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***Prefinal Inspection Report for  
the Operable Unit 3-13 Tank  
Farm Interim Action, Phase II***

**Idaho  
Completion  
Project**

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Bechtel BWXT Idaho, LLC

*September 2004*

ICP/EXT-04-00602  
Revision 0  
Project Nos. 23614 and 20978

# **Prefinal Inspection Report for the Operable Unit 3-13 Tank Farm Interim Action, Phase II**

**September 2004**

**Idaho Completion Project  
Idaho Falls, Idaho 83415**

**Prepared for the  
U.S. Department of Energy  
Assistant Secretary for Environmental Management  
Under DOE Idaho Operations Office  
Contract DE-AC07-99ID13727**

## **ABSTRACT**

In accordance with the Federal Facility Agreement and Consent Order, the U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (EPA), Idaho Department of Environmental Quality (DEQ), and subcontracted personnel participated in a prefinal inspection of the Operable Unit 3-13 Tank Farm Interim Action Project. The inspection was conducted on August 18, 2004. This report provides responses from the DOE Idaho Operations Office to comments received from the EPA and DEQ. Appendix A of this report contains the checklist that was provided to the EPA and DEQ for use during the prefinal inspection. Appendix B contains the full text of the EPA and DEQ comments resulting from the prefinal inspection. Appendix C contains modified design drawings showing the location of additional asphalt curbing added in response to EPA and DEQ prefinal inspection comments, and Appendix D provides applicable photos.



# CONTENTS

ABSTRACT .....	iii
ACRONYMS .....	vii
1. PURPOSE .....	1
2. APPLICABILITY AND SCOPE.....	1
3. DESCRIPTION OF THE PREFINAL INSPECTION PROCESS .....	1
4. PREFINAL INSPECTION CHECKLIST .....	2
5. AGENCY COMMENTS AND ACTIONS REQUIRED .....	2
6. DATE OF FINAL INSPECTION.....	3
7. OPERATION AND MAINTENANCE PLAN UPDATE .....	4
8. REFERENCES .....	4
Appendix A—Prefinal Inspection Checklist for the Tank Farm Interim Action, Phase II.....	5
Appendix B—Agency-Written Comments Following the INEEL Tank Farm Interim Action Prefinal Inspection .....	9
Appendix C—Modified Design Drawings .....	13
Appendix D—Photos.....	17



## ACRONYMS

BBWI	Bechtel BWXT Idaho, LLC
CMP	corrugated metal pipe
DEQ	Idaho Department of Environmental Quality
DOE	U.S. Department of Energy
DOE Idaho	U.S. Department of Energy Idaho Operations Office
EPA	U.S. Environmental Protection Agency
FFA/CO	Federal Facility Agreement and Consent Order
HDPE	high-density polyethylene
IWTS	Integrated Waste Tracking System
OU	Operable Unit
RD/RA	remedial design/remedial action
SPC	Specification
SSA	Staging and Storage Annex
TFIA	Tank Farm Interim Action



# **Prefinal Inspection Report for the Operable Unit 3-13 Tank Farm Interim Action, Phase II**

## **1. PURPOSE**

This report documents the results of the prefinal inspection for the Operable Unit (OU) 3-13 Tank Farm Interim Action (TFIA) conducted in accordance with the *Federal Facility Agreement and Consent Order for the Idaho National Engineering and Environmental Laboratory* (FFA/CO) (DOE-ID 1991).

## **2. APPLICABILITY AND SCOPE**

This prefinal inspection report applies to the OU 3-13 Tank Farm Interim Action Project, Phase II (i.e., interim action construction activities completed within the tank farm area), as defined in the *Remedial Design/Remedial Action Work Plan for Group 1, Tank Farm Interim Action* (DOE-ID 2003). The scope encompasses the review elements established on the prefinal inspection checklist (Appendix A) and applicable design drawings utilized by the U.S. Environmental Protection Agency (EPA) and the Idaho Department of Environmental Quality (DEQ) (collectively referred to hereinafter as the Agencies) during the inspection.

## **3. DESCRIPTION OF THE PREFINAL INSPECTION PROCESS**

The prefinal inspection of the OU 3-13 Tank Farm Interim Action Project was conducted on August 18, 2004. The following Agency representatives participated in the prefinal inspection:

Nick Ceto, EPA

Mark Clough, Idaho DEQ

The following Bechtel BWXT Idaho, LLC (BBWI) and U.S. Department of Energy Idaho Operations Office (DOE Idaho) personnel participated in the prefinal inspection:

Rachel Hall, DOE Idaho

Kermit Bunde, DOE Idaho

Steve Butterworth, SP-5 Project Lead

Jestin Hurst, Project Engineer

Dean Shanklin, TFIA Remedial Design/Remedial Action (RD/RA) Work Plan Author

Larry Ropp, Construction Subcontracts Coordinator

James (Mitch) White, Tank Farm Facility Owner

Lee Tuott, Regulatory Integration

During the prefinal inspection, ongoing discussion was held between the Agency representatives and DOE-Idaho/BBWI to provide early identification of issues, obtain clarification of Agency comments, review project design drawings, compare those drawings to the final construction installation, and coordinate additional data needs, if any. As requested by the Agencies, photographs of the project were taken during the prefinal inspection and provided to the Agencies on a CD, along with a checklist that referenced the photographs.

On August 18, 2004, the Idaho DEQ provided BBWI with written comments resulting from the prefinal inspection (see Appendix B). In response, DOE-Idaho/BBWI provided verbal responses and resolutions to the Agency comments during an Agency conference call on August 26, 2004 (see Section 5 of this report). These comment resolutions were discussed and agreed upon during the Agency conference call.

#### 4. PREFINAL INSPECTION CHECKLIST

The checklist used during the OU 3-13 Tank Farm Interim Action Project prefinal inspection is included as Appendix A. The draft checklist was submitted to the Agencies via e-mail on August 12, 2004, and incorporates Agency comments received on August 16, 2004. The following inspection items, identified by the Agencies, were included in the prefinal checklist:

- “As-built drawings with survey data (Spec. Ref. 01051-1 lines 9-16; Spec. Ref. 02430-2 lines 35-36).”
- “Asphalt adherence to existing structures (Spec. Ref. 02741-4 lines 30-36).”
- “In addition to checking that contaminated excess soils are properly staged at the SSA (Checklist Item 4a), ensure that information pertaining to the waste characteristics and waste generation and storage location is maintained in the IWTS database (RD/RA Work Plan Rev. 1, Appendix L Waste Management Plan, Chapter 12).”

Agency comments refer to specification reference numbers and lines from Specification (SPC)-472, “Construction Specifications, OU 3-13 Group 1 Tank Farm Interim Action, Phase 2.”

#### 5. AGENCY COMMENTS AND ACTIONS REQUIRED

Written comments received from the Agencies following the prefinal inspection are contained in Appendix B. Numbered comments are reproduced below, followed by a description of the actions taken by BBWI and a completion date in response to each comment. There are no unresolved items from the prefinal inspection.

Agency Comment #1	<i>“Pipe boots need to be installed, at all drain lines, where the lines interface with the asphalt to prevent leakage at the joint.”</i>
Action Taken	As recommended by the project’s design engineer and with Agency concurrence during the Agency conference call (dated August 26, 2004), an adhesive sealant (DAP® Blacktop Asphalt Filler and Sealant) was applied between each corrugated metal pipe (CMP) and the underlying asphalt (refer to Figures C-1 and C-2 in Appendix C for CMP locations) to create a water-tight seal (see photo, Figure D-1, Appendix D).
Completion Date	September 9, 2004.
Agency Comment #2	<i>“Some drain lines are not yet placed in the final position; thus, these lines do not have a continuous downgradient invert flow line.”</i>

Action Taken All high-density polyethylene (HDPE) drain piping have been placed in the final positions as per design drawing (DWG 624401). Excavations beneath drain piping at Zones A-1 and A-5 (DWG 624402) and at Zone D-6 (DWG 624403) have been reworked to provide a continuous downgradient flow pathway for surface water runoff. Refer to drawings in Appendix C for zone locations (also see photo, Figure D-2, Appendix D).

Completion Date September 9, 2004.

Agency Comment #3 *“Not all drain lines have ballast placed at 30 foot intervals.”*

Action Taken Additional ballast tubes were fabricated and placed along each HDPE drainpipe at 30-ft intervals and within 10 ft of each discharge point. HDPE drainpipe has been permanently marked at 30-ft intervals to assist with adequate ballast placement and as an aid to properly replace ballasts if temporary removal is required to accommodate ongoing construction activities (see photo, Figure D-3, Appendix D).

Completion Date September 9, 2004.

Agency Comment #4 *“As-built drawings are not yet completed and submitted.”*

Action Taken As-built drawings are currently being finalized and will be included in the draft Remedial Action Report scheduled for submittal to the Agencies by May 31, 2005 (see DOE-ID 2003, Appendix H-2).

Completion Date Completion will be addressed in the Remedial Action Report.

Agency Comment #5 *“Survey data is not yet completed and submitted.”*

Action Taken As per the Vendor Data Status Report for Tank Farm Interim Action Phase 2, as-built survey data were transferred to the vendor data coordinator on August 10, 2004 and recorded as “received and completed” on August 11, 2004, satisfying scheduled item Number 2 (SPC-472). This date will be used to generate the as-built drawings discussed in the previous comment.

Agency Comment #6 *“Curbing at various locations, at drain pipe inlets in particular, is not adequate to prevent run-off from the asphalt. This comment also applies to the CPP-28, -79 areas. The current raised edge/curb of the asphalt, in several locations, does not take into account the effect of snow and ice accumulation and spring snow melt/rain events. DEQ and EPA consider this issue to be critical to the performance and intended function of the asphalt cover.”*

Completion Date August 11, 2004

Action Taken Asphalt was increased/heightened at Zones D-2 through D-7 (DWG 624402) and A-1 through A-6 (DWG 624402), and at Zones D-4 through D-7 (DWG 624403). Refer to modified drawings, Figures C-1 and C-2, Appendix C.

Completion Date September 1, 2004.

## 6. DATE OF FINAL INSPECTION

The final inspection was conducted on September 22, 2004, to review the open items that were previously identified during the prefinal inspection. The inspection was performed by Agency

representatives Mark Clough (DEQ) and Dennis Faulk (EPA). Discussions held between Agency representatives and DOE Idaho/BBWI personnel in attendance were summarized as follows:

1. All items identified during the prefinal inspection have been satisfactorily closed.
2. The following observations were made during the final inspection and the closure of these observations will be addressed in the forthcoming Remedial Action Report:
  - a. The Operation and Maintenance (O&M) Plan will need to address the inspection and maintenance of the pipe connections to the asphalt and the pipe joints sealed with RTV (silicone rubber).
  - b. Several OU 3-14 probeholes penetrated the asphalt since it was installed. Pictures will be sent to the Agencies illustrating the repair/sealing of these probes to the asphalt and discussed in the Remedial Action Report.
  - c. The drain from the top of CPP-79 will be directed toward the west, in the direction of the surface runoff. Pictures will be sent to the Agencies illustrating this alignment and then discussed in the Remedial Action Report.
3. The remedial action meets the RD/RA requirements and no further agency inspection is required.

As discussed, these observations will be addressed as soon as possible and the Remedial Action Report will be submitted in accordance with the schedule in the TFIA RD/RA Work Plan (DOE-ID 2003).

## **7. OPERATION AND MAINTENANCE PLAN UPDATE**

The *Operation and Maintenance Plan for INTEC Operable Unit 3-13, Group 1, Tank Farm Interim Action, Phases I and II* (DOE-ID 2004) will be updated and issued with the draft Remedial Action Report to incorporate the requirements to maintain the newly installed asphalt surfaces and drainage piping from the TFIA Phase II construction activities. This O&M Plan will also be updated to incorporate wording clarifications and improvements that were identified during implementation of O&M during Phase I.

## **8. REFERENCES**

DOE-ID, 1991, *Federal Facility Agreement and Consent Order for the Idaho National Engineering Laboratory*, Administrative Docket No. 1088-06-29-120, U.S. Department of Energy Idaho Operations Office; U.S. Environmental Protection Agency, Region 10; Idaho Department of Health and Welfare, December 4, 1991.

DOE-ID, 2003, *Remedial Design/Remedial Action Work Plan for Group 1, Tank Farm Interim Action*, DOE/ID-10772, Rev. 1, U.S. Department of Energy Idaho Operations Office, September 2003.

DOE-ID, 2004, *Operation and Maintenance Plan for INTEC Operable Unit 3-13, Group 1, Tank Farm Interim Action, Phases I and II*, DOE/ID-10771, Rev. 2, U.S. Department of Energy Idaho Operations Office, September 2004.

SPC-472, 2003, "Construction Specifications, OU 3-13 Group 1 Tank Farm Interim Action, Phase 2," Rev. 1, Idaho Completion Project, April 2004.

## **Appendix A**

### **Prefinal Inspection Checklist for the Tank Farm Interim Action, Phase II**



## Appendix A

### Prefinal Inspection Checklist for the Tank Farm Interim Action, Phase II (RD/RA Work Plan for Group 1 Tank Farm Interim Action)

Note: FCN-1 depicts the revision to the paved areas as approved by the Agencies in a conference call on 7/1/04.

Item	Item Description	Complete	Incomplete	Comments/Corrective Actions	Initials	Initials	Initials
1	Installation of Asphalt						
a	Tack coat applied to surfaces of previously constructed asphalt, steel, or Portland cement concrete and surfaces abutting or projecting into asphalt pavement for area CPP-31. DWG 624404.						
b	Covering area CPP-31 DWG 624402 Zone and FCN-1.						
c	Curb/edge installed around Area CPP-31. DWG 624402 and FCN-1.						
d	Tack coat applied to surfaces of previously constructed asphalt, steel, or Portland cement concrete and surfaces abutting or projecting into asphalt pavement for combined areas CPP-28, -79. DWG 624404.						
e	Covering combined Areas CPP-28, -79. DWG 624403.						
f	Curb/edge installed on West, NW, North, NE and East sides of combined Areas CPP-28, -79. DWG 624403.						
2	Installation of Pavement Sealing						
a	Seal coat installed on asphalt curb/edge and cover at Area CPP-31.						
b	Seal coat installed on asphalt curb/edge and cover at combined Areas CPP-28, -79.						
3	Culverts/HDPE Drain Pipe						
a	CMP installed at NW corner of combined areas CPP-28, -79. DWG 624403. Zone D-6.						
b	DWG 624403 CMP installed at NW corner (Zone D-8), west side of north edge (D-6), east side of north edge (D-3), SE corner (A-1), and south end of Area CPP-31 (A-5).						
c	HDPE drain pipe extends from CMP at NW corner of CPP-31 to drainage ditch near Beech St. DWG 624401. Zone D-7.						

Item	Item Description	Complete	Incomplete	Comments/Corrective Actions	Initials	Initials	Initials
d	HDPE drain pipe extends from two CMPs at north side of CPP-31; combine with wye connection to drainage ditch on NE corner of tank farm area. DWG 624401. Zones C-5 & D-2.						
e	HDPE drain pipe extends from CMP at SE corner of area CPP-31 to 5 LF inside exiting CMP culvert in SE corner of tank farm area. DWG 624401, Zone B-4.						
f	HDPE drain pipe extends from CMP at south edge of area CPP-31 to existing trench in SW corner of tank farm area. DWG 624401, Zone A-7.						
g	HDPE drain pipe extends from CMP at NW corner of combined Areas CPP-28, -79, to wye connection on south discharging HDPE from south edge of area CPP-31. DWG 624401, Zone B-6.						
h	Dandy pipe sock installed at each HDPE discharge location (4). DWG 624401, Zone B-4.						
i	Pipe ballasts installed on HDPE drain pipe at intervals of 30 lineal ft and within 10 lineal ft of each discharge point. Spec Ref. 02430-3 lines 9-10.						
4	Earthworks						
a	Contaminated excess soils (waste) are properly staged at the SSA for final disposition.						
b	Information pertaining to the waste characteristics and waste generation and storage location is maintained in the IWTS database (RD/RA Work Plan Rev. 1, Appendix L, Waste Management Plan, Chapter 12).						
5	Post Construction						
a	As-built drawing completed.						
b	Survey data received from subcontractor for layout and control of construction work.						

Agency Representative:

Printed Name	Signature	Agency	Date

## **Appendix B**

### **Agency-Written Comments Following the INEEL Tank Farm Interim Action Prefinal Inspection**



## Appendix B

### Agency-Written Comments Following the INEEL Tank Farm Interim Action Prefinal Inspection

From: MARK CLOUGH [mailto:mclough@deq.state.id.us]  
Sent: Wednesday, August 18, 2004 11:22 PM  
To: DARYL KOCH; MARGARETHA ENGLISH; ceto.nicholas@epamail.epa.gov; faulk.dennis@epamail.epa.gov; ivy.kathy@epamail.epa.gov; Hain, Kathleen E; Hall, Rachel C  
Subject: TFIA Pre-final

The INEEL Tank Farm Interim Action Pre-final inspection was performed on 8-18-04 by Nick Ceto (EPA), Mark Clough (DEQ), and Rachel Hall (DOE). The following items need to be placed on a punch list and reviewed during the final inspection. The IWTS database portion of the prefinal has not yet been completed, and is scheduled to be performed on 8-19-04.

Nick, please respond to the e-mail with your concurrence if you agree with the write-up.

1. Pipe boots need to be installed, at all drain lines, where the lines interface with the asphalt to prevent leakage at the joint.
2. Some drain lines are not yet placed in the final position, thus these lines do not have a continuous downgradient invert flow line.
3. Not all drain lines have ballast placed at 30 foot intervals.
4. As-built drawings are not yet completed and submitted.
5. Survey data is not yet completed and submitted.
6. Curbing at various locations, at drain pipe inlets in particular, is not adequate to prevent run-off from the asphalt. This comment also applies to the CPP-28, -79 area. The current raised edge/curb of the asphalt, in several locations, does not take into account the effect of snow and ice accumulation and spring snow melt/rain events. DEQ and EPA consider this issue to be critical to the performance and intended function of the asphalt cover.

Mark Clough, P.E.  
Idaho DEQ  
Office: (208) 373-0528  
Cell: (208) 861-3098



**Appendix C**  
**Modified Design Drawings**



# Appendix C

## Modified Design Drawings

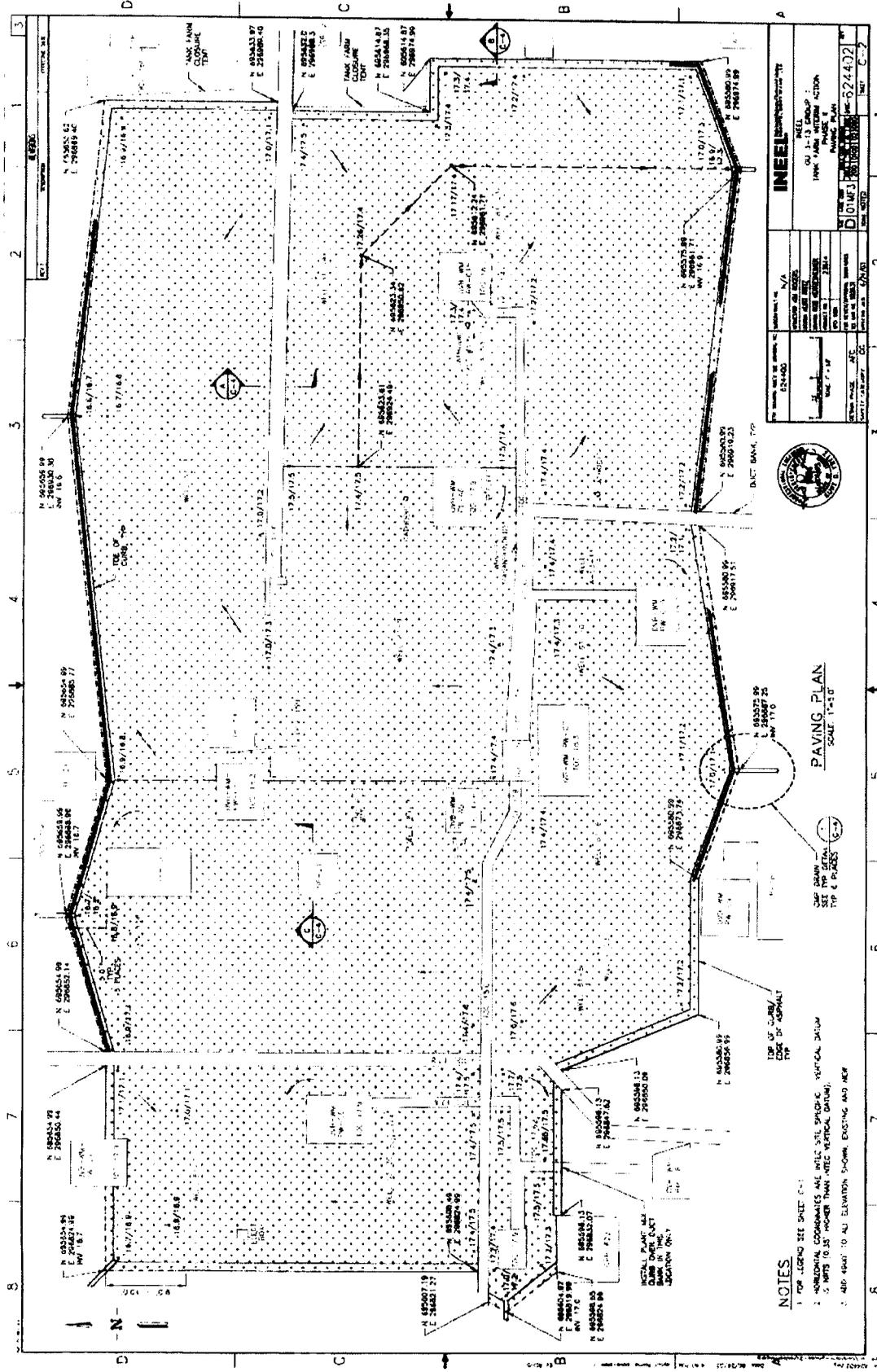


Figure C-1. Design drawing 624402 showing location of additional asphalt curbing (red line).



## **Appendix D**

### **Photos**



## Appendix D

### Photos

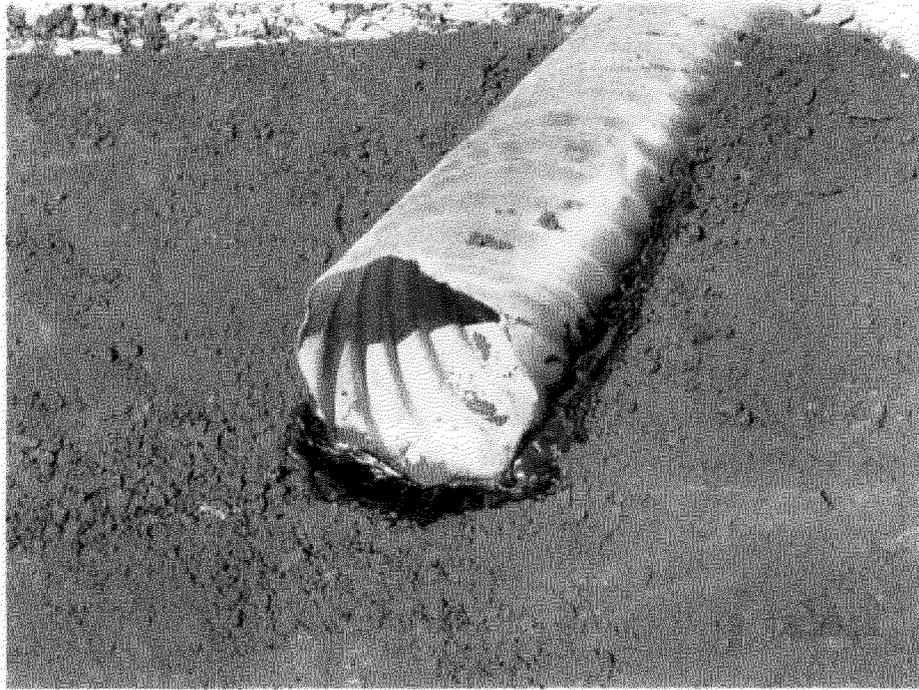


Figure D-1. Application of blacktop asphalt filler and sealant between corrugated metal pipe and underlying asphalt.

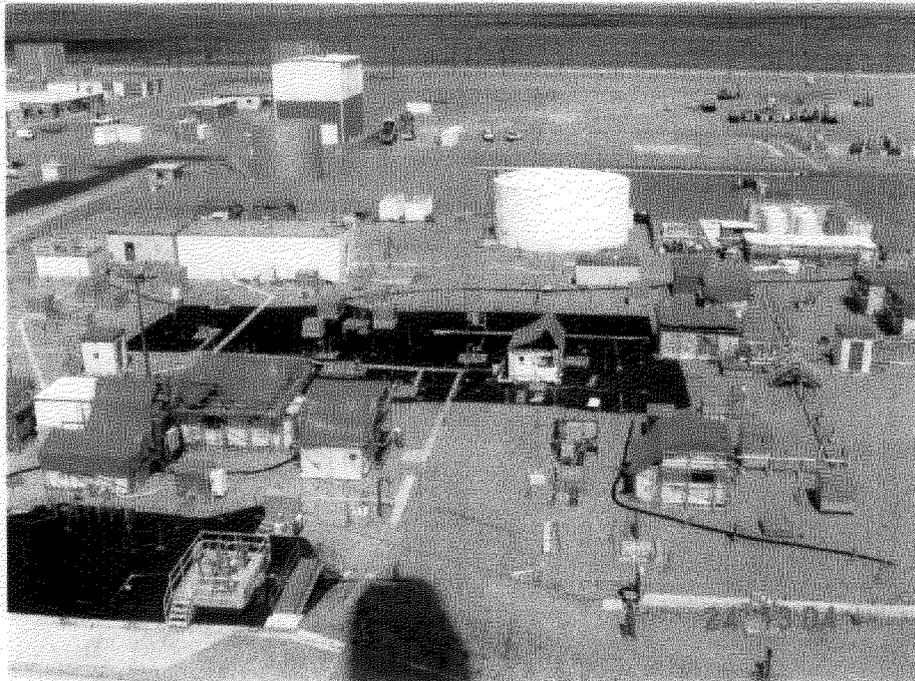


Figure D-2. Placement of drain lines in final positions.

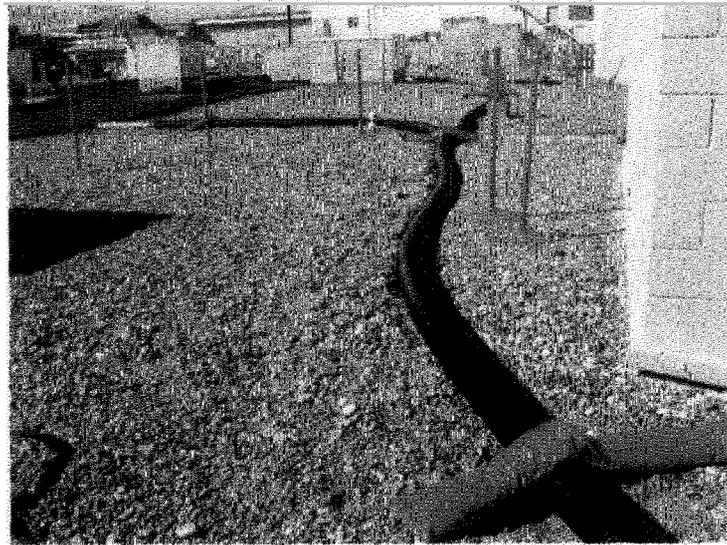


Figure D-3. Ballast tubes placed at 30-ft intervals over high-density polyethylene piping