

**Baker**

**Baker Environmental, Inc.**  
Airport Office Park, Building 3  
420 Rouser Road  
Coraopolis, Pennsylvania 15108

(412) 269-6000  
FAX (412) 269-2002

May 10, 1994

Commander  
Atlantic Division  
Naval Facilities Engineering Command  
1510 Gilbert Street (Building N-26)  
Norfolk, Virginia 23511-2699

Attn: Ms. Linda Berry, P.E.  
Code 18231

Re: Contract N62470-89-D-4814  
Navy CLEAN, District III  
Contract Task Order (CTO) 0222  
Contaminated Soil and Groundwater  
Remedial Design, Operable Unit No. 2  
MCB, Camp Lejeune, North Carolina

Dear Ms. Berry:

Baker Environmental, Inc. (Baker) is pleased to submit for your review two (2) sets of the Final Design Package for Soil and Groundwater Remediation for the subject project. This package includes drawings, specifications, the Basis of Design Report, and a construction cost estimate. Copies of this submittal have been sent to Ms. Susan Gale, Code 1831, Mr. Jerry Haste, Code 0524, Mr. Neal Paul (MCB Camp Lejeune), Ms. Gena Townsend (USEPA Region IV), Mr. Patrick Watters (North Carolina DEHNR), the ROICC Office at Camp Lejeune, OHM Corporation (without construction cost estimate), and to the Members of the Technical Review committee.

Also enclosed is a list of changes and revisions made to the drawings, based on comments received from LANTDIV and OHM, and on Baker's own review. Those design revisions which impact cost were forwarded to you on May 2, 1994, and are also included in the attached list.

Based on our discussions, the Final Design Package presents performance based plans and specifications. Please note that these documents were prepared assuming that the Contractor will complete the design following this submittal. Therefore, certain parts of the design are not complete, and the package is not intended to be used for construction.



A Total Quality Corporation

**Baker**

Ms. Linda Berry  
May 10, 1994  
Page 2

If you have any questions regarding this submittal, please contact me at (412) 269-2064 or Mr. Ray Wattras (Activity Coordinator) at (412) 269-2016.

Sincerely,

BAKER ENVIRONMENTAL, INC.



Don P. Joiner, P.E.  
Project Manager

DPJ/jc  
Enclosures

cc: Ms. Susan Gale, Code 1831 (letter only)  
Ms. Beth Hacie, Code 02145 (letter only)  
Mr. Jerry Haste, P.E., Code 0524 (1 set)  
Mr. Neal Paul, AC-S EMD, MCB Camp Lejeune (2 sets)  
Ms. Lee Anne Rapp, Code 183 (letter only)  
LCDR Steve Shalleen, ROICC, MCB Camp Lejeune (2 sets)

5-10-94

**CHANGES/REVISIONS TO PRE-FINAL DESIGN**

**4-28-94 REVIEW MEETING WITH LANTDIV, OHM REMEDIATION SERVICES, INC.,  
AND BAKER ENVIRONMENTAL, INC.**

**SOIL AND GROUNDWATER REMEDIATION, OPERABLE UNIT NO. 2**

**MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA**

| <u>DRAWING<br/>NO./SPEC</u> | <u>COMMENT OR REVISION</u>  |
|-----------------------------|---|
| T-1                         | Deleted "Site 82" from title. Added north arrow to Location Map.  |
| C-1                         | Added note defining Phase I and Phase II work.  |
| C-1                         | Provided index of match lines.  |
| C-3                         | Showed entire area for AOC-1 (northern part).   |
| C-3                         | Shallow recovery well (SRW-1) shown on C-3.   |
| C-5                         | Added note to remove existing concrete pad and top 4 feet of monitoring well 6GW15, grout remaining well casing, and replace well after remediation is completed. |
| C-5                         | Do not provide new chain link fence at AOC-5, remove and reinstall existing fence after completion of remediation. (Work note 4 for AOC-5 was revised).           |
| C-5                         | Identified MW 6GW11.  |
| C-7                         | Provided revised pavement detail for treatment plant (Reduced thickness of subbase and pavement).   |
| C-7                         | Remove and reinstall existing chain link fence as possible, provide new chain link fence as required.   |
| C-7                         | Provided a fire hydrant detail and revised drawing as indicated. Also added spec for fire hydrant (Section 02661).  |
| C-7(old)                    | Deleted drawing.  |
| C-8                         | Revised drawing as indicated (Corrected match line and detail).   |
| C-9                         | Contractor can propose alternate or revised equipment locations, as necessary, based on equipment or piping considerations, with the approval of the Government.  |
| C-10                        | Specified 6-inch diameter stainless steel well casing and screens for all recovery wells.   |
| C-10                        | Specified electrical heat tracing for all above grade piping within each wellhead building.   |
| C-10                        | Added note regarding pipe sizing to detail.   |

|  |  |
|--|--|
| C-11   | Revised details as indicated.  |
| P-1  | Added deep recovery well P-105. Provided title for material balance.                                       |
| P-2  | Changed discharge point of treated effluent to "Wallace Creek".  |
| P-7  | Changed discharge point of treated effluent to "Wallace Creek".  |
| A-1 and C-9  | Treatment building office shall be constructed of concrete block walls and a precast concrete plank roof.  |
| M-1  | Indintified interior hose bibbs. Insulated hot and cold water piping. Added propane supply shut-off valve. |
| M-1  | Provided acid/caustic resistant piping for floor drain piping.   |
| E-1 through E- 6   | Addressed comments from LANTDIV 4/28/94 markups.   |
| Section 01010  | Edited submittal register.   |
| Section 01010  | Added EFD and NAVFAC drawing nos.  |
| Sections 07214, 07920, 08331, 08710, 08110, 09900, 10800 | Provided Architectural Specifications (as per Camp Allen).   |

**DESIGN COORDINATION AND REVIEW COMMENTS**

SND LANTDIV 3-11012/30 (NEW2/76)

JOB ORDER NO. ~~RF4807~~ RF4800

|  |                     |                              |  |
|--|---------------------|------------------------------|--|
| COMMENTS BY<br><b>BRIAN COOPER</b>   | CODE<br><b>0403</b> | PHONE 504<br><b>444-9786</b> | DATE<br><b>4/28/94</b>   |
| PROJECT TITLE AND LOCATION<br><del>FINISH FINISH FINISH</del><br><del>WATER, SANITARY, PIPING</del><br><b>SOIL REMEDIATION</b><br><b>O.U. # 2</b><br><b>CAMP LOTEUNE</b> |                     |                              | TYPE OF REVIEW<br><input checked="" type="checkbox"/> 20%<br><input type="checkbox"/> 50%<br><input type="checkbox"/> 100%<br><input type="checkbox"/> OTHER |

| DWG. NO. OR PAR. NO. | COMMENTS<br>(MAKE GENERAL COMMENTS AFTER SPECIFIC COMMENTS)   | ACTION TAKEN<br>(REASONS WHERE SIGNIFICANT) |
|----------------------|---|---|
| M-1                  | PROVIDE CONTROL DIAGRAMS &/OR SEQUENCES OF OPERATION FOR MECHANICAL EQUIPMENT                                   | PROVIDED IN SPEC. SECTION 15011             |
| M-1                  | SHOW WATER & SANITARY LINES   | PROVIDED BY CONTRACTOR                      |
| M-1                  | PROVIDE ACID RESISTANT PIPING FROM FD'S IN AREAS WITH CAUSTIC MATERIALS.  | WILL PROVIDE                                |
| BASIS                | PROCESS AREA DESIGN TEMP SHOULD BE 55°F IF WE HAVE A FAIRLY CONTINUOUS WORK AREA OR 40°F FOR FREEZE PROTECTION. | N/A OR GELS AT 55°F WILL MAINTAIN 60°F.     |
| M-1                  | SHOW NORTH ARROW. PROVIDE SHEET TITLES.   | WILL PROVIDE                                |
| M-1                  | INDICATE EXHAUST CFM'S ON DWG.  | WILL PROVIDE FOR PROCESS ONLY               |
| M-1                  | LOCATE THERMOSTATS.   | WILL PROVIDE                                |
| 15250                | INSULATE DOMESTIC HOT WATER & COLD WATER PIPING.  | WILL PROVIDE                                |
| SPECS                | SHOULD BE USING LANTDIV GUIDE SPECS WHERE APPLICABLE.   | USING ALL APPLICABLE SPECS.                 |
| DWGS                 | DETAIL FAN PENETRATIONS THRU ROOF   | PROVIDED BY CONTRACTOR                      |
| DWGS                 | SHOW ACTUAL PIPING & PUMPING OF PROCESS EQUIPMENT.  | PROVIDED BY CONTRACTOR                      |

Post-It - brand fax transmittal memo 7671 6 of pages = 3

|         |              |
|---------|--------------|
| To      | Susan GATLE  |
| From    | Brian Cooper |
| Ca      | 0403         |
| Dept.   | Bldg. A.     |
| Phone # | 444-9786     |
| Fax #   | 444-9065     |
| Fax #   | 322-4530     |

DESIGN COORDINATION AND REVIEW COMMENTS

SND LANTDIV 3-11012/30 (NEWS/76)

JOB ORDER NO. ~~RF4800~~ RF4800

|  |              |                                  |                 |
|--|--------------|----------------------------------|-----------------|
| COMMENTS BY<br><u>BRIAN COOPER</u>   | CODE<br>0403 | PHONE <del>824</del><br>444-9776 | DATE<br>1/28/94 |
| PROJECT TITLE AND LOCATION<br><del>Final Design - Hazardous Waste, Camp Lejeune</del><br>Soil Remediation<br>O. U. # 2<br>CAMP LEJEUNE |              |                                  | TYPE OF REVIEW  |
|  |              |                                  | X 101           |
|  |              |                                  | 102             |
|  |              |                                  | 103             |
|  |              |                                  | OTHER           |

| DWG. NO. OR PAR. NO. | COMMENTS<br>(MAKE GENERAL COMMENTS AFTER SPECIFIC COMMENTS)   | ACTION TAKEN<br>(REASONS WHERE SIGNIFICANT)  |
|----------------------|---|--|
| P-1, 2               | PROVIDE TITLES FOR SCHEMATIC & SCHEDULE   |  |
| M-1                  | SIZE GAS LINES, SUPPLY & EXHAUST DUCTS.   | PROVIDED BY CONTRACTOR   |
| M-1                  | INDICATE LOCATION OF IN-LINE EXHAUST FANS. INDICATE MOUNTING HEIGHTS OF ALL SUSPENDED EQUIPMENT. LOCATE EQUIP. AT AN ELEVATION WHERE IT CAN BE EASILY MAINTAINED. | PROVIDED BY CONTRACTOR   |
| M-1                  | SIZE SIGNAL REGISTERS.  | PROVIDED BY CONTRACTOR   |
| M-1                  | DETAIL ALL EQUIPMENT MOUNTING AND VIBRATION ISOLATION.  | PROVIDED BY CONTRACTOR   |
| M-1                  | FLOOR DRAINS IN HAZARDOUS MATERIAL STORAGE AREAS SHALL DRAIN TO A WASTE CONTAINMENT TANK - OTHERWISE ELIMINATE THESE FD'S   | ALL FLOOR DRAINS DRAIN TO SUMP AND ARE PUMPED THROUGH PROTECTIVE DEVICE DISCHARGE. |
| M-1                  | SIZE WALL LOUVRES, INDICATE MAX. PRESSURE DROP & CFM.   | SIZE PROVIDED BY CONTRACTOR. PRESS. DROP AND MAX. VELOCITY IN SPEC. SECTION 15011  |
| M-1                  | PROVIDE EQUIPMENT SCHEDULES & DESIGN CONDITIONS. PROVIDE DUCT CONSTRUCTION SCHEDULE.  | PROVIDED BY CONTRACTOR. WILL PROVIDE DESIGN CONDITIONS                             |
| M-2                  | SHOW WATER PIPING TO HOSE BIBS & WALL HYDRANTS  | PROVIDED BY CONTRACTOR   |



CC: Ed Freundburg  
Brad Smith

| DESIGN COORDINATION AND REVIEW COMMENTS                               |  |   | JOB ORDER NO.  |
|---|--|---|----------------|
| 6ND LANTDIV 3-11012/30 (NEW2/76)                                      |  |   | RF4800         |
| COMMENTS BY   | CODE   | PHONE   | DATE           |
| LK Sherfey  | 402  | (804)444-9922   | 05/02/94       |
| PROJECT TITLE AND LOCATION  |  |   | TYPE OF REVIEW |
| Soil & Groundwater Remediation, Operable Unit No. 2, Camp Lejeune, NC |  |   | 35%            |
|   |  |   | 100X%          |
|   |  |   | FINAL          |
|   |  |   | OTHER          |
| DWG. NO. OR PAR NO.   | COMMENTS<br>(MAKE GENERAL COMMENTS AFTER SPECIFIC COMMENTS)  | ACTION TAKEN<br>(& REASONS WHERE SIGNIFICANT)   |                |
| A-1   | Pre-engineered frame not compatible with cavity wall construction. will have to limit deflection of frame, eliminating the economy of the pre-engineered system. Do not recommend this. Use either PEB system or load bearing masonry. PEB is cheaper, more fool proof, lighter and faster to build. | BECAUSE OF PROJECT DESIGN SCHEDULE - LANTDIV APPROVED THIS ARRANGEMENT - IBIZI WAS EDITED AS NECESSARY. |                |
| A-1   | What is the allowable lintel deflection?   |   |                |
| A-1   | 10" masonry (h/t<24) min. reinf. req. for seismic - provide joint reinforcement & control joints (crack control for CMU, expansion joints for brick)   | TO BE PROVIDED BY CONTRACTOR  |                |
| A-1   | Thru wall flashing eliminates running bond   |   |                |
| A-1   | Need design requirements: slab live load, roof live load, wind load.   | ADDED TO IBIZI  |                |
| A-1   | For masonry: Use industry standards (ACI 530), if not MIL HDBKS. Must design & detail sufficiently for contractor to build. Design foundation & roof. Should be separate sheets for structural info. Masonry must be reinforced both horizontally and vertically.                                    | ADDED TO 4230 THIS INFORMATION WILL BE PROVIDED BY CONTRACTOR.  |                |

Post-It™ brand fax transmittal memo 7671 # of pages > 1

|       |                |         |                |
|-------|----------------|---------|----------------|
| To    | STEVE KRECHMAN | From    | DON PETTEWAY   |
| Co.   | BAKER          | Co.     | LANTDIV        |
| Dept. |                | Phone # | (804) 444-9916 |
| Fax # | (412) 269-2002 | Fax #   | (804) 444-9065 |

STEVE,  
 HERE ARE STRUCTURAL'S COMMENTS. PLEASE CALL LAURIE SHERFEY TO RESPOND AND FOR QUESTIONS. INCLUDE THIS SHEET WITH RESPONSE IN NEXT SUBMITTAL.

DON

**CHANGES/REVISIONS TO PRE-FINAL DESIGN**

**4-28-94 REVIEW MEETING WITH LANTDIV, OHM REMEDIATION SERVICES, INC.,  
AND BAKER ENVIRONMENTAL, INC.**

**SOIL AND GROUNDWATER REMEDIATION, OPERABLE UNIT NO. 2**

**MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA**

| <u>DRAWING<br/>NO./SPEC</u> | <u>COMMENT OR REVISION</u>  |
|-----------------------------|---|
| T-1                         | Deleted "Site 82" from title. Added north arrow to Location Map.  |
| C-1                         | Added note defining Phase I and Phase II work.  |
| C-1                         | Provided index of match lines.  |
| C-3                         | Showed entire area for AOC-1 (northern part).   |
| C-3                         | Shallow recovery well (SRW-1) shown on C-3.   |
| C-5                         | Added note to remove existing concrete pad and top 4 feet of monitoring well 6GW15, grout remaining well casing, and replace well after remediation is completed. |
| C-5                         | Do not provide new chain link fence at AOC-5, remove and reinstall existing fence after completion of remediation. (Work note 4 for AOC-5 was revised).           |
| C-5                         | Identified MW 6GW11.  |
| C-7                         | Provided revised pavement detail for treatment plant (Reduced thickness of subbase and pavement).   |
| C-7                         | Remove and reinstall existing chain link fence as possible, provide new chain link fence as required.   |
| C-7                         | Provided a fire hydrant detail and revised drawing as indicated. Also added spec for fire hydrant (Section 02661).  |
| C-7(old)                    | Deleted drawing.  |
| C-8                         | Revised drawing as indicated (Corrected match line and detail).   |
| C-9                         | Contractor can propose alternate or revised equipment locations, as necessary, based on equipment or piping considerations, with the approval of the Government.  |
| C-10                        | Specified 6-inch diameter stainless steel well casing and screens for all recovery wells.   |
| C-10                        | Specified electrical heat tracing for all above grade piping within each wellhead building.   |
| C-10                        | Added note regarding pipe sizing to detail.   |

|  |  |
|--|--|
| C-11   | Revised details as indicated.  |
| P-1  | Added deep recovery well P-105. Provided title for material balance.                                       |
| P-2  | Changed discharge point of treated effluent to "Wallace Creek".  |
| P-7  | Changed discharge point of treated effluent to "Wallace Creek".  |
| A-1 and C-9  | Treatment building office shall be constructed of concrete block walls and a precast concrete plank roof.  |
| M-1  | Indintified interior hose bibbs. Insulated hot and cold water piping. Added propane supply shut-off valve. |
| M-1  | Provided acid/caustic resistant piping for floor drain piping.   |
| E-1 through E- 6   | Addressed comments from LANTDIV 4/28/94 markups.   |
| Section 01010  | Edited submittal register.   |
| Section 01010  | Added EFD and NAVFAC drawing nos.  |
| Sections 07214, 07920, 08331, 08710, 08110, 09900, 10800 | Provided Architectural Specifications (as per Camp Allen).   |

**DESIGN COORDINATION AND REVIEW- COMMENTS**  
 SHD LANTDIV 3-11012/30 (NEW2/76)

JOB ORDER NO.  
~~RF4800~~ RF4800

COMMENTS BY BRIAN COOPER CODE 0403 PHONE 504 444-9786 DATE 4/28/94

PROJECT TITLE AND LOCATION  
~~FINISH FLOOR THROUGH~~ SOIL REMEDIATION  
~~NADES, ANCHOR, PILING~~ O.U. # 2  
 CAMP LEBRUNG

| TYPE OF REVIEW |       |
|----------------|-------|
| X              | 30%   |
|                | 90%   |
|                | 100%  |
|                | OTHER |

| DWG. NO. OR PAR. NO. | COMMENTS<br>(MAKE GENERAL COMMENTS AFTER SPECIFIC COMMENTS) | ACTION TAKEN<br>(REASONS WHERE SIGNIFICANT) |
|----------------------|---|---|
|----------------------|---|---|

|     |   |                                 |
|-----|---|---------------------------------|
| M-1 | PROVIDE CONTROL DIAGRAMS &/OR SEQUENCES OF OPERATION FOR MECHANICAL EQUIPMENT | PROVIDED IN SPEC. SECTION 15011 |
|-----|---|---------------------------------|

|     |                             |                        |
|-----|-----------------------------|------------------------|
| M-1 | SHOW WATER & SANITARY LINES | PROVIDED BY CONTRACTOR |
|-----|-----------------------------|------------------------|

|     |  |              |
|-----|--|--------------|
| M-1 | PROVIDE ACID RESISTANT PIPING FROM FD'S IN AREAS WITH CAUSTIC MATERIALS. | WILL PROVIDE |
|-----|--|--------------|

|       |   |                                       |
|-------|---|---------------------------------------|
| BASIS | PROCESS AREA DESIGN TEMP SHOULD BE 55°F IF WE HAVE A FAIRLY CONTINUOUS WORK AREA OR 40°F FOR FREEZE PROTECTION. | NAOH GELS AT 55°F WILL MAINTAIN 60°F. |
|-------|---|---------------------------------------|

|     |   |              |
|-----|---|--------------|
| M-1 | SHOW NORTH ARROW. PROVIDE SHEET TITLES. | WILL PROVIDE |
|-----|---|--------------|

|     |                                |                               |
|-----|--------------------------------|-------------------------------|
| M-1 | INDICATE EXHAUST CFM'S ON DWG. | WILL PROVIDE FOR PROCESS ONLY |
|-----|--------------------------------|-------------------------------|

|     |                     |              |
|-----|---------------------|--------------|
| M-1 | LOCATE THERMOSTATS. | WILL PROVIDE |
|-----|---------------------|--------------|

|       |  |              |
|-------|--|--------------|
| 15250 | INSULATE DOMESTIC HOT WATER & COLD WATER PIPING. | WILL PROVIDE |
|-------|--|--------------|

|       |   |                             |
|-------|---|-----------------------------|
| SPECS | SHOULD BE USING LANTDIV GUIDE SPECS WHERE APPLICABLE. | USING ALL APPLICABLE SPECS. |
|-------|---|-----------------------------|

|      |                                   |                        |
|------|-----------------------------------|------------------------|
| DWGS | DETAIL FAN PENETRATIONS THRU ROOF | PROVIDED BY CONTRACTOR |
|------|-----------------------------------|------------------------|

|      |  |                        |
|------|--|------------------------|
| DWGS | SHOW ACTUAL PIPING & PUMPING OF PROCESS EQUIPMENT. | PROVIDED BY CONTRACTOR |
|------|--|------------------------|

Post-It - brand fax transmittal memo 7871 # of pages = 3

|         |              |
|---------|--------------|
| To      | Susan GAYLE  |
| From    | Brian Cooper |
| Ca      | 0403         |
| Dept.   | Beck. A.     |
| Phone # | 444-9786     |
| Fax #   | 444-9065     |
| Fax #   | 322-4530     |

**DESIGN COORDINATION AND REVIEW - COMMENTS**

SND LANTDIV 3-11012/30 INEW2/781

JOB ORDER NO. ~~RF480~~ RF480

COMMENTS BY BRIAN COOPER CODE 0403 PHONE 804 444-9776 DATE 1/28/94

PROJECT TITLE AND LOCATION  
~~Remediation of Hazardous Waste~~ SOIL REMEDIATION  
~~at Camp Loggune~~ O. U. # 2  
 CAMP LOGGUNE

| TYPE OF REVIEW |       |
|----------------|-------|
| X              | 30%   |
|                | 50%   |
|                | 100%  |
|                | OTHER |

| DWG. NO. OR PAR. NO. | COMMENTS<br>(MAKE GENERAL COMMENTS AFTER SPECIFIC COMMENTS) | ACTION TAKEN<br>(REASONS WHERE SIGNIFICANT) |
|----------------------|---|---|
|----------------------|---|---|

|        |   |   |
|--------|---|---|
| P-1, 2 | PROVIDE TITLES FOR SCHEMATIC & SCHEDULE   |   |
| M-1    | SIZE GAS LINES, SUPPLY & EXHAUST DUCTS.   | PROVIDED BY CONTRACTOR  |
| M-1    | INDICATE LOCATION OF IN-LINE EXHAUST FANS. INDICATE MOUNTING HEIGHTS OF ALL SUSPENDED EQUIPMENT. LOCATE EQUIP. AT AN ELEVATION WHERE IT CAN BE EASILY MAINTAINED. | PROVIDED BY CONTRACTOR  |
| M-1    | SIZE SIOGALL REGISTERS.   | PROVIDED BY CONTRACTOR  |
| M-1    | DETAIL ALL EQUIPMENT MOUNTING AND VIBRATION ISOLATION.  | PROVIDED BY CONTRACTOR  |
| M-1    | FLOOR DRAINS IN HAZARDOUS MATERIAL STORAGE AREAS SHALL DRAIN TO A WASTE CONTAINMENT TANK - OTHERWISE ELIMINATE THESE FD'S   | ALL FLOOR DRAINS DRAIN TO SUMP AND ARE PUMPED THRU PROCESS BEFORE DISCHARGE.      |
| M-1    | SIZE WALL LOUVRES, INDICATE MAX. PRESSURE DROP & CFM.   | SIZE PROVIDED BY CONTRACTOR. PRESS. DROP AND MAX. VELOCITY IN SPEC. SECTION 15011 |
| M-1    | PROVIDE EQUIPMENT SCHEDULES & DESIGN CONDITIONS. PROVIDE DUCT CONSTRUCTION SCHEDULE.  | PROVIDED BY CONTRACTOR. WILL PROVIDE DESIGN CONDITIONS                            |
| M-2    | SHOW WATER PIPING TO HOSE BIBS & WALL HYDRANTS  | PROVIDED BY CONTRACTOR  |



CC: Ed Freundburg  
Brad Smith

| DESIGN COORDINATION AND REVIEW COMMENTS   |  |   | JOB ORDER NO.    |
|---|--|---|------------------|
| 5ND LANTDIV 3-11012/30 (NEW2/76)  |  |   | RF4800           |
| COMMENTS BY<br>LK Sherfey   | CODE<br>402  | PHONE<br>(804)444-9922  | DATE<br>05/02/94 |
| PROJECT TITLE AND LOCATION<br>Soil & Groundwater Remediation, Operable Unit No. 2, Camp Lejeune, NC |  |   | TYPE OF REVIEW   |
|   |  |   | 35%              |
|   |  |   | 100X%            |
|   |  |   | FINAL            |
|   |  |   | OTHER            |
| DWG. NO. OR PAR NO.   | COMMENTS<br>(MAKE GENERAL COMMENTS AFTER SPECIFIC COMMENTS)  | ACTION TAKEN<br>(& REASONS WHERE SIGNIFICANT)   |                  |
| A-1   | Pre-engineered frame not compatible with cavity wall construction. Will have to limit deflection of frame, eliminating the economy of the pre-engineered system. Do not recommend this. Use either PEB system or load bearing masonry. PEB is cheaper, more fool proof, lighter and faster to build. | BECAUSE OF PROJECT DESIGN SCHEDULE - LANTDIV APPROVED THIS ARRANGEMENT - IBIZI WAS EDITED AS NECESSARY. |                  |
| A-1   | What is the allowable lintel deflection?   |   |                  |
| A=1   | 10" masonry (h/t<24) min. reinf. req. for seismic - provide joint reinforcement & control joints (crack control for CMU, expansion joints for brick)   | TO BE PROVIDED BY CONTRACTOR  |                  |
| A-1   | Thru wall flashing eliminates running bond   |   |                  |
| A-1   | Need design requirements: slab live load, roof live load, wind load.   | ADDED TO IBIZI  |                  |
| A-1   | For masonry: Use industry standards (ACI 530), if not MIL HDBKS. Must design & detail sufficiently for contractor to build. Design foundation & roof. Should be separate sheets for structural info. Masonry must be reinforced both horizontally and vertically.                                    | ADDED TO 4230 THIS INFORMATION WILL BE PROVIDED BY CONTRACTOR.  |                  |

|  |                 |            |                |
|--|-----------------|------------|----------------|
| Post-It™ brand fax transmittal memo 7671 |                 | # of pages | 1              |
| To                                       | STEVE KRECHMANN | From       | DON PETERWAY   |
| Co.                                      | BAKER           | Co.        | LANTDIV        |
| Dept.                                    |                 | Phone #    | (804) 444-9916 |
| Fax #                                    | (412) 269-2002  | Fax #      | (804) 444-9065 |

STEVE,  
HERE ARE STRUCTURAL'S COMMENTS. PLEASE CALL LAURIE SHERFEY TO RESPOND AND FOR QUESTIONS. INCLUDE THIS SHEET WITH RESPONSE IN NEXT SUBMITTAL.

DON

**Baker**

**Baker Environmental, Inc.**  
Airport Office Park, Building 3  
420 Rouser Road  
Coraopolis, Pennsylvania 15108

(412) 269-6000  
FAX (412) 269-2002

May 10, 1994

Commander  
Atlantic Division  
Naval Facilities Engineering Command  
1510 Gilbert Street (Building N-26)  
Norfolk, Virginia 23511-2699

Attn: Ms. Susan Gale, Code <sup>1831</sup>~~18231~~

Re: Contract N62470-89-D-4814  
Navy CLEAN, District III  
Contract Task Order (CTO) 0222  
Contaminated Soil and Groundwater  
Remedial Design, Operable Unit No. 2  
MCB, Camp Lejeune, North Carolina

Dear Ms. Gale:

Baker Environmental, Inc. (Baker) is pleased to submit the Final Design Package for Soil and Groundwater Remediation for the subject project. This package includes the following items:

1. Nine sets of full size drawings, stamped and signed.
2. One set of mylar drawings, stamped and signed.
3. Drawing AutoCAD Files on disk.
4. Nine sets of bound specifications.
5. One set of unbound specifications.
6. Specifications in SPECSINTACT file on disk.
7. Four bound construction cost estimates.
8. Cost estimate files in QUATTRO PRO on disk.
9. QA/QC check prints.
10. LANTDIV review comments on pre-final plans and specifications, with Baker responses.
11. Nine copies of the Basis of Design Report.



A Total Quality Corporation

**Baker**

Ms. Susan Gale  
May 10, 1994  
Page 2

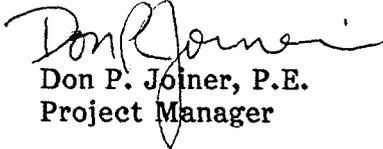
Also enclosed is a list of changes and revisions made to the drawings, based on comments received from LANTDIV and OHM, and on Baker's own review. Those design revisions which impact cost were forwarded to you on May 2, 1994, and are also included in the enclosed list.

The Final Design Package presents performance based plans and specifications. Please note that these documents were prepared assuming that the Contractor will complete the design following Baker's Final Design Package Submittal, and provide the necessary supplemental design information, in the form of additional submittals. Therefore, certain parts of the design are not complete, and the package is not intended to be used for construction.

If you have any questions regarding this submittal, please contact me at (412) 269-2064 or Mr. Ray Wattras (Activity Coordinator) at (412) 269-2016.

Sincerely,

BAKER ENVIRONMENTAL, INC.

  
Don P. Joiner, P.E.  
Project Manager

DPJ/jc

Enclosures

cc: Ms. Linda Berry, Code 1823