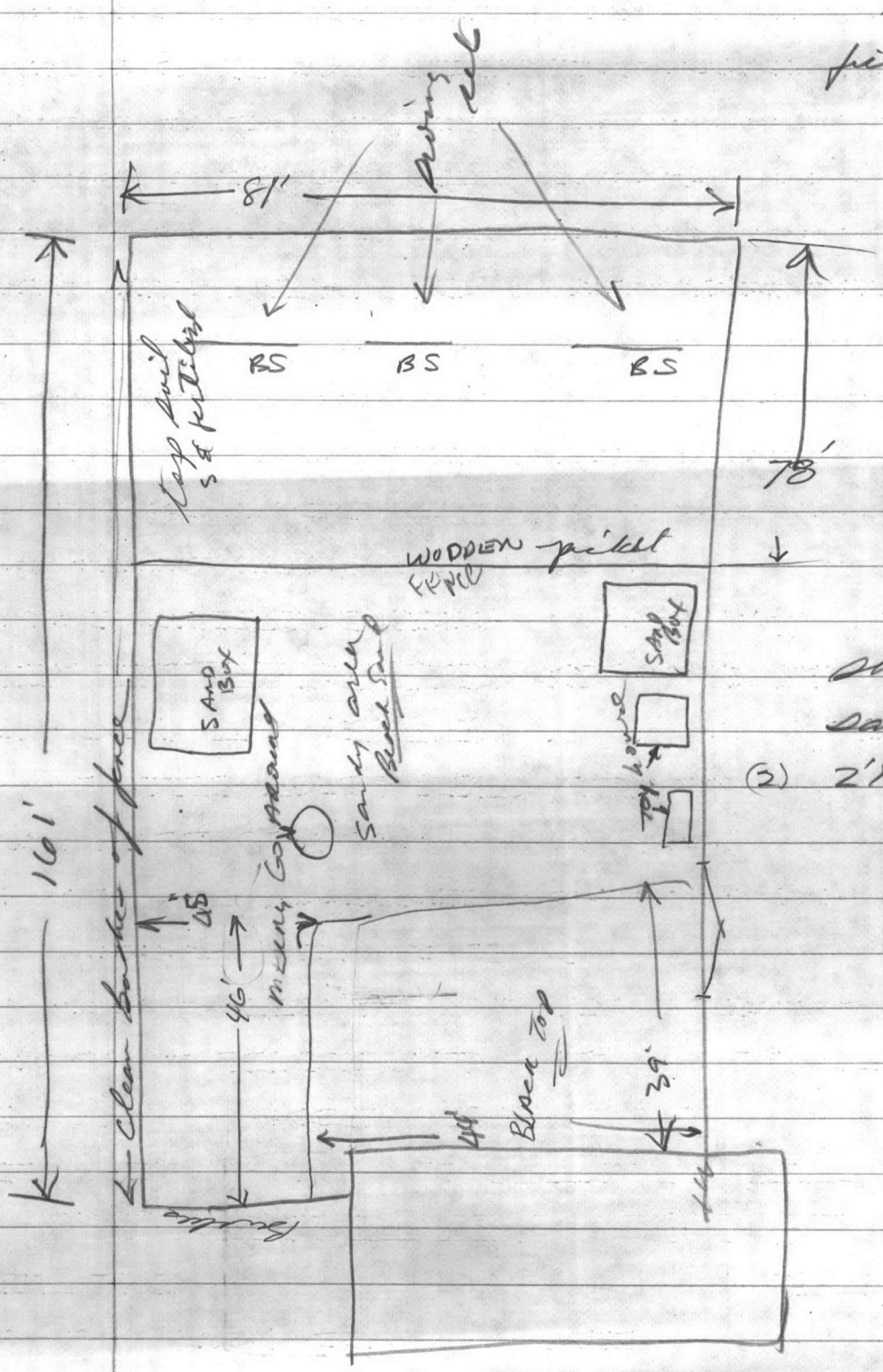
18,900 $18,000

utilized our equip.

mon or tues

~~joint venture contract~~

loader
Dump truck
field tractor Blade
w/ Sweeper



Shop 41 rebuild
sand Boxes
(2) 2'X10' X16' SQUARE

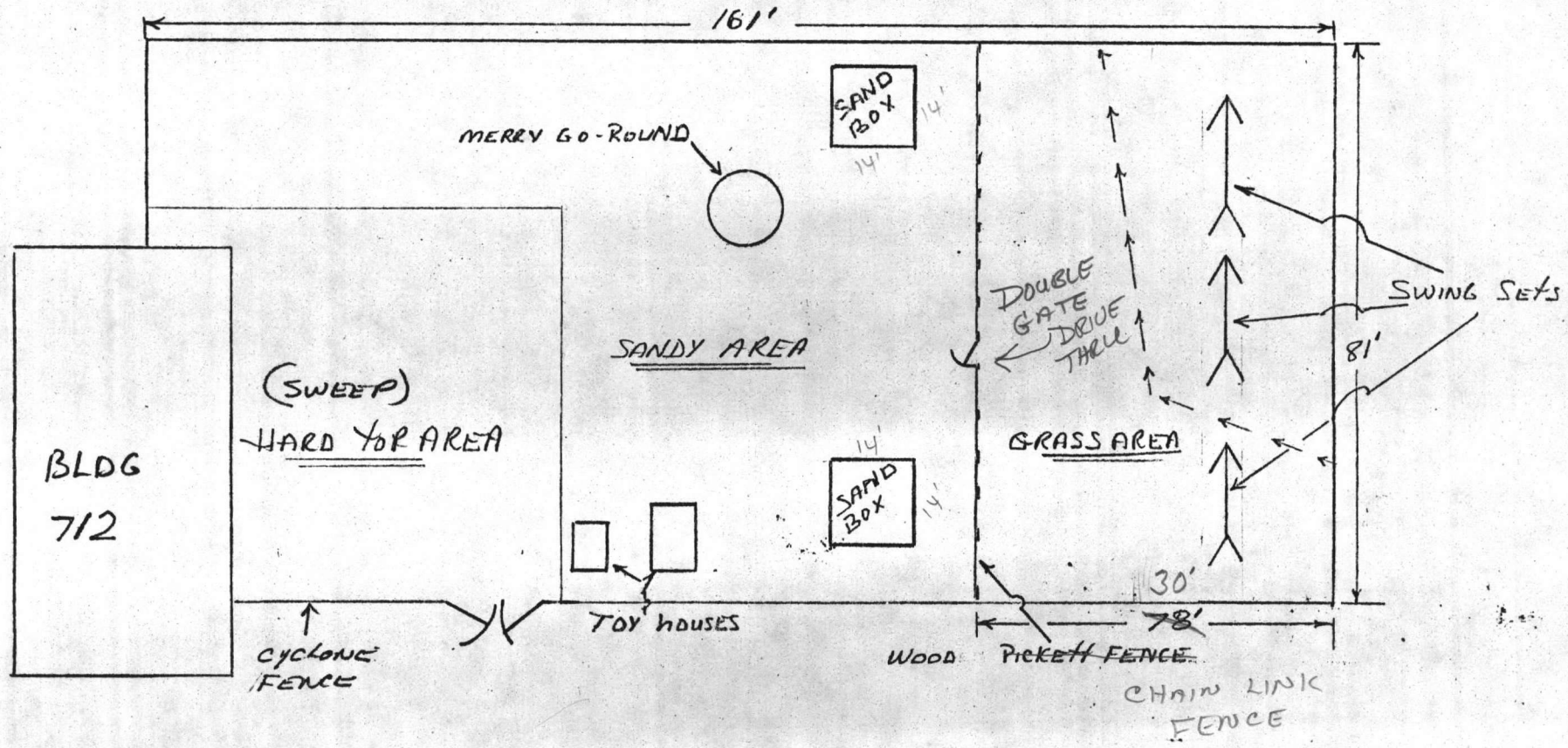
6. 43 paint Wood
red, Blue & White
Ski Blue

7. re shape curbs
2'X1' X 90'

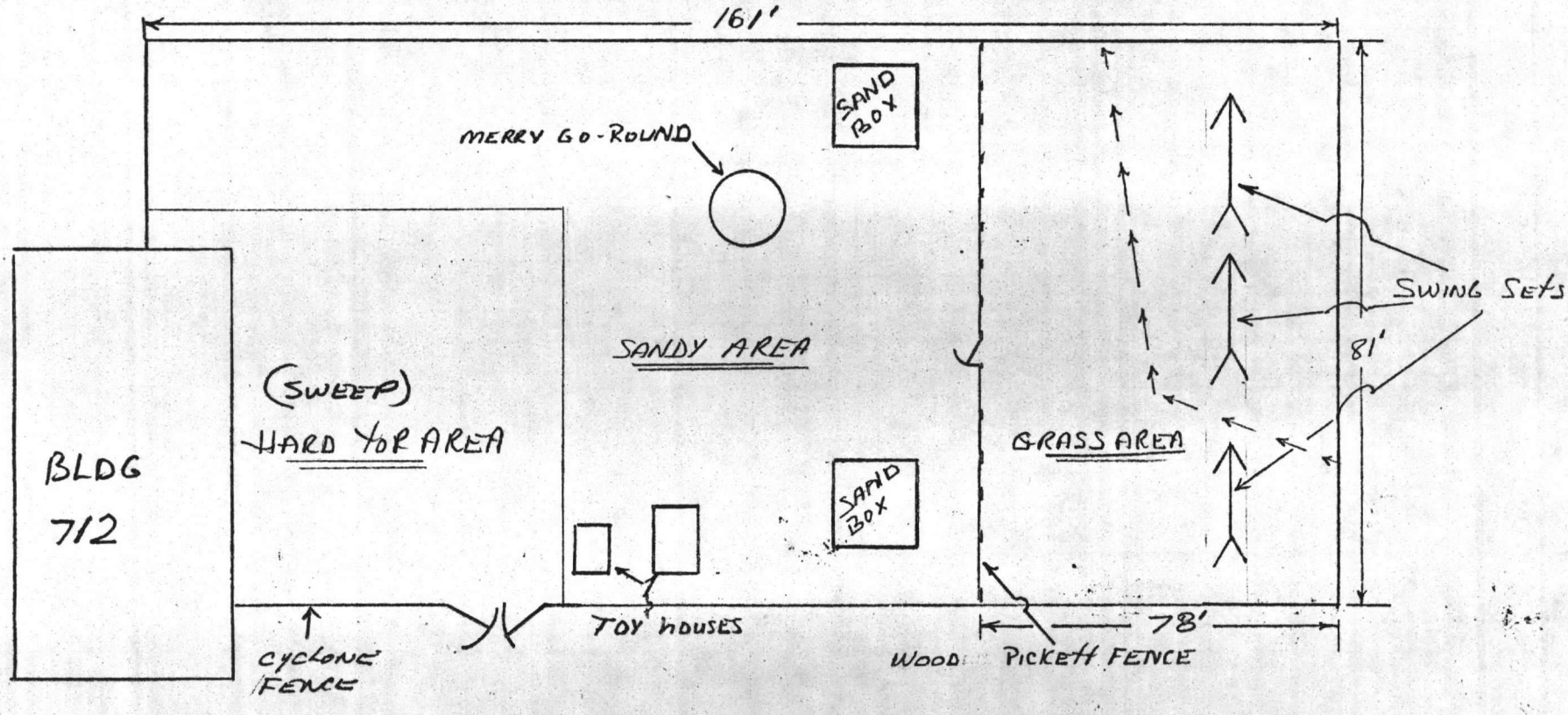
8. remove dead shrubbery
Bm 51

128

1. remove 4" of soil & haul
2. remove & haul to land fill sand box
3. haul Beach sand
4. haul top soil s & fert.
5. cut Bushes out of fence
6. clean up Black top area
5. remove fence & rebuild
1'X4' X 4' picket
12 pcs 4'X4'X6
2"X4" X 81'RL (2) Top & Bottom


161'
MERRY GO-ROUND
SAND BOX
14'
14'
SANDY AREA
(SWEEP)
HARD TOP AREA
BLDG
712
DOUBLE GATE DRIVE THRU
SWING SETS
81'
GRASS AREA
14'
SAND BOX
14'
30'
78'
TOY HOUSES
CYCLONE FENCE
WOOD
PICKETT FENCE
CHAIN LINK FENCE

W.C. 72
SH#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78'
CYCLONE FENCE
WOOD PICKETT FENCE

W.C.
SH#

JOB ORDER (CONTROLLED MAINTENANCE)
MCBCL 11014/18 (REV. 12-80)

W.C.	Distb. Date-By	Job Order No.

Activity Accounting No.	F/SFC	Program/Budget	Facility No.
			VICINITY OF 712
Appropriation	**Subhead**	**Approval Document**	**AC/S Fac. Proj. No.**
Allotment/Project	**CAC**	**Requester**	**Reg. No.** 342: DMW: NAS 6000/6250, SER 07236 DATED 26 JUL 1982
		CO, NEHC NORFOLK, VA	
WGC	**Type Of Work**	**Sketch/Plan Attached**	**Special Instr.**
05	REPAIR/REPLACE	☒ YES ☐ NO	

For Further Information Contact:
G. TURNER PH# 5809 MRS. PERKINS # 353-5576

General Job Description

REPLACE 4" OF SOIL WITHIN PLAYING AREA OF CHILD CARE CENTER. REPLACE FENCE (PICKETT) AND SAND BOXES.

NOTE: CONTAMINATED SOIL (4") SHOULD BE DISPOSED OF AS PER INSTRUCTION - ENVIRONMETAL (DANNY SHARPE).

AC/S Fac. Projects:
The Authorized Funded Cost of _____ Will Not Be Exceeded Without Prior Approval Of AC/S Fac.

Starting Date:	Complete By:	Completed Date:

Breakdown of Work			Summary of Estimates					
Phase No.	Work Center	Description	Est. Hrs.	Work Center	Labor Hours	Labor Cost	Mat. Cost	Total Est. Cost
1	71	REMOVE (2) SAND BOXES,	175	* 71 E	187	1845	28	
		PICKETT FENCE, HAUL TO LAND-		72 E	66	992		992
		fill. REMOVE DEAD SHRUB. CLEAN		41				
		VINES AND BUSHES OUT OF		43				
		FENCE. REPLACE 4" OF SAND		72	EQUIP	Chg	738	738
		AND SOIL THRU-OUT PLAY-		73	VEH	Chg		
		GROUND. SEED AND FERT-						
		ILIZE AREA by SWING SETS.						
		CUT SWALE AS PER SKETCH.						
		SW SH# 384						
For Continuation See Sheets 2 Thru 2								
				TOTALS				

Prepared By:	Reviewed By:
Turner	

Authorized By (Signature): Date:

Sheet 1 of

JOB ORDER (Controlled Maintenance) (Continued)
MCBCL 11014/18A (REV. 2-81)

BREAKDOWN OF WORK

WORK CENTER	DESCRIPTION	EST. HOURS
2/72	ASSIST SHOP 71 IN REMOVING 4" OF SAND AND TOP SOIL THRU-OUT PLAYING AREA. LOAD FRESH BEACH SAND AND TOP SOIL FOR PLAY AREA. ASSIST WITH SPREADING.	66
	Sh# 586	
3/41	BUILD NEW SAND BOXES (2) 16' SQUARE (2"X10") BUILD NEW PICKETT FENCE 81' LONG WITH GATE (4' WIDE) 4' HIGH. 1"X4" PICKETT, 12 PCS 4"X4" POSTS 4' HIGH, (2) TOP & BOTTOM RAILING 81' RL	
	Sh#	
4/43	PAINT ALL SIDES OF PICKETT FENCE (SEE W.C. 41) RED, SKY BLUE & WHITE. PAINT SWING SETS (3). AND MERRY GO-ROUND Sh#	
5/71	SPREAD SAND IN SAND BOXES AND CUT SWALE AS PER SKETCH. CLEAN UP AREA.	12
	N/S	

JOB ORDER NO.

FACILITY NO. VICINITY OF 712

SHEET 2 OF ____

MAINTENANCE COST ESTIMATE WORKSHEET
MCBCL 11011 (REV. 1-81)

DATE	REQ. NO.	UNIT	BLDG. NO.	NATURE OF WORK	WORK CENTER
7/26/82	LTR	CO NEHC	712	VICINITY OF CLEAN OUT AREA, REPLACE SOIL, SEED & FERTILIZE	71

AMOUNT	MATERIEL REQUIRED	SIZE	UNIT	UNIT COST	TOTAL COST	FOR SUPPLY USE ONLY
16	TRACTOR, WHEEL (FIELD W/BLADE & SWEEPER). @ 3.09	EQUIP	chg	49.44		
32	Dump Truck @ 3.24	VEH	chg	103.68		
2	FERTILIZE 8-8-8 8720-00-C90-0001	50Lb	bg	3.61	7.22	
2	BERMUDA GRASS SEED 8730-01-C00-7807	5Lb	bg	10.56	21.12	

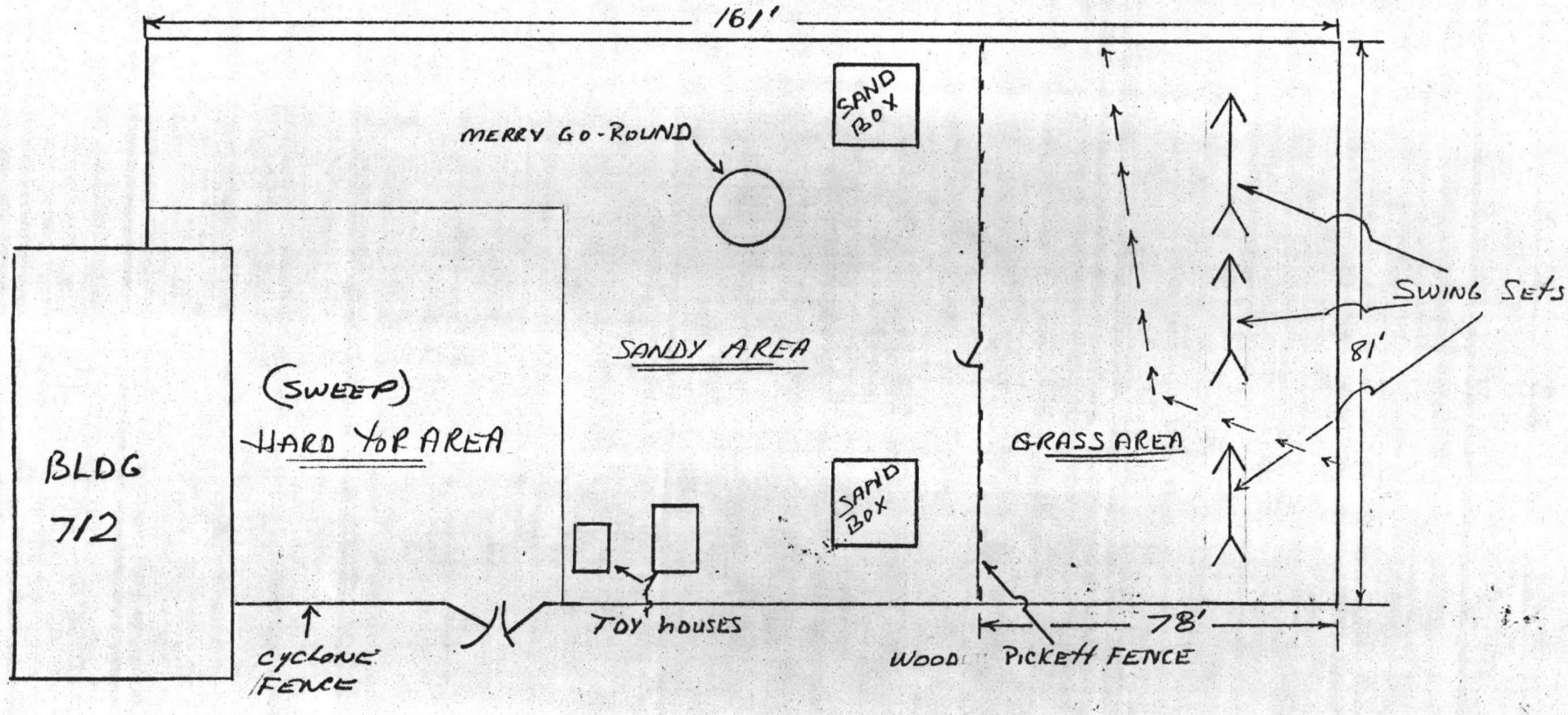
139	MAN HOURS @ WG-2 PER HOUR 8.91	TOTAL MAN DAYS	TOTAL MATERIEL		28.34	
16	MAN HOURS @ WG-6 PER HOUR 12.11					
32	MAN HOURS @ WG-7 PER HOUR 12.91		TOTAL LABOR		1845.37	J.O. SERIAL NO.
187	TOTAL MAN HOURS	23.4	TOTAL LABOR AND MATERIEL		1873.71	

REMARKS:

OTHER WORK CENTERS INVOLVED	SIGNATURE OF P & E	DATE
72, 41, 43	Geo. Turner	8/5/82

Sheet 1 of 1

SHEET 3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(SWEEP)
HARD TOP AREA
GRASS AREA
BLDG
712
SAND BOX
TOY HOUSES
78'
CYCLONE FENCE
WOOD PICKETT FENCE

W.C. 71
Sh# 4

JOB PHASE CALCULATION SHEET
NAVFAC 11014/23 (REV. 1-75)
S/N 0105-LF-002-7160

*See NOTE below

WORK SITE			
Billing service Bldg 712			
1. CRAFT PHASE NO.	2. JOB PHASE NO.	3. JOB IDENTITY NO.	4. DATE
		LR	26 July 1982

5. WORK CENTER NO. AND TITLE
71

6. JOB PHASE DESCRIPTION

Replace 4" of top soil playing area

REFERENCE 7	TASK DESCRIPTION 8	9. EPS ESTIMATED TIME UNIT HOURS a.	OCCURRENCE b.	CRAFT TIME c.	NON-EPS ESTIMATED TIME 10
24-	remove soil by hand 10 ft of 139.93	2.3166	13.993	32.5	
RT-6	Cu yds = 13.993.				
pwA-2	Haul soil to landfill 139.93 ÷ 10 Cu yd =	1.8	14	25.2	
	13.993 trips or 14 trips				
	Zone 5 & 3 = .9 (2) = 1.8				
pwA-2	Haul debris to landfill 2 loads	1.8	2	3.6	
est	remove sand boxes & fences				12
pwA-2	Haul Beach sand 61.93 ÷ 10 = 7 trips	3.1	7	21.7	
pwA-2	Haul top soil zone 5 & zone 5 = 1.1 (2) = 2.2	2.2	8	17.6	
	78 cu yd ÷ 10 = 7.8				
17-G	spread sand & dirt 190 Cu yds	4.4	1	4.4	
WT-43					
27-C	seed & fertilize area. 78' x 81' = 6318 SF	.6	2	1.2	
RT-19				106.2	
est	sweep & clean up area				4
est	remove vine & trees from fence				16

* NOTE: This form should be used for BOTH EPS and NON-EPS estimates.

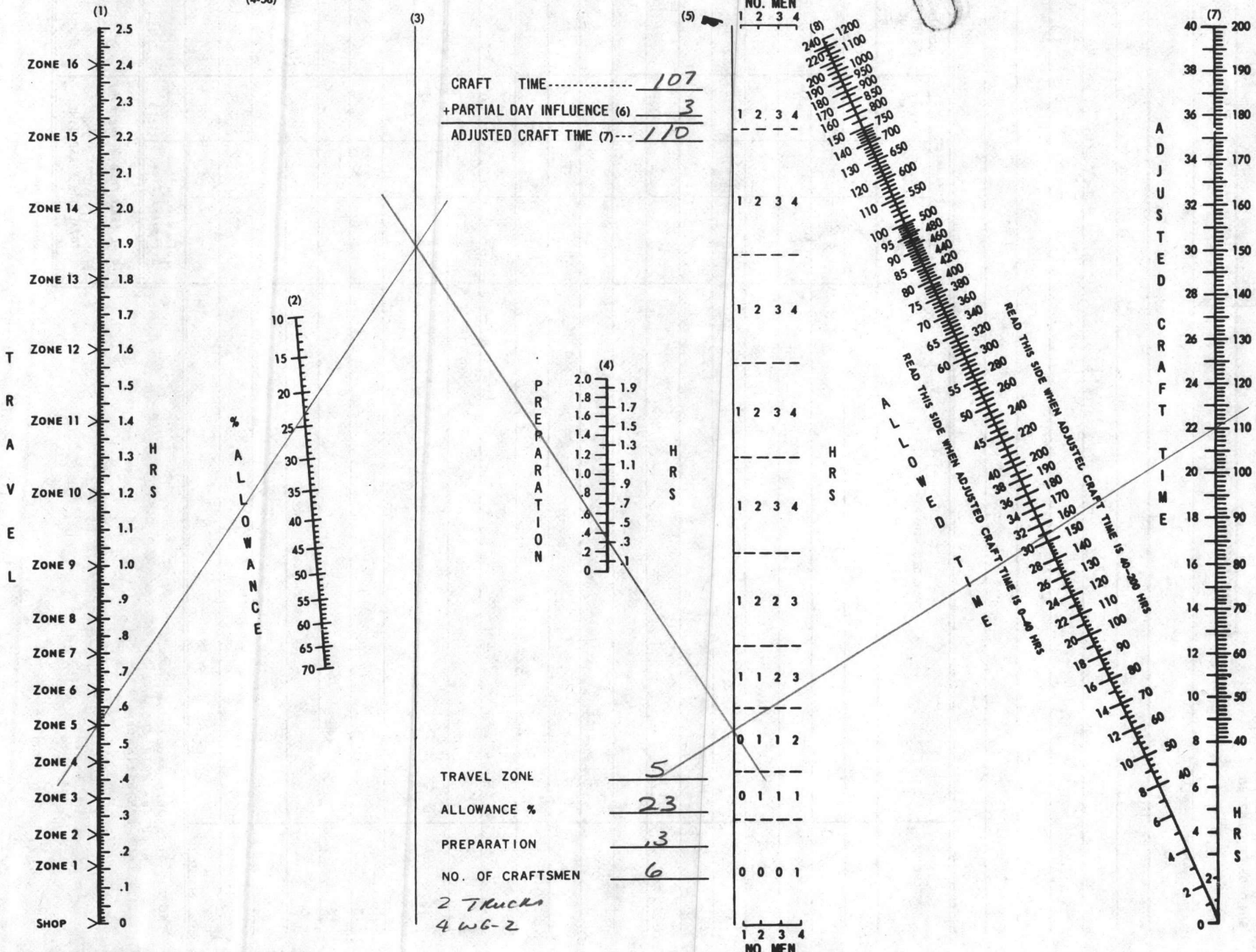
6318 ÷ 1000 = 6.5 (2) = 14

139.93 Cu yds

TOTALS (Craft & Estimated Time)	107	32
TOTAL (EPS from Nomograph)	155	
TOTAL JOB PHASE TIME	187	

SHEET OF

NOMOGRAPH
(4-58)



CRAFT TIME ---------- 107

+PARTIAL DAY INFLUENCE (6) 3

ADJUSTED CRAFT TIME (7) --- 110

TRAVEL ZONE 5

ALLOWANCE % 23

PREPARATION .3

NO. OF CRAFTSMEN 6

2 TRUCKS
4 WG-2

☆GPO: 1980—603-189/7575 2-1

MAINTENANCE COST ESTIMATE WORKSHEET
MCBCL 11011 (REV. 1-81)

DATE	REQ. NO.	UNIT	BLDG. NO.	NATURE OF WORK	WORK CENTER
7/26/82	LTR	CO NEHC	712	Vicinity of EXCAVATE AND REPLACE 4" FOR SAND & SOIL	72

AMOUNT	MATERIEL REQUIRED	SIZE	UNIT	UNIT COST	TOTAL COST	FOR SUPPLY USE ONLY
16	LOADER FRONT END		HR	4.76	76.16	
44	GRADALL		HR	13.91	612.04	
6	LOWBED @ 6.43	VEH	chg	38.58		

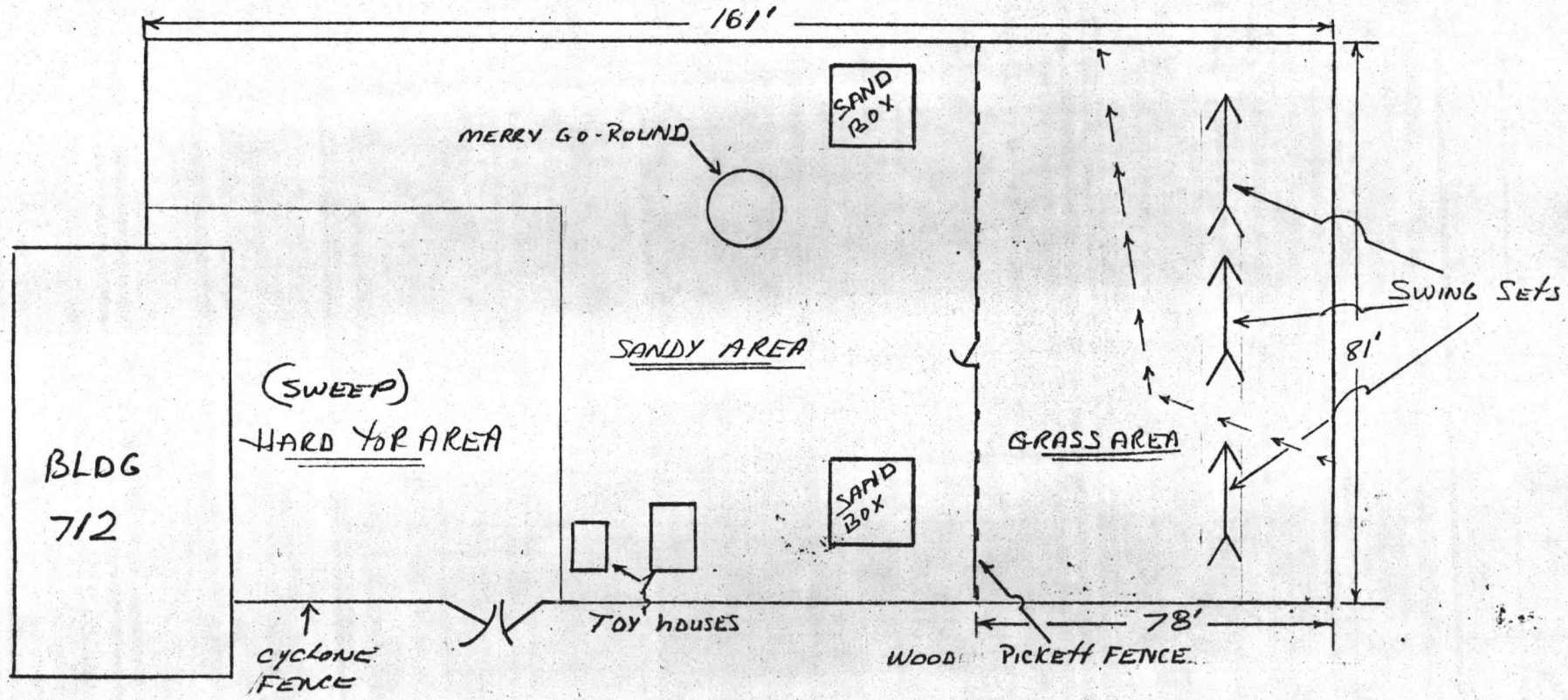
60	MAN HOURS @ WG-10 PER HOUR 15.17	TOTAL MAN DAYS	TOTAL ~~MATERIEL~~ EQUIP chg	688.20	
6	MAN HOURS @ WG-8 PER HOUR 13.65		TOTAL LABOR	992.10	J.O. SERIAL NO.
66	TOTAL MAN HOURS	8.25	TOTAL LABOR AND ~~MATERIEL~~ EQUIP CHG	1680.30	

REMARKS:

OTHER WORK CENTERS INVOLVED	SIGNATURE OF P & E	DATE
71, 41, 43	Geo. Turner	8/5/82

Sheet 1 of 1

SHEET 5


161'
SAND BOX
MERRY GO-ROUND
SWING SETS
81'
SANDY AREA
(SWEEP)
HARD TOP AREA
GRASS AREA
BLDG
712
SAND BOX
TOY HOUSES
78'
CYCLONE FENCE
WOOD PICKETT FENCE

W.C. 72
Sh# 6

JOB PHASE CALCULATION SHEET
NAVFAC 11014/23 (REV. 1-75)
S/N 0105-LF-002-7160

*See NOTE below

WORK SITE			
SITHING SERVICE BLDG 712			
1. CRAFT PHASE NO.	2. JOB PHASE NO.	3. JOB IDENTITY NO.	4. DATE
		LHR	26 JULY 1982

5. WORK CENTER NO. AND TITLE
72

6. JOB PHASE DESCRIPTION
REPLACE 4" OF TOP SOIL IN PLAYING AREA.

REFERENCE 7	TASK DESCRIPTION 8	9. EPS ESTIMATED TIME UNIT HOURS a.	OCCURRENCE b.	CRAFT TIME c.	NON-EPS ESTIMATED TIME 10
17-I	Excavate and remove top soil	8.0	1	8.0	
WT-40	4" X 78'X81' = 2106 C.F ÷ 27 = 78 Cy				
	use Book time because of condition				
17-G	Excavate and remove sandy area	4.4	1	4.4	
WT-40	4"X81'X37' = 989.01 CF ÷ 27 = 36.63 cu yds				
17-F	Excavate and remove sandy area	2.9	1	2.9	
WT-40	4"X46'X40" = 683.1 CF ÷ 27 = 25.3 cu yds				
17-I	Load top soil 78 Cy	8.0	1	8.0	
WT-40					
17-H	Load Beach sandy 61.93 Cy	6.0	1	6.0	
WT-40					
PWB-2	Haul loader to Beach (lowbed	3.1	1	3.1	
	zone 5+9 = (1.0 + .55 = 1.55 (2) = 3.1			32.4	6
	waiting time for lowbed) 2 people				

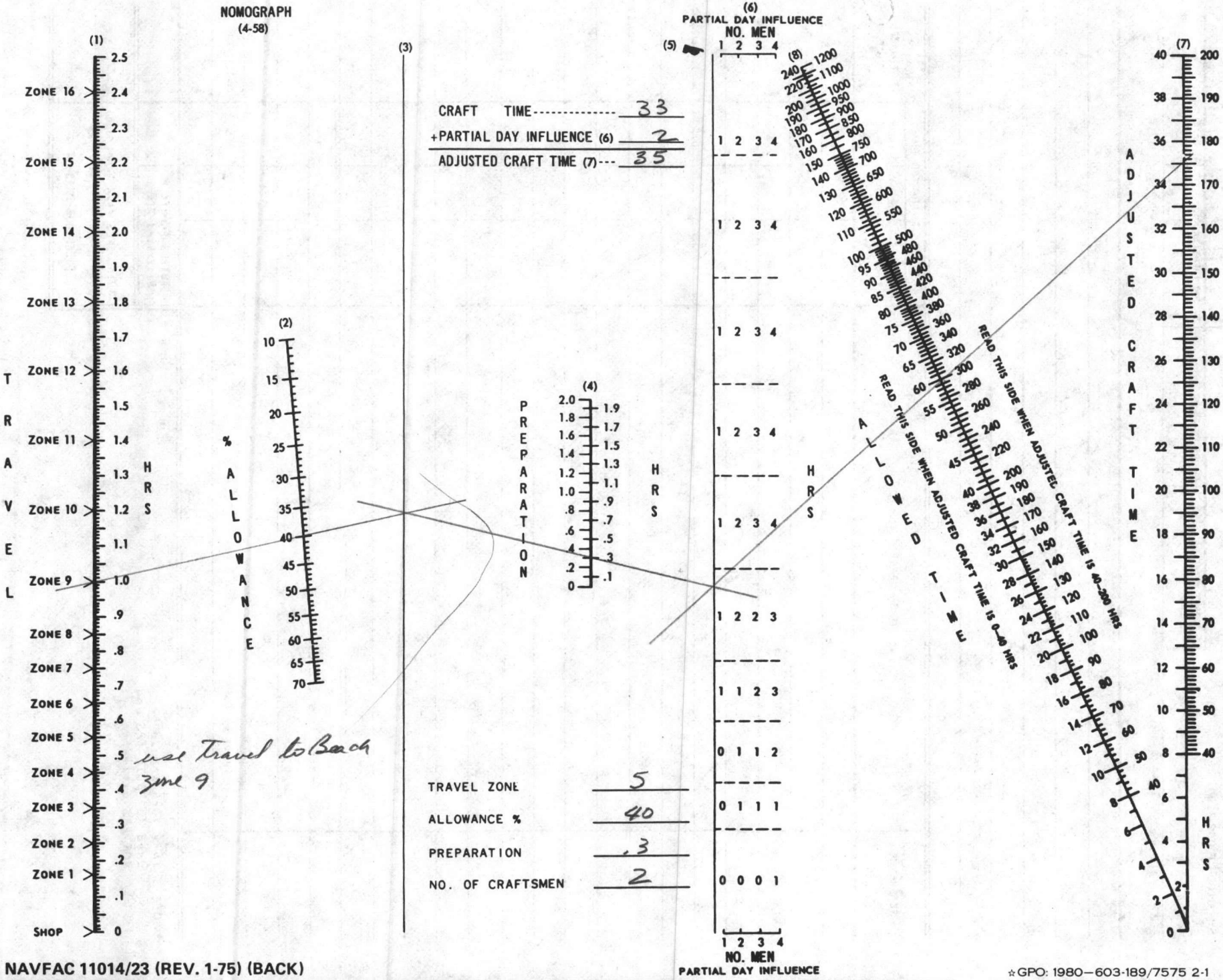
139.93 cu yds

TOTALS (Craft & Estimated Time)	33	6
TOTAL (EPS from Nomograph)	60	
TOTAL JOB PHASE TIME	66	

* NOTE: This form should be used for BOTH EPS and NON-EPS estimates.

SHEET OF

NOMOGRAPH
(4-58)



CRAFT TIME---------- 33

+PARTIAL DAY INFLUENCE (6) 2

ADJUSTED CRAFT TIME (7)--- 35

use Travel to Beach
zone 9

TRAVEL ZONE 5

ALLOWANCE % 40

PREPARATION .3

NO. OF CRAFTSMEN 2

☆GPO: 1980—603-189/7575 2-1

Lt Winters
OPMS

DEPARTMENT OF THE NAVY
NAVY ENVIRONMENTAL HEALTH CENTER
NAVAL STATION
NORFOLK, VIRGINIA 23511

342:DMW:naf
6000/6250
Ser 07236
26 Jul 1982

From: Commanding Officer, Navy Environmental Health Center
To: Commanding Officer, Naval Regional Medical Center, Camp Lejeune, North Carolina 28542

Subj: Medical evaluation of soil samples analysis results

Ref: (a) CO NAVREGMEDCEN Camp Lejeune ltr 62-dlm 6260 dtd 28 May 1982

1. In accordance with reference (a), results of pesticide analysis of soil samples from five areas adjacent to the Sitter Service at Camp Lejeune were evaluated.

2. The levels of pesticide residue found in the samples from the two playgrounds were felt to present no acute toxic hazards to children playing in the area. However, no definitive studies have been done in this area and possible long-term effects, if any, are not known.

3. Although no known hazards exist, prudence might dictate that measures be instituted to eliminate or limit any possible contact with the soil from either the playground or the other more heavily contaminated areas sampled.

4. The recommended control measure is to remove the upper 4 inches of contaminated soil from the areas where children play, replace it with uncontaminated soil and reseed or resod the area. It should be noted that contaminated soil disposal should be done in an area where no threat to waterfowl or other wildlife would exist.

J.J. Edwards

J.J. EDWARDS, Jr.
By direction

DPO

MAINTENANCE COST ESTIMATE WORKSHEET
MCBCL 11011 (REV. 1-81)

DATE	REQ. NO.	UNIT	BLDG. NO. NEAR 712	NATURE OF WORK REPAIR DUE TO CONTAMINATION	WORK CENTER 41

AMOUNT	MATERIEL REQUIRED	SIZE	UNIT	UNIT COST	TOTAL COST	FOR SUPPLY USE ONLY
187	5510-00-551-9869 LUMBER		BF	.38	71.06	
	PRESERV TREATED 2X10X14'					
	DO NOT SUBSTITUTE					
1	5530-00-129-7721 PLYWOOD	½"	SH	7.90	7.90	
1	5340-00-291-6521 HASP	3½"X1"	EA	.58	.58	
2	5340-00-664-1327 HINGE	2½"X2½"	PR	2.10	4.20	

1	MAN HOURS @ 10.78 PER HOUR +33.8%	TOTAL MAN DAYS	TOTAL MATERIEL	93.74	
8	MAN HOURS @ 10.78 PER HOUR +33.8%		TOTAL LABOR	129.78	J.O. SERIAL NO.
9	TOTAL MAN HOURS	1.125	TOTAL LABOR AND MATERIEL	223.52	

REMARKS:
EBS. MAKE FORMS FOR SAND BOX (2)
PUT DOORS ON FRONT OF TOY BOX WITH HASP

OTHER WORK CENTERS INVOLVED	SIGNATURE OF P & E	DATE
		6 AUG 82

Sheet 1 of 2

SHEET ____

MAINTENANCE COST ESTIMATE WORKSHEET (Cont'd)
MCBCL 11011/1 (REV. 1-81)

DATE	REQ. NO.	UNIT	BLDG. NO. NEAR 712	NATURE OF WORK REPAIR DUE TO CONTAMINATION	WORK CENTER 41

AMOUNT	MATERIEL REQUIRED	SIZE	UNIT	UNIT COST	TOTAL COST	FOR SUPPLY USE ONLY
	MISC MATERIAL				10.00	

J.O. SERIAL NO.

Sheet 2 of 2

SHEET ____

INSPECTION REPORT

MCBCL 11101/16

Area & Facility No.	Date	Inspector & Time (Hours) Used	Sheet #	of	Sheets
NEAR 712	6AUG82	JONES			

Work Center	Urgency Code *	DEFICIENCIES: Include Size, Sketches, and/or Special Information regarding needed corrections.	*Action *Taken	ESTIMATE Man Hours	ESTIMATE Total Cost
41		1. CUT DOOR & INSTALL ON TOY STORAGE			
		½" PLYWOOD WITH HASP & HINGES			
		30½" X 39" (2)			
		2. FORM UP FOR SAND BOX			
		14' SQUARE USE 2X10 NO BOTTOM (2)			

* URGENCY CODE: Enter appropriate Code as follows:

A. Emergency nature, should be corrected as soon as possible.
B. Essential Maintenance, should be corrected within one (1) year.
C. Projected Maintenance, correction can wait one or more years, Indicate # of years.

** ACTION TAKEN

1. Emergency
2. Preventive Maint.
3. S. W. O. P.
4. Deferred Maintenance