National Aeronautics and
Space Administration

Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, Virginia 23337

NASA

DEC 23 1992

Reply to Attn of: 200

Mr. Terry D. Wagner, Manager
Environmental Program
State Water Control Board
P.O. Box 11143
Richmond, VA 23230-1143

SUBJECT: Ground Water Withdrawal Permits

Dear Mr. Wagner:

Enclosed are two applications for ground water withdrawal permits for Goddard Space Flight Center, Wallops Flight Facility (GSFC/WFF). One application pertains to the noncommunity public water supply serving Wallops Island and the second is for the community public water supply at the Main Base. Both locations are currently operating under permits issued prior to July 1, 1991 and consequently, GSFC/WFF is filing these applications to meet the December 31, 1992 deadline as per Chapter 25 Section 62.1-260A of the Ground Water Management Act of 1992.

GSFC/WFF is not making applications for the noncommunity transient water supply located at the NASA Visitor Center because under Section 62.1-259 of Chapter 25, no ground water withdrawal permit is required for withdrawals of less than 300,000 gallons a month. It is estimated withdrawals at the Visitor Center average 150,000 gallons per month.

The applications require submittal of Water Well Completion Reports or other well construction documentation and these are included with one exception, no construction data is available for well F113 on the Main Base. However, well F112 is located within two hundred feet of well F113 and should, therefore, have similar stratigraphy.

The production wells currently providing institutional water supply to the Main Base are scheduled for closure in 1993. Construction of four new production wells, designated wells #1, #2, #3, and #4, is underway. These wells tap the Upper and Middle Miocene aquifers, with wells #1, #3, #4 in the Middle Miocene and #2 in the Upper Miocene. It is anticipated that well installations will be completed by Spring 1993. WFF will provide well information upon completion and request an amendment to the Main Base Ground Water Withdrawal Permit at such time.

F2-5

WFF conducts research and development (R&D) operations and therefore, is not a "steady state" type facility. Ground water withdrawals vary daily, a fact supported by historical water usage data. It is our understanding the withdrawal permit will be based on annual water usage data from twelve consecutive months during the period July 1, 1987 to June 30, 1992, with a not to exceed daily withdrawal amount allotted in our Virginia Department of Health Waterworks Operating Permit. WFF is requesting an increase in permitted withdrawal capacities above our historical usage for the following reasons:

- planned expansion of Navy operations at WFF, including construction of 58 housing units and enlarged cafeteria facilities at the Main Base and installation of a cooling tower on the Island,

- the nature of future R&D activities, and associated water dependencies, is unknown,

- future R&D activities and Navy operations will have associated population fluctuations.

- the Main Base has an old aviation fuel tank farm that is subject to a corrective action plan (CAP) currently monitored by the State Water Control Board. The CAP calls for a pump and treat system for remediation of ground water contamination. Also, remediation of an old fire training area is planned. The impact to ground water withdrawals from these activities is unknown at this time.

If you have any questions or comments concerning this issue, please contact either Tom Givens at 804-824-1148 or Pam Whitman at 804-824-2137.

Frank V. Moore
Associate Director of Management
Operations

Enclosure

STATE WATER CONTROL BOARD

PRELIMINARY GROUND WATER WITHDRAWAL APPLICATION
TO CONVERT AN EXISTING CERTIFICATE OF GROUND WATER RIGHT OR PERMIT TO WITHDRAW GROUND WATER TO A GROUND WATER WITHDRAWAL PERMIT PURSUANT TO THE GROUND WATER MANAGEMENT ACT OF 1992

Section 62.1-260.A and Section 62.1-265 of the Ground Water Management Act of 1992 requires that all persons holding certificates of ground water right or permits to withdraw ground water issued prior to July 1, 1991 who were withdrawing ground water prior to July 1, 1992 or who were providing supplemental water during drought conditions to apply for a ground water withdrawal permit by December 31, 1992. Section 62.1-260.A requires the State Water Control Board to issue ground water withdrawal permits for the total amount of ground water withdrawn in any consecutive twelve month period between July 1, 1987 and June 30, 1992, together with such savings as can be demonstrated to have been achieved through water conservation. Section 62.1-265 requires the State Water Control Board to issue a ground water withdrawal permit for the annual amount necessary to support human consumptive use. Procedures for demonstration of water conservation savings and annual need for human consumptive use will be developed as part of ground water withdrawal regulations that are in development. A separate application must be filed for each existing certificate of ground water right and permit to withdraw ground water. Completed applications must be received at the State Water Control Board, Office of Spill Response and Remediation, P. O. Box 11143, Richmond, Va. 23230 by December 31, 1992.

Applicant NASA/Goddard Space Flight Center (Main Base)
Address Wallops Flight Facility Building F-16
Wallops Island, VA 23337 Phone 804-824-1209
Contact Person William Phillips, Head, Plant Operations and Maintenance Branch
Location of Withdrawal Facility: (County/City) Accomack County/Wallops Island

1. Existing Certificate or Permit No. ES0038900

2. Certificated or Permitted Amount 8,153,000 gallons per day / (month) (circle one)

3. List all Permitted or Certificated Wells on reverse side and attach Water Well Completion Reports or other well construction documentation for each certificated or permitted well with well location and number on USGS 7 1/2 minute topographic maps.

4. Total Amount of Ground Water Withdrawn During Any Consecutive Twelve Month Period Between July 1, 1987 and June 30, 1992 (Section 62.1-260.A.)
Consecutive Twelve Months begins January 1, 1988 and ends December 31, 1988
Period must begin on the first day of the beginning month and end on the last day of the ending month.
Total Ground Water Withdrawn during this period 51,846,600 Gallons
Documentation of claim must be provided. The preferred documentation of withdrawal amounts are Ground Water Pumpage and Use Reports required by existing certificate or permit conditions or water withdrawal reports required by Water Withdrawal Reporting Regulations (VR 680-15-01).

5. Water Use Category: If water use category is public supply submit a copy of the Virginia Department of Health Waterworks Operation Permit. (Section 62.1-264)
( ) Industrial (including food processing)
( ) Commercial
(X) Public Supply (including institutional)
( ) Irrigation
( ) Emergency
( ) Other

6. Does the applicant intend to apply for ground water withdrawal rights based on savings achieved through water conservation? (Section 62.1-260.A.) ___Yes X No

7. Does the applicant intend to apply for ground water withdrawal rights in excess of those established by historical use and savings achieved through water conservation with this application? (Section 62.1-260.G.) X Yes ___No

8. Does the applicant intend to apply for ground water rights to provide supplemental water during drought conditions? (Section 62.1-265) ___Yes X No

Applicant's Signature _____

Date _____

FORM GW-1B
1986 150

PERMIT NO. ES0038900

COMMONWEALTH of VIRGINIA

PERMIT

TO WITHDRAW OR ENLARGE WITHDRAWAL OF GROUNDWATER

(FOR USE IN GROUNDWATER MANAGEMENT AREAS)

Pursuant to the authority granted by Sections 62.1-44.100 and 62.1-44.93, Chapter 3.4, Title 62.1 of the GROUNDWATER ACT OF 1973, as amended, the STATE WATER CONTROL BOARD hereby grants this PERMIT to

Name NASA-Goddard Space Flight Center (Main Base)
Address Wallops Flight Facility
Building F-6
Wallops Island, VA 23337

effective June 24, 1991 (date), in order to acquire or enlarge a use of ground water, to the extent and manner described below:

existing use authorized by State Water Control Board PERMIT or CERTIFICATE is 263,000 gallons per day; acquired or enlarged use authorized under this PERMIT shall be no greater than 0 (zero) gallons of ground water per day, with the following conditions and/or restrictions: see attached

for a grand total use not to exceed 8,153,000 gallons of ground water use per ~~day~~ month.

The following conditions apply to ground water use under this PERMIT:

1. ~~Daily~~ Monthly water use must be recorded and reported to the BOARD by the ~~fifth~~ tenth day of each January, April, July and October for the respective previous standard quarter.
2. All applicable laws and applicable STATE WATER CONTROL BOARD regulations in RULES OF THE BOARD AND STANDARDS FOR WATER WELLS must be complied with. Noncompliance will void this PERMIT at the pleasure of the BOARD and may result in additional action by the BOARD.
3. The terms of this PERMIT are subject to review and modification by the BOARD ~~at its discretion or~~ no later than June 25, 1996 and every five (5) years thereafter.

$5.00 fee received by:
Name V. P. Newton
Date 12/3/90

By direction of the STATE WATER CONTROL BOARD, this Permit is granted by:

Signed [signature]
For the STATE WATER CONTROL BOARD

Date June 25, 1991

COMMONWEALTH of VIRGINIA

DEPARTMENT OF HEALTH
BUREAU OF WATER SUPPLY ENGINEERING
WATERWORKS OPERATION PERMIT

National Aeronautics and Space Administration Is Hereby Granted Permission

) Operate a Community Waterworks Having a Design Capacity of 1500 equivalent residential connections or 0.6 m

Wallops Flight Center Located In Accomack County (City, Town and/or County) In Accordance With the Provisions of

tle 62.1, Chapter 4, Section(s) 62.1 - 50 Code of Virginia As Amended and

ction(s) 3.14 Of the Waterworks Regulations of the Virginia Department of Health As Amended.

his Permit Is Issued In Accordance with Previously Issued Permits No. O-145, dated March 17, 1975, and expired

e 30, 1977. (See attached description sheet, dated December 19, 1977.)

nd With The Understanding That The National Aeronautics and Space Administration Wi

perate the Waterworks in Accordance with Part 2 "Operation Regulations for Waterworks" of the Waterworks Regulations of the Virginia Department

Health and any Variances and/or Exemptions Noted Below.

ariances and/or Exemptions Granted (X) None ( ) See Attached.

RECOMMENDED Allen R. Hammon
Director, Bureau of Water Supply Engineering

ERMIT NO. 3001500

FFECTIVE DATE June 30, 1977

RECOMMENDED Oscar G. Adams
Director, Division of Engineering

APPROVED J. H. Kenley M.D.
State Health Commissioner

Material Approval Submittal

(See instructions on reverse)

BUT

To: *(Contracting Officer's Technical Representative)*	From: *(Contractor)*	Date:
Jerry T. Wall	S.H. Barner, Inc.	12/08/92
Contract Number: FAS5-31138	**Submission Number:** 20	**Submittal:** XX New ☐ Resubmittal
Previous Submission Number:	**Project Number:**	

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
Item No.	Specification Section/ Para. No./Drawing No.	Description of Material *(Include Type, Model Number, Catalog Number, Mfg., etc.)*	Approved	Disapproved	See Reverse	Initial
1	02734/1.2.4	Driller's Log - Well #2	X			WB
2	02734/1.2.4	Electric Logs - Well #2	X			WB

RECEIVED FEB 10 1992

By completing this form, the undersigned contractor certifies that the material complies with all specifications of subject contract.

Date:	Type or print name and title of submitter:	Signature:
12/08/92	Scott H. Barner, President	Scott H. Barner

FOR GOVERNMENT USE ONLY

To: C.O.T.R.

Recommend: ☑ Approval ☐ Disapproval as indicated above and subject to any applicable comments on the reverse.

Date:	Type or print name of Project Manager:	Signature:
12-14-92	William R. Scott	William R. Scott

To: *(Contractor)*

☑ Approved ☐ Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved item within _____ days of date shown below.

Date:	Type or print name of C.O.T.R.:	Signature:
12-14-92	Jerry T. Wall	Jerry T. Wall

NASA WI-12 (REV.2-89)

S.H. Barner, Inc.
Driller's Log, Well #2
Driller: Mark Eure

Feet	Description
0 - 10	Sandy brown clay
10 - 20	Sandy brown clay
20 - 30	Sandy brown clay, medium to course sand, gravel, brown
30 - 40	Sandy brown clay, medium to course gray sand
40 - 50	Medium to course sand, clay, brown
50 - 60	Course sand, brown
60 - 70	Fine to course sand, brown clay, blue mud
70 - 80	Mud, clay, fine to medium sand
80 - 90	Sand, medium to course, blue mud, some shell
90 - 100	Sand, fine to course, shell
100 - 110	Sand, fine to course, shell
110 - 120	Sand, fine to course, shell
120 - 130	Sand, fine to course, shell
130 - 140	Sand, fine to course,
140 - 150	Sand, fine to course, shell, gravel, rock at 145'
150 - 160	Sand, fine to medium, shell, small gravel
160 - 170	Mud, gravel, sand, fine to medium
170 - 180	Mud, shell, sand, fine to medium, gravel
180 - 190	Gravel, sand, medium, shell
190 - 200	Sand, medium to course, gravel, shell
200 - 205	Sand, medium to course, gravel, shell
205 - 210	Sand, medium to course, gravel, shell
210 - 215	Sand, medium to course, gravel, shell
215 - 220	Sand, fine to medium, shell
220 - 225	Sand, medium, shells
225 - 230	Sand, medium, shells
230 - 235	Sand, medium, shells
235 - 240	Fine to medium sand, mixed shells
240 - 245	Fine to medium sand, mixed shells
245 - 250	Fine to medium sand, mixed shells
250 - 255	Fine to medium sand, mixed shells
255 - 260	Fine to medium sand, mixed shells

S.H. Barner, Inc.
Driller's Log - Well #2
Page 2

Feet	Description
260 - 265	Rock at 265', fine to medium sand mixed shells
265 - 270	Fine to medium sand, mixed shells
270 - 275	Fine to medium sand, mixed shells
275 - 280	Fine to medium sand, mixed shells
280 - 285	Fine to medium sand, mixed shells rock at 283'
285 - 290	Fine to medium sand, mixed shells
290 - 295	Fine to medium sand, mixed shells rock at 295'
295 - 300	Fine to medium sand, mixed shells
300 - 305	Fine to medium sand, mixed shells rock at 301'
305 - 310	Fine to medium sand, mixed shells
310 - 315	Medium sand, mixed shells

Material Approval Submittal

(See instructions on reverse)

Bott

To: (Contracting Officer's Technical Representative)	From: (Contractor)	Date:
Jerry T. Wall	S.H. Barner, Inc.	01/12/93
Contract Number: NAS5-31138	Submission Number: 25	Submittal: ☒ New ☐ Resubmittal
Previous Submission Number:	Project Number:	

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
Item No.	Specification Section/ Para. No./Drawing No.	Description of Material (Include Type, Model Number, Catalog Number, Mfg., etc.)	Approved	Disapproved	See Reverse	Initial
1	02734/1.2.3	Sieve analysis - Well #2	X			WS

RECEIVED
JAN 15 1993
FEB

By completing this form, the undersigned contractor certifies that the material complies with all specifications of subject contract.

Date:	Type or print name and title of submitter:	Signature:
01/12/93	Scott H. Barner, President	

FOR GOVERNMENT USE ONLY

To: C.O.T.R.

Recommend: ☒ Approval ☐ Disapproval as indicated above and subject to any applicable comments on the reverse.

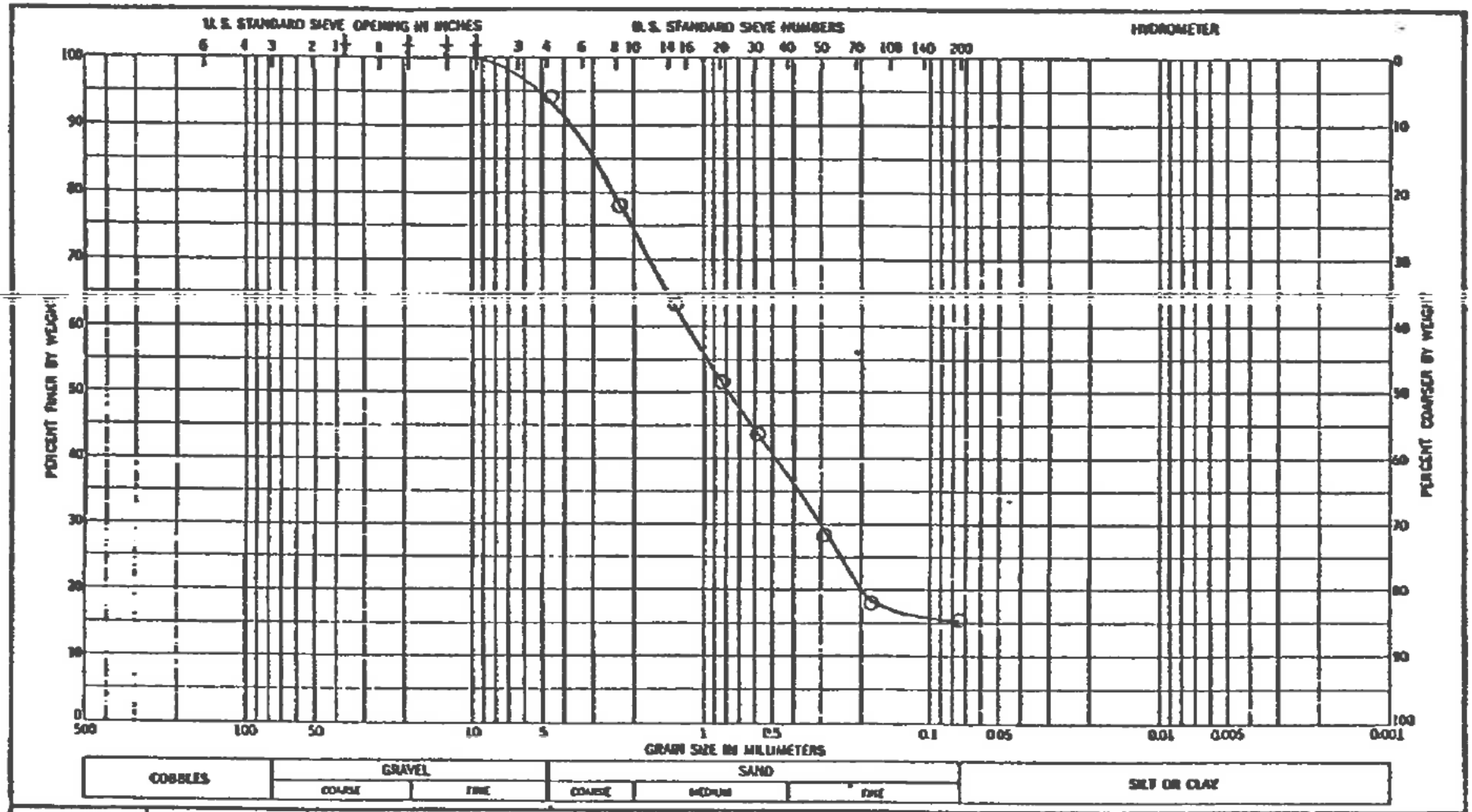
Date:	Type or print name of Project Manager:	Signature:
1-19-93	William Bott	

To: (Contractor)

☒ Approved ☐ Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved item within _____ days of date shown below.

Date:	Type or print name of C.O.T.R.:	Signature:
1-19-93	Jerry T Wall	

NASA WI-12 (REV.2-89)



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
	90'	Gray, fine to coarse SAND, trace fine gravel, trace Silt with shell fragments				

Figure 1

GRADATION CURVES

Project Wallops Island Well No. 2

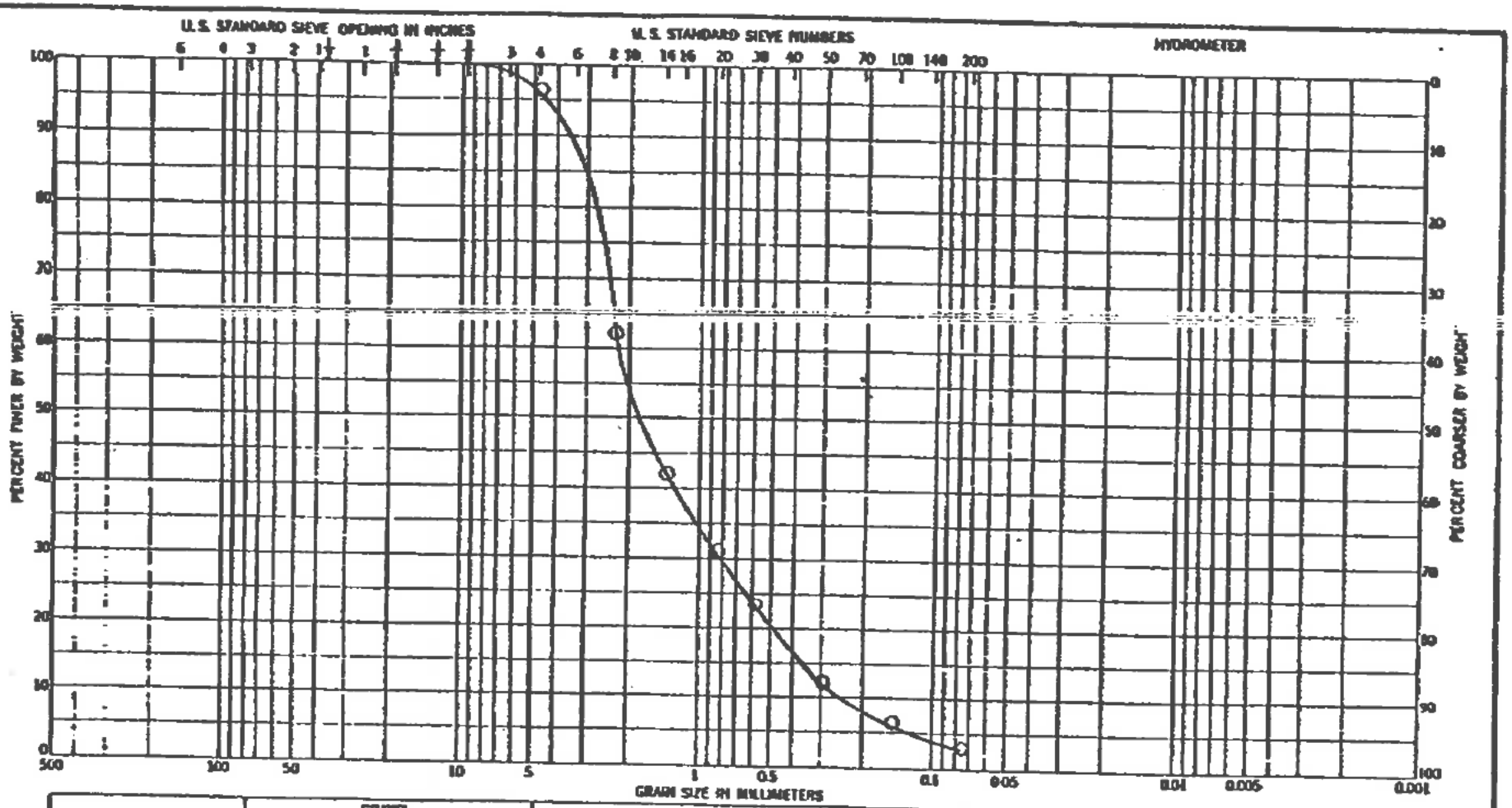
JOB NO. 26-02-93-00004

Area

Boring No. Well No. 2

Date January 11, 1993

ENG FORM 1 MAY 63 2087



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
	100'	Gray, fine to coarse SAND, trace fine gravel, trace Silt with shell fragments				

Figure 2

GRADATION CURVES

Project Wallops Island Well No. 2

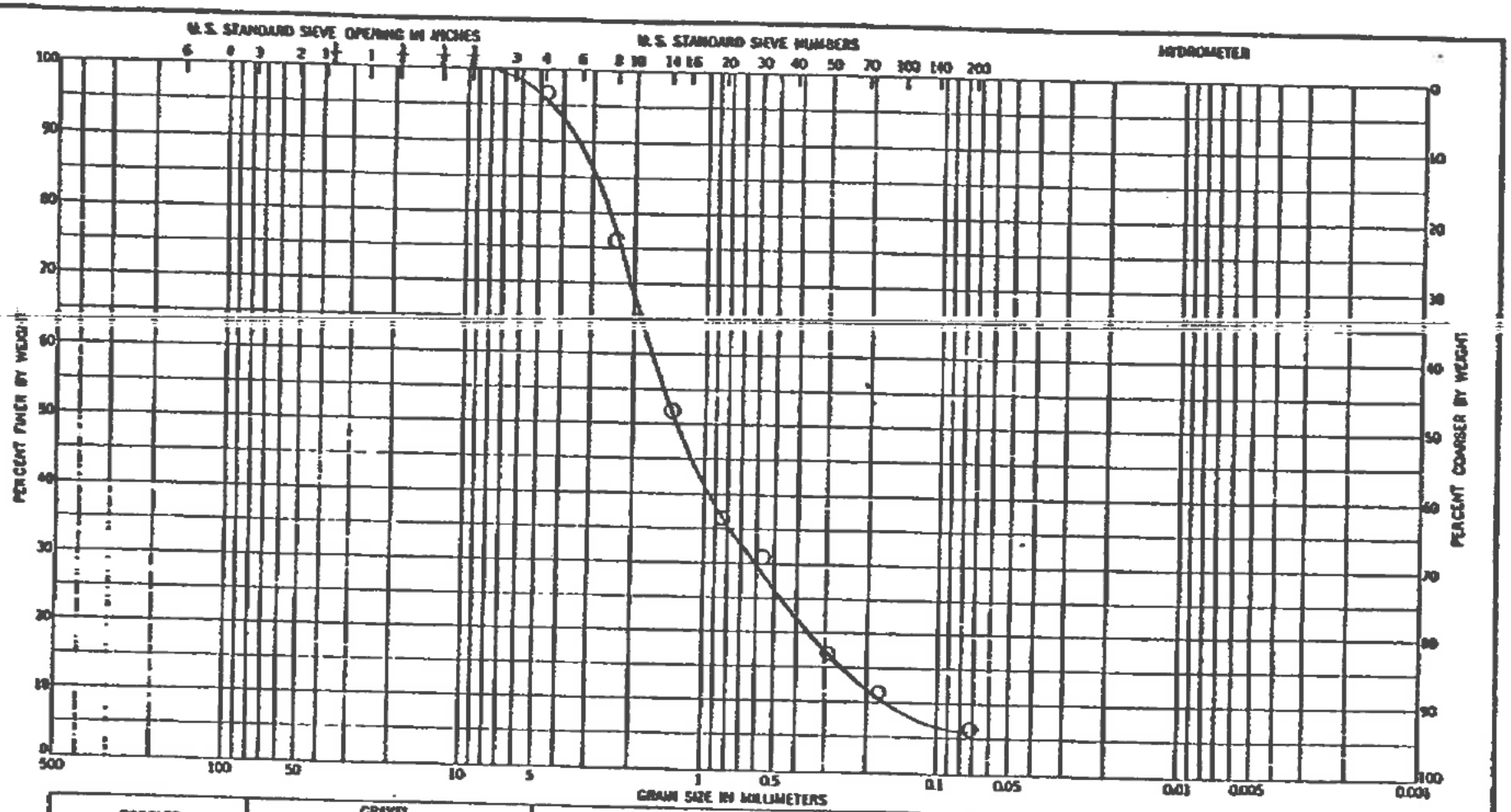
Job. No. 26-02-93-00004

Area

Boring No. Well No. 2

Date January 11, 1993

ENG FORM 1 MAY 65 2087



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
	110'	Gray, fine to coarse SAND, trace fine gravel, trace Silt with shell fragments				

Figure 3

GRADATION CURVES

Project Wallops Island Well No.2

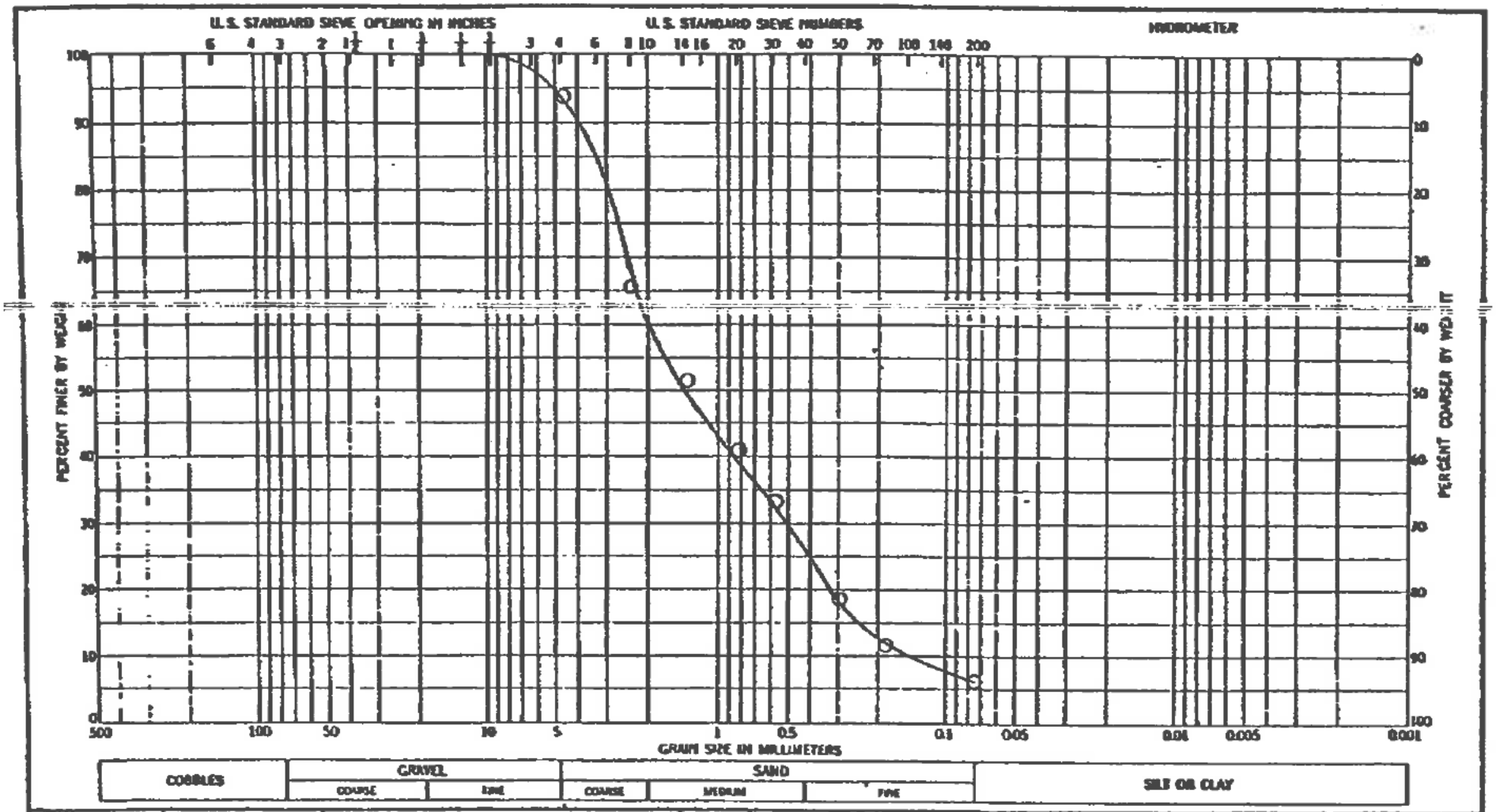
Job No. 26-02-93-00004

Area

Boring No. Well No. 2

Date January 11, 1993

ENG FORM 1 MAY 82 2087



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
	120'	Gray, fine to coarse SAND,				
		trace fine gravel, trace				
		Silt with shell fragments				
		Figure 4				

GRADATION CURVES

Project Wallops Island Well No. 2

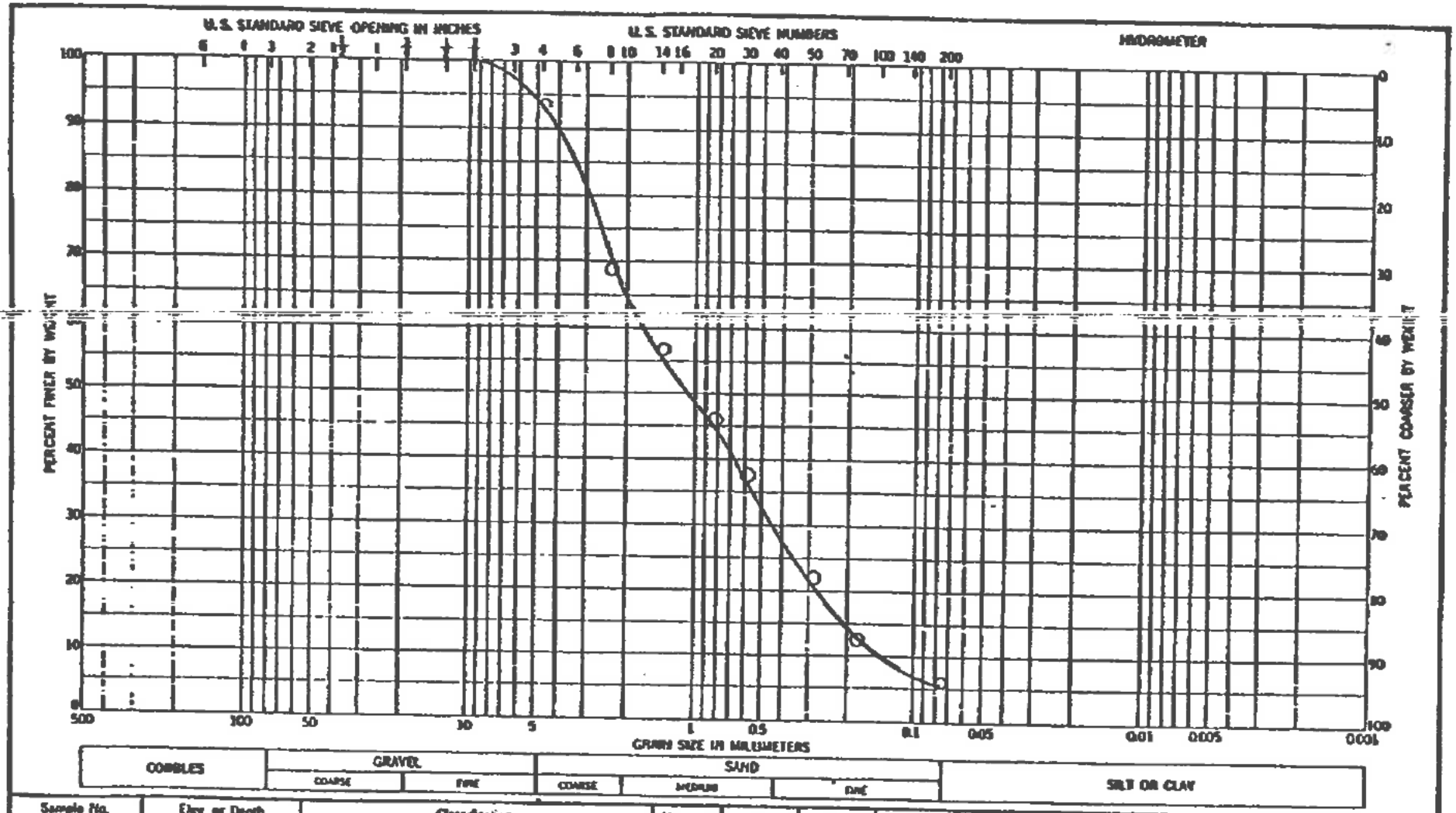
Job No. 26-02-93-00004

Area

Boring No. Well No. 2

Date January 11, 1993

ENG FORM 1 MAY 63 2087



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
	130'	Gray, fine to coarse SAND, trace fine gravel, trace Silt with shell fragments				

Figure 5

GRADATION CURVES

Project Wallops Island Well No. 2

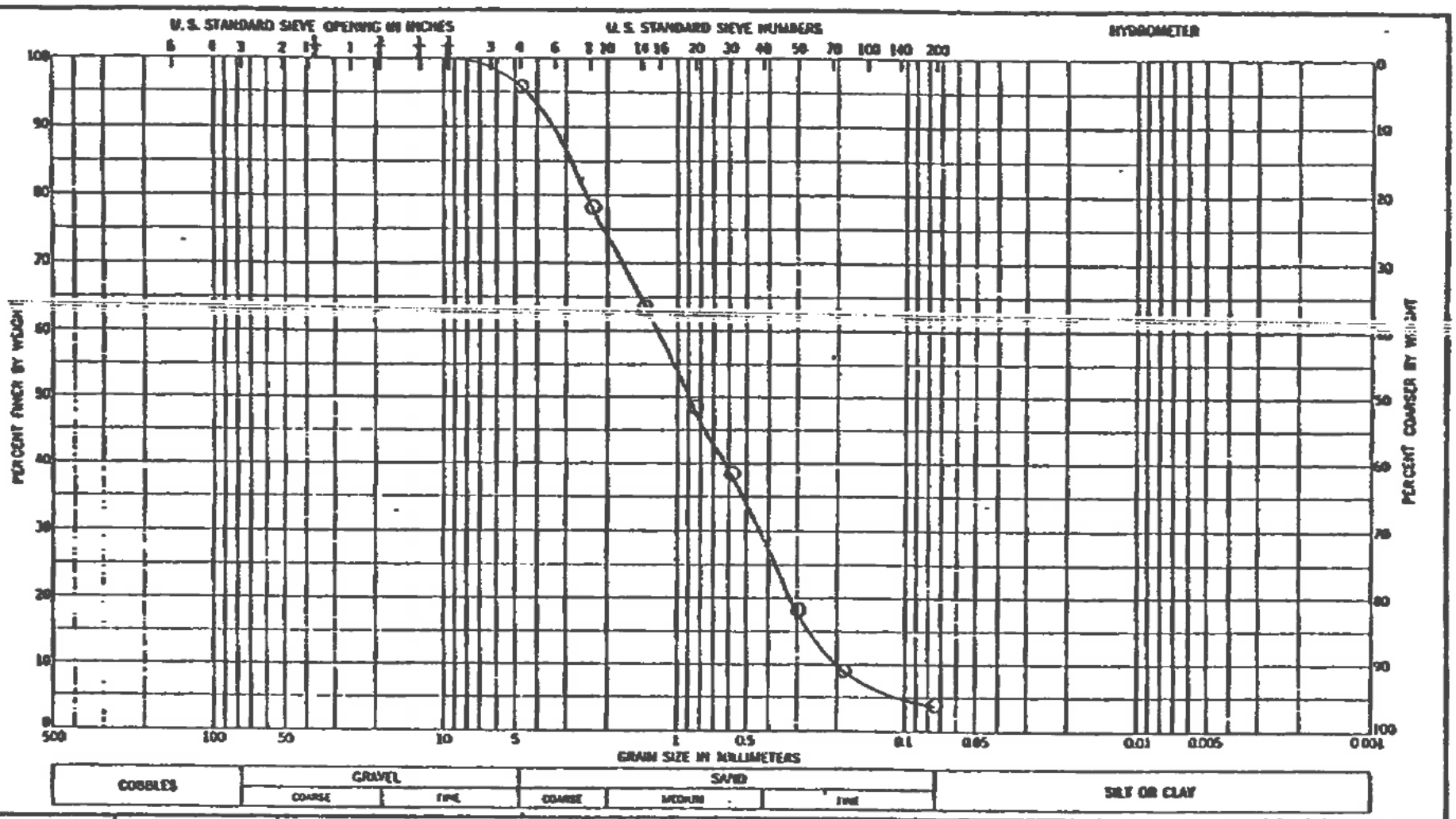
Job No. 26-02-93-00004

Area

Boring No. Well No. 2

Date January 11, 1993

ENG FORM 1 MAY 63 2087



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
	140'	Gray, fine to coarse SAND, trace fine gravel, trace Silt with shell fragments				
		Figure 6				

GRADATION CURVES

Project Wallops Island Well No. 2

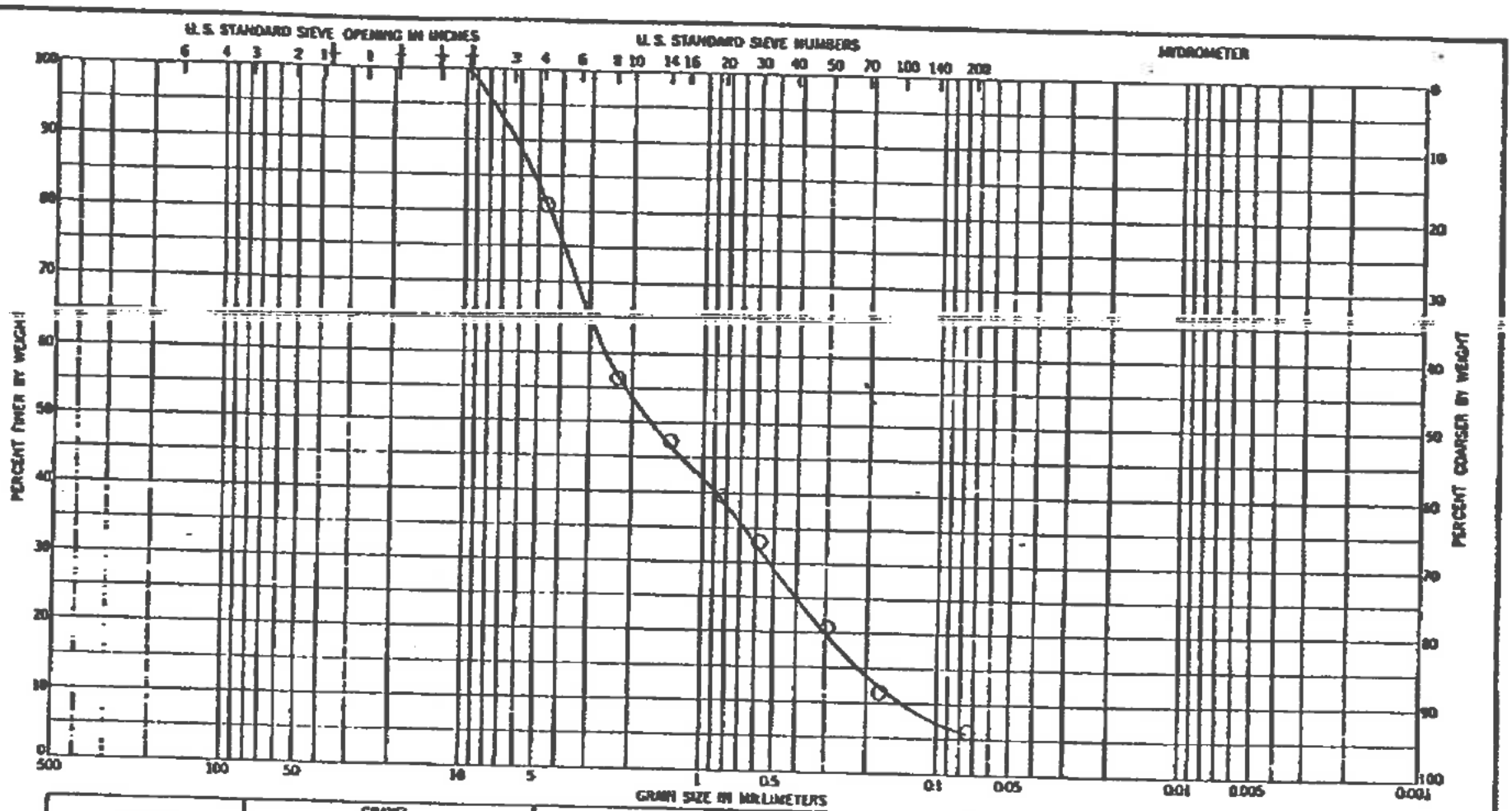
Job No. 26-02-93-00004

Area

Boring No. Well No. 2

Date January 11, 1993

ENG FORM 1 MAY 82 2087



Sample No.	Elev or Depth	Classification	Nat w %	LL	PL	PI
	150'	Gray, fine to coarse SAND, little fine gravel, trace Silt with shell fragments				

Figure 7

GRADATION CURVES

Project Wallops Island Well No. 2

Job No. 26-02-93-00004

Area

Boring No. Well No. 2

Date January 11, 1993

ENG FORM 1 MAY 63 2087

Material Approval Submittal

(See instructions on reverse)

Bett

To: *(Contracting Officer's Technical Representative)*	From: *(Contractor)*	Date:
Jerry T. Wall	S.H. Barner, Inc.	01/07/93
Contract Number: NAS5-31138	**Submission Number:** 20-2	**Submittal:** ☐ New ☒ Resubmittal
Previous Submission Number:	**Project Number:**	

TO BE COMPLETED BY CONTRACTOR

Item No.	Specification Section/ Para. No./Drawing No.	Description of Material *(Include Type, Model Number, Catalog Number, Mfg., etc.)*	FOR GOVERNMENT USE ONLY: Approved	Disapproved	See Reverse	Initial
1	02734/1.2.3	Proposed well construction - Well #2	X		X	WS

RECEIVED JAN 12 1993 FEB

By completing this form, the undersigned contractor certifies that the material complies with all specifications of subject contract.

Date:	Type or print name and title of submitter:	Signature:
01/07/93	Scott H. Barner, President	Scott H. Barner

FOR GOVERNMENT USE ONLY

To: C.O.T.R.

Recommend: ☒ Approval ☐ Disapproval as indicated above and subject to any applicable comments on the reverse.

Date:	Type or print name of Project Manager:	Signature:
1-17-93	William Bissott	William Bissott

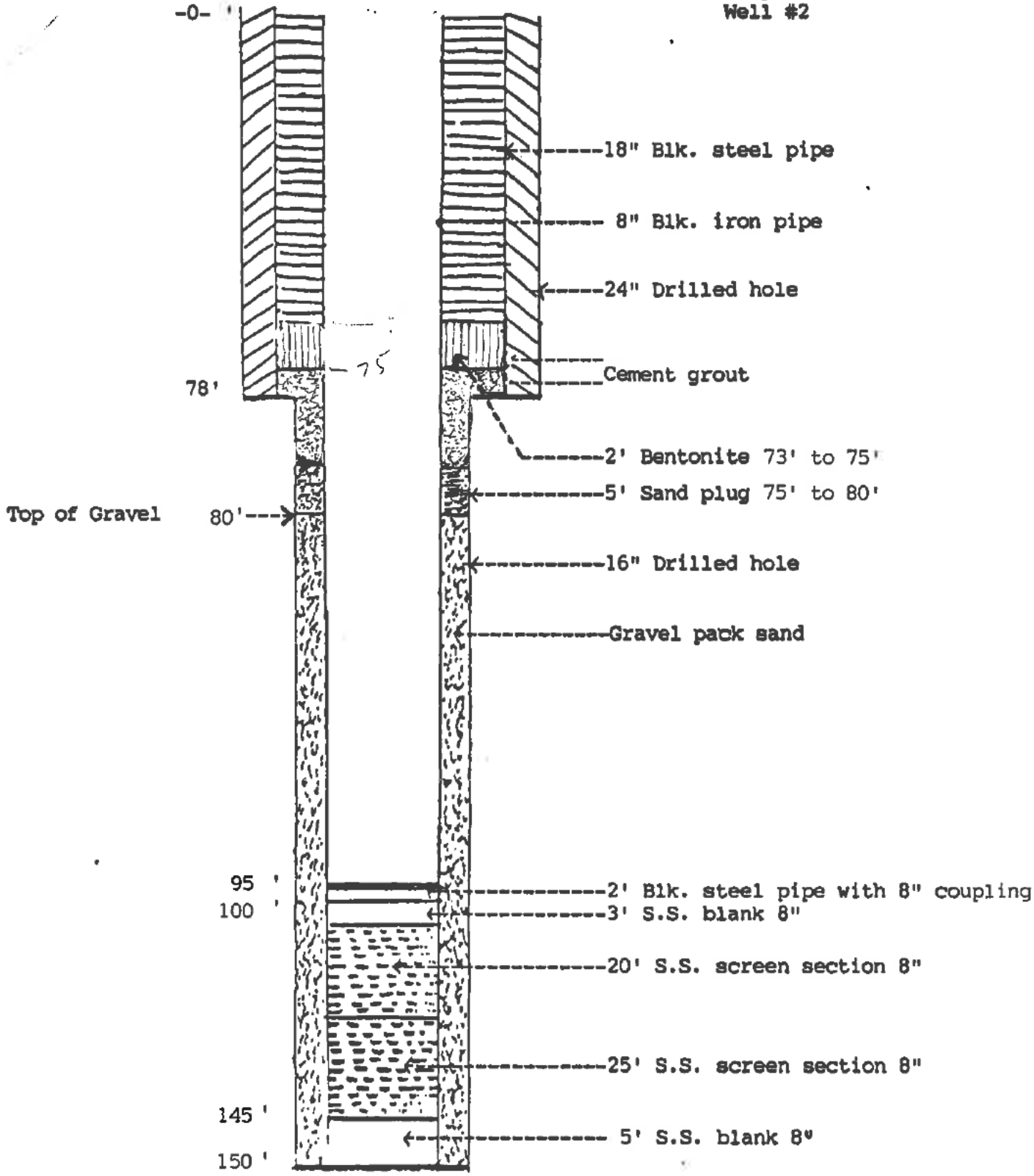
To: *(Contractor)*

☒ Approved ☐ Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved item within _____ days of date shown below.

Date:	Type or print name of C.O.T.R.:	Signature:
1-12-93	Jerry T Wall	Jerry T Wall

NASA WI-12 (REV.2-89)

Proposed Well Design
Well #2



Material Approval Submittal

(See instructions on reverse)

Bott

To: *(Contracting Officer's Technical Representative)*	From: *(Contractor)*	Date:
Jerry T. Wall	S.H. Barner, Inc.	05/12/93
Contract Number: NAS5-31138	**Submission Number:** 32	**Submittal:** ☒ New ☐ Resubmittal
Previous Submission Number:	**Project Number:**	

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
Item No.	Specification Section/ Para. No./Drawing No.	Description of Material *(Include Type, Model Number, Catalog Number, Mfg., etc.)*	Approved	Disapproved	See Reverse	Initial
1	02734/1.2.4	48 Hour Pump and Recovery Test - well #2	X			WHS

RECEIVED
MAY 13 1993
FEB

By completing this form, the undersigned contractor certifies that the material complies with all specifications of subject contract.

Date:	Type or print name and title of submitter:	Signature:
05/12/93	Scott H. Barner, President	

FOR GOVERNMENT USE ONLY

To: C.O.T.R.

Recommend: ☒ Approval ☐ Disapproval as indicated above and subject to any applicable comments on the reverse.

Date:	Type or print name of Project Manager:	Signature:
5-17-93	William [illegible]	

To: *(Contractor)*

☒ Approved ☐ Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved item within _____ days of date shown below.

Date:	Type or print name of C.O.T.R.:	Signature:
5-17-93	Jerry T. Wall	

NASA W9-13 (REV.2-89)

NASA - GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY - 48 HOUR PUMP TEST
WELL #2 - 50 GPM
STATIC WATER LEVEL - 27 FT. 3 IN.

DATE	TIME	PUMPING LEVEL	TOTAL DRAW DOWN	G.P.M.	
05/04/93	1400				
05/04/93	1401	67.92 FT.	40.67 FT.	50	
05/04/93	1402	78.00 FT.	50.75 FT.	50	
05/04/93	1403	84.08 FT.	56.83 FT.	50	
05/04/93	1404	86.08 FT.	58.83 FT.	50	
05/04/93	1405	90.42 FT.	63.17 FT.	50	
05/04/93	1406	92.25 FT.	65.00 FT.	50	
05/04/93	1407	93.08 FT.	65.83 FT.	50	
05/04/93	1408	94.67 FT.	67.42 FT.	50	
05/04/93	1409	94.83 FT.	67.58 FT.	50	
05/04/93	1410	94.92 FT.	67.67 FT.	50	
05/04/93	1415	94.58 FT.	67.33 FT.	50	
05/04/93	1420	93.42 FT.	66.17 FT.	50	
05/04/93	1425	93.50 FT.	66.25 FT.	50	
05/04/93	1430	93.67 FT.	66.42 FT.	50	
05/04/93	1435	97.08 FT.	69.83 FT.	50	
05/04/93	1440	97.83 FT.	70.58 FT.	50	
05/04/93	1450	97.67 FT.	70.42 FT.	50	
05/04/93	1500	98.42 FT.	71.17 FT.	50	
05/04/93	1510	100.17 FT.	72.92 FT.	50	
05/04/93	1520	99.92 FT.	72.67 FT.	50	
05/04/93	1530	100.33 FT.	73.08 FT.	50	
05/04/93	1540	99.50 FT.	72.25 FT.	50	
05/04/93	1550	103.17 FT.	75.92 FT.	50	
05/04/93	1600	100.25 FT.	73.00 FT.	50	
05/04/93	1700	101.83 FT.	74.58 FT.	50	
05/04/93	1800	102.50 FT.	75.25 FT.	50	
05/04/93	1900	103.08 FT.	75.83 FT.	50	
05/04/93	2000	104.08 FT.	76.83 FT.	50	
05/04/93	2100	104.08 FT.	76.83 FT.	50	
05/04/93	2200	103.25 FT.	76.00 FT.	50	
05/04/93	2300	102.83 FT.	75.58 FT.	50	
05/04/93	2400	104.00 FT.	76.75 FT.	50	
05/05/93	0100	102.50 FT.	75.25 FT.	50	
05/05/93	0200	103.17 FT.	75.92 FT.	50	
05/05/93	0300	103.25 FT.	76.00 FT.	50	
05/05/93	0400	103.00 FT.	75.75 FT.	50	
05/05/93	0500	102.67 FT.	75.42 FT.	50	
05/05/93	0600	102.50 FT.	75.25 FT.	50	SAMPLE #1
05/05/93	0700	103.83 FT.	76.58 FT.	50	
05/05/93	0800	103.33 FT.	76.08 FT.	50	
05/05/93	0900	102.67 FT.	75.42 FT.	50	
05/05/93	1000	103.17 FT.	75.92 FT.	50	SAMPLE #2
05/05/93	1100	102.67 FT.	75.42 FT.	50	
05/05/93	1200	104.33 FT.	77.08 FT.	50	
05/05/93	1300	107.33 FT.	80.08 FT.	50	
05/05/93	1400	107.67 FT.	80.42 FT.	50	SAMPLE #3
05/05/93	1500	107.58 FT.	80.33 FT.	50	
05/05/93	1600	107.58 FT.	80.33 FT.	50	
05/05/93	1700	107.42 FT.	80.17 FT.	50	
05/05/93	1800	107.50 FT.	80.25 FT.	50	SAMPLE #4
05/05/93	1900	107.50 FT.	80.25 FT.	50	

NASA - GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY - 48 HOUR PUMP TEST
WELL #2 - 50 GPM
STATIC WATER LEVEL - 27 FT. 3 IN.

DATE	TIME	PUMPING LEVEL	TOTAL DRAW DOWN	G.P.M.	
05/05/93	2000	107.42 FT.	80.17 FT.	50	
05/05/93	2100	107.50 FT.	80.25 FT.	50	
05/05/93	2200	107.42 FT.	80.17 FT.	50	SAMPLE #5
05/05/93	2300	107.42 FT.	80.17 FT.	50	
05/05/93	2400	107.50 FT.	80.25 FT.	50	
05/06/93	0100	107.50 FT.	80.25 FT.	50	
05/06/93	0200	107.42 FT.	80.17 FT.	50	SAMPLE #6
05/06/93	0300	107.42 FT.	80.17 FT.	50	
05/06/93	0400	107.42 FT.	80.17 FT.	50	
05/06/93	0500	107.42 FT.	80.17 FT.	50	
05/06/93	0600	107.42 FT.	80.17 FT.	50	SAMPLE #7
05/06/93	0700	107.33 FT.	80.08 FT.	50	
05/06/93	0800	107.25 FT.	80.00 FT.	50	
05/06/93	0900	107.33 FT.	80.08 FT.	50	
05/06/93	1000	107.25 FT.	80.00 FT.	50	SAMPLE #8
05/06/93	1100	107.25 FT.	80.00 FT.	50	
05/06/93	1200	107.42 FT.	80.17 FT.	50	
05/06/93	1300	107.25 FT.	80.00 FT.	50	
END OF TEST	1400	107.25 FT.	80.00 FT.	50	SAMPLE #9
RECOVERY TEST					
05/06/93	1401	67.25 FT.	40.00 FT.	0	
05/06/93	1402	56.42 FT.	29.17 FT.	0	
05/06/93	1403	54.50 FT.	27.25 FT.	0	
05/06/93	1404	52.00 FT.	24.75 FT.	0	
05/06/93	1405	46.33 FT.	19.08 FT.	0	
05/06/93	1406	45.50 FT.	18.25 FT.	0	
05/06/93	1407	44.75 FT.	17.50 FT.	0	
05/06/93	1408	43.25 FT.	16.00 FT.	0	
05/06/93	1409	42.17 FT.	14.92 FT.	0	
05/06/93	1410	41.75 FT.	14.50 FT.	0	
05/06/93	1415	40.33 FT.	13.08 FT.	0	
05/06/93	1420	39.33 FT.	12.08 FT.	0	
05/06/93	1425	39.00 FT.	11.75 FT.	0	
05/06/93	1430	38.58 FT.	11.33 FT.	0	
05/06/93	1435	38.00 FT.	10.75 FT.	0	
05/06/93	1440	37.83 FT.	10.58 FT.	0	
05/06/93	1445	37.42 FT.	10.17 FT.	0	
05/06/93	1500	36.75 FT.	9.50 FT.	0	
05/06/93	1510	36.50 FT.	9.25 FT.	0	
05/06/93	1520	36.17 FT.	8.92 FT.	0	
05/06/93	1530	34.92 FT.	7.67 FT.	0	
05/06/93	1540	34.67 FT.	7.42 FT.	0	
05/06/93	1550	34.42 FT.	7.17 FT.	0	
05/06/93	1600	34.08 FT.	6.83 FT.	0	
05/06/93	1700	32.58 FT.	5.33 FT.	0	
05/06/93	1800	31.08 FT.	3.83 FT.	0	
05/06/93	1900	30.33 FT.	3.08 FT.	0	
05/06/93	2000	29.67 FT.	2.42 FT.	0	

Material Approval Submittal
(See instructions on reverse)

Bott

To: (Contracting Officer's Technical Representative)	From: (Contractor)	Date:
Jerry T. Wall	S.H. Barner, Inc.	05/28/93
Contract Number: NAS5-31138	Submission Number: 33	Submittal: ☒ New ☐ Resubmittal
Previous Submission Number:	Project Number:	

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
Item No.	Specification Section/ Para. No./Drawing No.	Description of Material (Include Type, Model Number, Catalog Number, Mfg., etc.)	Approved	Disapproved	See Reverse	Initial
1	02734/1.2.4	Well #2 Water Quality Report - Pesticide	X			[illegible]
2	02734/1.2.4	Well #2 Water Quality Report - Metals	X			[illegible]
3	02734/1.2.4	Well #2 Water Quality Report - Radiological	X			[illegible]
		Note: Reports for Inorganics and Nitrate/				
		Nitrite Nitrogen have not been received				
		to date. Will submit as soon as they				
		are received by this office.				

RECEIVED
JUN 1 1993
FEB

By completing this form, the undersigned contractor certifies that the material complies with all specifications of subject contract.

Date:	Type or print name and title of submitter:	Signature:
05/28/93	Scott H. Barner, President	[signature]

FOR GOVERNMENT USE ONLY

To: C.O.T.R.

Recommend: ☒ Approval ☐ Disapproval as indicated above and subject to any applicable comments on the reverse.

Date:	Type or print name of Project Manager:	Signature:
6-1-93	William B. Bott	[signature]

To: (Contractor)

☒ Approved ☐ Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved item within _____ days of date shown below.

Date:	Type or print name of C.O.T.R.:	Signature:
6-2-93	Jerry T Wall	[signature]

NASA WI-12 (REV.2-89)

MAY 14 1993

LAB #:

Water Quality Report

NAME OF WATER SYSTEM: Goddard Space Center
SOURCE: Well #2 Wallops Island, VA.
OTHER INFORMATION:

REPORT RESULTS TO HEALTH OFFICIAL AT:
Name: S.H. Barner Inc.
Address: 161 A John Jefferson Rd
City: Williamsburg, VA Zip Code: 23185

PESTICIDE

WSE 50

Commonwealth of Virginia
Department of Health
Division of Water Programs
Bureau of Water Supply Engineering

REGION: ☐ Abingdon ☐ Culpeper ☐ Danville ☐ Lexington ☐ Richmond ☑ Virginia Beach ☐ Local Health Dept. ☐

PLANNING DISTRICT#
COUNTY: Accomack
INDEPENDENT CITY:
SAMPLING LOCATION: Well head
CODE: 7-9
SOURCE TYPE: ☑ Public-Community ☐ Public-Noncommunity

FIELD TESTS: Temp: pH: Cl_2: mg/L Alk: mg/L CO_2 mg/L Hard.: mg/L

P.W.S.I.D.#: N P W S I D # 10-16
TRANSACTION CODE: 0 3 17-18

DATE COLLECTED: Mo 05 Day 06 Yr 93 19-24

TIME: 1400 25-28

COLLECTED BY: CDK

CONTAINER TYPE: ☑ Glass ☐ Plastic

PRESERVATIVE USED: ☑ None ☐ Ice ☐ Other ☐ Nitric Acid

SAMPLE TYPE: D ☐ Reg. Dist. P ☐ Plant Tap R ☐ Raw Water C ☐ Check M ☐ MCL Check ☑ Other Well 29

DATE REC.: 5-7

CONT. I.D.	CONTAMINANT NAME (Maximum Allowable Level)		MTD.	S	ANALYSIS RESULTS	PRECISION	ANALYSIS DATE Mo Day Yr	A*
2005	Endrin	0.0002	201	<	00000 4	±	05 12 93	Hmm
2010	Lindane	0.004	201	<	00001	±	05 12 93	Hmm
2015	Methoxychlor	0.1	201	<	00002	±	05 12 93	Hmm
2020	Toxaphene	0.005	201	<	00005	±	05 12 93	Hmm
						±		
						±		
2105	2,4-D	0.1	206	<	00003	±	05 12 93	Hmm
2110	2,4,5-TP (Silvex)	0.01	206	<	00001	±	05 12 93	Hmm

30-33 LAB I.D. 0 2 0 0 0 34-38 39-41 43-50 51-53 54-59

3268881

93 MAY -7 PM 12:55 BUR OF CHEMISTRY

326879

LAB #: 1-6

NAME OF WATER SYSTEM: GODDARD SPACE CENTER
SOURCE: WELL #2 WALLOPS ISLAND, VA
OTHER INFORMATION:

REPORT RESULTS TO HEALTH OFFICIAL AT:
Name: S.H. BARNER & INC.
Address: 161 A JOHN JEFFERSON RD.
City: WILLIAMSBURG, VA Zip Code: 23185

Water Quality Report

METALS

WSE 50

Commonwealth of Virginia
Department of Health
Division of Water Programs
Bureau of Water Supply Engineering

REGION: ☐ Abingdon ☐ Danville ☐ Richmond ☐ Local Health Dept.
☐ Culpeper ☐ Lexington ☐ Virginia Beach ☐

PLANNING DISTRICT#
COUNTY: ACCOMACK
INDEPENDENT CITY:
SAMPLING LOCATION: WELL HEAD
CODE: 7-9
SOURCE TYPE: ☑ Public-Community ☐ Public-Noncommunity

FIELD TESTS: Temp: pH: Cl_2: mg/L Alk: mg/L CO_2 mg/L Hard.: mg/L

P.W.S.I.D.#: N P W S I D # 10-16
TRANSACTION CODE: 0 3 17-18

DATE COLLECTED: Mo 05 Day 06 Yr 93 19-24

TIME: 1400 25-28

COLLECTED BY: CRK

CONTAINER TYPE:
☐ Glass
☑ Plastic

PRESERVATIVE USED:
☐ None
☐ Ice
☐ Other
☑ Nitric Acid

SAMPLE TYPE:
D ☐ Reg. Dist.
P ☐ Plant Tap
R ☐ Raw Water
C ☐ Check
M ☐ MCL Check
☑ Other WELL 29

DATE REC:
DATE REP:

93 MAY -7 PM 12:55
BUR. OF CHEMISTRY

RECEIVED
MAY 20 1993

SAMPLE NUMBER : 26879 DCLS : BUREAU OF CHEMISTRY

CONT.I.D.	CONTAMINANT NAME (Maximum Allowable Level)		MTD	S	ANALYSIS RESULTS UG/ML
1005	Arsenic	0.05	125		< 0.010
1010	Barium	1.0	108		< 0.01
1015	Cadmium	0.010	125		< 0.0025
1020	Chromium	0.05	125		< 0.010
1030	Lead	0.05	125		< 0.005
1035	Mercury	0.002	106		< 0.0003
1045	Selenium	0.01	125		< 0.010
1050	Silver	0.05	125		< 0.010
1002	Aluminum		108		< 0.1
1016	Calcium		108		31
1028	Iron	0.30	108		0.47
1031	Magnesium		108		7
1032	Manganese	0.05	108		0.03
1051	Strontium		108		0.19
1095	Zinc	5.0	108		0.02
1022	Copper	1.0	108		< 0.01
1042	Potassium		108		6
1052	Sodium	20.	108		9
1036	Nickel		108		< 0.01
1007	Boron		108		
1919	Calcium Hardness		108		77
1918	Magnesium Hardness		136		28
1013	Ca & Mg Hardness		136		110
1015	Total Hardness***		136		110
1004	Antimony		125		< 0.010

DATE REPORTED : 17-May-93 ANALYST : JIM ANDERSON

LAB #: | | | | | | 1-6

Water Quality Report

NAME OF WATER SYSTEM: Goddard Space Center
SOURCE: Well #2 Wallops Island, VA
OTHER INFORMATION:

REPORT RESULTS TO HEALTH OFFICIAL AT:
Name S.N. Barnes Inc.
Address 161A John Jefferson Rd.
City Williamsburg, VA Zip Code 23185

RADIOLOGICAL

WSE 50

Commonwealth of Virginia
Department of Health
Division of Water Programs
Bureau of Water Supply Engineering

REGION: ☐ Abingdon ☐ Culpeper ☐ Danville ☐ Lexington ☐ Richmond ☐ Virginia Beach ☐ Local Health Dept. ☐

PLANNING DISTRICT#
COUNTY: Accomack
INDEPENDENT CITY:
SAMPLING LOCATION: Well Head
CODE: | | | 7-9

SOURCE TYPE:
☒ Public-Community
☐ Public-Noncommunity

FIELD TESTS: Temp: pH: Cl_2: mg/L Alk: mg/L CO_2 mg/L Hard.: mg/L

P.W.S.I.D. #: N P W S I D ## 10-16

TRANSACTION CODE | Ø | 3 | 17-18

DATE COLLECTED: Mo 05 Day 06 Yr 93 19-24

TIME: 1 4 0 0 25-28

COLLECTED BY: CRK

CONTAINER TYPE:
☐ Glass
☒ Plastic

PRESERVATIVE USED:
☒ None
☐ Ice
☐ Other
☐ Nitric Acid

SAMPLE TYPE:
D ☐ Reg. Dist.
P ☐ Plant Tap
R ☐ Raw Water
C ☐ Check
M ☐ MCL Check
S ☒ Other Well 29

CONT. I.D.	CONTAMINANT NAME (Maximum Allowable Level)	MTD.	S	ANALYSIS RESULTS	PRECISION	ANALYSIS DATE Mo Day Yr	A*
4 0 0 0	Gross Alpha 5 pCi/L	4 1 9		Ø Ø Ø 2 Ø Ø	± Ø Ø 6	5 12 93	SAD
4 0 1 0	Gross Radium (Alpha)	4 2 0		Ø Ø Ø Ø	± Ø		
4 0 2 0	Radium-226	4 2 1		Ø Ø Ø Ø	± Ø		
4 0 3 0	Radium-228	4 2 2		Ø Ø Ø Ø	± Ø		
4 1 0 0	Gross Beta 50 pCi/L	4 1 9		Ø Ø 5 Ø Ø Ø	± Ø 1 1	5 12 93	SAD
4 0 0 6	Uranium			Ø Ø Ø Ø	± Ø		
4 1 0 2	Tritium				±		
30-33	LAB I.D. 0 4 0 0 0 34-38	39-41	42	43-50	51-53	54-59	

RECEIVED MAY 20 1993

DATE REC: MAY 10 1993
DATE REP: MAY 17 1993

PREPARED BY: S. Dugas KLK

The results on this report are expressed in pCi/ L unless otherwise indicated. *A = analyst's initials

326880

93 MAY -7 PM 12:55

BUR. OF CHEMISTRY

Bott

Material Approval Submittal

(See instructions on reverse)

To: *(Contracting Officer's Technical Representative)*	From: *(Contractor)*	Date:
Jerry T. Wall	S.H. Barner, Inc.	07/06/93
Contract Number: NAS5-31138	**Submission Number:** 33-1	**Submittal:** ☒ New ☐ Resubmittal
Previous Submission Number: 33	**Project Number:**	

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
Item No.	Specification Section/ Para. No./Drawing No.	Description of Material *(Include Type, Model Number, Catalog Number, Mfg., etc.)*	Approved	Disapproved	See Reverse	Initial
1	02734/1.2.4	Inorganic Water Quality Report - Well #2	X			WS
2	02734/1.2.4	Nitrate/Nitrite Nitrogen Water Quality Report Well #2	X			WS

RECEIVED
JUL 23 1993
FEB

By completing this form, the undersigned contractor certifies that the material complies with all specifications of subject contract.

Date:	Type or print name and title of submitter:	Signature:
07/06/93	Scott H. Barner, President	

FOR GOVERNMENT USE ONLY

To: C.O.T.R.

Recommend: ☒ Approval ☐ Disapproval as indicated above and subject to any applicable comments on the reverse.

Date:	Type or print name of Project Manager:	Signature:
7-26-93	William R. Bott	

To: *(Contractor)*

☒ Approved ☐ Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved item within _____ days of date shown below.

Date:	Type or print name of C.O.T.R.:	Signature:
7-26-93	Jerry T. Wall	

NASA WI-12 (REV.2-89)

326877

93 MAY -7 PM 12:55

BUR. OF CHEMISTRY

LAB #: 1-6

NAME OF WATER SYSTEM: Goddard Space Center

SOURCE: WELL #2 WALLOP'S ISLAND, VA

OTHER INFORMATION:

REPORT RESULTS TO HEALTH OFFICIAL AT:

Name S.H. BARNER

Address 161A JOHN JEFFERSON Rd

City WILLIAMSBURG Zip Code 23185

Water Quality Report

INORGANIC

WSE 50

Commonwealth of Virginia
Department of Health
Division of Water Programs
Bureau of Water Supply Engineering

REGION: ☐ Abingdon ☐ Danville ☐ Richmond ☐ Local Health Dept. ☐ Culpeper ☐ Lexington ☐ Virginia Beach ☐

PLANNING DISTRICT#

SAMPLING LOCATION: WELL HEAD

SOURCE TYPE: ☑ Public-Community ☐ Public-Noncommunity

COUNTY: Accomack

CODE: 7-9

INDEPENDENT CITY:

FIELD TESTS: Temp: Cl_2: mg/L CO_2 mg/L

pH: Alk: mg/L Hard.: mg/L

P.W.S.I.D. #: N P W S I D # 10-16

TRANSACTION CODE Ø 3 17-18

DATE COLLECTED: Mo 05 Day 06 Yr 93 19-24

TIME: 1400 25-28

COLLECTED BY: CRK

CONTAINER TYPE: ☐ Glass ☑ Plastic

PRESERVATIVE USED: ☐ None ☐ Ice ☐ Other Sulfuric Acid

SAMPLE TYPE: D ☐ Reg. Dist. P ☐ Plant Tap R ☐ Raw Water C ☐ Check M ☐ MCL Check S ☐ Other 29

DATE REC:

DATE REP: 6/30/93

RECEIVED - 6 1993

CONT. I.D.	CONTAMINANT NAME (Maximum Allowable Level)	MTD.	S	ANALYSIS RESULTS	PRECISION	ANALYSIS DATE Mo Day Yr	A*
1925	pH (6.5-8.5)	1 3 5		Ø Ø 8.54 Ø Ø	±	05 07 93	BJO
1927	Alkalinity-Total	1 5 7		Ø 1998 Ø Ø Ø	±	/ / /	/
1928	Alkalinity-Bicarbonate	1 5 7		Ø 1888 Ø Ø Ø	±	/ / /	/
1929	Alkalinity-Carbonate	1 5 7		Ø 110 Ø Ø Ø	±	/ / /	/
1915	Hardness-EDTA	1 4 1		Ø Ø Ø	±		
1932	Acidity	1 5 7		Ø Ø Ø	±		
1910	Corrosion Index	1 3 6		Ø Ø 1274 Ø Ø	±		
1025	Fluoride 1.8	1 0 7	<	Ø Ø 010 Ø Ø	±	06 23 93	MS
1017	Chloride 250.	1 0 7		110 Ø Ø Ø	±	05 10 93	[illegible]
1905	Color (APHA) 15 CU	1 2 9		Ø Ø 5 Ø Ø Ø Ø	±	05 07 93	GBJ
0100	Turbidity (FTU) 1.0	0 0 1		Ø 022 Ø Ø	±	05 1[illegible] 93	JD
1027	Hydrogen Sulfide 0.05	1 5 5	<	Ø Ø Ø 003 Ø Ø	±	05 06 93	GBJ
1055	Sulfate 250.	1 3 7		Ø 50 Ø Ø Ø	±	05 10 93	[illegible]
1040	Nitrogen-Nitrate 10.0	1 6 3		Ø Ø Ø Ø	±		
1039	Nitrogen-Ammonia	1 4 7		Ø Ø 012 Ø Ø	±	05 13 93	GBJ
1038	Nitrogen-Nitrite	1 6 3		Ø Ø Ø Ø	±		
1041	Nitrogen-Total Kjeldahl	1 7 5		Ø Ø Ø Ø	±		
1043	Phosphate-Total (As P)	1 6 2		Ø Ø Ø Ø	±		
1044	Phosphate-Ortho (As P)	1 6 2	<	Ø Ø 005 Ø Ø	±	05 10 93	[illegible]
1926	Specific Conductance (umhos/cm)	1 4 5		252 Ø Ø Ø	±	05 06 93	OP
1930	Total Dissolved Solids (185°C)	1 3 9		155 Ø Ø Ø Ø	±	05 11 93	HS
1058	Volatile (550°C)	1 3 9		12 Ø Ø Ø Ø	±	\ \ \	\
1059	Fixed (550°C)	1 3 9		143 Ø Ø Ø Ø	±	\ \ \	\
1049	Silica (as SiO_2)	1 4 3		Ø 2287 Ø Ø	±	05 10 93	BJO
1997	Langlier Index 15°C	1 3 6		Ø Ø Ø 706 Ø	±		
	Bromide		<	005	±	05 10 93	[illegible]
					±		
30-33	LAB I.D. 0 1 0 0 0 34-38	39-41	42	43-50	51-53	54-59	

PREPARED BY: B. O'Neal

The results on this report are expressed in mg/L unless otherwise indicated. *A = analyst's initials

LAB #: 1 6

NAME OF WATER SYSTEM: Goddard Space Center
SOURCE: Well #2 Wallops Island, VA
OTHER INFORMATION:

REPORT RESULTS TO HEALTH OFFICIAL AT:
Name S.H. Barner Inc
Address 161 A John Jefferson Rd.
City Williamsburg, VA Zip Code 23185

Water Quality Report

NITRATE/NITRITE NITROGEN

WSE 50

Commonwealth of Virginia
Department of Health
Division of Water Programs
Bureau of Water Supply Engineering

REGION: ☐ Abingdon ☐ Culpeper ☐ Danville ☐ Lexington ☐ Richmond ☐ Virginia Beach ☐ Local Health Dept. ☐

PLANNING DISTRICT#
COUNTY: Accomack
INDEPENDENT CITY:

SAMPLING LOCATION: Well Head
CODE: 7 9

SOURCE TYPE:
☒ Public Community
☐ Public Noncommunity

FIELD TESTS: Temp: pH: Cl2: mg/L Alk: mg/L CO2 mg/L Hard.: mg/L

P.W.S.I.D.#: N P W S I D # (10 16)

TRANSACTION CODE: 0 3 (17-18)

DATE COLLECTED: Mo 05 Day 06 Yr 93 (19 24)

TIME: 1400 (25 28)

COLLECTED BY: CRK

CONTAINER TYPE:
☐ Glass
☒ Plastic

PRESERVATIVE USED:
☐ None
☐ Ice
☒ Other H_2SO_4
☐ Nitric Acid

SAMPLE TYPE:
D ☐ Reg. Dist.
P ☐ Plant Tap
R ☐ Raw Water
C ☐ Check
M ☐ MCL Check
S ☒ Other Well
(29)

DATE REC:
DATE REP: 6/30/93

CONT. I.D. (30 33)	CONTAMINANT NAME (Maximum Allowable Level)	MTD. (39 41)	S (42)	ANALYSIS RESULTS (43 50)	PRECISION (51 53)	ANALYSIS DATE Mo Day Yr (54 59)	A*
1 0 4 0	Nitrate-Nitrogen		<	0.05	±	05 / 06 / 93	
1 0 3 8	Nitrite-Nitrogen		<	0.05	±	05 / 23 / 93	
	Hardness, Total			105	±	06 / 23 / 93	BSO
	Hardness, Calcium			79	±	/ / /	

LAB I.D. (34-38)

PREPARED BY: B. O'Neal

The results on this report are expressed in mg/L unless otherwise indicated. *A = analyst's initials

326878
93 MAY -7 PM 12:55
BR. OF CHEMISTRY
RECEIVED
- 6 1993

Material Approval Submittal

(See instructions on reverse)

Butt

To: *(Contracting Officer's Technical Representative)*	From: *(Contractor)*	Date:
Jerry T. Wall	S.H. Barner, Inc.	08/24/93
Contract Number: NAS5-31138	Submission Number: 33-2	Submittal: ☒ New ☐ Resubmittal
Previous Submission Number: 33-1	Project Number:	

TO BE COMPLETED BY CONTRACTOR			FOR GOVERNMENT USE ONLY			
Item No.	Specification Section/ Para. No./Drawing No.	Description of Material *(Include Type, Model Number, Catalog Number, Mfg., etc.)*	Approved	Disapproved	See Reverse	Initial
1	02734/2.6	Bacteriological test results on Well #2	X			WS

RECEIVED
5 1993
FEB

By completing this form, the undersigned contractor certifies that the material complies with all specifications of subject contract.

Date:	Type or print name and title of submitter:	Signature:
08/24/93	Scott H. Barner, President	Scott H. Barner

FOR GOVERNMENT USE ONLY

To: C.O.T.R.

Recommend: ☒ Approval ☐ Disapproval as indicated above and subject to any applicable comments on the reverse.

Date:	Type or print name of Project Manager:	Signature:
8-26-93	William I. Scott	William I. Scott

To: *(Contractor)*

☒ Approved ☐ Disapproved as indicated above and subject to any applicable comments on the reverse side. Request resubmittal on disapproved item within _____ days of date shown below.

Date:	Type or print name of C.O.T.R.:	Signature:
8-26-93	Reed D. McDowell	Reed D. McDowell

NASA WI-12 (REV.2-89)

SEE REVERSE SIDE FOR COLLECTION INFORMATION

BACTERIOLOGICAL ANALYSIS INPUT FORM — DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT / [ ] COLIFORM PRESENT COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR
VA PWS ID #	05		Coliform	MPN		08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	02	93		1700

COLLECTED BY: [illegible]
TELEPHONE ([illegible]) [illegible] AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

356

LAB ID.	LABORATORY NAME/ANALYST
305	DSS MS

DCLS LAB USE ONLY
UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM — DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT / [ ] COLIFORM PRESENT COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR.
VA PWS ID #	05		Coliform	MPN		08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	02	93		1900

COLLECTED BY: Mark
TELEPHONE ([illegible]) [illegible] AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

357

LAB ID.	LABORATORY NAME/ANALYST
305	DSS MS

DCLS LAB USE ONLY
UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM — DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT / [ ] COLIFORM PRESENT COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR.
VA PWS ID #	05		Coliform	MPN		08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	02	93		2100

COLLECTED BY: Mark
TELEPHONE ([illegible]) [illegible] AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

358

LAB ID.	LABORATORY NAME/ANALYST
305	DSS MS

DCLS LAB USE ONLY
UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

SEE REVERSE SIDE FOR COLLECTION INFORMATION

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT / [ ] COLIFORM PRESENT COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR
PWS ID #	05		Coliform	MPN	[ ] / [✓]	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	03	03	93		2300

COLLECTED BY: Mark

TELEPHONE (804) 253-1500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S. H. Barner, Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

359

LAB ID.	LABORATORY NAME/ANALYST
BOS	DSS MS

UNSATISFACTORY: PLEASE RESAMPLE — DCLS LAB USE ONLY

[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT / [ ] COLIFORM PRESENT COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR
PWS ID #	05		Coliform	MPN	[ ] / [✓]	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #1 Goddard Space Flight Center	03	03	93		0100

COLLECTED BY: Mark

TELEPHONE (804) 253-1500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

360

LAB ID.	LABORATORY NAME/ANALYST
BOS	DSS MS

UNSATISFACTORY: PLEASE RESAMPLE — DCLS LAB USE ONLY

[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[✓] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT / [ ] COLIFORM PRESENT COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR.
PWS ID #	05		Coliform	MPN	[ ] / [✓]	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	03	03	93		0300

COLLECTED BY: Mark

TELEPHONE (804) 253-1500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

361

LAB ID.	LABORATORY NAME/ANALYST
BOS	DSS MS

UNSATISFACTORY: PLEASE RESAMPLE — DCLS LAB USE ONLY

[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

SEE REVERSE SIDE FOR COLLECTION INFORMATION

DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VA PWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT COLLECT REPEATS	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	03	93		0500

COLLECTED BY: Mark

TELEPHONE (804) 253-7500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.H. Garner Inc.
P.O. Box 3147 Williamsburg Va.
23187 3147

362

LAB ID	LABORATORY NAME/ANALYST
305	LBS M-5

DCLS LAB USE ONLY

UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VA PWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT COLLECT REPEATS	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	03	93		0700

COLLECTED BY: Mark

TELEPHONE (804) 253-7500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.H. Garner Inc.
P.O. Box 3147 Williamsburg Va.
23187 3147

363

LAB ID	LABORATORY NAME/ANALYST
305	LBS M-5

DCLS LAB USE ONLY

UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[✓] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VA PWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [✓] COLIFORM PRESENT COLLECT REPEATS	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	03	93		0900

COLLECTED BY: Mark

TELEPHONE (804) 253-7500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.H. Garner Inc.
P.O. Box 3147 Williamsburg Va.
23187 3147

364

LAB ID	LABORATORY NAME/ANALYST
305	LBS M-5

DCLS LAB USE ONLY

UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM — DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD		DATE COMPLETED MO.	DAY	YR.
VA P W S I D #	05		Coliform	MPN	[ ] COLIFORM ABSENT [X] COLIFORM PRESENT COLLECT REPEATS	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [X] RLS CL _____ PPM

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY:	TELEPHONE (AREA CODE)
	Well #2 Goddard Space Flight Center	08	03	93		1100	[illegible]	(804) 253-[illegible]

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Garner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

365

LAB ID	LABORATORY NAME/ANALYST
305	DSS MS

DCLS LAB USE ONLY
UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM — DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD		DATE COMPLETED MO.	DAY	YR.
VA P W S I D #	05		Coliform	MPN	[ ] COLIFORM ABSENT [X] COLIFORM PRESENT COLLECT REPEATS	08	03	93

IS SUPPLY CHLORINATED? YES [ ] NO [X] RLS CL _____ PPM

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY:	TELEPHONE (AREA CODE)
	Well #2 Goddard Space Flight Center	08	03	93		1300	[illegible]	(804) 253-[illegible]

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Garner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

366

LAB ID	LABORATORY NAME/ANALYST
305	DSS MS

DCLS LAB USE ONLY
UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

SEE REVERSE SIDE FOR COLLECTION INFORMATION

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VPWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT [ ] COLLECT REPEATS	08	09	93

IS SUPPLY CHLORINATED? YES [ ] NO [X] RLS CL _____ PPM

<2.

1045

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	03	93		1500

COLLECTED BY: Mark

TELEPHONE (804) 253-7500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.M. Barner Inc.
PO Box 3147 Williamsburg Va.
23187-3147

369

LAB ID.	LABORATORY NAME/ANALYST
BDS	DSS MS

DCLS LAB USE ONLY

UNSATISFACTORY, PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

Nancy Hale

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VPWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT [ ] COLLECT REPEATS	08	04	93

IS SUPPLY CHLORINATED? YES [ ] NO [X] RLS CL _____ PPM

<2.

1115

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	03	93		1700

COLLECTED BY: Mark

TELEPHONE (804) 253-7500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.M. Barner Inc.
PO Box 3147 Williamsburg Va.
23187-3147

370

LAB ID.	LABORATORY NAME/ANALYST
BDS	DSS MS

DCLS LAB USE ONLY

UNSATISFACTORY, PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VPWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT [ ] COLLECT REPEATS	08	04	93

IS SUPPLY CHLORINATED? YES [ ] NO [X] RLS CL _____ PPM

<2.

1115

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME
	Well #2 Goddard Space Flight Center	08	03	93		1900

COLLECTED BY: Mark

TELEPHONE (804) 253-7500 AREA CODE

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS

Goddard Space Flight Center
S.M. Barner Inc.
PO Box 3147 Williamsburg Va.
23187-3147

371

LAB ID.	LABORATORY NAME/ANALYST
BDS	DSS MS

DCLS LAB USE ONLY

UNSATISFACTORY, PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

SEE REVERSE SIDE FOR COLLECTION INFORMATION

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT [ ] COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR
PWSID#	05		Coliform	MPN		08	04	1

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY: Mark
	Well #2 Goddard Space Flight Center	08	03	93		2100	TELEPHONE (804) 253-1500 (AREA CODE)

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg, Va.
23187-3147

372

LAB ID.	LABORATORY NAME/ANALYST
305055	DCS

DCLS LAB USE ONLY

UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT [ ] COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR.
PWSID#	05		Coliform	MPN		08	04	1

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY: Mark
	Well #2 Goddard Space Flight Center	08	03	93		2300	TELEPHONE (804) 253-1500 (AREA CODE)

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg, Va.
23187-3147

373

LAB ID.	LABORATORY NAME/ANALYST
305055	DCS

DCLS LAB USE ONLY

UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA - DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT [ ] COLLECT REPEATS	DATE COMPLETED MO.	DAY	YR.
PWSID#	05		Coliform	MPN		08	04	1

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

<2

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY: Mark
	Well #2 Goddard Space Flight Center	08	04	93		0100	TELEPHONE (804) 253-1500 (AREA CODE)

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Barner Inc.
P.O. Box 3147 Williamsburg, Va.
23187-3147

374

LAB ID.	LABORATORY NAME/ANALYST
305055	DCS

DCLS LAB USE ONLY

UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

SEE REVERSE SIDE FOR COLLECTION INFORMATION

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VPWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [ ] COLIFORM PRESENT [ ] COLLECT REPEATS	08	04	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

42

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY: Mark
	Well #2 Goddard Space Flight Center	08	04	93		0300	TELEPHONE (804) 253-1000 (AREA CODE)

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Berner Inc.
P.O. Box 3147 Williamsburg Va.
23187-3147

375

LAB ID: BOSS LABORATORY NAME/ANALYST: BOSS INC

DCLS LAB USE ONLY
UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VPWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [✓] COLIFORM PRESENT [ ] COLLECT REPEATS	08	04	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

42

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY: Mark
	Well #2 Goddard Space Flight Center	08	04	93		0500	TELEPHONE (804) 253-1000 (AREA CODE)

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
Goddard Space Flight Center
S.H. Berner Inc.
P.O. Box 3147 Williamsburg, Va.
23187-3147

376

LAB ID: BOSS LABORATORY NAME/ANALYST: BOSS INC

DCLS LAB USE ONLY
UNSATISFACTORY: PLEASE RESAMPLE
[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

BACTERIOLOGICAL ANALYSIS INPUT FORM

DO NOT WRITE IN SHADED AREA – DCLS LAB USE ONLY

PWS ID (MUST PROVIDE)	TRANS CODE	CONTAMINANT CODE	CONTAMINANT NAME	LAB ANALYSIS - RESULT METHOD	LAB ANALYSIS - RESULT	DATE COMPLETED MO.	DAY	YR.
VPWSID#	05		Coliform	MPN	[ ] COLIFORM ABSENT [✓] COLIFORM PRESENT [ ] COLLECT REPEATS	08	04	93

IS SUPPLY CHLORINATED? YES [ ] NO [✓] RLS CL _____ PPM

42

SAMPLE LOCATION CODE	LOCATION NAME	DATE COLLECTED MO.	DAY	YR.	SAMPLE TYPE	TIME	COLLECTED BY: Mark
	Well #2 Goddard Space Flight Center	08	04	93		0:00	TELEPHONE (804) 253-1000 (AREA CODE)

[ ] MARK HERE IF PREVIOUS SAMPLE WAS CONFLUENT GROWTH, TNTC, OR TURBID CULTURE

PUBLIC WATER SYSTEM NAME AND ADDRESS
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[ ] INSUFFICIENT DATA [ ] NO FORM ENCLOSED [ ] LEAKED [ ] NO PWSID
[ ] INSUFFICIENT QUANTITY [ ] INCORRECT CONTAINER [ ] RECEIVED OUT OF DATE
[ ] CONFLUENT GROWTH [ ] TNTC [ ] TURBID CULTURE
[ ] OTHER

Well No 2 - Pump Design

I Given

1. 48 hr Pump Test Attached
2. Discharge to Ground Storage Tank
3. Normal Operation - One well on a time until Volume requirement is satisfied (20,000 gal(±)

II Assume

1. Well pump Capacity of 50 gpm
2. Pump Setting of 120' below ground Level
3. Specific Capacity = 0.625 gpm/ft
4. Static Water Level = 27.25 ft

III Static Lift

1. Pump setting - 120'
2. Flow / Drawdown

Flow	Drawdown
25	40
50	80
75	120
100	160

3. Elev at Ground Storage tank

Full - 46.00' ±
Empty - 33.00' ±

4. Pipe High Point - 35.00
5. Ecr[illegible] Well - 35.10

6. Static Lift (without Drawdown)

Full — 46.00 − [35.10 − 27.25] = 38.15
Empty — 33.00 − [35.10 − 27.25] = 25.15

IV Friction Loss (Assume [illegible] = 2' Pipe)

1. 3" Pipe — 142'

pump	20
3-CV @ 27	81
1-90	11
2-TTEE @ 12	24
2-GV @ 2	4
Meter	15
3x6 Red	17

Total 3" - 314'

2. 6" Pipe — 3413'

22½	4
2-45 @ 6	72
90 TEE	4
3-TTEE @ 4	12

Total 6" - 3505'

3. 8" Pipe — 469'

2-22½ @ 6	12
5-45 @ 8	40
3-90 @ 12	36
3 TTEE @ 5	15
2-90 TEE @ 24	48
3-GV @ 4	12
1-Tov'c Ex + @ 6	6
Cl-Inc	24
1 Reducer @ 3	3

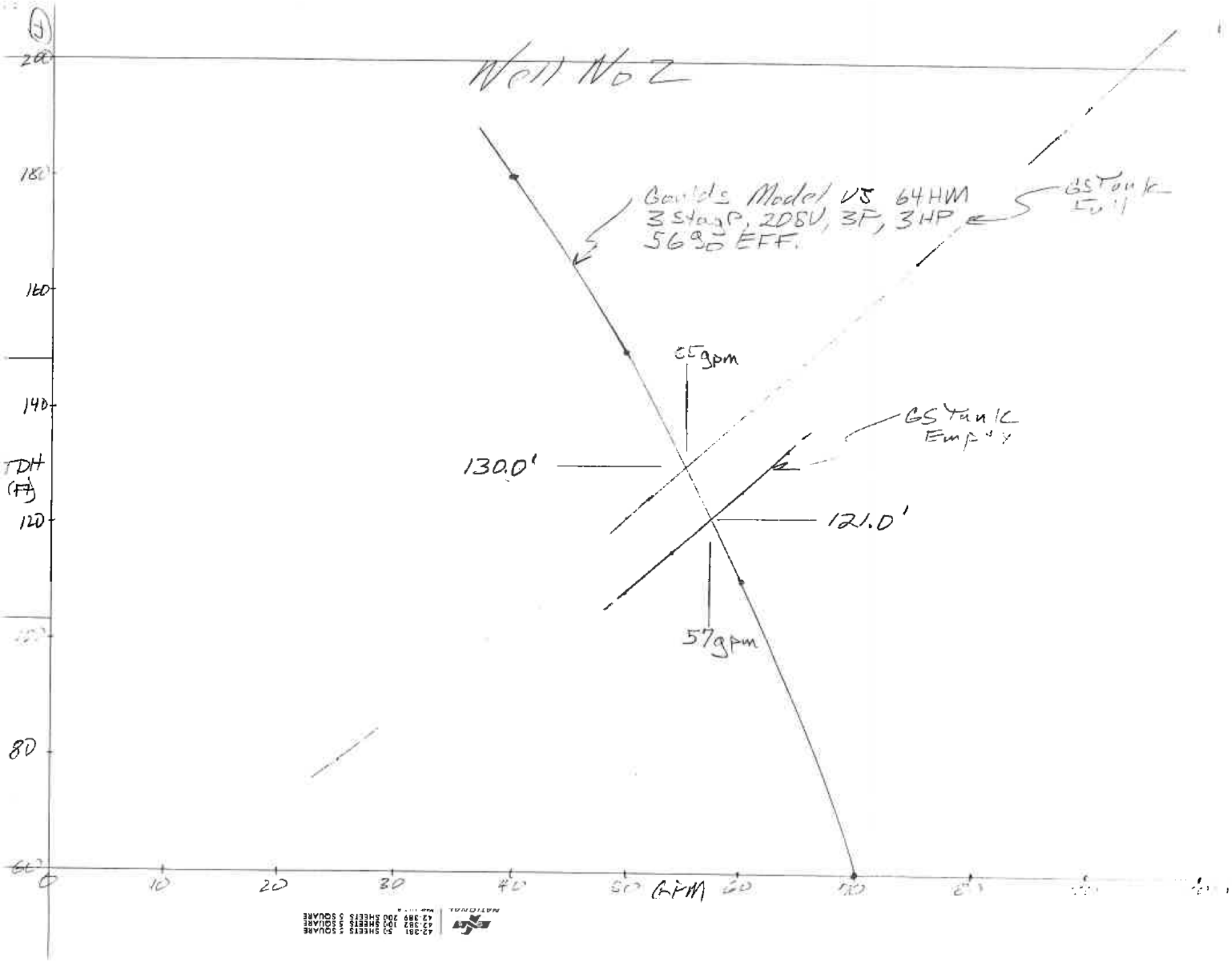
Total 8" - 665'

Flow	C=130 Fric Ft/1000' 3"	6"	8"	Fric Ft. 3'	6"	8"	SC=0.625 Drawdown	Stat. Full	Full TDH
25	2.22	.08	0.03	0.7	0.3	0	40	38.15	79.2
50	6.45	0.27	0.07	2.0	0.9	0	80	"	121.0
75	12.4	0.59	0.15	5.5	2.1	.1	120	"	165.8
100	31.0	0.94	0.26	9.7	3.5	.2	160	"	21[illegible].6

USM 64HM 3STB

Flow	TDH
25	220
40	180
50	150
60	110
70	60

42-381 50 SHEETS 5 SQUARE
42-382 100 SHEETS 5 SQUARE
42-389 200 SHEETS 5 SQUARE
NATIONAL



Well No 2
Gould's Model VS 64HM
3 Stage, 208V, 3P, 3HP
56% EFF.
GS Tank Full
GS Tank Empty
55gpm
130.0'
121.0'
57gpm
TDH (Ft)
GPM
200
180
160
140
120
80
60
0
10
20
30
40
50
60
70