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CONSTRUCTION QUALITY PLAN FOR ABOVE GROUND FUEL STORAGE TANK REMOVAL

NAS FORT WORTH TX

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METCALF AND EDDY

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NAVAL AIR STATION FORT WORTH JRB CARSWELL FIELD TEXAS

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 169

CONSTRUCTION QUALITY PLAN

FOR

ABOVE GROUND FUEL STORAGE TANK REMOVAL

Carswell Air Force Base, Texas 76127-5000

December 1993

PREPARED BY

Metcalf & Eddy, Inc.
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Houston, Texas 77092

PREPARED FOR

AIR FORCE BASE CONVERSION AGENCY
DISPOSAL MANAGEMENT TEAM
ENVIRONMENTAL PROGRAMS OFFICE
CARSWELL AIR FORCE BASE, TEXAS 76127-5000

AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE
BASE CLOSURE RESTORATION DIVISION (AFCEE/ESB)
8001 INNER CIRCLE DRIVE, SUITE 2
BROOKS AIR FORCE BASE, TEXAS 78235-5328

169002

CONSTRUCTION QUALITY PLAN

FOR

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Air Force Base Conversion Agency
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PREPARED BY

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USAF CONTRACT NUMBER: F41624-92-D-8002, DELIVERY ORDER NO. 0010

CONTRACTOR CONTRACT NO: 012904

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CONSTRUCTION QUALITY PLAN

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SECTION ONE

INTRODUCTION

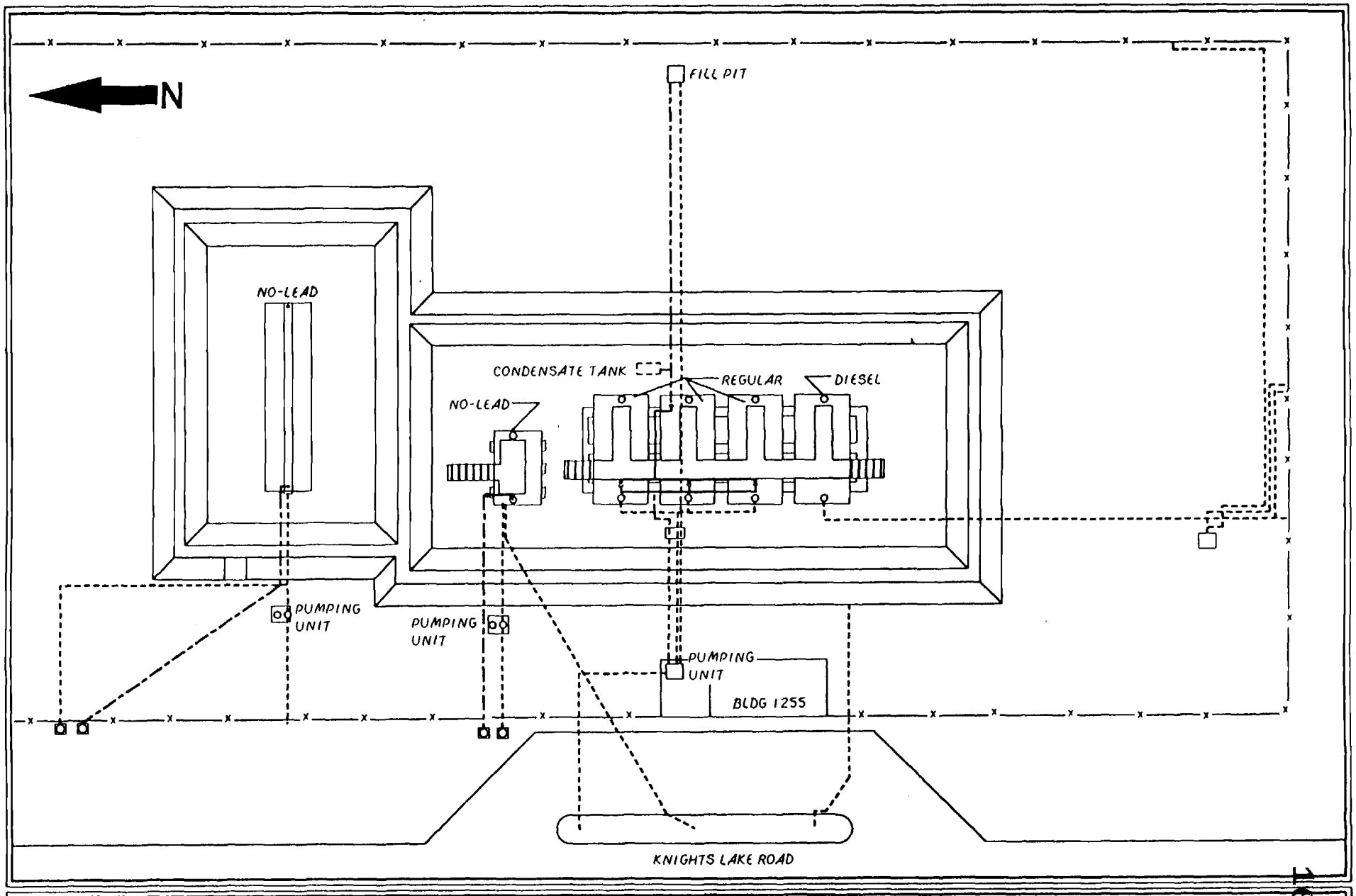
Under a contract with the Air Force Center for Environmental Excellence (AFCEE), Brooks AFB, Texas, Metcalf & Eddy (M&E) has been issued a delivery order to remove storage tanks near Building 1255) on base at Carswell Air Force Base (AFB), Texas. This involves the removal of six (6) aboveground storage tanks and associated piping and structures; excavation of contaminated soils and transportation of contaminated soils, tanks, and associated piping to a treatment/disposal facility. Additional work may include the sampling, testing, analysis, and reporting of contaminants at the site. This facility was used for the filling of fuel tanks with unleaded, regular or diesel fuel. It is located northeast of the intersection of Knights Lake Road and Warehouse Street. The area is flat; surrounding vegetation is similar to the grasses and oak trees found elsewhere on base.

The tanks include one 12,000 gallon and one 6,000 gallon unleaded tank, three 6,000 gallon regular tanks, and one 12,000 gallon diesel tank. The site layout, including the arrangement of the tanks and associated piping, is shown on Figure 1-1. These tanks are registered with the Texas Natural Resource Conservation Commission's (TNRCC) storage tank program as inactive. The facility has been inactive since 1989 after approximately 25 years of operation. There are no regulations regarding the closure of above-ground storage tanks (ASTs) for the State of Texas. If a release is identified, the regulations contained in Subtitle D of Chapter 334 of the Texas Code are activated.

The Construction Quality Plan identifies the site-specific procedures to be used to ensure that the removal performed under the delivery order at Carswell AFB is properly controlled and documented. The plan describes the approach and procedures to be employed to meet the quality, quantity, and schedule of removal requirements, as well as the applicable regulatory requirements.

Specifications have been prepared for work items not covered in other project documents (health and safety, and sampling and analysis plans) to assure overall project quality.

Preparatory phase checklists will be used to assure readiness to initiate and complete removal on schedule. Daily inspection checklists will be used to document the progress of the removal activities. A transportation checklist will be used to assure materials are transported according to all local, state, and federal guidelines, as well as Annex A to the AFCEE SOW "Transporting Wastes Offsite".



LEGEND

- UNDERGROUND PRODUCT LINE
- UNDERGROUND VAPOR LINE
- OVERHEAD VAPOR LINE
- FENCE

FACILITY LAYOUT MAP

BASE GAS STATION

CARSWELL AIR FORCE BASE, TX

Metcalf & Eddy

APPROXIMATE SCALE

0 10 20 30

FIGURE 1-1

SECTION TWO

PURPOSE AND SCOPE

The purpose of this CQP is to identify the site-specific personnel, procedures, instructions, records and forms to be used in controlling the quality of removal activities performed under the delivery order for above ground fuel storage tank removal at Carswell AFB. The plan describes the approach and procedures to be employed to meet the quality, quantity and schedule of removal requirements, as well as the applicable statutory and regulatory requirements.

The CQP will be used by the project staff to control the quality of the removal activities. Separate plans have been prepared to address health and safety (HASP) and sampling and analysis (SAP) activities. All plans are in accordance with M&E's Quality Program Plan (QPP), approved July 13, 1992.

SECTION THREE

QUALITY CONTROL ORGANIZATION

3.1 Key Personnel

The key personnel responsible for controlling quality on the project are shown in Table 3-1. They include the Program Manager (JC Goldman, Jr.), Remedial Construction/Sr. Project Manager (Phil Smith), Site/Project Manager (J. E. Bentkowski), QA/QC Manager (Steve Alvanas), QA/QC Officer (Christine Hettinger), and Technical Advisor (Carol Sweet).

Table 3-1 lists the key personnel in the quality control organization and describes their responsibilities and authority. The Site Manager is the primary person responsible for implementing all site specific plans (CQP, SAP, HASP). The Site Manager will be on site during all field activities and will be responsible for inspecting, monitoring, documenting and reporting on related activities on a daily basis.

3.2 Responsibility and Authority

Table 3-1 lists the key personnel in the quality control organization and describes their responsibilities and authority.

TABLE 3-1. KEY PERSONNEL RESPONSIBILITY AND AUTHORITY		
Title	**Name**	**Responsibility/Authority**
Program Manager	JC Goldman, Jr.	Responsible for the overall management of the Program Management Office. Ensures conformance with contract requirements and reports contract performance.
Regional Remedial Construction Manager/ Sr. Project Manager	Philip F. Smith	Responsible for ensuring all activities are conducted in accordance with AFCEE-approved plans and within the overall contractual obligations. Monitors the project budget and schedule; ensures the availability of personnel, equipment, and services, and participates in all phases of the project.
Site/Project Manager/ Health & Safety Officer	J. E. Bentkowski	Responsible for managing the implementation of all work under this task order. Assigns project staff; reviews all project deliverables; and manages the delivery order budget and schedule. Responsible for oversight and administration of health and safety issues.
QA/QC Manager	Stephen F. Alvanas	Ensures that QA objectives are met. Responsible for ongoing surveillance of project activities and has the authority to recommend that work be stopped when work appears to jeopardize data quality.
QA/QC Officer	Christine Hettinger	Ensures proper number and type of samples are collected, shipments are received by the laboratory, samples are analyzed within holding times, and verifies the quality of analytical data.
Technical Advisory Team	Carol Sweet	Provides technical review of project approach, data interpretation, and final report preparation.

SECTION FOUR

CONTROL PROCEDURES

4.1 Inspection and Testing

M&E's CQP incorporates the two key phases of inspection:

- Preparatory Phase, performed before beginning removal work
- Daily, performed daily for the duration of the removal work

In addition, a complete inspection is performed by the Site Manager prior to and following completion of the removal work.

4.1.1 Preparatory Phase. Prior to the start of the removal work, the Site Manager will perform a preparatory review and inspection to assure the satisfactory status of all items necessary for successful initiation and execution of removal and sampling activities. The checklist shown in Appendix A will be used to document the Preparatory Inspection.

4.1.2 Daily. At the beginning of the removal and daily thereafter, the Site Manager will conduct an inspection to verify that work is being performed in accordance with contract and subcontract requirements, control testing is being performed or has been provided for, and that the quality of work is acceptable. The checklist shown in Appendix B will be used to document the Daily Inspection. Additional sampling and testing procedures are discussed in the project specifications contained in the SAP and HASP.

4.1.3 Completion Inspections. At the substantial completion of all work or any defined increment of work (such as separate completion dates or elements of subcontracted work), the Site Manager will conduct a Pre-Final Inspection and develop a punch list of items that do not conform to the approved plans and specifications. A list of deficiencies will be included in the CQP documentation, and will include the estimated date by which the deficiencies will be corrected.

The Site Manager will conduct a Final Inspection to ensure that all deficiencies identified in the Pre-Final Inspection have been corrected. The completion inspections and any required deficiency corrections will be accomplished within the time stated for completion of the entire project, or any particular increment thereof.

4.2 Control of Submittals

The need for vendor submittals is not anticipated during execution of this task order. However, receipts for tank and soil disposal will be required from the removal subcontractor.

4.3 Schedule Control

Before the start of field activities, M&E will establish a schedule with major milestones. This schedule will include M&E tasks for inspecting the removal subcontractor and conducting sampling activities. Subcontractors will be required, as a part of their bid, to submit detailed schedules for completing their portions of the work. These will be integrated into the master schedule. This schedule will be used by the Site Manager to track and control the progress of the project. During Site operations, the Site Manager will phone to the Sr. Project Manager a daily report of actual progress versus scheduled progress, with a detailed explanation of any actual or anticipated delays, and the actions being taken or required to correct the schedule slippage, if necessary. Depending on the nature of the delay, measures such as extended work hours (lump-sum contracts), more equipment or manpower, expedited equipment delivery, and other actions will be considered for maintaining the project schedule.

4.4 Summary of Removal Activities

Working from blueprints provided by Carswell AFB, Metcalf & Eddy personnel will oversee the removal of the six (6) above ground storage tanks and associated piping. The goal of this removal will be to completely clear the site for future use. There are no Texas regulations regarding the closure of ASTs. These tanks and piping will be purged and rinsed and properly disposed of by the demolition subcontractor. The rinsate will be collected and disposed of by the demolition subcontractor. These procedures are based on American Petroleum Institute guidelines and OSHA regulations and are included in Appendix L of the H&SP for this task. During the excavation for the piping and concrete foundations, the soil will be visually inspected and monitored with an organic vapor analyzer (OVA). Any areas which appear impacted or exceed a 100 ppm reading on the OVA will be over-excavated and the soils will be stockpiled on plastic sheeting. Visual inspection and the OVA will be used to determine the limits of excavation. Once the area appears "clean" a confirmation sample will be taken and analyzed using the guidelines in the sampling and analysis plan which is part of the work plan documents for this delivery order. If a release of petroleum product is detected, Subtitle D of Chapter 334 of the Texas Code, Release Reporting and Corrective Action, is activated. A copy of these regulations will be on site during the field work.

Backfill will not be required. The site will be levelled using on-site materials. The volume of piping and foundations is very small and the overall level of the site should be little affected. It is expected that the stockpiled soils would not exceed 25 yd^3 in volume. One composite sample will be taken from the stockpile and analyzed in accordance with the Sampling and Analysis Plan. Based upon those results, proper disposal of the stockpiled soils will be arranged.

SECTION FIVE

DOCUMENTATION AND REPORTING

M&E will maintain daily records of control operations, activities, and tests performed including the work of subcontractors and suppliers. Records will be kept in field diaries, inspector's daily reports, and special forms developed for the purpose. These records will include factual evidence that required quality control activities and/or tests have been performed.

In addition, the Site Manager will keep a master diary. This diary will contain a brief daily summary of all occurrences such as important conferences, telephone conversations, observations, comments of subcontractors, and instructions issued by the Site Manager or received from higher authority. All incidents indicating present or potential differences with subcontractors that might result in a dispute or claim will be recorded in the diary with full details as to time, place, materials, quantities, persons present, and so forth.

The diary will be kept neat and clean, with entries that are legible and concise. No pages will be left blank. Each page will bear the date to which the entry pertains. Entries that pertain to more than one day will not be combined on one page. If the entries for one day require more than one page, consecutively numbered pages will be used as are necessary to include the data. Pages must be numbered consecutively in indelible ink and no numbers skipped. No pages should be torn out of the book, and no erasures made. In case of error, the incorrect information will be crossed out with a single line, initialed and the correct data entered following it. If no work is performed on a weekend, it should be noted. Every calendar day must be reported.

Upon completion of the project, the Site Superintendent will return the diary promptly to the office so that the field records are available for review and use after he or she has left the project.

5.1 Preparatory Phase Reports

The Preparatory Inspection Checklist (Appendix A) documents the preliminary inspection that is conducted at the beginning of removal activities. This inspection ensures that the materials and equipment are available for the successful initiation of removal activities. All forms are part of the permanent project records and will accompany the other records when they are transferred to the home office for permanent storage.

5.2 Daily Inspection Checklist

The Site Manager will document the progress of the work in the Daily Inspection Checklist (Appendix B). The Sr. Project Manager will review the reports daily to ensure that they include all information required to reconstruct the day's activities, and completely support subsequent decisions and conclusions. The daily report should be detailed enough to reconstruct the removal progress of construction from start to finish.

The daily reports will be prepared in duplicate, one copy retained in the field office files and the original forwarded to the home office.

5.3 Other Documentation and Reports

Other documentation and reports refer to photographs, closure reports, manifests, test reports, waste transportation checklists, etc. that may be generated during the course of field activities. All relevant documents and reports become part of the permanent project records. Following completion of the field activities, a final report will be prepared and submitted to AFCEE, Carswell AFB, and the Texas Natural Resources Conservation Commission (TNRCC). The final report will include a summary of findings including locations of sampling, copies of photographs documenting site activities; copies of permits, manifests, laboratory analysis reports, and other relevant documentation that was generated during the implementation of the Delivery Order.

PREPARATORY INSPECTION CHECKLIST

Contract No.: _____ Date: _____

Specification Paragraph or Section: _____

Description and Location of Work Inspected: _____

REFERENCE CONTRACT DRAWINGS:

A. PERSONNEL PRESENT

NAME	POSITION	COMPANY
1.		
2.		
3.		
4.		

___ Applicable plans and specs have been prepared/reviewed
- ___ Health & Safety Plan approved
- ___ Sampling and Analysis Plan approved
- ___ Construction Quality Plan approved

___ Executed copies of all subcontracts
___ Subcontractor's insurance certificates, professional licenses, and Health and Safety documents on file.
___ Badges, passes, entry permits obtained
___ Staging area identified and secured
___ Decontamination area identified and prepared
___ Field office installed (if required)
___ Required materials are on hand and conform to requirements (see attached list)
___ Required equipment is on hand and conform to requirements (see attached list)
___ Permits have been obtained
___ Laboratory procured and alerted
___ Materials testing service procured (if required)
___ Waste accumulation points identified
___ Utilities identified, disconnection completed or arranged

_____
Site Manager

PREPARATORY INSPECTION CHECKLIST (continued)

PURCHASED MATERIALS

	Description
___	35mm Film
___	FID Calibration Gas
___	Barricade Tape
___	Ziplock Baggies
___	Field Books
___	Paper Towels
___	Nitrile Gloves
___	Ear Plugs
___	Drink Concentrate
___	Toilet Paper
___	Hand Soap
___	Lotion
___	Hose
___	Wash Tub
___	Lab Markers
___	Scrub Brush
___	Aluminum Foil
___	Packing Tape
___	Chain of Custody Tape
___	Trash Bags

PREPARATORY INSPECTION CHECKLIST (continued)

REQUIRED EQUIPMENT

Description

Sampling Rental Equipment

___ Rental Vehicle

Owned Equipment

___ FID Meter

___ First Aid Kit, 1 each

___ Camera, 35 mm

___ Sampling Equipment

___ Fire Extinguisher

___ Chain of Custody Forms

___ Federal Express Forms

DAILY INSPECTION CHECKLIST

Date: _____ Report No.: _____

Contract No.: _____

Name and Location of Project: _____

WEATHER: (Clear) (P. Cloudy) Temperature: _____

Rainfall _____ Inches Min. _____ Max. _____

Contractor/Subcontractors	Area of Responsibility
a.	
b.	
c.	
d.	
e.	
f.	
g.	

1. WORK PERFORMED TODAY: (Indicate time, location, and description of work performed. Refer to work performed by prime and/or subcontractors by letter in Table above.

DAILY INSPECTION CHECKLIST (cont'd)

2. PREPARATORY INSPECTION FOR NEXT ITEM OR WORK: Materials/shop drawings approved, required control testing arranged, all preliminary work has been accomplished as per plans and specifications.

---

3. INITIAL INSPECTION: Address quality of workmanship, assure control testing and materials being used in all work are in compliance with plans and specifications.

---

4. FOLLOW-UP INSPECTIONS: Assure control testing performed as required and all work performed continues to be in compliance with plans and specifications.

DAILY INSPECTION CHECKLIST (cont'd)

5. VERBAL INSTRUCTIONS RECEIVED: List any instructions given by Government personnel on construction deficiencies, retesting required, etc., with action to be taken.

---

6. REMARKS: Cover any conflicts in plans, specifications, or instructions or any delay to the job attributable to weather conditions.

---

7. RESULTS OF SAFETY INSPECTION: Note safety violations and corrective action taken. Indicate phase of work where violations occurred.

DAILY INSPECTION CHECKLIST (cont'd)

8. UPCOMING WORK: Indicate next major phase of work anticipated and approximate date of Preparatory Inspection meeting to cover this work

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9. EQUIPMENT DATA: Indicate items of construction equipment, other than hand tools, at the job site and whether or not used.

---

10. CONTRACTOR'S VERIFICATION: The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications except as noted above.

Signature: _____

Title: _____

WASTE TRANSPORTATION CHECKLIST

Contract No.: _____ Date: _____

Specification Paragraph or Section: _____

___ A route selection report has been submitted and approved by AFCEE.

Prior to leaving the site, a load inspection of all shipments will be conducted by the site superintendent. A load inspection report will be submitted to the Contracting Officer's Technical Representative, which will verify and provide written documentation of the following:

___ A complete and accurate manifest

___ Labeling is in accordance with DOT regulations specified by 49 CFR

___ When required, a Bill of Lading is traceable to the manifest

___ A statement is available indicating that the driver is physically fit to perform his duties

___ The driver has written documentation in his possession of completion of any required safety training and health monitoring

___ The driver's log book is current

___ A certificate of insurance is in force

_____
Site Manager

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE