



U.S. Department of Energy
Office of River Protection

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

08-WTP-139

JUL 23 2008

Mr. L. J. Simmons, Project Manager
Bechtel National, Inc.
2435 Stevens Center Place
Richland, Washington 99354

Dear Mr. Simmons:

CONTRACT NO. DE-AC27-01RV14136 – SURVEILLANCE REPORT S-08-WCD-RPPWTP-002 – THE WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) CONSTRUCTION OVERSIGHT AND ASSURANCE DIVISION (WCD) CALENDAR YEAR 2008 SECOND QUARTER CONSTRUCTION SURVEILLANCE SUMMARY REPORT

This letter transmits the results of the U.S. Department of Energy, Office of River Protection (ORP) WCD review of Bechtel National, Inc.'s (BNI) construction performance of the WTP for the period April 1, 2008 through June 30, 2008. A summary of the surveillance activities is documented in the attached report S-08-WCD-RPPWTP-002.

During this surveillance period, six findings and one observation were identified. Four of the findings were characterized as non-cited and do not require written responses. Two of the findings require written responses and include: 1) Electrical equipment associated with the Chiller Compressor air dryers did not comply with NEC electrical working clearance requirements; and 2) three examples of not following procedures regarding the control of bulk piping materials. Section III of the attached report list these findings and contain instructions for responding.

Overall, construction activities observed during this inspection period were performed well with few performance issues identified.

This letter is not considered to constitute a change to the Contract. In the event BNI disagrees with this interpretation, it must immediately notify the Contracting Officer orally, and otherwise comply with the requirements of the Contract clause entitled "52.243-7 Notification of Changes."

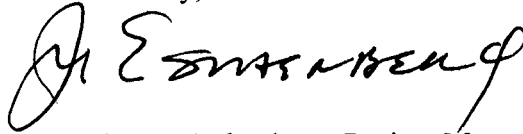
Mr. L. J. Simmons
08-WTP-139

-2-

JUL 23 2008

If you have any questions, please contact me, or your staff may contact Ken Wade, Director, WTP Construction Oversight and Assurance Division (509) 373-8637.

Sincerely,

A handwritten signature in black ink, appearing to read "John R. Eschenberg". The signature is written in a cursive style with a large initial "J" and "E".

John R. Eschenberg, Project Manager
Waste Treatment and Immobilization Plant Project

WTP:JWM

Attachment

cc w/attach:
D. Jantosik, BNI
D. Kammenzind, BNI
G. M. McCann, PAC
BNI Correspondence

U.S. DEPARTMENT OF ENERGY
Office of River Protection

INSPECTION: WCD CY 2008 Second Quarter Construction Surveillance Summary
Report

REPORT NO.: S-08-WCD-RPPWTP-002

FACILITY: Bechtel National, Inc. (BNI)

LOCATION: 2435 Stevens Center Place
Richland, Washington 99354

DATES: April 1 through June 30, 2008

INSPECTORS: J. Barger, Acceptance Inspector
*E. Enloe, Site Inspector
*M. Evarts, Site Inspector
*W. Meloy, Site Inspector
*R. Taylor, Site Inspector
*D. Wallace, Site Inspector

*Subcontractor to PAC, Supporting ORP

APPROVED BY: K. Wade, Division Director
WTP Construction Oversight and Assurance Division (WCD)

WCD CY 2008 SECOND QUARTER CONSTRUCTION SURVEILLANCE SUMMARY REPORT

I. Introduction

During the period April 1, 2008, through June 30, 2008, the U.S. Department of Energy (DOE), Office of River Protection (ORP), Waste Treatment and Immobilization Plant (WTP) Project Construction Oversight and Assurance Division (WCD) conducted construction inspections of important-to-safety (ITS) and non-ITS (Balance-of-Plant) activities during WTP construction. These inspections were documented in surveillance reports and maintained electronically. There were 149 inspections of various construction activities, summarized in Sections II, III, and IV below.

In Sections II and III, findings were identified during performance of some construction oversight surveillances. Findings are characterized in accordance with ORP M 220.1, *Integrated Assessment Program*. [Note: ESQ-OA-IP-01, *Integrated Assessment Program*, superseded ORP M 220.1 on May 19, 2008.] A finding is defined as an individual item not meeting a committed requirement (e.g., contract, regulation, safety basis, quality assurance program, authorization basis document, procedure, and Standards/Requirements Identification Documents). ESQ-OA-IP-01 provides an option to characterize findings as either cited or non-cited findings. Cited findings require written responses whereas non-cited findings do not. At ORP management's discretion, a finding can be characterized as non-cited, provided it was not willful, programmatic, or a repeat of a previous finding; has minor safety or cost impact; and is being tracked by Bechtel National, Inc.'s (BNI) corrective action program. Section II of this report includes discussions of non-cited findings. Section III of this report includes discussions of cited findings and provides response instructions.

Section IV of this report contained a listing of new follow-up items (findings, non-cited findings, and observations) identified during this inspection period. There is also a list of follow-up items closed during this period. There were eight follow-up items closed during this period (three findings and five non-cited findings).

Section V contains a summary listing of the 149 surveillance reports written this inspection period. (Note: Although 150 surveillance report numbers were issued [002-01 through 002-150], report number 002-30 was not used to document an inspection).

II. Observations and Conclusion

- On numerous occasions, BNI was observed performing adequate fit-up and welding using the correct materials, filler metal, and qualified welders and weld examiners in accordance with applicable Contract and engineering requirements. (Surveillance Reports 002-02, 002-03, 002-04, 002-06, 002-10, 002-12, 002-13, 002-14, 002-15, 002-19, 002-21, 002-22, 002-23, 002-25, 002-26, 002-27, 002-28, 002-31, 002-32, 002-33, 002-34, 002-36, 002-38, 002-39, 002-40, 002-41, 002-42, 002-48, 002-49, 002-50, 002-51, 002-52, 002-55, 002-56, 002-57, 002-58, 002-59, 002-60, 002-61, 002-62, 002-64, 002-65, 002-67, 002-68, 002-70, 002-71, 002-72, 002-73, 002-74, 002-75, 002-78, 002-79, 002-80, 002-82, 002-84, 002-86,

002-87, 002-92, 002-93, 002-95, 002-97, 002-101, 002-103, 002-104, 002-105, 002-106, 002-107, 002-110, 002-115, 002-116, 002-120, 002-124, 002-126, 002-129, 002-131, 002-132, 002-134, 002-138, 002-139, 002-140, 002-142, 002-143, 002-145, 002-146, 002-148, 002-149, and 002-150)

- BNI had installed earthen backfill, anode wires CPE-AW-50005N and CPE-AW-50005L, removed oversize material, and compacted loose soil to 95% of required soil densities in accordance with the appropriate design and program requirements. During this activity, BNI had installed the incorrect width of marker tape and issued 24590-WTP-NCR-CON-08-0062 to document a miss-installation (used 4" wide marker tape when 6" was required). (Surveillance Report 002-05)
- On a number of occasions, BNI was observed installing temporary electrical power at various locations throughout the WTP site. BNI had hired an electrical code inspector to inspect completed temporary power installations before energization and, as a result, substantial improvements in complying with the National Electrical Code (NEC) have been noted. Eight surveillances identified installations that complied with NEC requirements. Two surveillances identified three NEC electrical code violations. Below is a summary of two non-cited findings identified during this inspection period. The third NEC violation was characterized as a finding and is discussed in Section III of this report. (Surveillance Reports without issues include: 002-07, 002-24, 002-54, 002-85, 002-88, 002-91, 002-109, and 002-112)
 - BNI's process did not ensure all deficiencies associated with Lighting Panelboard LTE-PNL-82001A had been identified and been either corrected or considered before concluding electrical equipment was safe to energize. BNI not establishing an adequate method of controlling/inspecting this electrical equipment at the Chiller Compressor Plant, to ensure compliance with design and codes and ensure it was safe to energize, is considered a finding (against the Contractor's Quality Assurance Manual [QAM] Policy Q-05.1, Section 3.1.1 regarding the requirement to have and use documented instructions to perform activities affecting quality). A Panelboard rating did not agree with design requirements and is tracked as **Non-cited Finding S-08-WCD-RPPWTP-002-N07**. An NEC grounding deficiency was identified and corrected immediately, without safety implications, and BNI issued NEC Bulletin (Volume 1, Issue 10) to address this code requirement; therefore, this issue will be characterized as **Non-cited Finding S-08-WCD-RPPWTP-002-N06** for trending purposes and was both opened and closed in this surveillance report. (Surveillance Report 002-122)
- Intermech, Inc. finished welding a piece of ductwork located in the High-Level Waste (HLW) Facility. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. Intermech used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. Intermech's examination personnel had been trained and certified for the examination method used, and examination records were adequate. (Surveillance Report 002-09)

- Procurement of the WTP Cathodic Protection rectifiers did not meet the Type National Electrical Manufacturers Association (NEMA) 4 rated rectifier assembly requirements of 24590-WTP-3PS-EQ00-T0002, *Engineering Specification for Cathodic Protection*. A non-cited finding was identified for BNI not ensuring the procurement of these rectifiers met requirements (**Non-cited Finding S-08-WCD-RPPWTP-002-N01**). (Surveillance Report 002-11)
- BNI subcontractors George A. Grant, Inc./Drywall Interiors, Inc. completed a portion of the metal framing for gypsum wallboard assemblies located in the Analytical Laboratory (LAB). The configuration and orientation of the items installed conformed to the drawings. Approved materials were used and installation personnel were experienced with the installation methods employed. Inspection personnel were knowledgeable and inspection records were adequate. (Surveillance Report 002-17)
- The ring beam for vessel HLP-VSL-00027B (HLW Lag Storage and Feed Blending Process System) was in the process of being prepared for welding for installation in Planning Area 4E of the Pretreatment (PT) Facility when unacceptable porosity was discovered in several vendor welds. BNI completed removal of the unacceptable porosity reported in 24590-WTP-NCR-CON-08-0038. BNI's examination personnel had been trained and certified for the examination methods used, and inspection records were adequate. (Surveillance Report 002-20)
- BNI was batching, placing, consolidating, and testing concrete for placements at the PT Facility east side hot cell wall 73, PCC2828, PCC2829, PCC2830 and PCC2832; HLW 1133, 1125, and 1116A;, and Low-Activity Waste (LAW)-143A in accordance with engineering specifications and the Safety Requirements Document (SRD). BNI had installed reinforcement, embeds, electrical grounding, and concrete work, in an acceptable manner in accordance with design requirements. (Surveillance Reports 002-29, 002-76, 002-83, 002-108, 002-130, and 002-144)
- CBI Services, Inc. completed welding for a portion of liner plate supports located in the LAW Building Pour Caves. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. CBI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. CBI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate. (Surveillance Report 002-35)
- Intermech successfully tested a portion of the C2, C3, and C5 exhaust stack for the LAB. Testing was performed in accordance with the applicable specifications and written procedures. Test equipment was configured properly, and measurement and test equipment (M&TE) was properly calibrated. Testing was performed in accordance with approved procedures and provided verification that the stack section conformed to the leakage criteria specified in contract documents. Intermech's testing personnel had been trained and certified for the test method used, and test records were adequate. (Surveillance Reports 002-44, 002-45, and 002-133)

- BNI completed six aboveground piping inspection records (APIR) in accordance with procedure 24590-WTP-WTP-CON-3503, *Aboveground Piping Installation*. (Surveillance Report 002-46)
- BNI acceptably completed 8,424 Field Weld Check List (FWCL) records in accordance with contract requirements and procedure 24590-WTP-MN-CON-01-001-08-01, *Welding Documentation (WD-3)*. The ORP Site Inspectors completed their review of all the backlogged Balance of Facilities (BOF) and LAB FWCL records stored in Project Data Control (PDC). (Surveillance Reports 002-47, 002-94, and 002-137)
- BNI successfully tested selected Fire Protection Water Storage & Distribution System piping spools located at the BOF. BNI's installation program adequately addressed procedural and code requirements including test method and acceptance criteria. Test medium was acceptable; test gauges were properly calibrated; test pressures were maintained for the required time interval; potential leak sources were examined in accordance with code requirements; and items tested met the specified acceptance criteria. BNI testing personnel had been trained for the test method used, and inspection records were adequate. (Surveillance Report 002-53)
- BNI's ultrasonic test (UT) procedure adequately addressed the 1-1/2" requirement for examining longitudinal welds when these welds intersected a circumferential weld. Although, Advanced Inspection Technologies (AIT) procedure did not adequately address this 1-1/2" requirement, BNI provided a copy of a letter from the American Society of Mechanical Engineers (ASME) Secretary of the B31.3 committee, dated May 1, 2008, that indicated the intersecting longitudinal welds did not require examination if it was made in accordance with the Material Specifications listed in Table A-1 or Table 326.1. Based on this letter, no concerns were identified. (Surveillance Report 002-63)
- A joint inspection was performed by the ORP electrical site inspector and Bechtel's NEC electrical inspector on the temporary power installed at various Conex storage boxes located at the WTP site. Several deficiencies were identified and were being tracked by BNI's lower tier/special management assessment report, 24590-WTP-MAR-CON-08-0049, *Control of Temporary Electrical Installation*. BNI is also reviewing their process for installing and modifying temporary power to Conex boxes. This process review is being tracked in BNI's corrective action program as CAR #24590-WTP-CRPT-QA-08-209. Because the deficiencies were identified as a joint BNI/DOE inspection effort, findings were not cited. However, BNI actions to address the deficiencies identified on temporary power for the Conex boxes will be tracked as **Observation S-08-WCD-RPPWTP-02-004**. (Surveillance Report 002-66)
- After performing some stack modifications, Intermech successfully retested a portion of the C5 exhaust stack for the LAB. Testing was performed in accordance with the applicable specifications and written procedures. Test equipment was configured properly, and M&TE was properly calibrated. Testing was performed in accordance with approved procedures and provided verification that the stack section conformed to the leakage criteria specified in contract documents. Intermech's testing personnel had been trained and certified for the test method used, and test records were adequate. (Surveillance Report 002-69)

- BNI had performed batching, placing, consolidation, and testing of concrete for the filling of skirt rings for vessels UFP-VSL-00002A and UFP-VSL-00002B in accordance with applicable requirements. (Surveillance Report 002-77)
- Cobra, the subcontractor for installation of roofing materials and factory foam, was installing factory foam metal wall panels and roofing materials at the LAW Facility, North Annex in accordance with applicable requirements. (Surveillance Report 002-81)
- BNI's oversight of NuWeld, Inc., a "quality level" joggle pipe spool penetration fabricator, was adequate. Supplier quality representative reports indicated adequate verification activities were ongoing at this supplier facility and issues raised by the supplier or BNI were being documented and addressed in an acceptable manner. NuWeld, Inc.'s quality program was acceptable to fabricate and assemble these joggle pipe spools; minor weld program issues were identified and being addressed by this supplier.

BNI identified performance issues with BNI Engineering's efforts to address its design drawings problems; a procurement hold was placed on the supplier until BNI Engineering addressed these problems. (Surveillance Report 002-89)

- BNI's oversight of American Fabricators, Inc., a "quality level" embed edge plate fabricator, was adequate. Supplier quality representative reports indicated adequate verification activities were ongoing at this supplier facility and issues raised by the supplier or BNI were being documented and addressed in an acceptable manner. American Fabricators, Inc.'s quality program was acceptable to fabricate and assemble these edge plates. (Surveillance Report 002-90)
- Apollo Sheet Metal, Inc. (ASM) completed welding of selected ductwork located in the LAB. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. ASM used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. ASM's examination personnel had been trained and certified for the examination method used, and inspection records were adequate. (Surveillance Report 002-96)
- With exception of the conflict between the work package's arc flash calculation and the incorrect warning label posted at Substation 7, which was immediately corrected and tracked (for trending) by BNI's corrective action program, BNI's hazardous energy work packages issued to perform annual maintenance at Substations 7 and 8 addressed National Fire Protection Association (NFPA)-70E, *Standard for Electrical Safety in the Workplace*, electrical safety requirements. The work packages also met the requirements of the Project's Integrated Safety Management System (ISMS) by addressing the following ISMS core functions: analyze the hazards, develop and implement hazard control, and provide feedback/improvement. (Surveillance Report 002-98)
- The cementitious fireproofing subcontractor was mixing and installing fireproofing to approved specifications and manufacturer's recommendations at the lower levels of the LAW North Annex. (Surveillance Report 002-99)
- BNI installed six 3/4" rigid conduits in slab 2005, at the HLW Facility's +14' elevation, in accordance with the appropriate design and specifications. (Surveillance Report 002-100)

- A follow-up review of the quality and level of detail of BNI's NEC inspection reports (follow-up review tracked by Consolidated Action Reporting System [CARS] # 9881) was performed to assess improvement in the documentation. Although only marginal improvement was found, based on the lack of specific requirements in this area, BNI management's acceptance of these reports as written, and their belief the inspection reports met the requirements of their temporary electrical installation procedure 24590-WTP-GPP-CON-3311, *Control of Construction Power Electrical Installations*, CARS #9881 is closed. (Surveillance Report 002-102)
- F.D. Thomas field-applied and examined protective coatings for steel items in accordance with specification and procedures. Materials were acceptable; application was in accordance with the approved procedure and specification; subcontractor's quality control performed the requisite checks; personnel training and qualification were appropriate; and inspection records provided evidence that the work had been performed correctly. (Surveillance Report 002-111)
- BNI performed and documented the required testing of A325 bolts (7/8" dia.), and A490 bolts (1 1/8" dia.) high strength bolts using a calibrated tension measuring device in accordance with American Institute of Steel Construction (AISC)-348, *Specification for Structural Joints Using ASTM A325 or A490 Bolts*. (Surveillance Reports 002-113 and 002-114)
- BNI re-inspected and repaired the PT Facility crane rail beams N-08, N-11, and S-08 using the correct filler metal and a qualified welder in accordance with the appropriate design and welding program requirements. BNI's weld inspector was qualified to perform the final acceptance of the welds. (Surveillance Reports 002-117 and 002-125)
- Other than the one deficiency identified by BNI Field Engineering, the cable pulled from BOF Switchgear Building 91 Loadcenter LVE-LC-91003-02A to Building 82 Chill Water Motor Starter CHW-MSTR-00007A was acceptable in accordance with the established design, specifications, and procedures. (Surveillance Report 002-119)
- BNI did not ensure fire alarm circuits installed at the temporary building (T-1, T-15, and T-5) met the requirements of NFPA 72, *National Fire Alarm Code*, and 24590-WTP-3PS-JQ05-T0001, *Fire Alarm and Detection Systems Specification* (incorrect guards installed on fire alarm circuit breakers and breakers not identified red). This issue will be tracked as a **Non-cited Finding S-08-WCD-RPPWTP-002-N05**. (Surveillance Report 002-121)
- BNI had accomplished hydrostatic testing in accordance with established requirements of NFPA 24, *National Fire Protection Association Code*, and 24590-WTP-GPP-CON-3504, *Pressure Testing of Piping, Tubing, and Components*. System testing conformed to established requirements regarding leakage and time at pressure. (Surveillance Report 002-123)
- F.D. Thomas applied and examined special protective coatings for concrete in accordance with applicable procedures and drawings. Materials were acceptable; application was in accordance with the approved procedure (24590-CM-HC2-AFPH-00001-17-01, *Field Preparation and Coating Work Procedures for Waste Treatment Plant Construction Site*) and specification (24590-WTP-3PI-AFPS-00004, *Field Applied Special Protective*

Coatings for Concrete Surfaces); subcontractor's quality control performed the requisite checks and measurements; personnel training and qualification were appropriate; and inspection records provided evidence the work had been performed correctly. (Surveillance Report 002-127)

- BNI installed PT Facility beams in the correct location, installed the correct bolts, and tightened bolts in accordance with the applicable design and installation documents. (Surveillance Report 002-135)
- Three reviewed APIRs had been completed in accordance with 24590-WTP-GPP-CON-3503, *Aboveground Piping Installation*. (Surveillance Report 002-136)

III. Summary of Findings Requiring Written Response

During performance of assessments of BNI's construction activities, conducted from April 1, 2008, through June 30, 2008, WCD identified the following findings requiring written responses:

1. BNI procured and accepted the dryer skids for the Chiller Compressor Plant. However, BNI did not establish an adequate method of controlling/inspecting this electrical equipment to ensure the control panels installed on the dryer skids complied with the working clearance requirements as specified in Section C.7(f) of the Contract (requirement to comply with NEC). This is considered a finding (**S-08-AMWTP-RPPWTP-002-F02**). (Surveillance Report 002-43)
2. During inspection of bulk piping located at the WTP, several issues were identified associated with material identification and verification. Three examples of a finding regarding staff compliance with procedures and engineering specification were identified. They include: (1) BNI had bulk pipe without the American Society for Testing and Materials (ASTM) and engineering specification required markings, such as heat numbers; (2) BNI had bulk "quality level" piping that when cut, the heat numbers were not transferred as required by specification and procedure; and (3) Field Engineering/Quality Control staff were only procedurally required to write the heat number found on the installed piping in final piping installation documentation packages; they were not required to verify heat numbers were traceable back to the certified material test reports (CMTR) as required by engineering specification. These three are examples of a finding against QAM Policy Q-05.1, "Instruction, Procedures, and Drawings," Section 5.1.2.1 regarding the requirement to follow instructions and procedures (**Finding S-08-WCD-RPPWTP-002-F03 a, b, and c** respectively). BNI has written NCR 24590-WTP-NCR-CON-08-0063 and CDR 24590-WTP-CDR-CON-08-0164 to address items 1 and 2 (a and b, respectively). (Surveillance Report 002-08)

The ORP Manager requests BNI to provide a response to the above findings, within 30 days of receipt of this report. The response should include:

- The causes of the findings;

- The corrective actions that have been taken to control or remove any adverse impact from noncompliant conditions (remedial actions) and the results achieved;
- The corrective actions that have been or will be taken to identify the extent of condition, correct the causes(s), and prevent further findings; and
- The date when all corrective actions will be completed, verified, and compliance to applicable requirements achieved.

IV. List of Assessment Items Opened, Closed, and Discussed

Opened

S-08-WCD-RPPWTP-002-N01	Non-cited Finding	Procurement of the WTP Cathodic Protection rectifiers did not meet the Type NEMA 4 rated rectifier assembly requirements of the Engineering Specification for Cathodic Protection. (Surveillance Report 002-11)
S-08-AMWTP-RPPWTP-002-F02	Finding	BOF dryer skids did not comply with the NEC working clearance requirements. (Surveillance Report 002-43)
S-08-WCD-RPPWTP-002-F03 a, b, and c	Finding	(a) Bulk pipe without the ASTM and engineering specification required markings, such as heat numbers; (b) Bulk “Q” piping that when cut, the heat numbers were not transfer as required; and (c) Field Engineering/ Quality Control staff were only procedurally required to write the heat number found on the installed piping in final piping installation documentation packages – they were not required to verify heat numbers were traceable back to the CMTR. (Surveillance Report 002-121)
S-08-WCD-RPPWTP-02-O04	Observation	Electrical deficiencies jointly identified by BNI and ORP on temporary power for BOF Conex boxes. (Surveillance Report 002-66)

Opened

S-08-WCD-RPPWTP-002-N05	Non-cited Finding	BNI did not ensure fire alarm circuits installed at temporary buildings met the requirements of NFPA 72 and the BNI Fire Alarm and Detection Systems Specification (24590-WTP-3PS-JQ05-T0001) (incorrect guards installed on fire alarm circuit breakers and breakers not identified red). (Surveillance Report 002-121)
S-08-WCD-RPPWTP-002-N06	Non-cited Finding	Chiller Compressor Facility grounding deficiency. (Surveillance Report 002-122)
S-08-WCD-RPPWTP-002-N07	Non-cited Finding	Chiller Compressor Facility Panelboard rating did not agree with design requirements. (Surveillance Report 002-122)

Closed

A-05-AMWTP-RPPWTP-004-A01	Assessment Follow-up Item	Follow-up on Contractor actions to address Simulator Building grounding conductor sizing issue for Panelboard DPE. (Surveillance Report S-08-WCD-RPPWTP-001-32)
S-07-WCD-RPPWTP-004-N01	Non-cited Finding	Grounding electrode conductor was not installed from the structure's disconnecting means (main disconnect switch MDS-GDR-018) to the metal structures. (Surveillance Report 002-01)
S-07-WCD-RPPWTP-004-N06	Non-cited Finding	Failure to implement handling and chemical contact requirements for stainless steel and nickel-based alloys. (Surveillance Report 002-37)
S-07-WCD-RPPWTP-004-F07	Finding	Failure to establish an adequate method of controlling electrical equipment with deficiencies. (Surveillance Report 002-18)
S-07-WCD-RPPWTP-004-F09	Finding	Failure to follow procedures regarding checking revised field sketches. (Surveillance Report 002-16)

Closed

S-08-WCD-RPPWTP-001-N01	Non-cited Finding	Failure of BNI to ensure Intermech adequately implemented the NQA-1 requirement regarding qualification of inspectors (receipt and final product). (Surveillance Report 002-118)
S-08-WCD-RPPWTP-001-N09	Non-cited Finding	Two of 28 Project Issues Evaluation Reporting (PIER) reports reviewed did not follow the PIER process. (Surveillance Report 002-128)
S-08-WCD-RPPWTP-002-N06	Non-cited Finding	Chiller Compressor Plant grounding deficiency. (Surveillance Report 002-122)
S-07-WCD-RPPWTP-020-F01 (a-e)	Finding	NEC violations associated with an electrical panel/enclosure located in the Central Pre-mix Boiler Storage Conex. (Surveillance Report 002-147)

V. List of Surveillance Reports Issued During the Assessment Period

<u>Surveillance Report Number</u>	<u>Inspection Subject</u>
S-08-WCD-RPPWTP-002-01	Closure of S-07-WCD-RPPWTP-004-N01
S-08-WCD-RPPWTP-002-02	Weld inspection LAW
S-08-WCD-RPPWTP-002-03	Weld inspection LAW
S-08-WCD-RPPWTP-002-04	Weld inspection LAW
S-08-WCD-RPPWTP-002-05	ITS soil backfill
S-08-WCD-RPPWTP-002-06	Weld inspection LAW
S-08-WCD-RPPWTP-002-07	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-08	Bulk pipe inspection LAW
S-08-WCD-RPPWTP-002-09	Ductwork welding HLW
S-08-WCD-RPPWTP-002-10	Weld inspection LAW
S-08-WCD-RPPWTP-002-11	Cathodic Protection BOF
S-08-WCD-RPPWTP-002-12	Weld inspection LAW
S-08-WCD-RPPWTP-002-13	Weld inspection HLW
S-08-WCD-RPPWTP-002-14	Weld inspection PTF
S-08-WCD-RPPWTP-002-15	Weld inspection PTF
S-08-WCD-RPPWTP-002-16	Closure of S-07-WCD-RPPWTP-004-F09
S-08-WCD-RPPWTP-002-17	Metal framing for gypsum board LAB
S-08-WCD-RPPWTP-002-18	Closure of S-07-WCD-RPPWTP-004-F07
S-08-WCD-RPPWTP-002-19	Weld inspection LAW
S-08-WCD-RPPWTP-002-20	Ring beam weld repair PTF
S-08-WCD-RPPWTP-002-21	Weld inspection BOF
S-08-WCD-RPPWTP-002-22	Weld inspection LAB
S-08-WCD-RPPWTP-002-23	Weld inspection LAW
S-08-WCD-RPPWTP-002-24	Electrical temporary power LAB

S-08-WCD-RPPWTP-002-25	Ductwork welding HLW
S-08-WCD-RPPWTP-002-26	Weld inspection BOF
S-08-WCD-RPPWTP-002-27	Weld inspection LAW
S-08-WCD-RPPWTP-002-28	Weld inspection LAW
S-08-WCD-RPPWTP-002-29	Concrete placement PTF Wall 73
S-08-WCD-RPPWTP-002-30	Canceled
S-08-WCD-RPPWTP-002-31	Weld inspection PTF
S-08-WCD-RPPWTP-002-32	Weld inspection LAW
S-08-WCD-RPPWTP-002-33	Weld inspection LAW
S-08-WCD-RPPWTP-002-34	Weld inspection BOF
S-08-WCD-RPPWTP-002-35	Welding Pour Cave liner supports LAW
S-08-WCD-RPPWTP-002-36	Weld inspection LAW
S-08-WCD-RPPWTP-002-37	Closure of S-07-WCD-RPPWTP-004-N06
S-08-WCD-RPPWTP-002-38	Weld inspection BOF
S-08-WCD-RPPWTP-002-39	Weld inspection LAW
S-08-WCD-RPPWTP-002-40	Weld inspection HLW
S-08-WCD-RPPWTP-002-41	Weld inspection PTF
S-08-WCD-RPPWTP-002-42	Weld inspection LAW
S-08-WCD-RPPWTP-002-43	Electrical Chiller Compressor Bldg Dryers
S-08-WCD-RPPWTP-002-44	Leak test C2 & C3 vent stacks LAB
S-08-WCD-RPPWTP-002-45	Leak test C5 vent stack LAB
S-08-WCD-RPPWTP-002-46	Final APIR reviews
S-08-WCD-RPPWTP-002-47	Final FWCL reviews
S-08-WCD-RPPWTP-002-48	Weld inspection BOF
S-08-WCD-RPPWTP-002-49	Weld inspection LAW
S-08-WCD-RPPWTP-002-50	Weld inspection LAW
S-08-WCD-RPPWTP-002-51	Weld inspection BOF
S-08-WCD-RPPWTP-002-52	Weld inspection LAW
S-08-WCD-RPPWTP-002-53	Pressure testing piping BOF
S-08-WCD-RPPWTP-002-54	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-55	Weld inspection PTF
S-08-WCD-RPPWTP-002-56	Weld inspection LAW
S-08-WCD-RPPWTP-002-57	Weld inspection LAW
S-08-WCD-RPPWTP-002-58	Weld inspection LAW
S-08-WCD-RPPWTP-002-59	Weld inspection LAW
S-08-WCD-RPPWTP-002-60	Weld inspection LAW
S-08-WCD-RPPWTP-002-61	Weld inspection BOF
S-08-WCD-RPPWTP-002-62	Weld inspection LAW
S-08-WCD-RPPWTP-002-63	NDE program review AIT
S-08-WCD-RPPWTP-002-64	Weld inspection HLW
S-08-WCD-RPPWTP-002-65	Weld inspection HLW
S-08-WCD-RPPWTP-002-66	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-67	Weld inspection BOF
S-08-WCD-RPPWTP-002-68	Weld inspection BOF
S-08-WCD-RPPWTP-002-69	Leak test C5 vent stack LAB
S-08-WCD-RPPWTP-002-70	Weld inspection BOF

S-08-WCD-RPPWTP-002-71	Weld inspection HLW
S-08-WCD-RPPWTP-002-72	Weld inspection BOF
S-08-WCD-RPPWTP-002-73	Weld inspection BOF
S-08-WCD-RPPWTP-002-74	Weld inspection LAW
S-08-WCD-RPPWTP-002-75	Weld inspection LAW
S-08-WCD-RPPWTP-002-76	Concrete placements PTF
S-08-WCD-RPPWTP-002-77	Concrete placements PTF grillage
S-08-WCD-RPPWTP-002-78	Weld inspection HLW
S-08-WCD-RPPWTP-002-79	Weld inspection LAW
S-08-WCD-RPPWTP-002-80	Weld inspection LAW
S-08-WCD-RPPWTP-002-81	Roofing North Annex LAW
S-08-WCD-RPPWTP-002-82	Weld inspection LAW
S-08-WCD-RPPWTP-002-83	Concrete placements HLW wall 1116A
S-08-WCD-RPPWTP-002-84	Weld inspection LAW
S-08-WCD-RPPWTP-002-85	Weld inspection LAW
S-08-WCD-RPPWTP-002-86	Weld inspection BOF
S-08-WCD-RPPWTP-002-87	Weld inspection BOF
S-08-WCD-RPPWTP-002-88	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-89	Supplier inspection NuWeld, Inc
S-08-WCD-RPPWTP-002-90	Supplier inspection American Fabricators, Inc
S-08-WCD-RPPWTP-002-91	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-92	Weld inspection BOF
S-08-WCD-RPPWTP-002-93	Weld inspection LAW
S-08-WCD-RPPWTP-002-94	Final FWCL review
S-08-WCD-RPPWTP-002-95	Weld inspection BOF
S-08-WCD-RPPWTP-002-96	Ductwork weld inspection LAB
S-08-WCD-RPPWTP-002-97	Weld inspection HLW
S-08-WCD-RPPWTP-002-98	Electrical Substation Maintenance BOF
S-08-WCD-RPPWTP-002-99	Cementitious Fireproofing installation LAW
S-08-WCD-RPPWTP-002-100	Conduit inspection for placement HLW 2005
S-08-WCD-RPPWTP-002-101	Weld inspection BOF
S-08-WCD-RPPWTP-002-102	Review of NEC Inspection Report (CARS 9881)
S-08-WCD-RPPWTP-002-103	Weld inspection PTF
S-08-WCD-RPPWTP-002-104	Weld inspection PTF
S-08-WCD-RPPWTP-002-105	Weld inspection BOF
S-08-WCD-RPPWTP-002-106	Weld inspection LAW
S-08-WCD-RPPWTP-002-107	Weld inspection BOF
S-08-WCD-RPPWTP-002-108	Concrete placements PTF
S-08-WCD-RPPWTP-002-109	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-110	Weld inspection LAW
S-08-WCD-RPPWTP-002-111	Coatings for HLW structural steel
S-08-WCD-RPPWTP-002-112	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-113	Bolt testing PTF
S-08-WCD-RPPWTP-002-114	Bolt testing LAW
S-08-WCD-RPPWTP-002-115	Weld inspection LAW
S-08-WCD-RPPWTP-002-116	Weld inspection LAW

S-08-WCD-RPPWTP-002-117	Weld inspection PTF
S-08-WCD-RPPWTP-002-118	Closure of S-08-WCD-RPPWTP-001-N01
S-08-WCD-RPPWTP-002-119	Electrical cable pull inspection BOF
S-08-WCD-RPPWTP-002-120	Weld inspection LAW
S-08-WCD-RPPWTP-002-121	Fire Alarm Circuit inspection BOF
S-08-WCD-RPPWTP-002-122	Electrical temporary power BOF
S-08-WCD-RPPWTP-002-123	Pressure testing piping BOF
S-08-WCD-RPPWTP-002-124	Weld inspection LAW
S-08-WCD-RPPWTP-002-125	Weld inspection PTF
S-08-WCD-RPPWTP-002-126	Weld inspection HLW
S-08-WCD-RPPWTP-002-127	Protective coatings for concrete PTF
S-08-WCD-RPPWTP-002-128	Closure of S-08-WCD-RPPWTP-001-N09a, b, & c
S-08-WCD-RPPWTP-002-129	Weld inspection PTF
S-08-WCD-RPPWTP-002-130	Concrete placement HLW wall 1125
S-08-WCD-RPPWTP-002-131	Weld inspection PTF
S-08-WCD-RPPWTP-002-132	Weld inspection BOF
S-08-WCD-RPPWTP-002-133	Leak testing CE exhaust stack LAB
S-08-WCD-RPPWTP-002-134	Weld inspection LAW
S-08-WCD-RPPWTP-002-135	Weld inspection PTF
S-08-WCD-RPPWTP-002-136	APIR records review
S-08-WCD-RPPWTP-002-137	Final FWCL review
S-08-WCD-RPPWTP-002-138	Weld inspection LAW
S-08-WCD-RPPWTP-002-139	Weld inspection LAW
S-08-WCD-RPPWTP-002-140	Weld inspection LAW
S-08-WCD-RPPWTP-002-141	Concrete and FRE inspection LAW
S-08-WCD-RPPWTP-002-142	Weld inspection HLW
S-08-WCD-RPPWTP-002-143	Weld inspection LAW
S-08-WCD-RPPWTP-002-144	Concrete and FRE inspection HLW 1133
S-08-WCD-RPPWTP-002-145	Weld inspection LAW
S-08-WCD-RPPWTP-002-146	Weld inspection HLW
S-08-WCD-RPPWTP-002-147	Closure of S-07-WCD-RPPWTP-020-F01 (a-e)
S-08-WCD-RPPWTP-002-148	Weld inspection BOF
S-08-WCD-RPPWTP-002-149	Weld inspection BOF
S-08-WCD-RPPWTP-002-150	Weld inspection BOF

Task# ORP-WTP-2008-0145

E-STARS^R Report
 Task Detail Report
 07/23/2008 0215

TASK INFORMATION

Task#	ORP-WTP-2008-0145		
Subject	Concurrence: 08-WTP-139 Surveillance Report S-08-WCD-RPPWTP-002 - The WTP WCD Calendar Year 2008 Second Quarter Construction Surveillance Summary report		
Parent Task#		Status	CLOSED 07/23/2008
Reference	08-WTP-139	Due	
Originator	Perez, Anez	Priority	High
Originator Phone	(509) 373-0068	Category	None
Origination Date	07/21/2008 1357	Generic1	
Remote Task#		Generic2	
Deliverable	None	Generic3	
Class	None	View Permissions	Normal
Instructions	bcc: WTP Off File WTP Rdg File MGR Rdg File T. M. Williams, AMD H. N. Taylor, DEP-MGR K. G. Wade, WCD J. W. McCormick-Barger, WCD G. Brunson, WPD W. Abdul, WTP H. Budweg, WTP J. R. Eschenberg, WTP B. Nicoll, WTP D. L. Noyes, WTP G. Olsen, WTP		

ROUTING LISTS

1	Route List	Inactive
	<ul style="list-style-type: none"> ● McCormick-Barger, James W - Review - Concur - 07/22/2008 0846 <i>Instructions:</i> ● Wade, Kenneth G - Review - Concur with comments - 07/22/2008 0659 <i>Instructions:</i> ● Noyes, Delmar L - Review - Cancelled - 07/23/2008 1415 <i>Instructions:</i> ● Eschenberg, John R - Approve - Cancelled - 07/23/2008 1415 <i>Instructions:</i> 	

ATTACHMENTS

- Attachments
1. 08-WTP-139.attach.JWM.Simmons.doc
 2. 08-WTP-139.JWM.Simmons.doc

RECEIVED

JUL 23 2008

DOE-ORP/ONPOC

COLLABORATION

COMMENTS

Poster Wade, Kenneth G - 07/22/2008 0607
 Concur

Task# ORP-WTP-2008-0145

Please change the letter final line to read -

If you have any questions, please contact me, or your staff may contact Ken Wade, Director, WTP Construction Oversight and Assurance Division (509) 373-8637.

TASK DUE DATE HISTORY

No Due Date History

SUB TASK HISTORY

No Subtasks

-- end of report --

Task# ORP-WTP-2008-0145

E-STARS^R Report
 Task Detail Report
 07/22/2008 0943

TASK INFORMATION

Task#	ORP-WTP-2008-0145		
Subject	Concurrence: 08-WTP-139 Surveillance Report S-08-WCD-RPPWTP-002 - The WTP WCD Calendar Year 2008 Second Quarter Construction Surveillance Summary report		
Parent Task#		Status	Open
Reference	08-WTP-139	Due	
Originator	Perez, Anez	Priority	High
Originator Phone	(509) 373-0068	Category	None
Origination Date	07/21/2008 1357	Generic1	
Remote Task#		Generic2	
Deliverable	None	Generic3	
Class	None	View Permissions	Normal
Instructions	bcc: WTP Off File WTP Rdg File MGR Rdg File T. M. Williams, AMD H. N. Taylor, DEP-MGR K. G. Wade, WCD J. W. McCormick-Barger, WCD G. Brunson, WPD W. Abdul, WTP H. Budweg, WTP J. R. Eschenberg, WTP B. Nicoll, WTP D. L. Noyes, WTP G. Olsen, WTP		

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1	Route List	Active
	<ul style="list-style-type: none"> ● McCormick-Barger, James W - Review - Concur - 07/22/2008 0846 <i>Instructions:</i> ● Wade, Kenneth G - Review - Concur with comments - 07/22/2008 0659 <i>Instructions:</i> ● Noyes, Delmar L - Review - Awaiting Response - Due Date <i>Instructions:</i> ● Eschenberg, John R - Approve - Awaiting Response - Due Date <i>Instructions:</i> 	

*Recd
7/22/08*

[Signature] 7/22/08

ATTACHMENTS

- Attachments
1. 08-WTP-139.attach.JWM.Simmons.doc
 2. 08-WTP-139.JWM.Simmons.doc

COLLABORATION

COMMENTS

Poster Wade, Kenneth G - 07/22/2008 0607
 Concur

Task# ORP-WTP-2008-0145

Please change the letter final line to read -

If you have any questions, please contact me, or your staff may contact Ken Wade, Director, WTP Construction Oversight and Assurance Division (509) 373-8637.

TASK DUE DATE HISTORY

No Due Date History

SUB TASK HISTORY

No Subtasks

-- end of report --

08-WTP-139

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, **Quality Class:** ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-01

Inspector Name(s): Debra Wallace

Dates of Inspection: April 1, 2008

Item(s) Inspected:

Closure of non-cited Finding S-07-WCD-RPPWTP-004-N01, pertaining to BNI's failure to install the grounding electrode conductor, at the Electrical Shop, as required per NEC Article 250.32 & 250.66. The grounding electrode conductor was not installed from the structure's disconnecting means (Main Disconnect Switch MDS-GDR-018) to the metal structures; it terminated on the unistrut rack. This deficiency was identified in Surveillance Report S-07-WCD-RPPWTP-004-30.

Design/Installation Documents Reviewed:

2002 National Electrical Code.

Control of Temporary Electrical Installations, 24590-WTP-GPP-CON-3311, Revision 3D, dated December 12, 2007.

Follow-up:

BNI closed Condition Report 24590-WTP-CRPT-QA-07-451 tracking the above issue. The inspectors reviewed/verified the following corrective actions taken by BNI:

- BNI installed the grounding electrode conductor from the ground buss in the MDS to the metal structure, thus meeting the above requirements.
- BNI documented the re-inspection on NEC Inspection Report 24590-WTP-EIP-CON-07-101.
- BNI issued an NEC Bulletin alerting the crews to the responsibility for reviewing the existing installation. (Reference Correspondence Control Number - CCN 172245)

Conclusion:

BNI closed Condition Report 24590-WTP-CRPT-QA-07-451 tracking non-cited Finding S-07-WCD-RPPWTP-004-N01 identified in Surveillance Report S-07-WCD-RPPWTP-004-30 regarding BNI's failure to install the grounding electrode conductor at the Electrical Shop, as required per NEC.

Based on the closure of Condition Report Number 24590-WTP-CRPT-QA-0-451 and the re-worked performed by BNI, **non-cited Finding S-07-WCD-RPPWTP-004-N01** is closed.

A specific planned effectiveness review for closed non-cited Finding S-07-WCD-RPPWTP-004-N01 is not required because continuing monitoring of electrical work is an ongoing WTP Construction Oversight and Assurance Division (WCD) activity.

Reviewed By: Jim Boyer Approved by: [Signature]
Date: 4/12/08 Date: 4/25/08

DA

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-02

Inspector Name(s): WT Meloy

Dates of Inspection: April 1, 2008

Item(s) Inspected:

The site inspector performed inspection of field weld (FW-001) between LAW Primary Offgas Process System (LOP) piping spools LAW-LOP-WS00050001-A and LAW-LOP-WS00050001-B located at the (+) 3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of weld fit-up condition to determine compliance with the welding procedure specification.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LOP-WS0005001, *LOP-WS-00050-S11B-3-LAW Vitrification Building Isometric*, Revision 0, dated December 3, 2003
- Procedure 24590-WTP-MN-CON-01-001-03-23, *Bechtel Welding Procedure Specification P8-T-o*, Revision 8, dated July 7, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0019*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04062*
- Qualification Record 24590-WTP-WQTR-CON-03-0113, *Welder Performance Qualification Test Record – P-30*, Revision 0, dated September 30, 2003

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0019* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04062* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-o*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P8-T-o* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-30 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-04062 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed fit-up for pipe spools located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings, and preparation for welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Reviewed By: Jim Berg Approved by: KW du
Date: 4/17/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-03

Inspector Name(s): WT Meloy

Dates of Inspection: April 1, 2008

Item(s) Inspected:

The site inspector performed inspection of a field weld between Building Plant Cooling Water System (PCW) piping spools LAW-PCW-WS03655003-A and LAW-PCS-WS03655002-B located at the (+) 28'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with ASME B31.3 acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-PCW-WS03655002 , *PCW-WS-03655-S11C-6-LAW Vitrification Building Isometric*, Revision 1, dated October 9, 2007
- Drawing 24590-LAW-P3-PCW-WS03655003, *PCW-WS-03655-S11C-6-LAW Vitrification Building Isometric*, Revision 1, dated January 26, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0043*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-01471*
- Qualification Record 24590-WTP-WQTR-CON-04-0200, *Welder Performance Qualification Test Record – P-90*, Revision 0, dated November 4, 2004

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0043* contained or referenced sufficient detail to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-01471* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had welded correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings listed in "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-90 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

All inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-01471 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for pipe spools located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Reviewed By: Jem Berger Approved by: KPD
Date: 4/17/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-04

Inspector Name(s): WT Meloy

Dates of Inspection: April 1, 2008

Item(s) Inspected:

The site inspector performed inspection of a field weld between LAW Primary Offgas Process System (LOP) piping spools LAW-LOP-WS00040001-A and LAW-LOP-WS00040001-B located at the (+) 3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with ASME B31.3 acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LOP-WS00040001, *LOP-WS-0040-S11B-3-LAW Vitrification Building Isometric*, Revision 0, dated December 3, 2003
- Procedure 24590-WTP-MN-CON-01-001-03-23, *Bechtel Welding Procedure Specification P8-T-o*, Revision 8, dated July 7, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0019*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-03995*
- Qualification Record 24590-WTP-WQTR-CON-03-0113, *Welder Performance Qualification Test Record – P-30*, Revision 0, dated September 30, 2003

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0019* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-03995* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-o*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-o* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner, and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-30 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

All inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-03995 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for a selected pipe spool to pipe spool joint located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: [Signature]
Date: 4/17/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X Quality Class: ITS X BOP X

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-05

Inspector Name(s): RI Taylor

Dates of Inspection: March 25-April 1, 2008

Item(s) Inspected:

The site inspector witnessed ITS backfilling operations and compaction testing of permanent plant earthwork, at the 664.78' elevation on the South side of the Pretreatment Facility (PTF). The area of inspection covers the radwaste piping system from the PTF to the High Level Treatment Facility (HLW).

The site inspector also witnessed the placement of anode wires, CPE-AW-50005N, and CPE-AW-50005L, over previously installed controlled density fill (CDF). BNI electricians unrolled approximately 75 feet of anode wire over the buried radwaste piping (note: this is considered to be CM work).

The site inspector witnessed BNI craftsmen removing backfill material that exceeded the 3" maximum size. Compaction efforts were accomplished with hand controlled jumping jack compactors, and vibrating roller compactors.

The site inspector witnessed compaction testing performed by BNI's testing sub-contractor (QISI). The inspector reviewed the *Backfill Inspection Report*, to verify entries were recorded legibly and accurately.

Design/Installation Documents Reviewed:

24590-BOF-BIR-CON-05-010, *Backfill Inspection Report*.

Construction Work Package, BCE1148.

24590-WTP-GPP-CON-3202, *Excavation and Backfill*, Revision 5, dated January 8, 2008.

24590-WTP-GPP-CON-3210, *Cathodic Protection Installation*, Revision 2, dated May 18, 2005.

24590-BOF-3PS-CE01-T0001, *Engineering Specification for Excavation and Backfill*, Revision 6, dated December 19, 2005.

24590-WTP-3PS-EQ00-T0002, *Engineering Specification for Cathodic Protection*, Revision 4, dated September 27, 2005.

24590-WTP-3YD-CPE-00001, *System Description for Waste Treatment Plant Cathodic Protection (CPE)*, Revision 0, dated February 22, 2005.

24590-BOF-EQ-CPE-00001, *Electrical Cathodic Protection Rectifier Power & Monitoring Plan*, Revision 6, dated July 27, 2006.

24590-BOF-E2-CPE-00001, *Electrical Cathodic Protection Plan Rad Transfer Lines PT Facility to HLW and E 10329.6*, Revision 2, dated February 20, 2008.

24590-WTP-NCR-CON-08-0062, *Nonconformance Report*.

Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2005.

Acceptability of Material Being Used:

The site inspector witnessed compaction testing performed by BNI's testing sub-contractor. Those compaction efforts were monitored by BNI Field Engineering and Quality Control personnel, and found to be acceptable. Areas that failed to achieve 95% compaction were reworked until they became acceptable; these areas were clearly identified on the *Backfill Inspection Report*.

Work Activities:

The site inspector witnessed placement of 12" loose lifts of soil, and watering of earthen backfill prior to compaction efforts. Compaction efforts were accomplished with hand controlled jumping jack compactors, to achieve 95% of required soil densities. Larger areas were compacted utilizing a rubber tired vibratory roller to attain 95% compaction results.

The site inspector witnessed BNI craftsmen removing backfill material that exceeded the 3" maximum size allowed per *Engineering Specification for Excavation and Backfill*.

The site inspector also witnessed the placement of anode wires, CPE-AW-50005N, and CPE-AW-50005L, over previously installed controlled density fill (CDF). BNI electricians rolled out approximately 75 feet of anode wire over the buried radwaste piping.

The site inspector verified BNI had placed marker tape over buried radwaste piping prior to placing earthen backfill over the CDF. Marker tape was also placed over the anode wires, prior to installing earthen backfill over them.

BNI identified the marker tape installed did not meet the requirements of paragraph 2.6, Detectable Marking Tape, as listed in specification 24590-BOF-3PS-CE01-T0001. The marker tape used by BNI craft was 4" wide, and the specification requires marker tape to be 6" wide. BNI Field Engineering issued 24590-WTP-NCR-CON-08-0062, *Nonconformance Report*, to document the use of 4" wide marker tape.

Training and Qualification of Personnel:

The site inspector reviewed the qualifications of BNI's Field Engineer and Quality Control Engineer, pertaining to earthen backfill activities, and found them to be acceptable.

Adequacy of Final Records:

The site inspector reviewed the *Backfill Inspection Report* and verified entries were recorded legibly and accurately.

Conclusion:

BNI had installed earthen backfill, anode wires CPE-AW-50005N and CPE-AW-50005L, removed oversize material, and compacted loose soil to 95% of required soil densities in accordance with the appropriate design and program requirements.

BNI had installed the incorrect width of marker tape and issued 24590-WTP-NCR-CON-08-0062 to document the miss-installation.

Reviewed By: Jim Barge Approved by: KWCh
Date: 4/24/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-06

Inspector Name(s): WT Meloy

Dates of Inspection: April 1, 2008

Item(s) Inspected:

The site inspector performed visual inspection of circumferential butt welds (GB-001 and GB-002) on Breathing Service Air System (BSA) piping spool LAW-BSA-GB0179002-D located at the (+)48'-0" elevation of the Low Active Waste (LAW) Building. At time of installation, these (shop) welds had been determined to be unacceptable and were then reworked per Construction Deficiency Report 24590-WTP-CDR-CON-08-00107. The inspection included evaluation of the final weld condition to determine compliance with ASME B31.3 visual acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-BSA-GB01790002, *BSA-GB-01790-S10A-3-LAW Vitrification Building Isometric*, Revision 0, dated September 15, 2004
- Construction Deficiency Report 24590-WTP-CDR-CON-08-00107, *LAW Excessive Reinforcement in Vendor Shop Weld on Spool LAW-BSA-GB0179002-D*, Revision 0, dated March 17, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0063*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-00956*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0063* contained or referenced sufficient direction to provide for rework of the identified welds. Field Welding Checklist *24590-LAW-FWCL-CON-08-00956* provided acceptable work instructions for weld profile remediation, and specified an appropriate inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements. Since no welding was performed, filler material was not required.

Work Activities:

The site inspector verified BNI had corrected weld deficiencies in accordance with Construction Deficiency Report 24590-WTP-CDR-CON-08-00107. No welding was required and the welds were reworked by grinding only. The following attributes were acceptable in accordance with ASME B31.3 visual acceptance criteria for normal fluid service:

- Weld reinforcement
- Final weld condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-00956 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed rework for pipe welds located in the Low Active Waste Building. Rework was accomplished in accordance with Construction Deficiency Report 24590-WTP-CDR-CON-08-00107 disposition, and final weld condition conformed to the specified criteria. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger
Date: 4/17/08

Approved by: KW
Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, **Quality Class:** ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-07

Inspector Name(s): Debra Wallace

Dates of Inspection: April 4, 2008

Item(s) Inspected:

Inspection of temporary power installed for Mobile Office T-37 consisting of 480, 100-amp disconnects DS-T4 & DS-T37; 50 KVA single phase transformer; and 225-amp panelboard (200-amp main breaker, branch circuits 1-24) located north of the Pretreatment Facility.

Design/Installation Documents Reviewed:

2002 National Electrical Code.

Control of Temporary Electrical Installations, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008.

Work Activities:

The ORP electrical inspector verified the following attributes were acceptable in accordance with the National Electrical Code:

- Equipment listed by Nationally Recognized Testing Laboratory (NRTL)
- Met working clearance requirements
- Correct wiring method installed
- Correct overcurrent protection provided
- Grounding/bonding met requirements of Article 250

Conclusion:

BNI had installed temporary power for Mobile Office T-37, located north of the Pretreatment Facility, in accordance with the 2002 NEC.

Reviewed By: Jem Borz **Approved by:** KWA
Date: 4/17/08 **Date:** 4/25/08

OA
DMJ Garwood
Krist Thomas

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-08

Inspector Name(s): MD Everts
Everts Enterprise, Inc.
(Subcontractor to PAC)
Supporting ORP

Dates of Inspection: April 3, 2008

Item(s) Inspected:

The inspector performed a general surveillance on bulk pipe storage for the LAW building.

Design/Installation Documents Reviewed:

Engineer Specification – 24590-WTP-3PS-PS02-T0003, *Field Fabrication and Installation of Piping*, Revision 6, dated February 27, 2007

Construction Procedure – 24590-WTP-GPP-CON-3503, *Aboveground Piping Installation*, Revision 3, dated March 24, 2005

Acceptability of Material Being Used:

The inspector looked at several pieces of bulk pipe material in a LAW pipe rack and found all the pipes were marked with a stock code number as a minimum and some had either a Material Withdrawal Request (MWR) or Material Requisition Request (MRR) number written on them. The inspector was not able to find heat numbers written on the pipe. Some of the pipes had the ASTM ribbon striping on them and, in those cases, had the heat number on it.

The inspector was informed by the lead field piping engineer for the LAW building that all the bulk pipe material was ordered “Q” material.

The stock code number is BNI’s description of a piece of pipe. For example, PPPCOBOFOP05 was the stock code for 8 inch, schedule 10, ASTM A312, Type 316L, Welded pipe. The heat number was RO7830 for pipe that had ribbon striping marks.

ASTM A312, paragraph 17.1 states; “In addition to the marking specified in Specification A999/A999M, the marking shall include the NPS (nominal pipe size) or outside diameter and schedule number or average wall thickness, heat number, and NH when hydrotesting is not performed and ET when eddy-current testing is performed or UT when ultrasonic testing is performed. The marking shall also include the manufacturer’s private identifying mark, the marking requirement of 12.3, if applicable, and whether seamless (SML), welded (WLD), or

heavily cold worked (HCW). There was bulk piping without the above information indicated on the pipe. Engineer Specification – 24590-WTP-3PS-PS02-T0003, paragraph 2.1.3 also requires material traceability for this piping. Failure to maintain the specification required markings is consider an example of a Finding against QAM Policy Q-05.1, *Instruction, Procedures, and Drawings*, Section 5.1.2.1 regarding the requirement to follow instructions (**Finding S-08-WCD-RPPWTP-002-F03a**).

The MWR did not have the heat number in it. The MWR would provide the MRR number which would contain the heat numbers. However, the MRR may be only a few pages long or may be several hundred pages long. It could be very time consuming to find the heat number in the MRR.

Engineering Specification 24590-WTP-3PS-PS02-T0003, paragraph 2.1.3 states; “When a pipe is cut, the heat number shall be transferred to the pipe section without it, before cutting. Field shall assure that the piping material is traceable to its material test report, heat number, and location as a minimum”. The Construction Procedure, Appendix 2c, paragraph 2-10 states; “For material requiring traceability (Black Cell, QL, or AP) and for all bulk material, record Material Heat/Trace number as applicable”. There was bulk pipe in the pipe rack that had been cut that the only identifying information on it was BNI stock code numbers. Failure to maintain the procedure required markings during cutting operations is another example of a Finding against QAM Policy Q-05.1, *Instruction, Procedures, and Drawings*, Section 5.1.2.1 regarding the requirement to follow procedures (**Finding S-08-WCD-RPPWTP-002-F03b**).

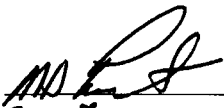
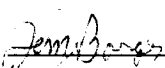
The inspector questioned the Quality Control (QC) lead piping inspector regarding how QC verifies bulk pipe material is acceptable. He responded by saying their material matrix indicates all stainless steel bulk pipe is purchased “Q”. The *Aboveground Piping Installation* procedure only requires QC to record the stock code number, type of stainless, and the heat number. The inspector asked if QC verified the heat number was a good heat number by verifying it against the Certified Material Test Report (CMTR) for the bulk piece of pipe. He responded again no, QC only records the heat number. Failure to perform the specification requirement (Engineer Specification – 24590-WTP-3PS-PS02-T0003, paragraph 2.1.3 a) for the field to assure the piping material is traceable to its material test report, is another example of a Finding against QAM Policy Q-05.1, *Instruction, Procedures, and Drawings*, Section 5.1.2.1 regarding the requirement to follow procedures (**Finding S-08-WCD-RPPWTP-002-F03c**).

Conclusion:

During inspection of bulk piping located at the WTP, several issues were identified associated with material identification and verification. Three examples of a Finding regarding staff compliance with procedures and engineering specification were identified. They include: a) BNI had bulk pipe without the ASTM and engineering specification required markings, such as heat numbers; b) BNI had bulk “Q” piping that when cut, the heat numbers were not transfer as required by specification and procedure; c) Field Engineering/Quality Control staff were only procedurally required to write the heat number found on the installed piping in final piping installation documentation packages –they were not required to verify heat numbers were traceable back to the Certified Material Test Reports (CMTR) as required by engineering

specification. The three examples described above are examples of a Finding against QAM Policy Q-05.1, *Instruction, Procedures, and Drawings*, Section 5.1.2.1 regarding the requirement to follow instructions and procedures (**Finding S-08-WCD-RPPWTP-002-F03a, b, and c** respectively).

BNI has written NCR 24590-WTP-NCR-CON-08-0063 and CDR 24590-WTP-CDR-CON-08-0164 to address the items a & b above.

Inspector:  Reviewed By:  Approved by: _____
Date: 7-9-08 Date: 7/9/08 Date: _____

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-09

Inspector Name(s): WT Meloy

Dates of Inspection: April 7, 2008

Item(s) Inspected:

The site inspector performed surveillance of subcontractor Intermech, Inc.'s ductwork welding at the High Level Waste Building (HLW) (-)21'-0" elevation. Ductwork was located between Columns "7.4" and "8", and Columns "J" and "K". The inspection included evaluation of weld final condition to determine compliance with specification requirements.

Design/Installation Documents Reviewed:

- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-31-00059, *Drawing-HVAC Orthographic Plan At Elev. (-)21'-0" – Area 8 – Task Order 2*, Revision 00E, dated January 14, 2008
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-21-01, *W/IP WTP 11.20 Procedure – Visual Examination of Duct and Supports*, Revision 00D, dated July 25, 2005
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-06-52, *Procedure BSC-41, Gas Metal Arc Welding*, Revision 00C, dated October 8, 2003
- Work Data Package 361016B, *Install C2 Supply, Col J/6.4 to T.4/8.3 Rooms HCB003, HCB004, H-B008, H-B004, H-B051 (CM)*, Revision 1, dated March 18, 2008
- Personnel Qualification Record, *Record of Welder or Welding Operator Qualification Test, Test No. 253-4G – IM-035*, Revision 0, dated June 19, 2006

Installation Program Adequacy:

The site inspector found Work Data Package (WDP) 361016B contained or referenced sufficient details to provide for correct installation of the ductwork components. The WDP referenced the appropriate welding procedure specification (BSC-41, *Gas Metal Arc Welding*), provided for the appropriate filler material (ER70S-6), and specified the applicable inspection procedure (*W/IP WTP 11.20 Procedure – Visual Examination of Duct and Supports*).

Acceptability of Material Being Used:

Ductwork material types and sizes conformed to design requirements, and the welding filler material classification (ER70S-6) met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified Intermech, Inc. had performed welding correctly in accordance with BSC-41, *Gas Metal Arc Welding* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GMAW
- Welding filler material – ER70S-6
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for Intermech's weld examiner and welding personnel. Intermech's welder qualification list and their *Record of Welder or Welding Operator Qualification Test* confirmed welder IM-035 was qualified to use BSC-41, *Gas Metal Arc Welding*. Intermech's records indicated the weld examiner had been certified as NDE Level II for visual examination, and their visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes in Work Data Package 361016B had been completed. The examination records identified the item examined, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

Intermech, Inc. completed welding for ductwork located in the High Level Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. Intermech used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. Intermech's examination personnel had been trained and certified for the examination method used, and examination records were adequate.

Reviewed By: Jean Berger

Date: 4/17/08

Approved by: KPA

Date: 4/25/08

OK
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SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-10

Inspector Name(s): WT Meloy

Dates of Inspection: April 7, 2008

Item(s) Inspected:

The site inspector performed inspection of field weld (FW-001) between LAW Melter Process System (LMP) piping spools LAW-LMP-GL90574001-A and LAW-LMP-GL90547001-A located at the (+) 28'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of weld fit-up condition to determine compliance with the welding procedure specification.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LMP-GL90574001, *LMP-GL-90574-S10A-1.5 LAW Vitrification Building Isometric*, Revision 0, dated April 13, 2005
- Drawing 24590-LAW-P3-LMP-GL90547001, *LMP-GL-90547-S10A-2 LAW Vitrification Building Isometric*, Revision 0, dated January 24, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0054*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04356*
- Qualification Record 24590-WTP-WQTR-CON-04-0215, *Welder Performance Qualification Test Record – P-91*, Revision 0, dated November 17, 2004

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0054* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04356* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-91 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-04356 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed fit-up for pipe spools located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings, and preparation for welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: KFA
Date: 4/17/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X Quality Class: ITS X BOP X

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-11

Inspector Name(s): RI Taylor

Dates of Inspection: April 8, 2008

Item(s) Inspected:

The site inspector reviewed the engineering specification for Cathodic Protection to verify component design requirements. The inspector performed an inspection of five rectifiers that had been installed at the WTP site.

Design/Installation Documents Reviewed:

24590-WTP-3PS-EQ00-T002, *Engineering Specification for Cathodic Protection*, Revision 4, dated September 27, 2005.

Underwriters Laboratories Inc. Marking Guide for Panelboards.

Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2005.

Acceptability of Material Being Used:

The site inspector reviewed the Materials section of *Engineering Specification for Cathodic Protection* for compliance to paragraph 4.1.1.2.6, "Enclosure: NEMA 250, Type 4", and inspected the installed rectifiers and found no markings on any of the five rectifiers indicated they complied with the NEMA requirement.

The inspector found all five installed rectifiers had a door that enclosed the electrical termination area; these doors did not have gaskets installed to prevent dust or moisture from entering the termination area. Without these gaskets the rectifiers would not meet the intent of a NEMA Type 4 enclosure. *Underwriters Laboratories Inc.* Marking Guide (definition of), Panelboards (Enclosure Types), states: Type NEMA 4; intended use, which is indoor or outdoor use primarily, to provide a degree of protection against splashing water, wind blown dust and rain, hose directed water and damage from external ice formation.

Work Activities:

The site inspector found there were seven rectifiers delivered to the WTP site. None of the seven had been completely installed to the point of acceptance by BNI engineering, but were five were installed at the WTP in their final locations.

The site inspector could not locate any markings on the rectifiers that would indicate compliance to *Engineering Specification for Cathodic Protection* for Type NEMA 4 enclosures as specified in paragraph 4.1.1.2.6 of the specification. Nor, as stated above, did the enclosures have seal gaskets or latches typical of NEMA 4 enclosures. Once this was brought to BNI's attention, Construction Deficiency Report 24590-WTP-CDR-CON-08-0157 was written to address this issue. Failure to verify these rectifier enclosures complied with the engineering specification is a Finding against Quality Assurance Manual, Policy Q-07.1, *Control of Purchased Items and Services*, regarding the requirements to plan and execute procurement in a manner that assures conformance with specified requirements. Specifically BNI's verification process failed to verify the rectifiers complied with the associated engineering specification prior to installation. Because this finding was not willful, is a commercial material procurement and the safety and cost impact is minor, the hardware issue was entered into BNI's corrective action program, and the finding is not a repeat of a previous finding, this finding is being classified as non-cited (**Non-cited Finding S-08-WCD-RPPWTP-002-N01**).

Conclusion:

Procurement of the WTP Cathodic Protection rectifiers did not meet the Type NEMA 4 rated rectifier assembly requirements of the *Engineering Specification for Cathodic Protection*. A non-cited finding was identified for failure to ensure the procurement of these rectifiers met requirements (**Non-cited Finding S-08-WCD-RPPWTP-002-N01**).

Reviewed By: Jim Berger Approved by: [Signature]
Date: 4/22/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-12

Inspector Name(s): MD Evarts Evarts Enterprise, Inc. Dates of Inspection: April 2, 2008

Item(s) Inspected:

The inspector performed a final weld inspection (FW-12C1) on cooling panel support in pour cave 2 in the LAW building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-LAW-FWCL-CON-08-00571
- Welding Procedure Specification (WPS) - P1-A-LH, Revision 4
- Drawing – 24590-LAW-S1-S15T-00332, Revision 1
- Visual Weld Inspection Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI installed the correct structural steel material in accordance with the above drawing and used the correct filler material per the above WPS.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Structural steel orientation and configuration
- Final Weld Acceptance
- Welding filler material used
- Welder Qualification

Training and Qualification of Personnel:

The inspector verified the welder (P-139) was qualified to make the structural steel welds.

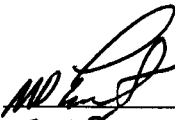
The inspector verified BNI's weld examiner was qualified to perform the final weld examination on the above weld in accordance with the visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded the a cooling panel support in pour cave 2 in the LAW building to the wall embed with the correct structural steel material and filler metal, and a qualified welder in accordance with the appropriate design and welding program requirements. BNI's weld examiner was qualified to perform the final acceptance of the weld.

Inspector:  Reviewed By: Jim Berger Approved by: KNA
Date: 6-12-08 Date: 6/12/08 Date: 7/14/08

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-13

Inspector Name(s): MD Everts
Everts Enterprise, Inc.

Dates of Inspection: April 8, 2008

Item(s) Inspected:

The inspector performed a final weld inspection on a structural steel clip to an embed (FW-2) at the 0' elevation between lines B and D, 16 and 17 (west side of HLW building). This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-HLW-FWCL-CON-08-00048
- Welding Procedure Specification (WPS) – P1-A-LH, Revision 4
- Drawing – 24590-HLW-SS-S15T-00023, Revision 7
- Visual Weld Inspection Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI installed the correct structural steel material in accordance with the above drawing and used the correct filler material per the above WPS.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Structural steel orientation and configuration
- Final Weld Acceptance
- Welding filler material used
- Welder Qualification

Training and Qualification of Personnel:

The inspector verified the welder (I-96/I-116) was qualified to make the structural steel weld.

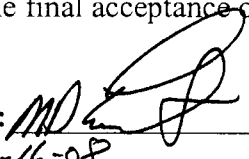
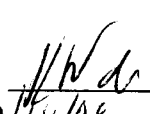
The inspector verified BNI's weld examiner was qualified to perform the fit-up weld examination on the above weld in accordance with the visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded the structural steel clip to an embed (FW-2 on the west side of HLW building) with the correct structural steel material and filler metal, and a qualified welder in accordance with the appropriate design and welding program requirements. BNI's weld examiner was qualified to perform the final acceptance of the weld.

Inspector:  Reviewed By: Jim Barger Approved by: 
Date: 6-16-08 Date: 6/16/08 Date: 7/14/08

SURVEILLANCE REPORT

Facility: PTF HLW ___ LAW ___ LAB ___ BOF ___ Quality Class: ITS BOP ___

Dangerous Waste Permit Affecting: Yes ___ No

Surveillance Report Number: S-08-WCD-RPPWTP-002-14

Inspector Name(s): EF Enloe

Dates of Inspection: April 8, 2008

Item(s) Inspected:

The site inspector performed inspection of field weld (FW-3) between structural steel W10 X 67 to embed plate with L6 X 4 X ½ at Pretreatment Facility (PTF) (+)55'-0" elevation. The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-PTF-SS-S15T-00036, *Pretreatment Facility Structural Steel Framing Floor Plan El 56'-0"*, Revision 10, dated April 13, 2007
- Drawing 24590-PTF-SS-S15T-00407, *Pretreatment Facility Structural Steel Framing Sections & Details Sh 1*, Revision 8, dated June 6, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *PCS0065*
- Field Weld Checklist – *24590-PTF-FWCL-CON-08-00027*
- Qualification Record 24590-WTP-WQTR-CON-03-0048, *Welder Performance Qualification Test Record – I-34*, Revision 0, dated October 7, 2003

Installation Program Adequacy:

The site inspector found Construction Work Package *PCS0065* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-PTF-FWCL-CON-08-00027* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-34 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-PTF-FWCL-CON-08-00027 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for a structural steel member located in the Pretreatment Facility. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: KWA
Date: 4/22/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-15

Inspector Name(s): WT Meloy

Dates of Inspection: April 8, 2008

Item(s) Inspected:

The site inspector performed inspection of field weld (FW-3) between structural steel W10 outrigger and 3/16" bent plate at Pretreatment Facility (PTF) (+)56'-0" elevation. The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-PTF-SS-S15T-00036, *Pretreatment Facility Structural Steel Framing Floor Plan El 56'-0"*, Revision 10, dated April 13, 2007
- Drawing 24590-PTF-SS-S15T-00401, *Pretreatment Facility Structural Steel Framing Sections & Details Sh 2*, Revision 4, dated May 27, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *PCS0065*
- Field Weld Checklist – *24590-PTF-FWCL-CON-08-00019*
- Qualification Record 24590-WTP-WQTR-CON-03-0048, *Welder Performance Qualification Test Record – I-34*, Revision 0, dated October 7, 2003
- Qualification Record 24590-WTP-WQTR-CON-07-0201, *Welder Performance Qualification Test Record – I-111*, Revision 0, dated December 31, 2007

Installation Program Adequacy:

The site inspector found Construction Work Package *PCS0065* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-PTF-FWCL-CON-08-00019* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-34 and I-111 were qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-PTF-FWCL-CON-08-00019 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for structural steel located in the Pretreatment Facility. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jan Boyce Approved by: KHd
Date: 4/17/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, Quality Class: ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-16

Inspector Name(s): Debra Wallace

Dates of Inspection: April 9, 2008

Item(s) Inspected:

Closure of Finding S-07-WCD-RPPWTP-004-F09, pertaining to BNI's failure to perform an adequate check of the Field Sketch Drawings, prior to approval, to maintain configuration management of supplier design drawings of T52 Warehouse, as required per Procedure 24590-WTP-GPG-CON-3102A, paragraph 3.3.2.1.

Design/Installation Documents Reviewed:

2002 National Electrical Code.

24590-BOF-FSK-CON-E-07-001, *RPP/WTP T-52 Warehouse Electrical Notes and Schedules*, Revision 2, dated March 20, 2008.

24590-BOF-FSK-CON-E-07-009, *RPP/WTP T-52 Warehouse Electrical Panel Schedules, Sheet 1*, Revision 2, dated March 20, 2008.

24590-BOF-FSK-CON-E-07-010, *RPP/WTP T-52 Warehouse Electrical Panel Schedules, Sheet 2*, Revision 2, dated March 20, 2008.

Control of Temporary Electrical Installations, 24590-WTP-GPP-CON-3311, Revision 3D, dated December 12, 2007.

Work Activities:

To address the above Finding, the ORP inspector reviewed the drawings revised (by CUG) to the new as-built condition, for the following deficiencies identified on Surveillance Report S-07-WCD-RPPWTP-004-66:

1. Drawing 24590-BOF-FSK-CON-E-07-001 (1-Line Diagram) the MDP depicted "480/277, 3-phase, 4-wire & ground".

Hazardous Energy Work Package 24590-WTP-CUG-T-E-07-0247 changed the MDP to a 3-phase, 3-wire, 480-volt system.

Drawing 24590-BOF-FSK-CON-E-07-001, Revision 2 changed the single line diagram to reflect a 3 phase, 3 wire system. This resolves this issue.

2. Drawing 24590-BOF-FSK-CON-E-07-001 (1-Line Diagram) depicted transformer H1 as a 75 KVA and H2 as a 112.5 KVA transformer.

The transformer numbers were swapped on the FSK, in the field H1 was a 112.5 KVA transformer and H2 was a 75 KVA transformer as required by the work package.

Drawing 24590-BOF-FSK-CON-E-07-001, Revision 2 changed the H1 transformer to a 112.5 KVA and H2 transformer to a 75 KVA. This resolves this issue.

3. Drawing 24590-BOF-FSK-CON-E-07-001 (1-Line Diagram) depicted transformer H2 secondary conductors as four #2 AWG phase conductors and a #8 AWG ground and drawing 24590-BOF-FSK-CON-E-07-009 panel schedule T52-H2 was revised to four #4 AWG phase conductors and a #8 ground.

Work Package 24590-WTP-CUG-T-E-07-0247 required and the field installed four #2 AWG phase conductors and a #8 AWG ground for the secondary conductors at transformer H2.

BNI revised Drawing 24590-BOF-FSK-CON-E-07-009, Revision 2 to reflect the as-installed condition – four #2 phase conductors and a #8 ground. This resolves this issue.

4. Drawing 24590-BOF-FSK-CON-E-07-001 (1-Line Diagram) depicted circuit #3 feeding Heat Pump T52-PHP3.

Drawing 24590-BOF-FSK-CON-E-07-009 and the actual configuration was circuit #17 feeding Heat Pump T52-PHP3.

Drawing 24590-BOF-FSK-CON-E-07-001, Revision 2 revised to the actual configuration, which was, circuit #17 feeding Heat Pump T52-PHP3. This resolves this issue.

5. Drawing 24590-BOF-FSK-CON-E-07-001 (Special Purpose Wiring Schedule) depicted Panel MDP-T52 circuit 12 with three #12 AWG phase conductors and a #14 AWG ground protected by a 60-amp circuit breaker.

The #12 AWG phase conductors were not rated for 60-amps. Also per Table 250-122 a #10 AWG ground conductor was required for a 60-amp overcurrent device.

Drawing 24590-BOF-FSK-CON-E-07-001, Revision 2 changed the #12 phase conductors to #6 AWG phase conductors with a #10 ground conductor. This resolves this issue.

6. Drawing 24590-BOF-FSK-CON-E-07-010 panel schedule for panelboard T52-L3 depicted the feeder conductors as three #1 AWG phase conductors and a #8 AWG ground.

Table 250-66 required a #6 ground conductor. Also drawing 24590-BOF-FSK-CON-E-07-001 (1-Line Diagram) did not agree with drawing 24590-BOF-FSK-CON-E-07-010 in that this drawing depicted this feeder as three #2 AWG phase conductors and a #8 AWG ground.

Drawing 24590-BOF-FSK-CON-E-07-001, Revision 2 and drawing 24590-BOF-FSK-CON-E-07-010, Revision 2 were both changed to reflect the as-installed condition, which was three #1 AWG phase conductors and a #4 ground. This resolves both the code requirement and drawing issue.

7. Drawing 24590-BOF-FSK-CON-E-07-010 panel schedule for panelboard T52-L3 depicted lights installed on circuit 13 (20-amp), circuit 15 (20-amp), and circuit 17 (30-amp).

These circuits are not shown on the panel schedule installed at the panelboard. Also circuit 17 is a 20-amp circuit breaker, not 30-amp.

Drawing 24590-BOF-FSK-CON-E-07-010, Revision 2 revised the panel schedule for circuits 13 & 15 to spares and circuit 17 to a 20-amp circuit. This resolves this issue.

8. Drawing 24590-BOF-FSK-CON-E-07-010 panel schedule for panelboard T52-L2 depicts a 100-amp circuit breaker on circuit #16.

The circuit breaker installed on circuit #16 is a 20-amp breaker.

Drawing 24590-BOF-FSK-CON-E-07-010, Revision 2 changed circuit 16 in panelboard T52-L2 to a 20-amp. This resolves this issue.

Follow-up:

BNI closed Condition Report 24590-WTP-CRPT-QA-08-004 tracking the above issue. The inspector reviewed/verified the following actions taken by BNI, per correspondence control number CCN 171514 - *Response to Finding S-07-WCD-RPPWTP-004-F09*:

- BNI revised Field Sketch 24590-BOF-FSK-CON-E-001, 24590-BOF-FSK-CON-E-002, 24590-BOF-FSK-CON-E-009, & 24590-BOF-FSK-CON-E-010.
- BNI briefed personnel involved in field sketch preparation for construction power configuration management on changes to the procedure and importance of quality checking the work. (Reference CCN 174339)
- BNI revised (by PGCN) *Control of Temporary Electrical Installations Procedure* 24590-WTP-GPP-CON-331 to add reference to the *Construction Field Sketch Procedure* 24590-WTP-GPP-CON-3102.

Conclusion:

BNI closed Condition Report 24590-WTP-CRPT-QA-08-004 tracking Finding S-07-WCD-RPPWTP-004-F09 identified in Surveillance Report S-07-WCD-RPPWTP-004-66 regarding BNI's failure to maintain configuration management of supplier design drawings of T52 Warehouse.

Based on the actions taken by BNI per CCN-171514 (Finding response) and closure of Condition Report Number 24590-WTP-CRPT-QA-08-004, **Finding S-07-WCD-RPPWTP-004-F09** is closed.

A specific planned effectiveness review for closed Finding S-07-WCD-RPPWTP-004-F09 is not required because continuing monitoring of electrical work is an ongoing WTP Construction Oversight and Assurance Division (WCD) activity.

Reviewed By: Jim Bergs Approved by: KVA
Date: 4/21/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB X BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-17

Inspector Name(s): WT Meloy

Dates of Inspection: April 10, 2008

Item(s) Inspected:

The site inspector performed field observation of metal framing for gypsum board located between Column Lines "A" and "D" and Column Lines "2.7" and "3" at the 0'-0" elevation of the Analytical Laboratory (LAB) Building. The inspection included evaluation of installed condition to determine compliance with the applicable standards and specifications. Framing was supervised and inspected by BNI subcontractor George A. Grant, Inc. with actual installation by Drywall Interiors, Inc.

Design/Installation Documents Reviewed:

- Standard ASTM C754-07, *Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products*, 2007 Edition
- Specification 24590-WTP-3PS-AFGB-T0001, *Engineering Specification for Gypsum Board Assemblies 09260*, Revision 3, dated February 4, 2008
- Drawing 24590-LAB-A1-A10T-01301002, *Analytical Laboratory Architectural Enlarged Floor Plan El 0'-0"*, Revision 5, dated August 17, 2007
- Drawing 24590-WTP-A0-A10T-00100004, *WTP Process Buildings Architectural Standard Interior/Exterior Wall Types Legend*, Revision 5, dated January 9, 2008
- Subcontractor Submittal 24590-CM-HC2-AY00-00001-50-00008, *Drawing – Shop Drawing – Wall Type Gypsum Wall (5510, 5520, 6220, 6230)-AFGB-T0001-GG-VIT-GW-200-GAG-116B*, Revision D, dated February 4, 2008

Installation Program Adequacy:

The site inspector found the drawings, standards, and specifications listed in "Design/Installation Documents Reviewed" above contained or referenced sufficient detail to provide for correct installation of the gypsum wallboard framing components.

Acceptability of Material Being Used:

Cold formed metal framing conformed to the established requirements for type, and size. Fasteners were consistent with specifications and submittal requirements. The materials used in installation had been approved by BNI via the submittal process.

Work Activities:

The site inspector verified framing for gypsum board had been installed in accordance with specification requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in "Design/Installation Documents Reviewed" above:

- Framing material type
- Framing placement including center to center spacing
- Framing configuration
- Fastener type and application

Training and Qualification of Personnel:

George A. Grant, Inc. had subcontracted Drywall Interiors, Inc. for actual installation of the gypsum board framing. Drywall Interiors, Inc. had employed experienced personnel including key supervisors who had gained substantial expertise with the materials and methods employed. Primary inspection personnel were employed directly by George A. Grant, Inc. These personnel had attained satisfactory practical knowledge and understanding with respect to the work at hand.

Adequacy of Final Records:

The appropriate inspection attributes on George A Grant's Inspection/Surveillance Report had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the items inspected.

Conclusion:

BNI subcontractor George A. Grant, Inc./Drywall Interiors, Inc. had completed a portion of the metal framing for gypsum wall board assemblies located in the Analytical Laboratory Building. The configuration and orientation of the items installed conformed to the drawings. Approved materials had been used, and installation personnel were experienced with the installation methods employed. Inspection personnel were knowledgeable, and inspection records were adequate.

Reviewed By: Jim Boyer Approved by: KWA
Date: 4/22/08 Date: 7/25/08

SURVEILLANCE REPORT

Facility: PTF __, HLW __, LAW __, LAB __, BOF X, **Quality Class:** ITS __, BOP X

Dangerous Waste Permit Affecting: Yes __ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-18

Inspector Name(s): Debra Wallace

Dates of Inspection: April 14, 2008

Item(s) Inspected:

Closure of Finding S-07-WCD-RPPWTP-004-F07, pertaining to BNI's failure to ensure all deficiencies associated with Main Distribution Panelboard LVE-PNL-86001 had either been corrected or considered before concluding electrical equipment was safe to energize. Failure to establish an adequate method of controlling/inspecting this electrical equipment at the Water Treatment Facility, to ensure compliance with design and codes and ensure it was safe to energize, was considered a Finding (against the Contractor's QA Manual Policy Q-05.1, Section 3.1.1 regarding the requirement to have and use documented instructions to perform activities affecting quality). This deficiency was identified on Surveillance Report S-08-WCD-RPPWTP-004-46.

Design/Installation Documents Reviewed:

2002 National Electrical Code.

24590-WTP-GPP-CON-3311, *Control of Temporary Electrical Installations*, Revision 3D, dated December 12, 2007.

Condition Report 24590-WTP-CRPT-QA-07-455, *Main Distribution Panelboard*, Revision 0, dated December 11, 2007.

CCN 171514 - *Response to Finding S-07-WCD-RPPWTP-004-F07*, dated February 21, 2008.

Follow-up:

BNI closed Condition Report 24590-WTP-CRPT-QA-07-455 tracking the above issue. The inspector reviewed/verified the following corrective actions taken by BNI, per Correspondence Control Number CCN 171514 - *Response to Finding S-07-WCD-RPPWTP-004-F02*:

- BNI reviewed the issues identified in the Field Inspection Reports (FIR) and confirmed there were no NEC violations. FIR #24590-BOF-FIR-CON-05-0151 was closed January 6, 2008, and logged into TEAMWORKS.
- BNI issued Vender Document Change Notice (VDCN) 24590-B86-VDCN-E-07-00002 on January 2, 2008, to add a label to the panel to inform employees of the non-standard

configuration. BNI installed the following label (per VDCN) on the outside of the panelboard – “CAUTION - Phasing on left side of panelboard is C-phase, B-phase, A-phase, Top-to-Bottom”.

- To verify the extent of condition, BNI reviewed the NEC inspector’s FIR log. BNI verified there were no additional open FIR’s that had not been logged into TEAMWORKS and the Temporary Electrical Punchlist.
- BNI reviewed *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, and verified the current procedure provided adequate controls to ensure construction power installation deficiencies that had been identified on field inspections or surveillances were properly dispositioned before work packages were performed. BNI’s review found that when the procedures were followed, the documentation was adequate to prevent the occurrence.
- BNI also reviewed *Field Inspection Report* procedure 24590-WTP-GPP-CON-7114 and verified the current procedure provided adequate controls to ensure permanent plant installation deficiencies identified on field inspections or surveillances had been properly disposition before work packages were performed. BNI’s review found, that when procedures were followed, the documentation was adequate to prevent the occurrence.

Conclusion:

BNI closed Condition Report 24590-WTP-CRPT-QA-07-455 tracking Finding S-07-WCD-RPPWTP-004-F07 identified in Surveillance Report S-07-WCD-RPPWTP-004-46 regarding BNI’s failure to ensure all deficiencies associated with Main Distribution Panelboard LVE-PNL-86001 had either been corrected or considered before concluding electrical equipment was safe to energize.

Based on the actions taken by BNI per CCN-171514 and closure of Condition Report Number 24590-WTP-CRPT-QA-07-455, **Finding S-07-WCD-RPPWTP-004-F07** is closed.

A specific planned effectiveness review for closed Finding S-07-WCD-RPPWTP-004-F07 is not required because continuing motoring of electrical work is an ongoing WTP Construction Oversight and Assurance Division (WCD) activity.

Reviewed By: Jim Bergen Approved by: [Signature]
Date: 4/22/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-19

Inspector Name(s): WT Meloy

Dates of Inspection: April 14, 2008

Item(s) Inspected:

The site inspector performed an inspection of field weld (FA-001) on pipe support LAW-HRV-H30008 located at the (+) 48'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of weld final condition to determine compliance with ASME B31.3 acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-ARV-GZ00013001, *ARV-GZ-00013-C12A-24 LAW Vitrification Building Isometric*, Revision 0, dated January 25, 2006
- Drawing 24590-LAW-ARV-H30008, *LAW-ARV-H30008 – Pipe Support Drawing*, Revision 1, dated November 2, 2006
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0059*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-05059*
- Qualification Record 24590-WTP-WQTR-CON-07-0014, *Welder Performance Qualification Test Record – P-137*, Revision 0, dated March 26, 2006

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0059* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-07-05059* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Support material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-137 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-05059 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for a pipe support located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jem Berger Approved by: KRM
Date: 4/22/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-20

Inspector Name(s): RI Taylor

Dates of Inspection: April 15, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a repair area on a vendor supplied ring beam, Vessel HLP-VSL-00027B (HLW Lag Storage and Feed Blending Process System). The ring beam was in the process of being prepared for welding for installation in planning area 4E, of the Pretreatment Facility when unacceptable porosity was discovered in several vendor welds. 24590-WTP-NCR-CON-08-0038 was issued to document the areas of porosity and with disposition to repair the subject areas by grinding.

The site inspector visually inspected the ground area to the American Welding Society-2000, table 6.1,8 (A) visual requirements.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- *American Welding Society-2000*
- 24590-WTP-MN-CON-01-0001-10-10, *Bechtel Nondestructive Examination Standard VT-AWS D1.1*, Revision 6, dated July 12, 2006
- Construction work package *PMS0043*
- 24590-WTP-NCR-CON-08-0038, *Nonconformance Report*
- 24590-PTF-FWCL-CON-08-00164, *Field Welding Checklist*
- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2005

Work Activities:

The site inspector performed a visual inspection of an area that had been ground to remove porosity. The porosity removed had exceeded the allowable limits found in both *American*

Welding Society-2000, table 6.1, 8 (A), and 24590-WTP-MN-CON-01-0001-10-10, paragraph 4.1.8.

Porosity is allowed as long as it does not exceed the sum of 1/32" or greater in diameter, shall not exceed 3/8" in any linear inch of weld. The ground area was found to be acceptable, in that the remaining porosity did not have any of the dimensions noted above, per the technical disposition of 24590-WTP-NCR-CON-08-0038.

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for the BNI welding examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder B-25 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-PTF-FWCL-CON-08-00164 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed removal by grinding the unacceptable porosity reported in 24590-WTP-NCR-CON-08-0038. BNI's examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Submitted By: RI Taylor Reviewed By: Jim Berger Approved by: KWA
Date: _____ Date: 4/22/05 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF_X___ **Quality Class:** ITS___ BOP_X___

Dangerous Waste Permit Affecting: Yes___ No_X___

Surveillance Report Number: S-08-WCD-RPPWTP-002-21

Inspector Name(s): R Taylor

Dates of Inspection: April 14, 2008

Item(s) Inspected:

The site inspector performed inspection of a field weld (FW-001) between 6" High Pressure Steam System (HPS) piping spools BOF-HPS-DB038886003-A and BOF-HPS-DB038886003-B located at the 699.0' elevation of the main steam pipe rack located at the South West corner of the Low Active Waste (LAW) Building. The inspection included evaluation of weld fit-up condition to determine compliance with the welding procedure specification.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3- HPS-DB038886003, *HPS-DB-03866-C12B-6-Balance of Facilities Isometric*, Revision 1, dated March 1, 2005.
- Procedure 24590-WTP-MN-CON-01-001-03-23, *Bechtel Welding Procedure Specification P1-T*, Revision 3, dated December 6, 2006.
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 30, 2006.
- Construction Work Package (CWP) – *BPI0020*.
- Field Weld Checklist – *24590-BOF-FWCL-CON-07-00208*.
- Qualification Record 24590-WTP-WQTR-CON-04-0027, *Welder Performance Qualification Test Record – P-66*, Revision 0, dated February 19, 2004.

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0020* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-07-00208* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-T*), filler material (ER70S-2), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P1-T* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER70S-2
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-66 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-BOF-FWCL-CON-07-00208 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed fit-up for pipe spools located in the Balance of Facilities, main steam rack, located on the South West corner of the LAW. The configuration and orientation of the items installed conformed to the drawings, and preparation for welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: KWA
Date: 4/22/08 Date: 4/21/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB X BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-22

Inspector Name(s): EF Enloe

Dates of Inspection: April 15, 2008

Item(s) Inspected:

The site inspector performed an inspection of a pipe support (LAB-DOW-H10148) field weld to existing structural steel in the Laboratory Facility (LAB) at the (+)19'-0" elevation. The inspection included evaluation of the weld final condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-LAB-P3-DOW-WV20336001, *LAB Facility Isometric El 19'-0"*, Revision 1, dated November 27, 2007
- Drawing 24590-LAB-DOW-H10148, *Pipe Support Drawing*, Revision 2, dated December 11, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *API0012*
- Field Weld Checklist – *24590-LAB-FWCL-CON-08-00116*

Installation Program Adequacy:

The site inspector found Construction Work Package *API0012* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-LAB-FWCL-CON-08-00116* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder P-68 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAB-FWCL-CON-08-00116 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for a pipe support in the Laboratory Facility. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Boney Approved by: [Signature]
Date: 4/23/08 Date: 4/24/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-23

Inspector Name(s): WT Meloy

Dates of Inspection: April 15, 2008

Item(s) Inspected:

The site inspector performed inspection of a field weld (FW-01) on pipe support LAW-RLD-H00274 located at the (+)3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-RLD-ZF03313001, *RLD-ZF-03313-S11B-2 LAW Vitrification Building Isometric*, Revision 2, dated April 7, 2005
- Field Change 24590-WTP-FC-P-08-0104, *LAW – Fix for RLD-H00273 and H00274*, Revision PTB, dated April 7, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI7004*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01101*
- Qualification Record 24590-WTP-WQTR-CON-03-0194, *Welder Performance Qualification Test Record – P-10*, Revision 0, dated December 4, 2002

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI7004* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01101* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Support material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-10 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01101 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for a pipe support located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jerry Boyer Approved by: K. Wade
Date: 4/22/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___, HLW ___, LAW ___, LAB X_, BOF ___, **Quality Class:** ITS ___, BOP X_

Dangerous Waste Permit Affecting: Yes ___ No X_

Surveillance Report Number: S-08-WCD-RPPWTP-002-24

Inspector Name(s): Debra Wallace

Dates of Inspection: April 16, 2008

Item(s) Inspected:

Inspection of Power Distribution Rack PDR-025 fabricated for the Analytical Laboratory, consisting of the following:

- 480 volt, 100-amp main disconnect switch - MDS-PDR-025 (fused 100 A)
- Three 480 volt, 60-amp disconnects DS-1, DS-2, & DS-3 (fused 50A, single phase)
- Two 480 volt, 60-amp disconnects DS-4 & DS-4 (fused 30A).

Design/Installation Documents Reviewed:

- 2002 National Electrical Code
- *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008.

Work Activities:

The ORP electrical inspector verified the following attributes were acceptable in accordance with the National Electrical Code:

- Equipment listed by Nationally Recognized Testing Laboratory (NRTL)
- Electrical equipment not damaged and suitable for the environment
- Correct wiring method installed
- Correct overcurrent protection provided
- Grounding/bonding met requirements of Article 250
- Equipment was installed in a neat and workmanlike manner

No issues were identified with this installation.

Conclusion:

BNI had installed Power Distribution Rack PDR-025 at the Analytical Laboratory in accordance with the 2002 NEC.

Submitted By: D.O. Wallace **Reviewed By:** Jim Boyer **Approved by:** KWA
Date: _____ **Date:** 4/22/08 **Date:** 4/25/08

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-25

Inspector Name(s): WT Meloy

Dates of Inspection: April 17, 2008

Item(s) Inspected:

The site inspector performed visual surveillance of subcontractor Intermech, Inc.'s welding on ductwork support DS-1A-295 located at the High Level Waste (HLW) Building (-)21'-0" elevation. Ductwork support was located between Columns "7.4" and "8" and Columns "J" and "K". The inspection included evaluation of span steel knife plate welds (FW-1, four each) final condition to determine compliance with specification requirements.

Design/Installation Documents Reviewed:

- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-51-00025, *Drawing – Duct Support Locations Seismic Cat. III & IV – Area 8 Elev. (-)21'-0" Task Order 2*, Revision 00A, dated March 3, 2008
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-50-00030, *General Notes and Span Steel Details for Seismic Cat III & IV Duct*, Revision 00B, dated January 31, 2005
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-21-01, *W/IP WTP 11.20 Procedure – Visual Examination of Duct and Supports*, Revision 00D, dated July 25, 2005
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-06-57, *Procedure – Welding Specification Flux Cored Arc Welding BSC No. 80*, Revision 00H, dated October 8, 2007
- Work Data Package 361016B, *Install C2 Supply, Col J/6.4 to T.4/8.3 Rooms HCB003, HCB004, H-B008, H-B004, H-B051 (CM)*, Revision 1, dated March 18, 2008
- Personnel Qualification Record, *Record of Welder or Welding Operator Qualification Test, Test No. 248-3G*, Revision 0, dated June 20, 2006
- Personnel Qualification Record, *Record of Welder or Welding Operator Qualification Test, Test No. 248-4G*, Revision 0, dated June 20, 2006

Installation Program Adequacy:

The site inspector found Work Data Package (WDP) 361016B contained or referenced sufficient details to provide for correct installation of the ductwork support components. WDP documentation referenced appropriate welding procedures, provided for appropriate filler material, and specified the applicable inspection procedure (*W/IP WTP 11.20 Procedure – Visual Examination of Duct and Supports*).

Acceptability of Material Being Used:

Ductwork support material types and sizes conformed to design requirements, and the welding filler material classification (E71T-1M) met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified Intermech, Inc. had performed welding correctly in accordance with *Welding Specification Flux Cored Arc Welding BSC No. 80* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – FCAW
- Welding filler material – E71T-1M
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for Intermech’s weld examiner and welding personnel. Intermech’s welder qualification list and their *Record of Welder or Welding Operator Qualification Test* confirmed welder IM-035 was qualified to use welding procedure BSC-80, *Flux cored Arc Welding*. Intermech’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and their visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes in Work Data Package 361016B had been completed. The inspection records identified the items inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

Intermech, Inc. completed welding for ductwork support steel located in the High Level Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. Intermech used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. Intermech’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jenn Berger Approved by: [Signature]
Date: 4/23/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-26

Inspector Name(s): EF Enloe

Dates of Inspection: April 16, 2008

Item(s) Inspected:

The site inspector performed inspection of a circumferential field weld between Nitric Acid Reagent System (NRA) piping spool BOF-NAR-HN20047013-C to BOF-NAR-HN20047013-D located at the (+)694'-5 3/4" elevation of the Balance of Facilities (BOF). The inspection included evaluation of the fit-up weld condition to determine compliance with ASME B31.3 acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-NAR-HN20047013, *NAR-HN-20047-S11R-3-Balance of Facilities Isometric*, Revision 1, dated March 1, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-AG*, Revision 7, dated: December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0021*
- Field Weld Checklist – *24590-BOF-FWCL-CON-07-00540*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0021* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-07-00540* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-AG*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed the weld correctly in accordance with *Bechtel Welding Procedure Specification P8-T-AG* requirements and the following attributes were acceptable in accordance with the procedures and drawings listed in "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-150 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

All inspection attributes on Field Welding Checklist 24590-BOF-FWCL-CON-07-00540 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for pipe spools located in the *Balance of Facilities Isometric*. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Reviewed By: Jamboran Approved by: KWA
Date: 4/23/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-27

Inspector Name(s): EF Enloe

Dates of Inspection: April 17, 2008

Item(s) Inspected:

The site inspector performed inspection of a field weld between Chilled Water System (CHW) piping spools LAW-CHW-WL50595003-A and LAW-CHW-WL50595003-B located at the (+) 58'-11 3/16" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with ASME B31.3 acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-CHW-WL50595003 , *LAW-CHW-WL-50595-C12A LAW Vitrification Building Isometric*, Revision 0, dated November 8, 2006
- Procedure 24590-WTP-MN-CON-01-001-03-35, *Bechtel Welding Procedure Specification P1-T*, Revision 3, dated December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0059*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01120*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0059* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01120* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-T*), filler material (ER70S-2), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had welded correctly in accordance with *Bechtel Welding Procedure Specification P1-T* requirements and the following attributes were acceptable in accordance with the procedures and drawings listed in "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER70S-2
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-149 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

All inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-01120 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for pipe spools located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Reviewed By: Jim Bergin Approved by: KWA
Date: 4/23/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-28

Inspector Name(s): WT Meloy

Dates of Inspection: April 17, 2008

Item(s) Inspected:

The site inspector performed visual inspection of fit-up for circumferential butt weld (FW003) on Radioactive Liquid Waste Disposal System (RLD) between spool LAW-RLD-ZE03351004-B and butt weld reducer on spool LAW-RLD-ZE03351001-A. The inspection included evaluation of weld fit-up condition to determine compliance with ASME B31.3 visual acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-RLD-ZE03351004, *RLD-ZE-03351-S11B-1 – LAW Vitrification Building Isometric*, Revision 1, dated July 7, 2006
- Drawing 24590-LAW-P3-RLD-ZE03351001, *RLD-ZE-03351-S11B-2 – LAW Vitrification Building Isometric*, Revision 1, dated December 13, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Qualification Record 24590-WTP-WQTR-CON-04-0059, *Welder Performance Qualification Test Record – P-73*, Revision 0, dated May 11, 2004
- Construction Work Package (CWP) – *LPI2002*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-03788*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI2002* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-03788* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316-L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316-L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-73 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-03788 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed fit-up for a pipe weld located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Bergen
Date: 4/23/08

Approved by: KWA
Date: 4/23/08

SURVEILLANCE REPORT

Facility: PTF X HLW___ LAW___ LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-29

Inspector Name(s): RI Taylor
Taylor Consulting Inc
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: April 17, 2008

Item(s) Inspected:

The inspector witnessed the placement, testing, and consolidation of concrete for the PTF east side hot cell wall 73 (from elevation +2' to +24').

Design/Installation Documents Reviewed:

- 24590-PTF-CPC-CON-08-003, *-Concrete Pour Card*
- 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 29, 2007
- 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 29, 2007
- 24590-BOF-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2007
- 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated June 22, 2005

Work Activities:

For the placement listed above, the inspector observed field quality control staff performing concrete receipt activities and observed their review of the batch tickets, as required by Section 3.11.9 of *Concrete Operations (Including Supply)*. The inspector concluded these activities were performed in accordance with established requirements.

The inspector observed the Materials Testing subcontractor field technicians performing concrete receipt activities, observed the review of batch tickets, and observed recording of information required by Section 3.2.1 of the *Engineering Specification for Material Testing Services*. The inspector concluded these activities and documents were performed or completed in accordance with the specification.

The inspector examined the conduct of testing for concrete temperature, slump, and unit weight. The inspector concluded the Material Testing subcontractor technicians were performing these

testing activities in accordance with their procedures, the applicable American Society for Testing and Materials (ASTM) standards, and Contractor's specifications.

Adequacy of Final Records:

The inspector examined Concrete Pour Card 24590-PTF-CPC-CON-08-003, and concluded the required signatures were in place prior to the start of the placement.

Conclusion:

BNI was batching, placing, consolidating, and testing concrete for HLW 1100 slab on grade placement in accordance with engineering specifications and the standards specified in the Safety Requirements Document.

Inspector: R. Taylor Reviewed By: Jim Bergen Approved by: _____
Date: 7-2-08 Date: 7/2/08 Date: _____

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X ___

Dangerous Waste Permit Affecting: Yes ___ No X ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-31

Inspector Name(s): MD Evarts

Dates of Inspection: April 9, 2008

Item(s) Inspected:

The inspector performed a fit-up weld inspection on handrail between lines 101 & 1 and N & N.5 (FW-01 A, B, C, D, & E) in the south/west stair tower of PTF building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-PTF-FWCL-CON-07-00036.
- Welding Procedure Specification (WPS) – P1-A-LH(str), Revision 3.
- Drawing – 24590-PTF-SS-S15T-00037, Revision 1.
- Visual Weld Inspection Procedure – VT-AWS D1.1, Revision 6.

Acceptability of Material Being Used:

The inspector verified BNI installed the correct handrail material in accordance with the above drawing and used the correct filler material per the above WPS.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Handrail orientation and configuration
- Fit-up Acceptance
- Welding filler material used
- Welder Qualification

Training and Qualification of Personnel:

The inspector verified the welders (I-34/I-78/I-111) were qualified to make the structural steel welds.

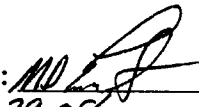
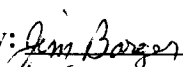

The inspector verified the BNI's weld inspector was qualified to perform the fit-up weld inspection on the above welds in accordance with the visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded the handrail together (FW-1(A, B, C, D, & E)) on the southwest side of PTF building, with the correct handrail material and filler metal, and qualified welders in accordance with the appropriate design and welding program requirements. BNI's weld inspector was qualified to perform the fit-up acceptance of the welds.

Inspector:  Reviewed By:  Approved by: 
Date: 5-29-08 Date: 5/28/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-32

Inspector Name(s): MD Evarts

Dates of Inspection: April 9, 2008

Item(s) Inspected:

The inspector performed a fit-up weld inspection on W4X13 to W14X233 flange to building structural steel connection for pipe support LAW-ISA-H20165 on the Instrument Service Air System in the LAW building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-LAW-FWCL-CON-08-00188
- Welding Procedure – P1-A-LH(str), Revision 3
- Drawing – 24590-LAW-ISA-H20165, *Pipe Support Drawing*, Revision 0, dated May 13, 2005
- Visual Weld Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI installed the correct pipe support material in accordance with the above drawing.

The inspector verified BNI was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Hanger material/orientation and configuration
- Welding filler material
- Welder Qualification
- Fit-up Weld Acceptance

Training and Qualification of Personnel:

The inspector verified welder P-148 was qualified to make the field weld.

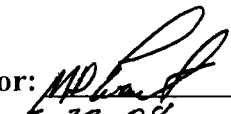
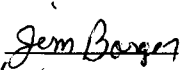
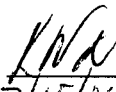
BNI's examiner was qualified to perform the Fit-up inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded the hanger material to building structural steel on the Instrument Service Air System using the correct hanger material, and welded them together with the correct filler metal, with a qualified welder, and a qualified examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-33

Inspector Name(s): MD Evarts

Dates of Inspection: April 22, 2008

Item(s) Inspected:

The inspector performed a final weld inspection (FW-1 & 2) on an electrical cable tray support located at the +48' elevation between columns 16, 16.9 and E in the LAW building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-LAW-FWCL-CON-07-04312
- Welding Procedure – P1-A-LH(str), Revision 3
- Drawing – 24590-LAW-E2-E57T-00322, *Electrical Cable Tray Plan at EL 48'*, Revision 0, dated May 27, 2005
- Visual Weld Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified the cable tray support material being joined together were acceptable in accordance with the above drawing.

The inspector verified the Contractor was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Welding filler material
- Welder Qualification
- Final Weld Acceptance
- Cable tray support steel orientation/configuration

Training and Qualification of Personnel:

The inspector verified the welder (E-6) was qualified to make the field weld.

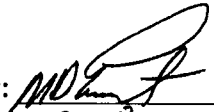
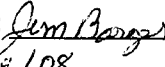
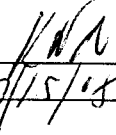
The Contractor's examiner was qualified to perform the Final inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be acceptably completed to the point of this inspection.

Conclusion:

BNI welded the electrical cable tray support steel to the existing LAW building steel using the correct cable tray material, the correct filler metal, a qualified welder, and a qualified examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-34

Inspector Name(s): MD Everts

Dates of Inspection: April 22, 2008

Item(s) Inspected:

Inspection of BNI welded clips to silo skirt anchors (FW-5 & 13) on glass former Silo GFR-TK-00002. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-BOF-FWCL-CON-08-00223
- Welding Procedure – P1-A-LH, Revision 4
- Drawing – 24590-CM-POA-MH00-00001-08-00401, *Anchor Bolt Layout Skirted Tank*, Revision 00B, dated December 20, 2005
- Visual Weld Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI was using the correct clip material in accordance with the above drawing and the weld filler material was found to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Welding filler material
- Welder Qualification
- Final Weld Acceptance
- Clip orientation and configuration

Training and Qualification of Personnel:

The inspector verified the welder (B-29) was qualified to make the field welds.

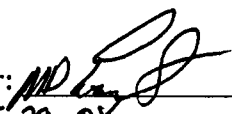
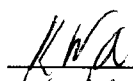
The BNI weld examiner was qualified to perform the Final inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be acceptably completed to the point of this inspection.

Conclusion:

BNI fitted and welded the clips to the skirt of BOF Glass Former silo GFR-TK-00002, using the correct filler metal, with a qualified welder, and a qualified examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By: Jim Berger Approved by: 
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-35

Inspector Name(s): WT Meloy

Dates of Inspection: April 23, 2008

Item(s) Inspected:

The site inspector performed surveillance of Pour Cave stainless steel liner supports located at the (-)21'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of support knife plate weld final condition to determine compliance with AWS D1.1 visual acceptance criteria. Work was performed by BNI subcontractor Chacago Bridege and Iron Services, Inc. (CBI).

Design/Installation Documents Reviewed:

- Specification 24590-LAW-3PS-NN00-T0001, *Engineering Specification for LAW Pour Caves, Buffer Store & Finishing Line Insulation and Stainless Steel Liner Plate*, Revision 0, dated June 13, 2005
- Subcontractor Submittal 24590-QL-SRA-MTF5-00001-29-00097, *Drawing – LAW Pour Cave – Embed Attachments – Row #1 Attachments East & West Walls*, Revision 00A, dated September 27, 2007
- Subcontractor Submittal 24590-QL-SRA-MTF5-00001-29-00098, *Drawing – LAW Pour Cave Embed Attachments – Row #2 Attachments East & West Walls*, Revision 00A, dated September 27, 2007
- Subcontractor Submittal 24590-QL-SRA-MTF5-00001-06-26, *Visual Inspection Procedure – Doc ID V12N*, Revision 00D, dated April, 16, 2003
- Subcontractor Submittal 24590-QL-SRA-MTF5-00001-06-51, *Welding Procedure Specification (WPS) E7018 B-P1C (AWS) Rev. 0*, Revision 00A, dated April 14, 2003
- Inspection/Work Package, *Constr PA #3 – CBI Area P18 BNI Room No. P0104*, Revision 0, dated March 17, 2008

Installation Program Adequacy:

The site inspector found Inspection/Work Package *Constr PA #3 – CBI Area P18 BNI Room No. P0104* contained or referenced sufficient detail to provide for correct installation of the liner plate support components. The Inspection/Work Package provided for the appropriate welding procedure specification (*Welding Procedure Specification (WPS) E7018 B-P1C (AWS)*), filler material (E7018), and inspection procedure (*Visual Inspection Procedure – Doc ID V12N*).

Acceptability of Material Being Used:

Liner plate support material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified CBI Services, Inc. had performed welding correctly in accordance with *Welding Procedure Specification (WPS) E7018 B-P1C (AWS)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for CBI Services, Inc. weld examination and welding personnel. CBI's Welder Qualification Test Records (WQTRs) confirmed welder Stamp No. "JMT" was qualified to use the Welding Procedure Specification (WPS) listed in the Inspection/Work Package. CBI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

Inspection attributes in Inspection/Work Package *Constr PA #3 – CBI Area P18 BNI Room No. P0104* had been completed for work finished to date. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

CBI Services, Inc. completed welding for a portion of liner plate supports located in the Low Active Waste Building Pour Caves. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. CBI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. CBI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger
Date: 4/24/08

Approved by: [Signature]
Date: 4/20/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-36

Inspector Name(s): WT Meloy

Dates of Inspection: April 23, 2008

Item(s) Inspected:

The site inspector performed visual inspection of welds (FW-01, -02, -03, and -04) on Low Active Waste (LAW) Building elevator rail, and counter weight rail lifting lugs. The inspection included evaluation of the final weld condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-S1-S15T-00111, *LAW Vitrification Building Main Building Structural Steel Framing Plans and Elevations*, Revision 2, dated November 5, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LCS0099*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01170*

Installation Program Adequacy:

The site inspector found Construction Work Package *LCS0099* contained or referenced sufficient details to provide for correct installation of the elevator rail, and counter weight rail components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01170* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Elevator rail, and counter weight rail material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01170 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for the Low Active Waste Building elevator rail, and counter weight rail lifting lugs. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jem Dargatz Approved by: KVA
Date: 4/24/08 Date: 4/25/08

M O J

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-37

Inspector Name(s): WT Meloy

Dates of Inspection: April 24, 2008

Item(s) Inspected:

This pertains to closure of non-cited Finding S-07-WCD-RPPWTP-004-N06, regarding BNI's failure to implement the requirements of Specification 24590-WTP-3PS-NW00-T0002, *Chemical Requirements for Materials Used in Contact With Austenitic Stainless Steel and Nickel Based Alloys*. Specifically, paper backed masking tape had been used in direct contact with stainless steel piping components. This deficiency was identified in Surveillance Report S-07-WCD-RPPWTP-004-50.

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-NW00-T0002, *Chemical Requirements for Materials Used in Contact With Austenitic Stainless Steel and Nickel Based Alloys*, Revision 1, dated March 8, 2005
- Condition Report 24590-WTP-CRPT-QA-07-420, *Use of Masking Tape*, Revision 0, dated January 1, 2008
- Deficiency Report 24590-WTP-CDR-CON-08-0064, *LAW – Paper Backed Masking Tape on the Joint Prior to Welding (24590-LAW-P3-DIW-WE03374001)*, Revision 0, dated February 14, 2008

Follow-up:

BNI closed Condition Report 24590-WTP-CRPT-QA-07-420 regarding the use of paper backed tapes on stainless steel and also closed Deficiency Report 24590-WTP-CDR-CON-08-0064 tracking use of paper backed tape on pipe spool 24590-LAW-P3-DIW-WE03374001. The inspector reviewed/verified the following corrective actions taken by BNI:

- BNI issued a Quality Bulletin informing all welders that masking tape is not authorized for use on stainless steels and nickel based alloys
- BNI issued a second Quality Bulletin listing which tapes are approved for use on stainless steels and nickel based alloys
- BNI removed all paper backed masking tape from tool rooms
- BNI removed paper backed masking tape from pipe spool 24590-LAW-P3-DIW-WE03374001 and cleaned the affected area with acetone in accordance with Specification 24590-WTP-3PS-NW00-T0002, *Chemical Requirements for Materials Used in Contact With Austenitic Stainless Steel and Nickel Based Alloys*

Conclusion:

BNI closed Condition Report 24590-WTP-CRPT-QA-07-420 and Deficiency Report 24590-WTP-CDR-CON-08-0064 tracking non-cited Finding S-07-WCD-RPPWTP-004-N06 identified in Surveillance Report S-07-WCD-RPPWTP-004-50 regarding BNI's failure to use approved tapes on stainless steels and nickel based alloys.

Based on the closure of Condition Report 24590-WTP-CRPT-QA-07-420 and Deficiency Report 24590-WTP-CDR-CON-08-0064, and verification of corrective actions taken, **non-cited Finding S-07-WCD-RPPWTP-004-N06** is closed.

A specific planned effectiveness review for closed non-cited Finding S-07-WCD-RPPWTP-004-N06 is not required since monitoring of mechanical work is a continual WTP Construction Oversight and Assurance Division (WCD) activity.

Reviewed By: Jim Berger Approved by: [Signature]
Date: 4/25/08 Date: 4/30/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF_X **Quality Class:** ITS_X BOP___

Dangerous Waste Permit Affecting: Yes_X No___

Surveillance Report Number: S-08-WCD-RPPWTP-002-38

Inspector Name(s): EF Enloe

Dates of Inspection: April 23, 2008

Item(s) Inspected:

The site inspector performed visual inspection of fit-up for circumferential butt weld (GB001) on Plant Service Air System (PSA) ITS-PSA Drip Leg Drain Trap. The inspection included evaluation of weld fit-up condition to determine compliance with ASME B31.3 visual acceptance criteria for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-C5-PSA-00006, *BOF-PSA-GQ-51002-S11C – IT-Plant Service Air-PTF/HLW Sections and Details(Detail 6)*, Revision 2, dated June 20, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – BPU0172
- Field Weld Checklist – 24590-BOF-FWCL-CON-08-00292

Installation Program Adequacy:

The site inspector found Construction Work Package *BPU001* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist 24590-BOF-FWCL-CON-08-00292 specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316-L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316-L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-66 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-00292 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed fit-up for a pipe weld located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jerm Berger **Approved by:** KPA
Date: 4/28/08 **Date:** 4/30/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-39

Inspector Name(s): EF Enloe

Dates of Inspection: April 23, 2008

Item(s) Inspected:

The site inspector performed a visual fit-up inspection of a pipe support (W6X15 to W14X233 Flange) to structural steel located at elevation 34'-10 11/16" at the Low Activity Waste (LAW) Building. The inspection included evaluation of the weld fit-up condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-DIW-WE00085202, *LAW Vitrification Building Isometric*, Revision 3 dated January 15, 2008
- Drawing 24590-WTP-PH-50-00003001, *Standard Pipe Support Details Cantilever*, Revision 5, dated August 23, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI4501*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-00108*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI4501* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-08-00108* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination, and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P148 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-00108 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for a Low Activity Waste Building pipe support. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: KMA
Date: 4/29/08 Date: 4/30/08

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ Quality Class: ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-40

Inspector Name(s): WT Meloy

Dates of Inspection: April 24, 2008

Item(s) Inspected:

The site inspector performed visual inspection of welds (FW-07B and FW-18B) on beam clips for structural steel located at elevation 14'-0" of the High Level Waste (HLW) Building. The inspection included evaluation of the final weld condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-HLW-SS-S15T-00031, *HLW Vitrification Building Structural Steel Framing Partial Plan At El 14'-0" (Area 1)*, Revision 5 dated August 23, 2007
- Drawing 24590-HLW-SS-S15T-00034, *HLW Vitrification Building Structural Steel Framing Partial Plan At El 14'-0" (Area 4)*, Revision 5, dated August 23, 2007
- Drawing 24590-HLW-SS-S15T-00265, *HLW Vitrification Building Structural Typical Connection Details*, Revision 5, dated May 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Qualification Record, 24590-WTP-WQTR-CON-08-0046, *Welder Performance Qualification Test Record (WR-1) – I-116*, Revision 0, dated March 3, 2008
- Construction Work Package (CWP) – *HSC2013*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00039*

Installation Program Adequacy:

The site inspector found Construction Work Package *HSC2013* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00039* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination, and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that welder I-116 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed that the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-HLW-FWCL-CON-08-00039 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for High Level Waste Building structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: HWA
Date: 4/25/08 Date: 4/25/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-41

Inspector Name(s): EF Enloe

Dates of Inspection: April 28, 2008

Item(s) Inspected:

The site inspector performed an inspection of field welds (FW-14-4 B,C & FW-17-25 B,C) at the Pretreatment Facility (PTF) ((+)14'-0" & 17'-0" elevation). The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-PTF-SS-S15T-00020, *Pretreatment Facility Structural Steel Framing Plan El 14'-4" and 17'-4"*, Revision 8, dated March 12, 2008
- Drawing 24590-PTF-SS-S15T-00407, *Pretreatment Facility Structural Steel Framing Connection Detail*, Revision 8, dated June 15, 2005
- Drawing 24590-PTF-SS-S15T-00410, *Pretreatment Facility Structural Steel Pipe Rack Framing Detail*, Revision 7, dated October 22, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *PCS0106*
- Field Weld Checklist – *24590-PTF-FWCL-CON-07-00037*

Installation Program Adequacy:

The site inspector found Construction Work Package *PCS0106* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-PTF-FWCL-CON-07-00037* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-34 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-PTF-FWCL-CON-07-00037 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for structural steel located in the Pretreatment Facility. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: KWA
Date: 4/24/05 Date: 4/26/08

SA

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-42

Inspector Name(s): WT Meloy

Dates of Inspection: April 28, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a field weld (FW-03B) for a light fixture support located at the (+)3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with AWS D1.6 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-E2-LTE-00105, *LAW Vitrification Building Electrical Lighting Plan At El 3'*, Revision 2, dated March 25, 2008
- Drawing 24590-LAW-E2-LTE-00107, *LAW Vitrification Building Electrical Lighting Plan at El 3'*, Revision 2, dated March 25, 2008
- Procedure 24590-WTP-CON-01-001-03-22, *Bechtel Welding Procedure Specification P8, P1-T-Ag*, Revision 3, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-14, *Bechtel Nondestructive Examination Standard Visual Examination VT-AWS D1.6*, Revision 4, dated August 15, 2006
- Construction Work Package (CWP) – *LEL0003*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-00778*
- Qualification Record 24590-WTP-WQTR-CON-04-0300, *Welder Performance Qualification Test Record – E-2*, Revision 0, dated December 22, 2004

Installation Program Adequacy:

The site inspector found Construction Work Package *LEL0003* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-08-00778* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8, P1-T-Ag*), filler material (ER 309L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-AWS D1.6*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8, P1-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER 309L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination, and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder E-2 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-00778 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for a Low Active Waste Building electrical support. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jim Berger Approved by: [Signature]
Date: 5/1/08 Date: 7/14/08

SURVEILLANCE REPORT

Facility: PTF ___, HLW ___, LAW ___, LAB ___, BOF X, **Quality Class:** ITS ___, BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-43

Inspector Name(s): Debra Wallace

Dates of Inspection: April 28, 2008

Item(s) Inspected:

The inspector performed a general surveillance of the Chiller Compressor Building #82 and identified the following NEC code violation on the Dryers:

- Article 110-26(a)(1) requires three foot working clearance in front of the electrical equipment that is likely to require examination, adjustment, servicing, or maintenance while energized. In all cases, the work space shall permit at least a 90 degree opening of equipment doors or hinged panels.

Contrary to the above, the Primary Drain Failure Indicating Station Control Panels, located on the five Dryers, do not meet the above working clearance requirements and the enclosure doors do not open the required 90 degrees. Failure to ensure the control panels installed on the Dryer Skids, at the Chiller Compressor Building, complied with requirements specified in Section C.7(f) of the Contract (requirement to comply with National Electrical Code), is considered a Finding. Although this issue has minor safety significance and will be corrected prior to energizing, working clearance violations have been written up several times in the past, indicating BNI's corrective actions have not been adequate to prevent recurrence. Furthermore, because this repeat issue was not identified and addressed at the fabrication shop, corrective actions will unnecessarily require construction site rework and possibly added WTP project expense. Therefore, to solicit written actions from the Contractor to prevent recurrence, this NEC violation (requirement to comply with National Electrical Code) will be cited as Finding **S-08-AMWTP-RPPWTP-002-F02**.

Design/Installation Documents Reviewed:

1999 National Electrical Code

24590-CM-POA-MCCA-00001-01-91, *Drawing – Heat of Compression Dryer – HC-10000 with PLC & PV Electrical Schematic*, Revision 00B, dated June 6, 2005.

Conclusion:

BNI procured and accepted the Dryer Skids for the Chiller Compressor Building. However, BNI failed to establish an adequate method of controlling/inspecting this electrical equipment to ensure the control panels installed on the Dryer Skids complied with the working clearance

requirements as specified in Section C.7(f) of the Contract (requirement to comply with National Electrical Code). This is considered a Finding (S-08-AMWTP-RPPWTP-002-F02).

Reviewed By: Jim Berger Approved by: [Signature]
Date: 4/29/08 Date: 9/29/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB X BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-44

Inspector Name(s): WT Meloy

Dates of Inspection: April 28, 2008

Item(s) Inspected:

The site inspector observed leak tests of sections of the C2 and C3 ventilation stacks for the Analytical Laboratory Building (LAB). Testing included approximately 70' portions of each stack intended for placement in their preassembled steel support structure prior to erection. Testing was performed under Intermech's Work Data Packages WDP364019C-1 (C3 system) and WDP364020C-1 (C2 system).

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-MD00-T0001, *Heating, Ventilation and Air Conditioning Systems Installation*, Revision 7, dated May 9, 2007
- Specification 24590-WTP-3PS-MDH0-T0002, *Engineering Specification for Heating, Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (CM)*, Revision 1, dated March 8, 2004
- Drawing 24590-LAB-M8-SDJ-00001, *Analytical Lab Plant Room V&ID Stack Monitoring System*, Revision 0, dated December 30, 2003
- Drawing change Notice 24590-LAB-M8N-SDJ-00002, *LAB C2V Ventilation Stack Material Change*, Revision 0, dated August 3, 2006
- Drawing Change Notice 24590-LAB-M8N-SDJ-00006, *Add Rectangular Designation to C3V and C5V Duct Tags*, Revision 0, dated March 27, 2008
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-70-00097, *Drawing - HVAC Construction Drawing, HVAC Vent Stacks – Elevation 41 Ft – 0 in – Task Order 20 (3387-4B-210)*, Revision 00C, dated July 17, 2007
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-06-81, *HVAC Housing/Duct Structural Capability and Leak Testing*, Revision F, dated May 2, 2006

Installation Program Adequacy:

The quality level designator for stack sections tested was Construction Material (CM). A review of the subcontractor's work packages and procedure showed that testing was being performed in accordance with specification requirements. The constant pressure method was used. For the C2 system, an allowable leak rate of 5%, and a Maximum Operating Pressure (MOP) of +8" water gage (wg) were specified in the ductwork designators on Drawing Change Notice 24590-LAB-M8N-SDJ-00002. For the C3 systems an allowable leak rate of 1% and a MOP of +8" water

gage (wg) were specified in the ductwork designators on Drawing Change Notice 24590-LAB-M8N-SDJ-00006.

Acceptability of Material Being Used:

The calibration/certification stickers affixed to the measurement & test equipment (M&TE) used to perform the test indicated the M&TE calibration/certification was current. Test equipment configuration conformed to procedural requirements.

Work Activities:

For each stack section tested, construction, modifications and repairs affecting the test boundary were complete and the inlet and discharge openings were sealed before the test was started. Test equipment, including flow measurement and pressure indicating devices, was installed and the respective stack sections were sequentially and independently pressurized. Test pressure was required to be at least Maximum Operating Pressure (MOP) per Specification 24590-WTP-3PS-MDH0-T0002, "Engineering Specification for Heating Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (CM)", and Intermech Procedure "HVAC Housing/Duct Structural Capability and Leak Testing". MOP and minimum test pressure were +8.0" water gauge for each stack section. In each case, the specified test pressure was attained and leak rate was measure at well below allowable. Allowable leak rate for the C2 system was 585.44 CFM; measure leak rate was 1.70 CFM. Allowable leak rate for the C3 system was 248.62 CFM; measured leak rate was 2.25 CFM.

Note: Initially, Intermech had not included the reduction factor for test blank perimeter in the allowable leak rate calculations. This was questioned by the DOE Facility Representative and the calculations were redone to include the test blank perimeter data. Test results were not affected.

Training and Qualification of Personnel:

Testing personnel had been certified as Level II in accordance with Intermech's "HVAC Housing/Duct Structural Capability and Leak Testing" procedure noted above.

Adequacy of Final Records:

Duct and Housing Leak Rate Test forms were completed with all attributes addressed. Test records included: identification of the items tested, reference to applicable test procedure, test dates, identification of the test conductor, type of test, and the results of acceptability.

Conclusion:

Intermech successfully tested portions of the C2 and C3 exhaust stacks for the Analytical Laboratory (LAB). Testing was performed in accordance with the applicable specifications and written procedures. Test equipment was configured properly, and Measurement and Test Equipment (M&TE) was properly calibrated. Testing was performed in accordance with

approved procedures and provided verification that the stack sections conformed to the leakage criteria specified in contract documents. Intermech's testing personnel had been trained and certified for the test method used and test records were adequate.

Reviewed By: Jem Berger Approved by: KWA
Date: 5/5/08 Date: 7/14/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB X BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes X No___

Surveillance Report Number: S-08-WCD-RPPWTP-002-45

Inspector Name(s): WT Meloy

Dates of Inspection: April 28, 2008

Item(s) Inspected:

The site inspector observed leak testing of a section of the 28-inch diameter C5 ventilation stack for the Analytical Laboratory Building (LAB). Testing included an approximately 70' portion of stack intended for placement in the preassembled steel support structure prior to erection. Testing was performed under Intermech's Work Data Package WDP 364018C-1.

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-MD00-T0001, *Heating, Ventilation and Air Conditioning Systems Installation*, Revision 7, dated May 9, 2007
- Specification 24590-WTP-3PS-MDH0-T0001, *Engineering Specification for Heating, Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (QL)*, Revision 6, dated October 20, 2004
- Drawing 24590-LAB-M8-SDJ-00001, *Analytical Lab Plant Room V&ID Stack Monitoring System*, Revision 0, dated December 30, 2003
- Drawing Change Notice 24590-LAB-M8N-SDJ-00006, *Add Rectangular Designation to C3V and C5V Duct Tags*, Revision 0, dated March 27, 2008
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-70-00097, *Drawing - HVAC Construction Drawing, HVAC Vent Stacks – Elevation 41 Ft – 0 in – Task Order 20 (3387-4B-210)*, Revision 00C, dated July 17, 2007
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-06-81, *HVAC Housing/Duct Structural Capability and Leak Testing*, Revision F, dated: May 2, 2006

Installation Program Adequacy:

The quality level designator for ductwork tested was Air Permit (AP). A review of the subcontractor's work packages and procedure showed that testing was being performed in accordance with specification requirements. The pressure decay method was used. For the systems tested, an allowable leak rate of 1%, and a Maximum Operation Pressure (MOP) of +8" water gage (wg), were specified in the ductwork designators on the Drawing Change Notice in the list of "Design/Installation Documents Reviewed" above.

Acceptability of Material Being Used:

The calibration/certification stickers affixed to the measurement & test equipment (M&TE) used to perform the test showed that the M&TE calibration/certification was current. Test equipment configuration conformed to procedural requirements.

Work Activities:

Construction, modifications, and repairs affecting the test boundary were completed and the inlet and discharge openings of the stack section were sealed before the test was started. Test equipment, including temperature, and pressure indicating devices, was installed and the stack section was subsequently pressurized. Test pressure was required to be at least 1.25 times Maximum Operating Pressure (MOP) per Specification 24590-WTP-3PS-MDHO-T0001, *Engineering Specification for Heating, Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (QL)*, and Intermech Procedure "HVAC Housing/Duct Structural Capability and Leak Testing". Drawing Change Notice 24590-LAB-M8N-SDJ-00006, *Analytical Laboratory/Plant Room V&ID Monitoring System*, established MOP as +8.0" wg for a minimum required test pressure of +10" wg. The specified test pressure was attained and then allowed to decay per Intermech's *HVAC Housing/Duct Structural Capability and Leak Testing* procedure. Based on recorded pressure and temperature data, leak rate was determined to be well below allowable.

Training and Qualification of Personnel:

Testing personnel had been certified as Level II in accordance with Intermech's "HVAC Housing/Duct Structural Capability and Leak Testing" procedure noted above.

Adequacy of Final Records:

Duct and Housing Leak Rate Test forms were completed with all attributes addressed. Test records included: identification of the items tested, reference to applicable test procedure, test dates, identification of the test conductor, type of test, and the results of acceptability.

Conclusion:

Intermech successfully tested a portion of the C5 exhaust stack for the Analytical Laboratory (LAB). Testing was performed in accordance with the applicable specifications and written procedures. Test equipment was configured properly, and Measurement and Test Equipment (M&TE) was properly calibrated. Testing was performed in accordance with approved procedures and provided verification that the stack section conformed to the leakage criteria specified in contract documents. Intermech's testing personnel had been trained and certified for the test method used, and test records were adequate.

Reviewed By: Am Boyer Approved by: Kna
Date: 5/5/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-46

Inspector Name(s): EF Enloe

Dates of Inspection: April 2008

Item(s) Inspected:

As part of the Office of River Protection's (ORP) responsibilities regarding functioning as the Owner's Inspector for American Society of Mechanical Engineers B31.3 Code requirements specified in Section 340, ORP is conducting a review of weld and test records associated B31.3 construction activities at the Waste Treatment and Immobilization Plant (WTP) Project. These inspection activities were defined in a letter to Bechtel on May 11, 2006 (06-WTP-028) as follows:

Review of all completed system or partial system packages (depending on how BNI chooses to package completed work) to verify the pipe fabrication and installation meets ASME B31.3 requirements. The onsite inspection staff will annotate each completed package with unique markings to indicate the owner's determination that the package meets ASME B31.3 requirements.

The inspector reviewed final Aboveground Piping Inspection Record (APIR) from the Balance of Facilities (BOF) as part of this owners Inspection process.

Design/Installation Documents Reviewed:

24590-WTP-GPP-CON-3503, *Aboveground Piping Installation*, Revision 3, dated March 24, 2005.

Adequacy of Final Records:

The inspector reviewed 6 APIRs for conformity to criteria established in WD-3, found them to be acceptable with a few minor errors. The Contractor corrected the minor errors.

Conclusion:

The inspector concluded that 6 reviewed APIRs had been completed in accordance with 24590-WTP-WTP-CON-3503, *Aboveground Piping Installation*.

Reviewed By: Jim Berg Approved by: KWA
Date: 5/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW X LAW X LAB X BOF X Quality Class: ITS X BOP X

Dangerous Waste Permit Affecting: Yes X No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-47

Inspector Name(s): EF Enloe & RT Taylor

Dates of Inspection: April 2008

Item(s) Inspected:

As part of the Office of River Protection's (ORP) responsibilities regarding functioning as the Owner's Inspector for American Society of Mechanical Engineers B31.3 Code requirements specified in Section 340, ORP is conducting a review of weld and test records associated B31.3 construction activities at the Waste Treatment and Immobilization Plant (WTP) Project. These inspection activities were defined in a letter to Bechtel on May 11, 2006 (06-WTP-028) as follows:

Review of all completed system or partial system packages (depending on how BNI chooses to package completed work) to verify the pipe fabrication and installation meets ASME B31.3 requirements. The onsite inspection staff will annotate each completed package with unique markings to indicate the owner's determination that the package meets ASME B31.3 requirements.

The Site Inspectors reviewed final Field Weld Checklists (FWCL) from the High Level Waste (HLW), Low Activity Waste Facility (LAW), Laboratory Building (LAB), Pretreatment Facility (PTF) and Balance of Facilities (BOF) as part of this owner's Inspection process.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007.
- Code ASME B31.3 *American Society of Mechanical Engineers*, 1996 Edition
- 24590-WTP-MN-CON-01-001-08-01, *Welding Documentation (WD-3)*, Revision 17, dated November 30, 2006

Adequacy of Final Records:

The Site Inspectors reviewed 3,126 FWCLs for conformity to criteria established in WD-3 and ASME B31.3. The Site Inspector found them to be acceptable with a few minor errors. BNI corrected the minor errors.

Conclusion:

The Site Inspector completed review of all of the BOF and LAB Field Weld Check List (FWCL) records stored in Project Data Control (PDC) as of this date.

For this inspection, BNI had acceptably completed 3,126 FWCLs in accordance with contract requirements and procedure 24590-WTP-MN-CON-01-001-08-01, *Welding Documentation (WD-3)*.

Reviewed By: *Jean Byrd* Approved by: *KWA*
Date: *7/1/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-48

Inspector Name(s): MD Everts

Dates of Inspection: April 30, 2008

Item(s) Inspected:

The inspector performed a fit-up weld (GB-1) inspection on a 10" pipe to weld neck flange connection on pipe spool BOF-PSA-GK09763001-B in accordance with field change 24590-WTP-FC-P-07-0385 on the Plant Service Air System in the Chiller/Compressor building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-BOF-FWCL-CON-08-00003
- Welding Procedure – P1-A-C-LH , Revision 2
- Drawing – 24590-BOF-P3-PSA-GK09763001, *Balance of Facilities Isometric*, Revision 1, dated August 5, 2004
- Visual Weld Procedure – VT-ASME, Revision 6

Acceptability of Material Being Used:

The inspector verified the Contractor installed the correct weld neck flange material in accordance with the above drawing.

The inspector verified the Contractor was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Weld neck flange material/orientation and configuration
- Welding filler material
- Welder Qualification
- Fit-up Weld Acceptance

Training and Qualification of Personnel:

The inspector verified the welder (P-63) was qualified to make the field weld.

The Contractor's examiner was qualified to perform the Fit-up inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded a weld neck flange to the pipe spool on the Plant Service Air System using the correct flange material and filler metal, with a qualified welder and examiner in accordance with the appropriate design and welding program requirements.

Reviewed By: Jean Berger Approved by: KPA
Date: 5/5/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-49

Inspector Name(s): WT Meloy

Dates of Inspection: May 1, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (FW002C1) between pipe spool LAW-CHW-WS00061001-A and pipe spool LAW-CHW-WS00061001-B located at the (+)3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-CHW-WS00061001, *LAW Vitrification Building Isometric – CHW-WS-00061-S11C-6*, Revision 2, dated April 22, 2006
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0019*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01030*
- Qualification Record 24590-WTP-WQTR-CON-07-0051, *Welder Performance Qualification Test Record – P-18*, Revision 0, dated May 9, 2007

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0019* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01030* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-18 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01030 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Reviewed By: Jim Bergen Approved by: K. M. A.
Date: 5/5/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-50

Inspector Name(s): WT Meloy

Dates of Inspection: May 1, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a socket weld (FW004) between pipe spool LAW-MXG-GA00009001-C and pipe spool LAW-LMP-GA90368001-A located at the (+)3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LMP-GA90368001, *LAW Vitrification Building Isometric –LMP-GA-90368-S10A-1*, Revision 0, dated February 9, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0046*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-03359*
- Qualification Record 24590-WTP-WQTR-CON-07-0198, *Welder Performance Qualification Test Record – P-10*, Revision 0, dated December 4, 2002

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0046* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-03359* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-10 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-03359 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed a socket weld for Low Active Waste Building piping. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: Jean Berger Approved by: [Signature]
Date: 5/5/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-51

Inspector Name(s): MD Evarts

Dates of Inspection: May 1, 2008

Item(s) Inspected:

The inspector performed a final inspection on a 6" pipe to 90 degree elbow connection of the Steam Condensate Water System on field weld GB-04 on the west side of the LAW building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-BOF-FWCL-CON-08-00278
- Welding Procedure – P1-AT-LH, Revision 5
- Drawing – 24590-BOF-P3-SCW-ZU01818024, *Balance of Facilities Isometric*, Revision 1, dated April 2, 2008
- Visual Weld Procedure – VT-ASME, Revision 6

Acceptability of Material Being Used:

The inspector verified the Contractor installed the correct spools in accordance with the above drawing.

The inspector verified the Contractor was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Final weld acceptable
- Welding filler material
- Welder Qualification
- Configuration/orientation acceptable

Training and Qualification of Personnel:

The inspector verified the welder (P-66) was qualified to make the field weld.


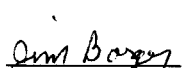

BNI's examiner was qualified to perform the fit-up inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be acceptably completed to the point of this inspection.

Conclusion:

BNI welded the 6" pipe on the LAW Steam Condensate Water System using the correct pipe spools, and welded them together with the correct filler metal, with a qualified welder, and a qualified examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-52

Inspector Name(s): EF Enloe

Dates of Inspection: May 1, 2008

Item(s) Inspected:

The site inspector performed visual fit-up inspection of a Split Ring Support (FW-05) for melter pour cave shield wall penetration elevation (+)3'-0" to (-)21'-0" of the Low Activity Waste (LAW) Building. The inspection included evaluation of the weld fit-up condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-SS-S15T-00139, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Plan*, Revision 0, dated February 17, 2004
- Drawing 24590-LAW SS-S15T-00140, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Collumn Line "E.9"*, Revision 1, dated May 5, 2004
- Field Change 24590-WTP-FC-P-08-0064
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI0015*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01080*

Installation Program Adequacy:

The site inspector determined Construction Work Package *LPI0015* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01080* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P82 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01080 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for Low Activity Waste Building structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Reviewed By: Jim Berger Approved by: [Signature]
Date: 5/5/08 Date: 7/5/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-53

Inspector Name(s): EF Enloe

Dates of Inspection: May 1, 2008

Item(s) Inspected:

The site inspector witnessed Fire Protection Water Storage & Distribution System (FSW) piping pressure testing at Balance of Facility (BOF) (+)673'-0" elevation, between N-3,954.00 & N-3,938.20. The tests were performed specifically to verify pressure boundary integrity at mechanical joints.

Design/Installation Documents Reviewed:

- ASME B31.3, *Process Piping*, 1996 Edition
- Specification 24590-WTP-3PS-PS-02-T0003, *Engineering Specification for Field Fabrication and Installation of Piping*, Revision 6, dated February 7, 2007
- Specification 24590-BOF-3PS-PZ41-T0001, *Engineering Specification for Underground Fire Protection Piping Mains*, Revision 3, dated April 22, 2002
- Procedure 24590-WTP-GPP-CON-3504, *Pressure Testing of Piping, Tubing and Components*, Revision 6B, dated January 10, 2008
- Field Change 24590-WTP-FC-P-08-0112, dated April 7, 2008
- Drawing 24590-BOF-C2-C12T-00025, *Firewater, Potable Water, Plant Service Air Yard Utility Composite Plan-Area 25*, Revision 9, dated April 20, 2008
- Drawing 24590-BOF-C2-C12T-00034, *Firewater, Potable Water, Plant Service Air Yard Utility Details*, Revision 6, dated April 20, 2006
- Drawing 24590-BOF-M6-FSW-00001, *P&ID Fire Protection System Fire Main Loop System FSW*, Revision 9, dated December 18, 2007
- Test Record 24590-BOF-PPTR-CON-08-0013, *Pressure Test Data Sheet*, dated May 1, 2008

Installation Program Adequacy:

The site inspector found the test package contained the appropriate procedure to correctly test the piping at hand. The Pressure Test Data Sheet specified the correct Code (ASME B31.3) and reflected proper test prerequisites including test method (hydrostatic), test pressure, test duration, test equipment including pressure relief valve, test medium (water), and acceptance criteria.

Acceptability of Material Being Used:

The site inspector verified BNI tested piping correctly in accordance with code requirements and the procedure noted in “Design/Installation Documents Reviewed” above. Mechanical attachment joints did not exhibit evidence of leakage when subjected to the specified test pressure.

Work Activities:

The site inspector verified the following attributes were acceptable in accordance with code and procedural requirements:

- Test apparatus was configured properly including test gauges and pressure relief valve
- Initial partial pressurization and preliminary checks were accomplished
- Test pressure was increased incrementally with pressure at each step being held long enough to equalize piping strains
- Test pressure was held for the required interval and then checked for leaks
- No leaks were detected

Training and Qualification of Personnel:

Qualification and training records for the Contractor’s testing personnel were reviewed. BNI training records show the testing Field Engineer had received training in the pertinent subject matter.

Adequacy of Final Records:

Test records met the requirements of ASME B31.3 paragraph 345.2.7 which stipulated the records made during testing include:

- Date of the test
- Identification of the piping system tested
- Test Fluid
- Test pressure
- Certification of results by the examiner

Records were legible and identifiable to the items tested.

Conclusion:

The BNI successfully tested Fire Protection Water Storage & Distribution System piping spools located at Balance of Facility (BOF) (+)673’-0” elevation, between N-3,954.00 & N-3,938.20. The BNI’s installation program adequately addressed procedural and code requirements including test method and acceptance criteria. Test medium was acceptable; test gauges were properly calibrated; test pressures were maintained for the required time interval; potential leak sources were examined in accordance with code requirements; and items tested met the specified

acceptance criteria. BNI testing personnel had been trained for the test method used, and inspection records were adequate.

Inspector: Stalae Reviewed By: Jim Boyer Approved by: K. Mc
Date: 5/27/08 Date: 5/27/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF_X_, Quality Class: ITS___, BOP_X_

Dangerous Waste Permit Affecting: Yes___ No_X_

Surveillance Report Number: S-08-WCD-RPPWTP-002-54

Inspector Name(s): Debra Wallace

Dates of Inspection: May 5, 2008

Item(s) Inspected:

Inspection of 480 volt 30-amp disconnect and 30-amp weld receptacle, installed at the Weld Shop in Combo Shop T15, as per Hazardous Work Package 24590-WTP-CUG-T-E-08-0162.

Design/Installation Documents Reviewed:

2002 National Electrical Code

Control of Temporary Electrical Installations, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008

System/Equipment Safety Tagout Permit #WTP-08-239

Work Activities:

The ORP electrical inspector verified the following attributes were acceptable in accordance with the National Electrical Code:

- Equipment listed by Nationally Recognized Testing Laboratory (NRTL)
- Met working clearance requirements
- Correct wiring method installed
- Correct overcurrent protection provided
- Grounding/bonding met requirements of Article 250
- Equipment was installed in a neat and workmanlike manner

No issues were identified with this installation.

Conclusion:

BNI installed the weld receptacle at the Weld Shop in Combo Shop T15, as per Hazardous Work Package 24590-WTP-CUG-T-E-08-0162, in accordance with the 2002 NEC.

Inspector: Debra Wallace Reviewed By: Jim Berger Approved by: [Signature]
 Date: 5-27-08 Date: 5/23/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF HLW ___ LAW ___ LAB ___ BOF ___ Quality Class: ITS ___ BOP

Dangerous Waste Permit Affecting: Yes ___ No

Surveillance Report Number: S-08-WCD-RPPWTP-002-55

Inspector Name(s): MD Everts

Dates of Inspection: May 6, 2008

Item(s) Inspected:

The inspector performed a final weld inspection on handrail between lines 11 & 12.1 and AA & A (FW-F3B) in the north side stair tower of PTF building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-PTF-FWCL-CON-08-00036
- Welding Procedure Specification (WPS) – P1-A-LH, Revision 4
- Drawing – 24590-PTF-SS-S15T-00037, Revision 1, dated July 6, 2005
- Visual Weld Inspection Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI installed the correct handrail material in accordance with the above drawing and used the correct filler material per the above WPS.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Handrail orientation and configuration
- Final Acceptance
- Welding filler material used
- Welder Qualification

Training and Qualification of Personnel:

The inspector verified the welder (I-111) was qualified to make the structural steel weld.

The inspector verified the BNI's weld inspector was qualified to perform the final weld inspection on the above weld in accordance with the visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be acceptably completed to the point of this inspection.

Conclusion:

BNI welded the handrail together (FW-3B) on the north side of PTF building, with the correct handrail material and filler metal, and a qualified welder in accordance with the appropriate design and welding program requirements. BNI's weld examiner was qualified to perform the fit-up acceptance of the welds.

Inspector: *M. Paul* Reviewed By: *Jim Berger* Approved by: *K. De*
Date: *5-29-08* Date: *5/29/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-56

Inspector Name(s): EF Enloe

Dates of Inspection: May 6, 2008

Item(s) Inspected:

The site inspector performed a final visual weld inspection of a shear plate to embed for beam support (W24X117) located at elevation 48'-0" of the Low Activity Waste (LAW) Building, Export Building. The inspection included evaluation of the weld fit-up condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-SS-S15T-00701, *LAW Vitrification Building Export Building Structural Steel Roof Framing Plan*, Revision 2, dated March 9, 2007
- Drawing 24590-LAW-S0-S15T-00013, *LAW Vitrification Building Structural Standards Steel Details*, Revision 9, dated October 19 2004
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LCS0108*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01069*

Installation Program Adequacy:

The site inspector found Construction Work Package *LCS0108* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01069* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 - Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for the BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that welder I-117 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed that the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-LAW-FWCL-CON-08-01069* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds of a shear plate to embed for beam support (W24X117) located at elevation 48’-0” of the Low Activity Waste (LAW) Building, Export Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Reviewed By: Jim Barry Approved by: KHA
Date: 5/15/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-57

Inspector Name(s): EF Enloe

Dates of Inspection: May 6, 2008

Item(s) Inspected:

The site inspector performed a final visual inspection of a Split Ring Support (FW-05) for a melter pour cave shield wall penetration at elevation (+)3'-0" to (-)21'-0" of the Low Activity Waste (LAW) Building. The inspection included evaluation of the welds final condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-SS-S15T-00139, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Plan*, Revision 0 dated February 17, 2004
- Drawing 24590-LAW SS-S15T-00140, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Collumn Line "E.9"*, Revision 1, dated May 5, 2004
- Field Change 24590-WTP-FC-P-08-0064
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI0015*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01080*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0015* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01080* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that welder P82 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01080 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for Low Activity Waste Building structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Reviewed By: Jam Berg Approved by: [Signature]
Date: 5/8/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ Quality Class: ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-58

Inspector Name(s): EF Enloe

Dates of Inspection: May 6, 2008

Item(s) Inspected:

The site inspector performed visual fit-up inspection of Split Ring Support (FW-35) for melter pour cave shield wall penetration elevation (+)3'-0" to (-)21"-0" of the Low Activity Waste (LAW) Building. The inspection included evaluation of the welds fit-up condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-SS-S15T-00139, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Plan*, Revision 0 dated February 17, 2004
- Drawing 24590-LAW SS-S15T-00140, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Column Line "E.9"*, Revision 1, dated May 5, 2004
- Field Change 24590-WTP-FC-P-08-0063
- Field Change 24590-WTP-FC-P-08-0064
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI7002*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01081*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI7002* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01081* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that welder P139 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-LAW-FWCL-CON-08-01081* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for Low Activity Waste Building structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Reviewed By: *Jim Berger* Approved by: *KHd*
Date: *5/9/08* Date: *7/8/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-59

Inspector Name(s): WT Meloy

Dates of Inspection: May 6, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a circumferential butt weld (FW001) between pipe spool LAW-SHR-JS00013004-A on Drawing 24590-LAW-P3-SHR-JS00013004 and pipe spool LAW-SHR-JS00013003-D on Drawing 24590-LAW-P3-SHR-JS00013003 located at the (+)28'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-SHR-JS00013003, *LAW Vitrification Building Isometric – SHR-JS-00013-S11K-2*, Revision 0, dated May 18, 2005
- Drawing 24590-LAW-P3-SHR-JS00013004 *LAW Vitrification Building Isometric – SHR-JS-00013-S11K-2*, Revision 0, dated May 18, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0063*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-03168*
- Qualification Record 24590-WTP-WQTR-CON-05-0201, *Welder Performance Qualification Test Record – P-58*, Revision 0, dated April 25, 2005

Installation Program Adequacy:

- The site inspector found Construction Work Package *LPI0063* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-03168* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination, and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-58 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-03168 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed a circumferential butt weld for Low Active Waste Building piping. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *W. Th. Jelen* Reviewed By: *Jerry Berger* Approved by: *K. Wa*
Date: *5/27/08* Date: *5/23/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-60

Inspector Name(s): EF Enloe

Dates of Inspection: May 6, 2008

Item(s) Inspected:

The site inspector performed a visual fit-up inspection of a pipe support (W4X13 to W14X233 Flange) to structural steel located at elevation 40'-11 3/16" of the Low Activity Waste (LAW) Building. The inspection included evaluation of the weld fit-up condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-PSA-GQ03713002, *LAW Vitrification Building Isometric*, Revision 1 dated May 9, 2007
- Drawing 24590-LAW-PSA-H20134, *Pipe Support Drawing* Revision 0, dated May 24, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI4501*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-00204*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI4501* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-08-00204* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that welder P148 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed that the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-00204 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for a Low Activity Waste Building pipe support to structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Reviewed By: Jim Bergen Approved by: K Pdr
Date: 5/9/08 Date: 7/18/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-61

Inspector Name(s): EF Enloe

Dates of Inspection: May 7, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (FW001C1) between pipe spool BOF-PSA-GK0976001-C and pipe spool BOF-PSA-GK00057002-B located at the (+)686'-6" 1/16" elevation of the Balance of Facilities (BOF). The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-PSA-GK09762001, *BOF Balance of Facilities Isometric*, Revision 1, dated August 5, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-02, *Bechtel Welding Procedure Specification P1-A-c-Lh*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0051*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00013*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0051* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00013* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-c-Lh*), filler material (E6016 & E7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified the Contractor had performed welding correctly in accordance with *Bechtel Welding Procedure Specification PI-A-c-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E6010 & E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-63 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00013* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Balance of Facilities pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *E. Enloe* Reviewed By: *Jem Berger* Approved by: *K. M. A.*
Date: *5/27/08* Date: *5/27/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-62

Inspector Name(s): EF Enloe

Dates of Inspection: May 7, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a circumferential butt weld (FW003) between pipe spool LAW-LMP-WS02054005-B and pipe spool LAW-LMP-WS02054005-C located at the (+)24'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LMP-WS02054005, *LAW Vitrification Building Isometric – LAW-LMP-WS-02054-S11C-4*, Revision 1, dated October 6, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI2601*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01093*

Installation Program Adequacy:

The site inspector found the Construction Work Package *LPI2601* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01093* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-24 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01093 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: E. Enloe Reviewed By: Jim Berger Approved by: K. W.
Date: 5/27/08 Date: 5/23/08 Date: 7/15/08

of

SURVEILLANCE REPORT

Facility: PTF X HLW___ LAW___ LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes X No___

Surveillance Report Number: S-08-WCD-RPPWTP-002-63

Inspector Name(s): MD Evarts
Evarts Enterprise, Inc.
(Sub-Contractor to PAC),
Supporting ORP

Dates of Inspection: May 7, 2008

Item(s) Inspected:

The inspector performed a general review of Advance Inspection Technologies' (AIT) Ultrasonic Testing procedure and BNI's Radiographic Testing procedure for the requirement of examining intersecting welds to circumferential welds.

Design/Installation Documents Reviewed:

- Procedure – 24590-WTP-MN-CON-01-001-10-03, *Radiographic Examination RT-ASME*, Revision 9, dated October 3, 2007
- Procedure – AIT-UT-005, *Automated Ultrasonic Phased Array Examination of Production Welds*, Revision 2, dated March 29, 2006.
- ASME B31.3-1996

Installation Program Adequacy:

ASME B31.3, paragraph 341.4.1(b)(1) states; "When a circumferential weld with an intersecting longitudinal weld(s) is examined, at least the adjacent 1-1/2 inches of each intersecting weld shall be examined".

The inspector reviewed BNI's RT procedure for the 1-1/2" requirement and found the requirement in paragraph 5.6.2 to RT at least 1-1/2 inches of the longitudinal weld.

The inspector reviewed AIT's UT procedure for the 1-1/2" requirement and found no mention of this requirement. The inspector talked to BNI's onsite UT Level III about the 1-1/2" requirement and he stated that AIT was not examining the longitudinal weld.

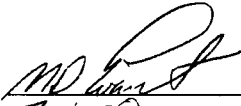
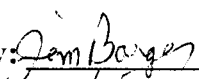

After the inspector raised this issue, BNI provided the inspector with a letter from the ASME secretary of the B31.3 committee, dated May 1, 2008, with the committee's official interpretation of ASME C&S File#08-597 which states; "Question 1 – Are the longitudinal welds made in accordance with Material Specifications listed in Table A-1 or Table 326.1 required to be examined per paragraph 341.4.1(b)(1) when the intersecting a circumferential

weld that is being examined? Reply – No. Reference Table 341.3.2, Note (3)”. Based on this letter, AIT is not out of compliance with ASME B31.3.

Conclusion:

BNI’s UT procedure adequately addressed the 1-1/2” requirement for examining longitudinal welds when these welds intersect a circumferential weld.

AIT’s procedure did not adequately address the 1-1/2” requirement for examining longitudinal welds when these welds intersect a circumferential weld. However, BNI provided a copy of a letter from the ASME secretary of the B31.3 committee, dated May 1, 2008, that indicated the intersecting longitudinal welds did not require examination if it was made in accordance with the Material Specifications listed in Table A-1 or Table 326.1. Based on this letter, AIT was not out of compliance with ASME B31.3.

Inspector:  Reviewed By:  Approved by: 
Date: 7-1-08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-64

Inspector Name(s): EF Enloe

Dates of Inspection: May 7, 2008

Item(s) Inspected:

The site inspector performed final inspection of field weld (FW-01), two rebar reinforcing studs to High Level Waste Treatment Building Structural Shield Door Liner (HLW) (-)21'-0" elevation structural steel. The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-HLW-DD-S13T-00027, *HLW Vitrification Building Structural Shield Door Liners Detail and Sections*, Revision 6, dated April 30, 2007
- Drawing 24590-HLW-DB-S13T-00159, *HLW Vitrification Building Concrete Forming Plan at EL. (-)21' 0"*, Revision 7, dated March 5, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-12, *Bechtel Welding Procedure Specification P1-STUD (D1.1)*, Revision 3, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *HCC1133*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00066*

Installation Program Adequacy:

The site inspector found Construction Work Package *HCC1133* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00066* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-STUD D1.1*), filler material (Stud Base Material), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-STUD (D1.1)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – Stud Welding
- Welding filler material – Stud Base Material
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-123 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-HLW-FWCL-CON-08-00066 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed stud welding for structural steel rebar located in the High Level Waste Treatment Building Structural Shield Door. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *E. Enbal* Reviewed By: *Sam Berger* Approved by: *KPA*
Date: *5/29/08* Date: *5/29/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW X LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-65

Inspector Name(s): EF Enloe

Dates of Inspection: May 8, 2008

Item(s) Inspected:

The site inspector performed final inspection of field welds (FW-145, FW-146, FW-147 & FW-148), plate washer to column base plates, at High Level Waste Treatment Building (HLW) (+)14'-0" elevation. The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-HLW-SS-S15T-00034, *HLW Vitrification Building Structural Steel Framing Partial Plan at EL 14'-0" (Area 4)*, Revision 6, dated August 23, 2007
- Drawing 24590-HLW-SS-S15T-00273, *HLW Vitrification Building Structural Column Base Plate Schedule*, Revision 6, dated September 28, 2007
- Field Change , *24590 WTP-FC-C-07-0215*, dated October 22, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *HCS2014*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00054*

Installation Program Adequacy:

The site inspector found Construction Work Package *HCS2014* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00054* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified contractor had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-114 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-HLW-FWCL-CON-08-00054* had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for structural steel located in the High Level Waste Treatment Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *F Enlal* Reviewed By: *Jim Berger* Approved by: *KKA*
Date: *5/29/08* Date: *5/29/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, **Quality Class:** ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-66

Inspector Name(s): Debra Wallace

Dates of Inspection: May 8, 2008

Item(s) Inspected:

Performed a joint BNI/DOE general surveillance of temporary power installed at various Conex Storage Boxes located at the WTP site. This joint effort was performed by the ORP site inspector along with Bechtel's NEC electrical inspector.

Design/Installation Documents Reviewed:

- 2002 National Electrical Code
- *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008
- 24590-WTP-MAR-CON-08-0049, *Lower Tier / Special Management Assessment Report – Control of Temporary Electrical Installations*, dated May 15, 2008, Revision 0

Observations:

The following deficiencies were identified at various locations:

- Article 225.30 requires each building or structures to be supplied by one feeder or branch circuit unless permitted in 225.30(A) through (E).

Several Conex Boxes had multiple branch circuits feeding the structures.

- Article 225.31 – Means shall be provided for disconnecting all ungrounded conductors that supply or pass through the building or structure. Article 250.32 – The disconnecting means shall be at a readily accessible location nearest the point of entrance of the conductors installed either inside or outside of the building or structure. The disconnecting means shall meet the requirements of Article 225.36, 225.38, & 225.39.

Contrary to above, several Conex Boxes did not have a disconnecting means, located at the structure, meeting the above requirements.

- Article 250.32 requires where two or more buildings or structures are supplied from a common ac service by a feeder(s) or branch circuit(s), the grounding electrode shall be

connected in the manner specified in 250.32(B) or (C). Section (B) requires the equipment grounding conductor ran with the supply conductors to be connected to the disconnecting means and to the grounding electrode.

Contrary to above, the equipment grounding conductor did not connect to the disconnecting means or the grounding electrode at several Conex Boxes. Also several Conex Boxes did not have a grounding electrode installed, as required above.

- Article 527.4(H) – Flexible cords and cables shall be protected from accidental damage. Sharp corners and projections shall be avoided. Article 400.14 requires flexible cords and cables to be protected by bushings or fittings where passing through holes in covers, outlet boxes, or similar enclosures.

Two locations were identified, where the cables were run through a hole in the metal siding and taped up to provide protection. It was obvious these installations were not installed by an electrician. The two locations were the Fitter's Conex located south of HLW and Iron Worker's Conex located east of HLW.

- Article 406.8 requires weatherproof boots for cord caps used outdoors and exposed to weather.

Contrary to above, the 240 volt male plug installed at Apollo Conex (located north of the LAB) did not have a weatherproof boot installed.

- Article 250.104(C) – Exposed structural steel that is interconnected to form a steel building frame that may become energized, shall be bonded to the service equipment enclosure and the grounding electrode conductor.

Several construction tents have electrical cords tie wrapped to the metal frames and the metal frames have not been grounded or bonded as required above.

The above issues are being tracked by BNI's Lower Tier / Special Management Assessment Report 24590-WTP-MAR-CON-08-0049 and BNI is also reviewing their process for installing or modifying Conex Boxes. This process review is being tracked in BNI's corrective action program (CAR #24590-WTP-CRPT-QA-08-209). Because the issues identified above were identified as a joint BNI/DOE inspection effort, findings were not cited. However, BNI actions to address the above deficiencies will be tracked as Observation S-08-WCD-RPPWTP-02-O04.

Conclusion:

A joint inspection was performed by the ORP site inspector and Bechtel's NEC electrical inspector on the temporary power installed at various Conex Storage Boxes located at the WTP site. Several deficiencies were identified and were being tracked by BNI's Lower Tier / Special Management Assessment Report 24590-WTP-MAR-CON-08-0049. BNI is also reviewing their process for installing and modifying temporary power to Conex Boxes. This process review is being tracked in BNI's corrective action program as CAR #24590-WTP-CRPT-QA-08-209.

Because the issues identified above were identified as a joint BNI/DOE inspection effort, findings were not cited. However, BNI actions to address the deficiencies identified on temporary power for the Conex Boxes will be tracked as Observation S-08-WCD-RPPWTP-02-004.

Inspector: DD. Wallace Reviewed By: Jem Berger Approved by: J. Wall
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-67

Inspector Name(s): EF Enloe

Dates of Inspection: May 12, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a circumferential butt weld (GB001) at 10" weld neck flange to pipe spool BOF-PSA-GK09762-A located at the (+)689'-3 1/2" elevation of the Balance of Facilities (BOF) Site. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-PSA-GK09762001, *BOF Balance of Facilities Isometric*, Revision 1, dated August 5, 2004
- Field Change 24590-WTP-FC-P-07-0387, *BOF (PSA & CHW Lines) Detail and Material at PSA Dryer 00001D*, dated December 26, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-02, *Bechtel Welding Procedure Specification P1-A-c-Lh*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0051*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00011*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0051* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00011* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-c-Lh*), filler material (E6016 & E7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified the Contractor had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-c-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E6010 & E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-63 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00011* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Balance of Facilities Plant Service Air pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *F Enloe* Reviewed By: *Jim Bergan* Approved by: *KMA*
Date: *5/27/08* Date: *5/27/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-68

Inspector Name(s): EF Enloe

Dates of Inspection: May 12, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a circumferential butt weld (FW001C1) between pipe spool BOF-PSA-GK0976001-C and pipe spool BOF-PSA-GK00057002-B located at the (+)686'-6 1/16" elevation of the Balance of Facilities (BOF) Site. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-PSA-GK09762001, *BOF Balance of Facilities Isometric*, Revision 1, dated August 5, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-02, *Bechtel Welding Procedure Specification P1-A-c-Lh*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0051*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00013*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0051* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00013* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-c-Lh*), filler material (E6016 & E7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified contractor had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-c-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E6010 & E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-63 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00013* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Plant Service Air BOF pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *J. Enloe* Reviewed By: *Jim Berger* Approved by: *KDA*
Date: *5/27/08* Date: *5/27/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB X BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-69

Inspector Name(s): WT Meloy

Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: May 8, 2008

Item(s) Inspected:

The site inspector observed leak testing of a section of the 28-inch diameter C5 ventilation stack for the Analytical Laboratory Building (LAB). Testing included an approximately 70' portion of the stack intended for placement in the preassembled steel support structure prior to erection. Testing was performed under Intermech's Work Data Package WDP 362018C-1. This test was in addition to testing of April 28, 2008 (Surveillance Report Number S-08-WCD-RPPWTP-002-45) and was performed to provide additional assurance that the ventilation stack met the specified leak criteria. The constant pressure method was used.

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-MD00-T0001, *Heating, Ventilation and Air Conditioning Systems Installation*, Revision 7, dated May 9, 2007
- Specification 24590-WTP-3PS-MDH0-T0001, *Engineering Specification for Heating, Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (QL)*, Revision 6, dated October 20, 2004
- Drawing 24590-LAB-M8-SDJ-00001, *Analytical Lab Plant Room V&ID Stack Monitoring System*, Revision 0, dated December 30, 2003
- Drawing Change Notice 24590-LAB-M8N-SDJ-00006, *Add Rectangular Designation to C3V and C5V Duct Tags*, Revision 0, dated March 27, 2008
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-70-00097, *Drawing - HVAC Construction Drawing, HVAC Vent Stacks – Elevation 41 Ft – 0 in – Task Order 20 (3387-4B-210)*, Revision 00C, dated July 17, 2007
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-06-81, *HVAC Housing/Duct Structural Capability and Leak Testing*, Revision F, dated: May 2, 2006

Installation Program Adequacy:

The quality level designator for ductwork tested was Air Permit (AP). A review of the subcontractor's work packages and procedure showed that testing was being performed in accordance with specification requirements. The constant pressure method was used. For the systems tested, an allowable leak rate of 1%, and a Maximum Operation Pressure (MOP) of +8" water gage (wg), were specified in the ductwork designators on the Drawing Change Notice listed above.

Acceptability of Material Being Used:

The calibration/certification stickers affixed to the measurement & test equipment (M&TE) used to perform the test indicated the M&TE calibration/certification was current. Test equipment configuration conformed to procedural requirements.

Work Activities:

Construction, modifications, and repairs affecting the test boundary were completed and the inlet and discharge openings of the stack section were sealed before the test was started. Test equipment, including temperature, pressure, and flow indicating devices, was installed and the stack section was subsequently pressurized. Test pressure was required to be at least 1.25 times Maximum Operating Pressure (MOP) per Specification 24590-WTP-3PS-MDHO-T0001, *Engineering Specification for Heating, Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (QL)*, and Intermech Procedure "HVAC Housing/Duct Structural Capability and Leak Testing". Drawing Change Notice 24590-LAB-M8N-SDJ-00006, *Analytical Laboratory/Plant Room V&ID Monitoring System*, established MOP as +8.0" wg for a minimum required test pressure of +10" wg. Test pressure was attained, and subsequent to test section temperature stabilization, was maintained for the specified time period. Leak rates were recorded for the specified intervals. Based on the M&TE indicated data, the leak rate was determined to be well below allowable.

Training and Qualification of Personnel:

Testing personnel had been certified as Level II in accordance with Intermech's "HVAC Housing/Duct Structural Capability and Leak Testing" procedure noted above.

Adequacy of Final Records:

Duct and Housing Leak Rate Test forms were completed with all attributes addressed. Test records included: identification of the items tested, reference to applicable test procedure, test dates, identification of the test conductor, type of test, and the results of acceptability.

Conclusion:

Intermech successfully retested a portion of the C5 exhaust stack for the Analytical Laboratory (LAB). Testing was performed in accordance with the applicable specifications and written procedures. Test equipment was configured properly, and Measurement and Test Equipment (M&TE) was properly calibrated. Testing was performed in accordance with approved procedures and provided verification that the stack section conformed to the leakage criteria specified in contract documents. Intermech's testing personnel had been trained and certified for the test method used, and test records were adequate.

Inspector: *A. Thibault* Reviewed By: *Jem Barzen* Approved by: *KPA*
Date: *7/2/08* Date: *7/2/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X Quality Class: ITS X BOP ___

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-70

Inspector Name(s): WT Meloy

Dates of Inspection: May 15, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (FW009) between the three-inch core pipe of spool BOF-FRP-PZ-01750-P and spool BOF-FRP-PZ-01750-R. The inspection included evaluation of weld fit-up condition to determine compliance with the requirements of ASME B31.3 for normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007
- Drawing 24590-BOF-P4-FRP-00002, *Pipe Fabrication and Support Location Drawing FRP-PZ-01750-W62F-03*, Revision 2, dated July 12, 2006
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPU0123*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00049*
- Qualification Record 24590-WTP-WQTR-CON-08-0021, *Welder Performance Qualification Test Record – P-150*, Revision 0, dated February 6, 2008

Installation Program Adequacy:

- The site inspector found Construction Work Package *BPU0123* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00049* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination, and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-150 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-BOF-FWCL-CON-08-00049 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed a weld fit-up for Balance of Facilities piping. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *Ant W. Selay* Reviewed By: *Jem Bergen* Approved by: *JPA*
Date: *5/27/08* Date: *5/27/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW X LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-71

Inspector Name(s): EF Enloe

Dates of Inspection: May 13, 2008

Item(s) Inspected:

The site inspector performed final inspection of field weld (FW-01), reinforcing angles to High Level Waste Treatment Building (HLW) (+)0'-0" elevation structural steel. The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-HLW-SS-S15T-00023, *HLW Vitrification Building Structural Steel Framing Plan at EL 0'-0"*, Revision 7, dated November 3, 2005
- Drawing 24590-HLW-SS-S15T-00027, *HLW Vitrification Building Structural Steel Framing Plan*, Revision 7, dated November 3, 2005
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *HCS0003*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00048*

Installation Program Adequacy:

The site inspector found Construction Work Package *HCS0003* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00048* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-122 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-HLW-FWCL-CON-08-00048 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for structural steel located in the High Level Waste Treatment Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: EF Enlal Reviewed By: Jim Berger Approved by: KHA
Date: 5/29/08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-72

Inspector Name(s): EF Enloe

Dates of Inspection: May 13, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a circumferential butt weld (GB001) between pipe spool BOF-PSA-GK09760001-B and installed pipe pup section located at the (+)692'-0 3/8" elevation of the Balance of Facilities (BOF). The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-PSA-GK09760001, *BOF Balance of Facilities Isometric*, Revision 1, dated August 5, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-02, *Bechtel Welding Procedure Specification P1-A-c-Lh*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0051*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00019*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0051* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00019* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-c-Lh*), filler material (E6016 & E7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified the Contractor had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-c-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E6010 & E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-63 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00019* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Plant Service Air BOF pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *E Enloe* Reviewed By: *Jem Berger* Approved by: *J/PA*
Date: *5/27/08* Date: *5/27/08* Date: *9/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-73

Inspector Name(s): EF Enloe

Dates of Inspection: May 13, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (GB002) between pipe spool BOF-PSA-GK09760001-B and installed pipe pup section located at the (+)692'-0 3/8" elevation of the Balance of Facilities (BOF). The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was not a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-PSA-GK09760001, *BOF Balance of Facilities Isometric*, Revision 1, dated August 5, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-02, *Bechtel Welding Procedure Specification P1-A-c-Lh*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0051*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00019*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0051* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00019* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-c-Lh*), filler material (E6016 & E7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification PI-A-c-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E6010 & E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-63 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00019* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Plant Service Air BOF pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *F Enloe* Reviewed By: *Jem Berger* Approved by: *J/ML*
Date: *5/27/08* Date: *5/27/08* Date: *7/15/08*

Work Activities:

The site inspector verified the contractor had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination, and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that welder P139 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-02826 had been completed. The inspection records identified the item examined, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed a pipe support weld for Low Activity Waste Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *F. Enlal* Reviewed By: *Jim Berger* Approved by: *K/M*
Date: *6/16/08* Date: *6/16/08* Date: *7/15/08*

4/11

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-75

Inspector Name(s): EF Enloe **Dates of Inspection:** May 14, 2008
ENLOE CONSULTANT, INC.

Item(s) Inspected:

The site inspector performed a visual fit-up inspection of a Split Ring Support (FW-35) for a melter pour cave shield wall penetration at elevation (+)3'-0" to (-)21"-0" of the Low Activity Waste (LAW) Building. The inspection included evaluation of the welds final condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-SS-S15T-00139, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Plan*, Revision 0, dated February 17, 2004
- Drawing 24590-LAW SS-S15T-00140, *LAW Vitrification Building/Main Building Melter Pour Cave Steel Shield Wall Column Line "E.9"*, Revision 1, dated May 5, 2004
- Field Change 24590-WTP-FC-P-08-0063, dated March 12, 2008
- Field Change 24590-WTP-FC-P-08-0064, dated April 9, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI7002*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01081*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI7002* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01081* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination, and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P139 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records confirmed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01081 had been completed. The inspection records identified the item examined, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI's LAW visual fit-up of a Split Ring Support for a melter pour cave shield wall penetration was acceptable. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *J. Enloe* Reviewed By: *Jim Berger* Approved by: *K. De*
Date: *6/16/08* Date: *6/16/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS BOP ___

Dangerous Waste Permit Affecting: Yes ___ No

Surveillance Report Number: S-08-WCD-RPPWTP-002-76

Inspector Name(s): RI Taylor

Dates of Inspection: May 15, 2008

Item(s) Inspected:

The site inspector witnessed the placement, testing, and consolidation of concrete for Pretreatment Facility (PTF) Slabs PCC2828, PCC2829, and PCC2830, at elevation +28' on the South side of the PTF. Three small slabs were incorporated into one placement of approximately 115 cubic yards of concrete.

The site inspector also performed forms, rebar, embeds (FRE) and electrical grounding inspection of the one foot thick slab.

Design/Installation Documents Reviewed:

- 24590-PTF-CPC-CON-07-009, *-Concrete Pour Card*.
- 24590-PTF-CPC-CON-07-011, *-Concrete Pour Card*.
- 24590-PTF-CPC-CON-07-024, *-Concrete Pour Card*.
- 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 26, 2007.
- 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 29, 2007.
- 24590-BOF-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2007.
- 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated June 22, 2007.

Work Activities:

For the placements listed above, the inspector observed quality control staff performing concrete receipt activities and observed their review of the batch tickets, as required by Section 3.11.2 of *Concrete Operations (Including Supply)*. The inspector concluded these activities were performed in accordance with established requirements.

The inspector observed the Materials Testing subcontractor field technicians performing concrete receipt activities, observed the review of batch tickets, and observed recording of information required by Section 3.2.1 of the *Engineering Specification for Material Testing Services*. The inspector concluded these activities and documents were performed or completed in accordance with the specification.

The inspector examined the conduct of testing for concrete temperature, slump, and unit weight. The inspector concluded the Material Testing subcontractor technicians were performing these testing activities in accordance with their procedures, the applicable American Society for Testing and Materials (ASTM) standards, and BNI's specifications.

The inspector witnessed the placement of concrete, for placements PTF PCC2828, PCC2829 and PCC2830 and concluded the concrete was being produced, placed, consolidated, and tested in accordance with procedures, specifications, and required codes and standards. The inspector found the concrete was being delivered within the acceptable concrete temperature ranges.

The inspector reviewed primary structural design documents listed in the above Concrete Pour Cards for the slab placements. Other drawings referenced on the primary drawings were also used for the inspection.

The site inspector also performed forms, rebar, embeds (FRE) and electrical grounding inspections of the one foot thick slabs. Items such as clear cover, rebar tying, edge distance, rebar sizing, and location were verified.

Adequacy of Final Records:

The inspector examined Concrete Pour Cards 24590-PTF-CPC-CON-07-009, 24590-PTF-CPC-CON-07-011, and 24590-PTF-CPC-CON-07-024 and concluded the required signatures were in place prior to the start of the placement.

Conclusion:

BNI was batching, placing, consolidating, and testing concrete for slab placements PTF PCC2828, PCC2829, and PCC2830 in accordance with engineering specifications and the SRD.

BNI had installed reinforcement, embeds, electrical grounding, and concrete work, in an acceptable manner in accordance to design requirements.

Inspector: R. Smith Reviewed By: Jerry George Approved by: KPA
Date: 5-28-08 Date: 5/28/08 Date: 7/15/12

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-77

Inspector Name(s): RI Taylor

Dates of Inspection: May 15, 2008

Item(s) Inspected:

The site inspector witnessed the placement, testing, and consolidation of concrete for PTF Grillage Fill inside Vessel Skirt Rings. Vessel Skirt Rings for the Ultrafiltration Process System, UFP-VSL-00002A, and UFP-VSL-00002B were filled with concrete.

Design/Installation Documents Reviewed:

- 24590-PTF-CPC-CON-08-012, *Concrete Pour Card*
- 24590-PTF-CPC-CON-08-013, *Concrete Pour Card*
- 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 26, 2007
- 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 26, 2007
- 24590-WTP-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2005
- 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated June 22, 2007
- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2005.

Work Activities:

For the placements listed above, the inspector observed Field Engineering Staff performing concrete receipt activities and observed their review of the batch tickets, as required by Section 3.11.2 of *Concrete Operations (Including Supply)*. The site inspector concluded these activities were performed in accordance with established requirements.

The site inspector observed the Materials Testing subcontractor field technicians performing concrete receipt activities, observed the review of batch tickets, and observed recording of information required by Section 3.2.1 of the *Engineering Specification for Material Testing Services*. The site inspector concluded these activities and documents were performed or completed in accordance with the specification.

The site inspector examined the conduct of testing for concrete temperature, slump, and unit weight. The site inspector concluded the Material Testing subcontractor technicians were performing these testing activities in accordance with their procedures, the American Society for Testing Materials (ASTM) standards, and BNI's specifications.

Adequacy of Final Records:

The site inspector examined the listed Concrete Pour Cards for the placements observed, and concluded the required signatures were in place prior to the start of the placements.

Conclusion:

BNI had performed batching, placing, consolidation, and testing of concrete for the filling of Skirt Rings for Vessels UFP-VSL-00002A and UFP-VSL-00002B in accordance with applicable requirements.

Inspector: R. Taylor Reviewed By: Jim Barger Approved by: KHA
Date: 5-28-08 Date: 5/28/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-78

Inspector Name(s): EF Enloe

Dates of Inspection: May 19, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a circumferential butt weld (FW001) between pipe spool PTF-PWD-WU00140007-A and pipe spool PTF-PWD-WU00140005-B located at the (+) 22'-8 13/16" elevation of the Pretreatment Facility (PTF) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007.
- Drawing 24590-PTF-P3-PWD-WU00140007, *PTF Pretreatment Facility Isometric*, Revision 1, dated October 22, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *PPI2052*
- Field Weld Checklist – *24590-PTF-FWCL-CON-08-00108*

Installation Program Adequacy:

The site inspector found Construction Work Package *PPI2052* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-PTF-FWCL-CON-08-00108* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-24 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-PTF-FWCL-CON-08-00108* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Pretreatment Facility PWD pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *F. Enloe* Reviewed By: *Jim Berger* Approved by: *[Signature]*
Date: *5/27/08* Date: *5/27/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-79

Inspector Name(s): EF Enloe

Dates of Inspection: May 19, 2008

Item(s) Inspected:

The site inspector performed a visual fit-up inspection of pipe support (W4XW13 to W18X60 Flange & W4X13 to W4X13) to structural steel located at elevation (+)16'-11 5/16" of the Low Activity Waste (LAW) Building. The inspection included evaluation of the welds final condition to determine compliance with AWS D1.1 acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-CHW-WS00061004, *LAW Vitrification Building Isometric*, Revision 1 dated June 20, 2005
- Drawing 24590-LAW-PH-50-00011001, *Pipe Support Drawing*, Revision 2, dated October 22, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI0019*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-03954*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0019* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-LAW-FWCL-CON-07-03954* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that welder P18 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-03954 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed pipe support welds for Low Activity Waste Building structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: EF Enloe Reviewed By: Jean Berger Approved by: KWA
Date: 5/27/08 Date: 5/27/08 Date: 7/15/08

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SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-80

Inspector Name(s): WT Meloy

Dates of Inspection: May 19, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of field welds (FA001) for pipe support LAW-MXG-H10027 on pipe spool LAW-MXG-GA00041006-A located at the (+)3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-MXG-GA00041006, *LAW Vitrification Building Isometric – MXG-GA-00041-S10A-2*, Revision 0, dated March 13, 2007
- Drawing 24590-WTP-PH-50-00001001, *Standard Pipe Support Details Axial Stop – Welded AW*, Revision 2, dated September 25, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0063*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-03672*
- Qualification Record 24590-WTP-WQTR-CON-03-0198, *Welder Performance Qualification Test Record – P-10*, Revision 0, dated October 22, 2003

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0063* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-07-03672* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-10 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-03672 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for a Low Active Waste Building pipe support. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Submitted By: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 5/28/08 Date: 5/28/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-81

Inspector Name(s): RI Taylor

Dates of Inspection: May 20, 2008

Item(s) Inspected:

The inspector performed a surveillance of subcontractor (Cobra) installation of roofing materials and factory foam wall panels at the North Annex of the Low Activity Facility (LAW). The inspector observed the placement of the vapor barrier over the BNI installed metal decking. A single layer of 5/8" dens deck was placed under the vapor barrier, from the northern edge of the LAW out to 10'. Installation of 2 layers of 2.80" polystyrene insulation and a covering of a layer of ice and water shield per approved roofing details was also installed. The inspector verified current revisions of detail drawings used by the subcontractor to install factory foam wall panels.

Design/Installation Documents Reviewed:

- *Submittal-24590-CM-HC2-ATPS-00001-02-00003, Inspection of Factory Foam Insulated Metal Wall Panel Installation, Revision 00E*
- *Submittal-24590-CM-HC2-ATPS-00001-52-00005, Details, Revision 00D*
- *Submittal-24590-CM-HC2-ATPS-00001-52-00001, Details, Revision 00C*
- *Submittal-24590-CM-HC2-ATPS-00001-50-00061, Roof Details, Revision 00A*
- *Submittal-24590-CM-HC2-ATPS-00001-39-00006, Roof Details, Revision 00A*
- *Submittal-24590-CM-HC2-ATPS-00001-15-00012, Inspection Reports, Revision 00A*

Acceptability of Material Being Used:

Prior to installation the inspector verified product information from bundles of roofing material staged at the WTP site. The siding materials had been delivered to the site and were found to be acceptable for use by the subcontractor.

Work Activities:

The inspector witnessed the installation of roofing materials at the LAW North Annex Facility. The surveillance occurred over a period of time to include siding panel receipt/installation, and subsequent roofing installation on portions of the roof. The inspector verified the use of caulking

between the flashing and installed structural steel. The inspector noted the sequence of events for each of the specific roofing materials that were installed. A single layer of 5/8" dens deck was placed under the vapor barrier. A layer of 6 mil vapor barrier was installed over the decking previously installed by BNI. Two staggered layers of extruded polystyrene insulation were installed over the vapor barrier. A layer of ice and water shield material was applied over the top of the polystyrene insulation and secured through the previously installed layers, through the metal decking.

A layer of Stevens reinforced TPO membrane was in the process of being installed over the roofing; this membrane installation had not been completed at the time of this surveillance.

Training and Qualification of Personnel:

The inspector reviewed training records, on file in the subcontractor's field office, documenting training of installation personnel on installation of factory foam insulated metal wall panels and roofing materials.

Adequacy of Final Records:

The inspector interviewed the subcontractor quality representative and found no completed inspection reports have been submitted to BNI to date for the LAW North Annex roofing activities. The inspector did perform a review of submittal 24590-CM-HC2-ATPS-00001-015-00012 for completed wall panel inspection reports, and found them acceptable.

Conclusion:

The subcontractor was installing factory foam metal wall panels and roofing materials at the Low Activity Waste Facility, North Annex (LAW) in accordance with applicable requirements.

Inspector: R. Taylor Reviewed By: Jem Bergan Approved by: [Signature]
Date: 5-28-08 Date: 5/28/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-82

Inspector Name(s): WT Meloy

Dates of Inspection: May 20, 2008

Item(s) Inspected:

The site inspector performed visual inspection of field welds on pipe support LAW-PCW-H20065 located at the (+)28'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of final weld condition to determine compliance with visual acceptance criteria for AWS D1.1-2000.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-PCW-WC00011007, *LAW Vitrification Building Isometric – PCW-WC-00011-C12A-4*, Revision 0, dated February 9, 2005
- Drawing 24590-WTP-PH-50-00003001, *Standard Pipe Support Details Cantilever – Cantilever CC*, Revision 4, dated September 25, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-85, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 3, dated December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI0043*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04662*
- Qualification Record 24590-WTP-WQTR-CON-05-0072, *Welder Performance Qualification Test Record – P-113*, Revision 0, dated February 9, 2005

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0043* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04662* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination, and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-113 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-LAW-FWCL-CON-07-04662* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for a Low Active Waste Building pipe support. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 5/28/08 Date: 5/28/08 Date: 7/17/08

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ Quality Class: ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-83

Inspector Name(s): WT Meloy & RI Taylor Dates of Inspection: May 21, 2008

Item(s) Inspected:

The site inspectors witnessed the placement, testing, and consolidation of concrete for HLW wall 1116A. Prior to the placement of concrete, the site inspectors verified interior wall cleanliness, clear cover between wall forms and reinforcing steel, and reinforcing steel wire ties (some wire ties had been left in place since before the 2005 shutdown).

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 26, 2007
- Specification 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 29, 2007
- Specification 24590-BOF-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2007
- Drawing 24590-HLW-DBS13T-00002, *HLW Vitrification Building Concrete Overall Plan At El 0'-0"*, Revision 4, dated August 17, 2007
- Procedure 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated June 22, 2005
- Project Record 24590-HLW-CPC-CON-08-028, *Concrete Pour Card*

Installation Program Adequacy:

The site inspectors found the specifications, drawings, and procedure noted in the list of "Design/Installation Documents Reviewed" above contained or referenced sufficient detail to provide for correct placement of concrete.

Acceptability of Material Being Used:

The site inspectors found Concrete Pour Card 24590-HLW-CPC-CON-08-028 specified an appropriate mix design for placement 1116A.

Work Activities:

Prior to wall form installation, the site inspectors performed visual inspections of various rebar wire ties occurring within the placement volume. The wire ties were found to be acceptable.

The wall placement had been inspected by BNI for deficient rebar ties and any questionable wire ties were removed and replaced to avoid shifting of the rebar during concrete placement.

For the placement identified above, the site inspectors observed the following attributes and activities and determined they were being performed or completed in accordance with the specifications, and procedure noted in the list of "Design/Installation Documents Reviewed" above.

- The interior of the formed area was clean and free of debris.
- BNI's quality control staff performed concrete receipt activities and reviewed batch tickets, as required by Section 3.11.2 of *Concrete Operations (Including Supply)*.
- The materials testing subcontractor's field technicians performed concrete receipt activities, reviewed batch tickets, and recorded information as required by Section 3.2.1 of the *Engineering Specification for Material Testing Services*.
- The materials testing subcontractor's field technicians tested concrete for temperature, slump, and unit weight in accordance with their procedures, the applicable American Society for Testing and Materials (ASTM) standards, and BNI specifications.
- Concrete was being delivered within the acceptable concrete temperature ranges.
- Concrete was conveyed, placed, and consolidated in accordance with procedures, specifications, and required codes and standards.

Training and Qualification of Personnel:

Training and qualification records for concrete testing personnel have been reviewed. Personnel have been trained and certified in accordance with specification requirements.

Adequacy of Final Records:

The site inspectors observed that batch tickets were reviewed and the information required by Section 3.2.1 of the *Engineering Specification for Material Testing* had been recorded. The site inspectors examined Concrete Pour Card 24590-HLW-CPC-CON-07-007, and concluded the required signatures were in place prior to the start of the placement.

Conclusion:

The site inspectors witnessed concrete placement at the High Level Waste facility and concluded BNI had placed, consolidated, and tested concrete in accordance with procedures, engineering specifications, required codes and standards, and the Safety Requirement Document (SRD). Quality control and testing personnel had been trained and certified for the examination and test methods used, and pertinent attributes of quality assurance documentation had been completed.

Inspector(s): R. Taylor Reviewed By: Jem Boyer Approved by: [Signature]
Date: 5/29/08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-84

Inspector Name(s): EF Enloe

Dates of Inspection: May 22, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (FW001) between pipe spool LAW-LVP-PW00009002-A and pipe spool LAW-LVP-PW00009001-A located at the (+)64'-9 13/16" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007.
- Drawing 24590-LAW-P3-LVP-PW00009002, *LAW Vitrification Building Isometric*, Revision 0, dated July 7, 2007
- Drawing 24590-LAW-P3-LVP-PW00009001, *LAW Vitrification Building Isometric*, Revision 0, dated July 5, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0059*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04934*

Installation Program Adequacy:

The site inspector observed Construction Work Package *LPI0059* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04934* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-149 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-04934 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: J Enloe Reviewed By: Jim Berger Approved by: K/PL
Date: 5/29/08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-85

Inspector Name(s): EF Enloe

Dates of Inspection: May 22, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (FW004) at pipe spool LAW-LMP-GL90242004-A and reworked in accordance with 24590-WTP-CDR-CON-08-0126 located at the (+)16'-4" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LMP-GL90242004, *LAW Vitrification Building Isometric*, Revision 0, dated February 27, 2007
- 24590-WTP-CDR-CON08-0126, *Construction Deficiency Report (CDR)*, dated July 5, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0046*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01375*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0046* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01375* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-10 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-LAW-FWCL-CON-08-01375* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

EF Enloe
Inspector: EF Enloe Reviewed By: Jim Borgon Approved by: *[Signature]*
Date: 3/29/08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS X BOP___

Dangerous Waste Permit Affecting: Yes X No___

Surveillance Report Number: S-08-WCD-RPPWTP-002-86

Inspector Name(s): EF Enloe

Dates of Inspection: May 22, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (FW007) between pipe spool BOF-FRP-PZ-01751-M and pipe spool BOF-FRP-PZ-01751-L located at the (+)662'-4 3/8" elevation of the Balance of Facilities (BOF). The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007.
- Drawing 24590-BOF-P4-FRP-00003, *Pipe Fabrication and Support Drawing*, Revision 2, dated July 12, 2006
- Drawing 24590-PTF-M6-PWD-00057, *PTF-P&ID-Plant Wash & Disposal System Underground Transfer Lines*, Revision 4, dated January 31, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0123*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00059*

Installation Program Adequacy:

The site inspector observed Construction Work Package *LPI0123* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00059* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-66 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-BOF-FWCL-CON-08-00059 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

EF Enloe
Inspector: EF Enloe Reviewed By: Jenn Bonyon Approved by: K/PA
Date: 5/29/08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-87

Inspector Name(s): EF Enloe

Dates of Inspection: May 22, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (FW007) between pipe spool BOF-FRP-PZ-01749-L and pipe spool BOF-FRP-PZ-01751-M located at the (+)662'-4 1/4" elevation of the Balance of Facilities (BOF). The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007.

- Drawing 24590-BOF-P4-FRP-00001, *Pipe Fabrication and Support Drawing*, Revision 2, dated July 12, 2006
- Drawing 24590-PTF-M6-PWD-00057, *PTF-P&ID-Plant Wash & Disposal System Underground Transfer Lines*, Revision 4, dated January 31, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPU0123*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00030*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPU0123* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00030* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-150 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00030* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a BOF pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *J. Enlal* Reviewed By: *Jim Boyer* Approved by: *J. Enlal*
Date: *5/29/08* Date: *5/29/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ____, HLW ____, LAW ____, LAB ____, BOF X, **Quality Class:** ITS ____, BOP X

Dangerous Waste Permit Affecting: Yes ____, No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-88

Inspector Name(s): Debra Wallace

Dates of Inspection: May 22, 2008

Item(s) Inspected:

Inspection of General Distribution Rack GDR-009 installed next to Substation 14 located on the northwest corner of the HLW Facility, as per Construction Utilities Group Work Package 24590-WTP-CUG-T-E-08-0081 and Temporary Electrical Installation Request Form TEIR-24590-WTP-EIP-CON-08-050, consisting of:

- 480 volt, 200-amp main disconnect MDS-GDR-009 (fused 200A)
- 480 volt, 100-amp disconnect DS-1 (fused 100A) feeding 100-amp plug
- 480 volt, 100-amp disconnect DS-2 (fused 60A) feeding 100-amp plug
- 480 volt, 100-amp disconnect DS-3 (fused 50A) feeding 50-amp plug
- 480 volt, 30-amp disconnect DS-4 (fused 25A) feeding 30-amp plug
- 480 volt, 60-amp disconnect DS-5 (fused 60A) feeding mini power center
- 25 KVA mini power center MCP-009

Design/Installation Documents Reviewed:

- 2002 National Electrical Code
- *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008.

Work Activities:

The ORP electrical inspector verified the following attributes were acceptable in accordance with the National Electrical Code:

- Equipment listed by Nationally Recognized Testing Laboratory (NRTL)
- Electrical equipment not damaged and suitable for the environment
- Met working clearance requirements
- Correct wiring method installed
- Correct overcurrent protection provided
- Grounding/bonding met requirements of Article 250

Conclusion:

BNI had installed General Distribution Rack GDR-009 located next to Substation 14 on the northwest corner of the HLW Facility, in accordance with the 2002 NEC.

Submitted By: D.O. Wallace Reviewed By: Jem Berger Approved by: K/NE
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

0A
Sitter/Lin

SURVEILLANCE REPORT

Facility: PTF ___ HLW X LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-89

Inspector Name(s): J Barger/MD Evarts **Dates of Inspection:** May 13, 2008
DOE Evarts Consulting, Inc
(Sub-contractor to PAC),
Supporting DOE

Item(s) Inspected:

The Office of River Protection (ORP) performed an inspection of NuWeld, Inc., located in Trout Run, Pennsylvania. NuWeld was selected by Bechtel National Inc. (BNI) to fabricate Waste Treatment and Immobilization Plant (WTP) joggle pipe spool penetrations (Purchase Order 24590-QL-POA-PY00-00004). This inspection reviewed both BNI's Supplier Oversight activities and NuWeld quality and fabrication processes. NuWeld production was put on hold just before the inspectors arrived at the site due to BNI design drawing errors.

Design/Installation Documents Reviewed:

- Quality Control Manual, 24590-QL-POA-PY00-00004-08-00001, Revision 00C
- Engineering Specification – 24590-WTP-3PS-PS02-T0001, *Shop Fabrication of Piping*, Revision 8, dated February 12, 2008.
- Material Acceptance Plan 24590-WTP-AS-04-00165, *Offset Piping Assemblies (HLW Above Grade Elevation)*
- BNI NuWeld Audit Report 24590-WTP-AR-QA-07-029, Revision 1, dated August 30, 2007.

BNI's Supplier Oversight Program:

The inspectors reviewed a copy of BNI's MAP for the fabrication of joggle piping. The MAP designated this procurement for Level 3-full scope oversight and specified typical Supplier Quality Representative (SQR) inspection attributes (first weld operation, welder qualifications, material verification, final configuration, material documentation, etc.).

The inspectors reviewed a sample of BNI's SQR Supplier Verification Reports (SVR) of inspection activities. There had been 34 SVRs generated since the purchase order was issued. Twelve issues had been raised and close by the SQRs. The SQR reports addressed MAP inspection requirements and issues raised were appropriately addressed prior to closure.

The inspectors reviewed BNI's audit report of NuWeld. Only minor issues were identified. The audit report documented an adequate review of NuWeld quality programs.

The inspectors reviewed nine Supplier Deviation Disposition Requests (SDDR) generated by the Supplier. Some dealt with BNI drawing dimensional errors that ultimately led to the stop work to allow time for BNI to address these design drawing dimensional errors issue globally. Some others dealt with typical material code year designation change requests. No concerns were identified with the disposition of these SDDRs. The Supplier stated they do use emails to communicate with BNI but follow-up with SDDRs as needed. The inspectors reviewed some copies of the email files and found several discussed BNI drawing dimensional errors, dating back to 2007. Based on the number of drawing related issues identified in these emails, the inspectors concluded BNI was not timely in addressing this issue. This was identified by BNI prior to the inspectors arriving at this fabrication shop. As a result, BNI directed the supplier to stop work on fabrication of the joggles until this issue was addressed by BNI engineering.

Other than the BNI drawing error issue already identified by BNI and being addressed, no additional concerns were identified in this area.

Supplier Quality Assurance Program Implementation:

The inspectors reviewed the Supplier's Non Compliance Reports (NCR) associated with this WTP procurement (9 provided). Most of the NCRs concerned dimensional errors and welding issues. These NCRs were adequately dispositioned.

The inspectors reviewed the Supplier's Corrective Action Requests (CAR) associated with this WTP procurement (8 CARs). No concerns were identified with the disposition of these CARs.

The inspectors reviewed the Supplier's Calibration Program *Gage Control*, Revision C and determined the Supplier was implementing an adequate program to ensure measuring and testing equipment (M&TE) were being calibrated and controlled in an acceptable manner. The inspectors determined M&TE were appropriately labeled indicating the date of calibration and date when calibration was again due, and records indicated calibrations were performed by a sub-contractor with standards traceable to nationally recognized standards.

Installation Program Adequacy:

The inspectors reviewed two Welding Procedure Specifications (W-7 & W-9) and determined they were acceptable in accordance with the above engineering specification for welding and ASME Section IX.

The inspectors reviewed the Supplier's written NDE practice *Qualification and Certification of Nondestructive Examination*, NWS-006, Revision A, and determined it was acceptable in accordance with the above welding specification and SNT-TC-1A except there was no objective evidence that an NDE Level III Inspector had approved the current revision of the written practice as required by SNT-TC-1A. After the inspectors brought this to BNI's attention, NuWeld had their Level III Inspector review and sign the current revision of the written practice. The Supplier had out-sourced the NDE Level III Inspector activities and the inspectors reviewed this NDE Level III Inspector's qualifications and determined them to be acceptable in accordance with the Supplier's written practice.

The inspectors reviewed the Visual examination procedure, Revision 0 and determined it to be acceptable in accordance with the above piping engineering specification for welding and ASME B31.3.

The inspectors reviewed Liquid Penetrant procedure NWS-033, Revision A and found it to be acceptable in accordance with ASME Section V and ASME B31.3 except there was no objective evidence their NDE Level III Inspector reviewed and approved this procedure as required by their written practice. NuWeld had their NDE Level III review and sign the LP procedure.

Acceptability of Material Being Used:

The inspectors reviewed Supplier audits to qualify their sub-tier suppliers to be placed on their Approved Suppliers List and determined they performed the audits in accordance with their QAM. The audits were led by the Supplier's lead auditor and his qualifications were on file in accordance with their QAM. The Supplier audits were detailed and of adequate scope.

The inspectors reviewed several Certified Material Test Reports (CMTR) for bulk pipe material and welding filler material and determined they were in accordance with the above engineering specifications for piping and welding.

Training and Qualification of Personnel:

The inspectors reviewed three welder qualifications and determined they were in accordance with the above specification and ASME Section IX. The inspectors reviewed the welders' continuity log and determined the welders were maintaining their qualifications in accordance with ASME Section IX.

The inspectors reviewed two visual welding examiner qualifications and determined they were not qualified in accordance with the above piping specification. Paragraph 3.2.2.2 of the piping specification states; "Perform and evaluate examinations in accordance with procedures and acceptance standards prepared in accordance with the applicable code and/or standard, and the ASME Boiler & Pressure Vessel Code, Section V". This was an administrative error; NuWeld's examiners were certified welding inspectors (CWI) by AWS. After the inspector's raised this issue with BNI, NuWeld revised its certification program to include referencing ASME Boiler & Pressure Vessel Code, Section V requirements. No additional welding examiner training or certifications were required. All the inspectors had current eye examinations.

Adequacy of Final Records:

The inspectors reviewed final work packages (2004121-060-1 & 2004121-060-2) and determined they were neat and complete as required by the BNI Form E321V.

Conclusion:

BNI's oversight of NuWeld, Inc., a Quality Level joggle pipe spool penetration fabricator was adequate. Supplier Quality Representative Reports indicated adequate verification activities were ongoing at this Supplier facility and issues raised by the Supplier or BNI were being documented and addressed in an acceptable manner. NuWeld, Inc. quality program was acceptable to fabricate and assemble these joggle pipe spools; minor weld program issues were identified and being addressed by this Supplier.

Performance issues with BNI engineering's efforts to address BNI design drawings problems was identified by BNI and a procurement hold was placed on the Supplier until BNI engineering addressed these problems.

Inspector: MLP Reviewed By: Jean Barger Approved by: KME
Date: 7-1-08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW_X___ LAW___ LAB___ BOF___ **Quality Class:** ITS_X___ BOP___

Dangerous Waste Permit Affecting: Yes___ No_X___

Surveillance Report Number: S-08-WCD-RPPWTP-002-90

Inspector Name(s): Jim Barger/MD Evarts **Dates of Inspection:** May 15, 2008
DOE/ Evarts Consulting Inc.

Item(s) Inspected:

The Office of River Protection (ORP) performed an inspection of American Fabricators, Inc., located at Idaho Falls, Idaho. American Fabricators was selected by Bechtel National Inc. (BNI) to fabricate Quality Level Waste Treatment and Immobilization Plant (WTP) embedded edge plates for concrete placements. This inspection reviewed both BNI's Supplier Oversight activities and American Fabricators' quality and fabrication processes.

Design/Installation Documents Reviewed:

- American Fabricators, Inc. Purchase Order 24590-WTP-QL-FPA-DD00-00001, dated November 11, 2007
- Material Acceptance Plan (MAP) 24590-WTP-AS-04-00531, Revision 1, dated February 26, 2008
- Engineering Specification – 24590-WTP-3PS-SS00-T0002, *Welding of Carbon Structural Steel*, Revision 6, dated August 30, 2005
- American Fabricators, Inc. Approved Suppliers List (ASL), Revision 46, dated December 19, 2007

BNI's Supplier Oversight Program:

The inspectors reviewed a copy of BNI's MAP for the fabrication of the embedded edge plates. The MAP designated this procurement for Level 3-with 40 Supplier Quality Representative (SQR) hours originally provided for oversight. Other than the qualification and use of stud guns and performance of visual examinations, the fabrication of these edge plates required very little special process activities and most of the typical MAP inspection attributes were marked not applicable.

The inspectors reviewed a sample of BNI's SQR Supplier Verification Reports (SVR) of inspection activities. There had been 8 SVRs generated since the purchase order was issued. Four issues had been raised and subsequently closed by the SQRs, mostly concerning excessive coating thickness requirements. The SQR reports addressed the applicable MAP inspection requirements and issues raised were appropriately addressed prior to closure.

The inspectors reviewed the one Supplier Deviation Disposition Request (SDDR) generated by the supplier. This SDDR regarded errant nail hole spacing and was accepted by BNI as use-as-is

in Noncompliance Report 08-01-002. No concern was identified with the disposition of this SDDR.

Supplier Quality Assurance Program Implementation:

The inspectors reviewed the Supplier's Approved Suppliers List (ASL) and reviewed the purchase order and audit reports, for the sub-tier suppliers responsible for providing the nelson studs and angle iron used in the fabrication of the edge plates. The purchase orders and audit reports used to place the sub-tier suppliers on the Supplier's ASL were appropriate for the procurement.

The audits discussed above were performed by a contract auditor. The inspectors reviewed the qualification requirements for this auditor and determined the auditor was qualified in accordance with NQA-1 requirements.

The inspectors reviewed the Supplier's Calibration Program 2 and determined the Supplier was implementing an adequate program to ensure measuring and testing equipment (M&TE) were being calibrated and controlled in an acceptable manner. The inspectors determined M&TE were appropriately labeled indicating the date of calibration and date when calibration was again due, and records indicated calibrations were performed by a sub-contractor with standards traceable to nationally recognized standards.

The inspectors reviewed the Supplier's Non Compliance Reports (NCR) associated with this WTP procurement (5 NCRs). No concerns were identified with the disposition of these NCRs.

Installation Program Adequacy:

The inspectors reviewed one Welding Procedure Specifications (WS-26395) and determined it was in accordance with the above engineering specification for welding and AWS D1.1.

The inspectors reviewed the Supplier's filler metal control procedure *QAI-WM-001*, Revision 0 and determined it was acceptable in controlling filler metal.

Training and Qualification of Personnel:

The inspectors reviewed six welder qualifications and determined they were in accordance with the above specification and AWS D1.1.

The inspectors reviewed two visual welding examiners' qualifications and determined the examiners were qualified in accordance with the above specification. These examiners had current eye examinations.

Although not related to the quality level procurement of embedded edge plates, the inspectors noted the Supplier's examiners were not qualified in accordance with that specific BNI purchase order to perform visual examinations on CM vessels being fabricated in the shop, in that the examiners were AWS certified welding inspectors but not certified in accordance with SNT-TC-

1A. BNI was informed of the administrative issue and reportably took steps to have the Supplier revise its NDE qualification procedure to allow AWS D1.1 certifications under SNT-TC-1A. This should address this minor problem.

The inspectors reviewed the lead auditor's qualifications and determined the auditor was qualified in accordance with the supplier's procedure QAP-2-004, *Qualification and Certification of Audit Personnel*, revision 2.

Adequacy of Final Records:

The inspectors reviewed final work package. *Embedded Angle 26395*, and determined it was neat and complete as required by the E321V.

Conclusion:

BNI's oversight of American Fabricators, Inc. a Quality Level embed edge plate fabricator was adequate. Supplier Quality Representative Reports indicated adequate verification activities were ongoing at this Supplier facility and issues raised by the Supplier or BNI were being documented and addressed in an acceptable manner. American Fabricators, Inc. quality program was acceptable to fabricate and assemble these edge plates.

Inspector: John D. [Signature] Reviewed By: [Signature] Approved by: [Signature]
Date: 6/26/08 Date: 6/26/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, Quality Class: ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-91

Inspector Name(s): Debra Wallace

Dates of Inspection: May 22, 2008

Item(s) Inspected:

Inspection of new HVAC feeder and 60-amp disconnect, installed on the north side of Mobile Office T-7A, as per Construction Utilities Group Work Package 24590-WTP-CUG-T-E-08-0176 and Temporary Electrical Installation Request Form TEIR-24590-WTP-EIP-CON-08-081.

Design/Installation Documents Reviewed:

- 2002 National Electrical Code
- *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008

Work Activities:

The ORP electrical inspector verified the following attributes were acceptable in accordance with the National Electrical Code:

- Equipment listed by Nationally Recognized Testing Laboratory (NRTL)
- Electrical equipment not damaged and suitable for the environment
- Met working clearance requirements
- Correct wiring method installed
- Correct overcurrent protection provided
- Grounding/bonding met requirements of Article 250

Conclusion:

BNI had installed the HVAC feeder and disconnect on the north side of Mobile Office T-7A in accordance with the 2002 NEC.

Inspector: D.O. Wallace Reviewed By: Jim Borgus Approved by: KME
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes X No___

Surveillance Report Number: S-08-WCD-RPPWTP-002-92

Inspector Name(s): R Taylor
Taylor Consulting Inc
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: May 21, 2008

Item(s) Inspected:

The site inspector performed inspection of field weld (GB-001) between BOF Process Radioactive Condensate System (RLD) piping spools BOF-RLD-ZS03382003-W31A and a 4" diameter stainless steel pup piece located in construction area 03A trench at elevation 664'-6". The inspection included evaluation of the weld fit-up condition to determine compliance with the welding procedure specification.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-RLD-ZS03382003, *RLD-ZS-03382-W31A-4-Balance of Facilities Isometric*, Revision 0, dated October 27, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-23, *Bechtel Welding Procedure Specification P8-T-AG*, Revision 8, dated November 19, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPU0157*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00305*
- Qualification Record 24590-WTP-WQTR-CON-07-0076, *Welder Performance Qualification Test Record – P-140*, Revision 0, dated August 14, 2007

Installation Program Adequacy:

The site inspector determined Construction Work Package *BPU0157* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00305* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-AG*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

The piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed the weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P8-T-AG* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed the welder (P-140) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-BOF-FWCL-CON-08-00305 had been completed. The inspection record identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. The record was legible and identifiable to the item inspected.

Conclusion:

BNI completed the fit-up for the selected pipe spools located in the Low Active Waste Building. The configuration and orientation of the items installed conformed to the drawings, and preparation for welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Inspector: R. Santos Reviewed By: Jim Berger Approved by: Kate
 Date: 7-2-08 Date: 7/2/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-93

Inspector Name(s): WT Meloy

Dates of Inspection: May 27, 2008

Item(s) Inspected:

The site inspector performed visual inspection of field welds on monorail maintenance platform structural steel located at the (+)3'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of final weld condition to determine compliance with visual acceptance criteria for AWS D1.1-2000.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-S1-S15T-00090, *LAW Vitrification Building Main Building Monorail Maintenance Platforms 45 & 46 Steel TOS Elev (+) 16'-10 3/4"*, Revision 2, dated August 17, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-85, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 3, dated December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LCS-0114*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-00001*
- Qualification Record 24590-WTP-WQTR-CON-08-0049, *Welder Performance Qualification Test Record – P-118*, Revision 0, dated March 3, 2008

Installation Program Adequacy:

The site inspector found Construction Work Package *LCS-0114* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-LAW-FWCL-CON-08-00001* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

SURVEILLANCE REPORT

Facility: PTF X HLW X LAW X LAB X BOF X **Quality Class:** ITS X BOP X

Dangerous Waste Permit Affecting: Yes X No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-94

Inspector Name(s): EF Enloe & R Taylor

Dates of Inspection: May, 2008

Item(s) Inspected:

As part of the Office of River Protection's (ORP) responsibilities regarding functioning as the owner's Inspector for American Society of Mechanical Engineers B31.3 Code requirements specified in Section 340, ORP is conducting a review of weld and test records associated B31.3 construction activities at the Waste Treatment and Immobilization Plant (WTP) Project. These inspection activities were defined in a letter to Bechtel on May 11, 2006 (06-WTP-028) as follows:

Review of all completed system or partial system packages (depending on how BNI chooses to package completed work) to verify the pipe fabrication and installation meets ASME B31.3 requirements. The onsite inspection staff will annotate each completed package with unique markings to indicate the owner's determination that the package meets ASME B31.3 requirements.

The site inspectors reviewed final Field Weld Checklists (FWCL) from the High Level Waste (HLW), Low Activity Waste Facility (LAW), Laboratory Building (LAB), Pretreatment Facility (PTF), and Balance of Facilities (BOF) as part of this owner's Inspection process.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007
- Code ASME B31.3 *American Society of Mechanical Engineers*, 1996 Edition
- 24590-WTP-MN-CON-01-001-08-01, *Welding Documentation (WD-3)*, Revision 17, dated November 30, 2006

Adequacy of Final Records:

The site inspectors reviewed 2,555 FWCLs for conformity to criteria established in WD-3 and ASME B31.3. The site inspectors found these FWCLs to be acceptable with a few minor errors. BNI corrected the minor errors.

Conclusion:

The site inspectors completed review of WTP Field Weld Check List (FWCL) records stored in Project Data Control (PDC) as of this date.

BNI had acceptably completed 2,555 FWCLs in accordance with contract requirements and procedure 24590-WTP-MN-CON-01-001-08-01, *Welding Documentation (WD-3)*.

Inspector: ^{R. Taylor} (s) J. Enbal Reviewed By: Jem Barger Approved by: K. Pe
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-95

Inspector Name(s): MD Everts

Dates of Inspection: May 27, 2008

Item(s) Inspected:

The inspector performed a final inspection on a 10" flange to pipe connection of the Plant Service Air System on field weld GB-3 in the Chiller/Compressor building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-BOF-FWCL-CON-08-00309
- Welding Procedure – P1-A-C-LH, Revision 2
- Drawing – 24590-BOF-P3-PSA-GK09760001, *Balance of Facilities Isometric*, Revision 1, dated August 5, 2004
- Visual Weld Procedure – VT-ASME, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI installed the correct pipe flange to the correct pipe spool in accordance with the above drawing.

The inspector verified BNI was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Final acceptable
- Welding filler material
- Welder qualification
- Configuration/orientation acceptable

Training and Qualification of Personnel:

The inspector verified the welder (P-5) was qualified to make the field weld and BNI's examiner was qualified to perform the final weld inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be acceptably completed to the point of this inspection.

Conclusion:

BNI welded the Plant Service Air System pipe flange and pipe spool together in accordance with the above drawing, and welded them together with the correct filler metal, with a qualified welder, and a qualified examiner in accordance with the appropriate design and welding program requirements.

Inspector: *MLP* Reviewed By: *Jim Berger* Approved by: *WA*
Date: *5-29-08* Date: *5/29/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB X BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-96

Inspector Name(s): WT Meloy

Dates of Inspection: May 27, 2008

Item(s) Inspected:

The site inspector performed surveillance of field welding performed by BNI Subcontractor Apollo Sheet Metal, Inc (ASM). Welds were located on ductwork and supports in the Analytical Laboratory Building at the 0'-0" elevation. The inspection included evaluation of weld final condition to determine compliance with AWS D1.1 or AWS D9.1 acceptance criteria as applicable.

Design/Installation Documents Reviewed:

- Subcontractor Submittal 24590-CM-HC1-MDHM-00007-08-00006, *Procedure – ASM-GMA-03 – WPS Stainless Steel (AWS D9.1)*, Revision 00B, dated November 7, 2007
- Subcontractor Submittal 24590-CM-HC1-MDHM-00007-08-00012, *Procedure – Welding Procedure AWS-SMA-01*, Revision 00B, dated October 5, 2007
- Subcontractor Submittal 24590-CM-HC1-MDHM-00007-25-00002, *Certification of Qualification – Visual Weld Inspection – T. Grimshaw*, Revision 00A, dated April 16, 2008
- Subcontractor Submittal 24590-CM-HC1-MDHM-00007-62-00075, *Drawing – Analytical Laboratory – HVAC Details at El. 17 Ft. -0 In. / Area 1 – C1V, C2V, & C3V Systems – 017-A1-C2-018-S2- Sht 2 of 2*, Revision 00A, dated February 22, 2008
- Subcontractor Submittal 24590-CM-HC1-MDHM-00007-08-00008, *Procedure – QCP-07-Visual Weld Inspection*, Revision 00A, dated March 6, 2007
- ASM Work Package *C-3/-1-A-DWG-M672-A6-106-02*
- ASM Work Package *Support 017-A1-C2-018-S2-FW*
- ASM personnel qualification *Welder/Welding Operator Qualification – A13-GMAW*, Revision 0, dated May 21, 2008
- ASM personnel qualification *Welder/Welding Operator Qualification – A13-GMAW*, Revision 0, dated November 13, 2007

Installation Program Adequacy:

The site inspector found the work packages referenced in the list of "Design/Installation Documents Reviewed" above contained or referenced sufficient details to provide for correct installation of the ductwork and support components. The work package referenced the appropriate welding procedure specifications (*ASM-GMA-03 – WPS Stainless Steel (AWS D9.1)*, and *Welding Procedure AWS-SMA-01*), provided for the appropriate filler material (ER316L, and E7018), and specified the applicable inspection procedure (*QCP-07-Visual Weld Inspection*).

Acceptability of Material Being Used:

Ductwork and support material types and sizes conformed to design requirements, and the welding filler material classifications (ER316L and E7018) met the requirements of their respective welding procedure specifications.

Work Activities:

The site inspector verified ASM had performed welding correctly in accordance with the requirements of *ASM-GMA-03 – WPS Stainless Steel (AWS D9.1)* or *Welding Procedure AWS-SMA-01* as applicable, and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Ductwork welding processes – GMAW, and support welding process – SMAW
- Ductwork welding filler material – ER316L and support welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for ASM’s weld examiner and welding personnel. ASM’s *Welder/Welding Operator Qualification Records* showed welder A-13 was qualified to use *ASM-GMA-03 – WPS Stainless Steel (AWS D9.)*, and *Welding Procedure (AWS-SMA-01)*. ASM’s personnel certification records indicated the weld examiner had been certified as Level II for visual weld inspection.

Adequacy of Final Records:

The appropriate inspection attributes in Work Packages *C-3/-1-A-DWG-M672-A6-106-02*, and *Support 017-A1-C2-018-S2-FW* had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

Apollo Sheet Metal, Inc. (ASM) completed welding for ductwork located in the Analytical Laboratory Building. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. ASM used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. ASM’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *Phil Hefley* Reviewed By: *Jim Bergin* Approved by: *KMA*
 Date: *5/29/08* Date: *5/29/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-97

Inspector Name(s): MD Everts

Dates of Inspection: May 29, 2008

Item(s) Inspected:

The inspector performed a final weld (FW-1) inspection on a 8" pipe to 90 degree elbow connection on pipe spool HLW-NLD-WT00014004-A to spool HLW-NLD-WT00014004-B on the Non-Radioactive Liquid Waste Disposal System in the HLW building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-HLW-FWCL-CON-08-00093
- Welding Procedure – P8-T-AG , Revision 7
- Drawing – 24590-HLW-P3-NLD-WT00014004, *HLW Vitrification Building Isometric*, Revision 0, dated March 10, 2004
- Visual Weld Procedure – VT-ASME, Revision 6

Acceptability of Material Being Used:

The inspector verified the Contractor installed the two spools together in accordance with the above drawing.

The inspector verified the Contractor was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Spool orientation and configuration
- Welding filler material
- Welder Qualification
- Final Weld Acceptance

Training and Qualification of Personnel:

The inspector verified the welder (P-36) was qualified to make the field weld.

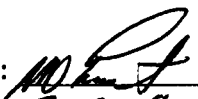
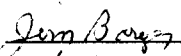

BNI's examiner was qualified to perform the final inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded the two pipe spools together on the Non-Radioactive Liquid Waste Disposal System using the correct pipe spools and filler metal, with a qualified welder and examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 5-29-08 Date: 5/29/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ____, HLW ____, LAW ____, LAB ____, BOF X, **Quality Class:** ITS ____, BOP X

Dangerous Waste Permit Affecting: Yes ____ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-98

Inspector Name(s): Debra Wallace **Dates of Inspection:** May 29, 2008
Wallace Consulting, Inc.

Item(s) Inspected:

Reviewed the following documents assembled in Hazardous Energy Work Packages to perform annual maintenance on off shift at Substations 7 & 8:

Work Package 24590-WTP-CUG-T-PM-08-0212 – Substation 7

- Temporary Electrical Installation Request Form – TEIR #24590-WTP-EIP-CON-07-108
- Construction Utility Group (CUG) Work Instructions – CUG # 24590-WTP-CUG-T-PM-08-0212
- Temporary Power Field Sketch 24590-WTP-FSK-CON-E-05-007, Revision 7
- Hazard Identification Checklist
- Arc Flash and Shock Hazards Calculation Summary Sheets (Substation 7 Transformer switching instructions , switching feeder breakers at Substation 7 & performing zero energy check at Shunt Trip junction box)
- Zero Energy Check Instructions
- Applicable JHA’s, Pre Job Briefing, and Craft Training Requirements

Work Package 24590-WTP-CUG-T-PM-08-0213 – Substation 8

- Temporary Electrical Installation Request Form – TEIR #24590-WTP-EIP-CON-07-109
- Construction Utility Group (CUG) Work Instructions – CUG # 24590-WTP-CUG-T-PM-08-0213
- Temporary Power Field Sketch 24590-WTP-FSK-CON-E-05-008, Revision 6
- Hazard Identification Checklist
- Arc Flash and Shock Hazards Calculation Summary Sheets (Substation 8 Transformer switching instructions , switching feeder breakers at Substation 8 & performing zero energy check at Shunt Trip junction box)
- Zero Energy Check Instructions
- Applicable JHA’s, Pre Job Briefing, and Craft Training Requirements

Design/Installation Documents Reviewed:

- 2002 National Electrical Code

- *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008

Work Activities:

During the review of the work packages, the inspector questioned the Hazard Risk Category “0” identified on the Arc Flash Calculation Summary Sheet for switching feeder breakers at Substation 7. The site inspector verified the warning label installed at Substation 7 required Hazard Risk Category “1” personnel protective clothing to perform the feeder breaker switching. After discussion and review of the arc flash calculation with the CUG field engineer, it was determined the incident-energy exposure level calculation (.83 cal/cm²) matched the work package calculation and Substation 7 was mislabeled. The mislabeling of the warning label at Substation 7 was being tracked in BNI’s corrective action program (PIER #24590-WTP-PIER-QA-08-0972). BNI immediately installed the correct warning label at Substation 7. This resolves this issue.

The ORP electrical inspector verified the work packages:

- Contained JHA’s identifying the electrical hazards
- Identified the arc flash and shock hazard boundaries
- Identified a clear description of PPE requirements
- Contained worker’s training requirements
- Contained current revision of design drawings & JHA’s
- Provided a process for feedback/improvement

The ORP inspector performed a work package review only, the actual work was performed on the off shift and not observed by the inspector. No issues were identified in the Substation 8 work package.

Conclusion:

With exception of the conflict between the work package’s arc flash calculation and the warning label posted at Substation 7, which was immediately corrected and was (for trending) being tracked by BNI’s corrective action program, BNI’s Hazardous Energy Work Packages issued to perform annual maintenance at Substations 7 & 8 addressed NFPA-70E electrical safety requirements. The work packages also met the requirements of Project Integrated Safety Management System (ISMS) by addressing the following ISMA Core Functions: analyzed the hazards, developed and implemented hazard control, and was a process to provide feedback/improvement.

Inspector: CO Wallace Reviewed By: Jem Berger Approved by: KWA
 Date: 6-23-08 Date: 6/23/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-99

Inspector Name(s): RI Taylor
Taylor Consulting, Inc.

Dates of Inspection: May 27-29, 2008

Item(s) Inspected:

The Site Inspector performed a surveillance of cementitious fireproofing installation at the Low Activity Waste Facility (LAW) North Annex, 0'-00" elevation. The coating subcontractor (*Clayton Coatings*) was in the process of mixing and installing cementitious fireproofing on carbon steel beams and columns around the outer perimeter of the annex's lower elevation, interior surfaces.

Design/Installation Documents Reviewed:

- 24590-WTP-3PS-ATFR T0002 – *Engineering Specification for Cementitious Fireproofing*, Revision 2, dated July 13, 2006
- 24590-CM-HC2-ATFR-00001-05-00021 – *Subcontractor Submittal for Monokote Fireproofing*, Revision 00A, dated November 4, 2004
- 24590-CM-HC2-ATFR-00001-03-00035 - *Subcontractor Submittal for Fireproofing Details*, Revision 00A, dated November 15, 2004

Acceptability of Material Being Used:

The Site Inspector obtained the fireproofing products submittal 24590-CM-HC2-ATFR-00001-05-00021 and reviewed the product data for Grace, Monokote Z-146. The subcontractor was correctly mixing the product listed in the submittal.

Work Activities:

The Site Inspector witnessed mixing of the premixed dry product in a mixer that produced an adequate blending of water and pre-bagged material (Z-146). The Site Inspector witnessed testing of the mixed material utilizing the wet density method. Samples were taken at the mixer and at the application nozzle in a container of known volume and weighed to assure the manufacturer's target density was met prior to application.

The Site Inspector witnessed the application, by spraying, of a thin layer of fireproofing material on beams and columns, this layer is the "scratch coat" where subsequent applications will be built upon to achieve required thicknesses.

Training and Qualification of Personnel:

The Site Inspector reviewed the subcontractor certifications of the Quality Control personnel and found them to be current. The certifications were stored on site in the project office files.

Adequacy of Final Records:

The Site Inspector found the subcontractor had not completed installation records for the LAW North Annex installation activities at the time of the inspection.

Conclusion:

The cementitious fireproofing subcontractor was mixing and installing fireproofing to approved specifications and manufacturer's recommendations at the lower levels of the LAW North Annex.

Inspector: R. Taylor Reviewed by: Jim Berger Approved by: K/He
Date: 6-16-08 Date: 6/16/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ____, HLW X__, LAW ____, LAB ____, BOF ____, **Quality Class:** ITS X__, BOP ____

Dangerous Waste Permit Affecting: Yes ____ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-100

Inspector Name(s): Debra Wallace
Wallace Consulting, Inc.
(Sub-contractor to PAC),
Supporting ORP

Dates of Inspection: June 4, 2008

Item(s) Inspected:

Inspection of the following six ¾" rigid metal conduits installed in HLW +14 elevation, slab 2005, as per drawing 24590-HLW-E21-E54T-00008 and Field Change Notice 24590-WTP-FC-E-08-0190, prior to concrete placement:

30ECRB1511Q – Set Route Card # 24590-HLW-SRC-E-08-0213, Rev 0
30EC RB1510Q – Set Route Card # 24590-HLW-SRC-E-08-0212, Rev 1
30EC RB1001Q – Set Route Card # 24590-HLW-SRC-E-08-0211, Rev 0
30EC RB2001Q – Set Route Card # 24590-HLW-SRC-E-08-0214, Rev 0
30EC RB2002Q – Set Route Card # 24590-HLW-SRC-E-08-0215, Rev 0
30EC RB1002Q – Set Route Card # 24590-HLW-SRC-E-08-0216, Rev 0

Design/Installation Documents Reviewed:

- 1999 National Electrical Code
- 24590-HLW-E21-E54T-00008, *HLW Vitrification Building Embedded Raceway Layout at Elevation 14'-0" North Annex*, Revision 2, dated May 5, 2008
- 24590-WTP-FC-E-08-0190, *Field Change Notice – HLW Conduit Layout in 2001 Slab*, dated June 3, 2008
- 24590-WTP-3PS-E00X-T0007, *Electrical Specification for Electrical Raceway System Installations*, Revision 1, dated April 25, 2008

Work Activities:

The ORP electrical inspector verified the following attributes were acceptable in accordance with the above design and raceway specification:

- Size and type
- Routing
- Separation
- Conduit bends

Conclusion:

BNI installed the six 3/4" rigid conduits in slab 2005, at the HLW +14' elevation, in accordance with the appropriate design and specifications.

Inspector: D.O. Wallace Reviewed By: Jem Barger Approved by: J/W
Date: 7-10-08 Date: 7/10/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-101

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.

Dates of Inspection: June 2, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of field welds (GB001 and GB002) on chilled water piping spool BOF-CHW-WL04149001-A located in the Chiller Compressor Building. The inspection included evaluation of the weld fit-up condition to determine its compliance with visual acceptance criteria for ASME B31.3 – 2000 edition, and the welding procedure specification.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-CHW-WL04149001, *Balance of Facilities Isometric – CHW-WL-04149-C12A-6*, Revision 0, dated May 26, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-02, *Bechtel Welding Procedure Specification P1-A-c-Lh*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI-0043*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00008*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00009*
- Qualification Record 24590-WTP-WQTR-CON-04-0013, *Welder Performance Qualification Test Record – P-63*, Revision 0, dated February 17, 2004

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI-0043* contained or referenced sufficient detail to provide for correct installation of the piping components. Field Welding Checklists *24590-BOF-FWCL-CON-08-00008* and *24590-BOF-FWCL-CON-08-00009* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-c-Lh*), filler material (E6010 and E7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P1-A-c-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E6010 and E7018
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination, and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-63 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Weld Checklists – *24590-BOF-FWCL-CON-08-00008* and *24590-BOF-FWCL-CON-08-00009* had been completed. The inspection records identified the items inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed weld fit-up of Chiller Compressor Building piping. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *R. T. Melan* Reviewed By: *Jim Berges* Approved by: *K. Mc*
Date: *6/16/08* Date: *6/16/08* Date: *7/15/08*

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SURVEILLANCE REPORT

Facility: PTF ____, HLW ____, LAW ____, LAB ____, BOF X, **Quality Class:** ITS ____, BOP X

Dangerous Waste Permit Affecting: Yes ____, No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-102

Inspector Name(s): Debra Wallace

Dates of Inspection: June 3, 2008

Item(s) Inspected:

The ORP site inspector performed a follow-up review of BNI's NEC Inspection Reports to assess improvements in inspection report documentation (tracked by CARS Number 9881). This concern was identified in Inspection Note A-06-AMWTP-RPPWTP-001-26.

Design/Installation Documents Reviewed:

2002 National Electrical Code.

Control of Temporary Electrical Installations, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008.

Background:

ORP met with BNI (February 2006) to discuss the quality of the NEC inspection reports. The reports were very vague, specific equipment inspected had not been identified, and design documents with applicable revision had not been listed on inspection reports.

BNI management believed the current process met the requirements of their procedure, but agreed improvement could be made; particularly with the identification of specific equipment and referencing design documents. BNI stated these inspections were for code compliance only and not for the acceptance to the design.

Work Activities:

The ORP site inspector reviewed NEC reports issued March 26, 2008 through April 11, 2008, and saw marginal improvement. Although the NEC reports were not well documented, BNI's management appeared to be satisfied with the quality of the NEC reports and believed they met the requirements of their *Temporary Electrical Installation Procedure* 24590-WTP-GPP-CON-3311. Because of lack of any specific requirements regarding the documentation of NEC field inspections, and BNI management's acceptance of these reports, this issue is closed.

Conclusion:

A follow-up review of the quality and level of detail of BNI's NEC Inspection Reports (follow-up review tracked by CARS Number 9881) was performed to assess improvement in the documentation. Although only marginal improvement was found, the lack of specific requirements in this area and BNI management's acceptance of these reports as written and their belief the inspection reports met the requirements of their *Temporary Electrical Installation Procedure* 24590-WTP-GPP-CON-3311; CARS Number 9881 is closed.

Inspector: O.O. Wallace Reviewed By: Jem Borgz Approved by: KMc
Date: 6-23-08 Date: 6/23/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ Quality Class: ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-103

Inspector Name(s): EF Enloe Dates of Inspection: June 3, 2008
ENLOE CONSUTLING, INC.

Item(s) Inspected:

The site inspector performed an inspection of welding for structural steel located in the Pretreatment Facility (PTF) (+) 55'-0" elevation. The inspection included evaluation of the final weld condition to confirm compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-PTF-SS-S15T-00037, *Pretreatment Facility Structural Steel Framing Floor Plan El 55'-0"*, Revision 12, dated April 13, 2007
- Drawing 24590-PTF-SS-S15T-00406, *Pretreatment Facility Structural Steel Framing Connection Sections Detail*, Revision 10, dated April 13, 2007
- Field Change Notice 24590-WTP FC-C-08-002, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-95, *Bechtel Welding Procedure Specification P1-F*, Revision 0, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *PCS0066*
- Field Welding Checklist – *24590-PTF-FWCL-CON-08-00014*

Installation Program Adequacy:

The site inspector determined Construction Work Package *PCS0066* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-PTF-FWCL-CON-08-00014* specified an appropriate welding procedure specification *Bechtel Welding Procedure Specification P1-F*, filler material (E71T-8), and examination procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements and the weld filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-F* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – FCAW
- Welding filler material – E71T-8
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-34 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-PTF-FWCL-CON-08-00014* had been completed. The examination records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for structural steel located in the Pretreatment Facility. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and examination records were adequate.

Inspector: *E. Enloe* Reviewed By: *Jim Barger* Approved by: *K. Mc*
Date: *6/16/08* Date: *6/16/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-104

Inspector Name(s): EF Enloe **Dates of Inspection:** June 3, 2008
 ENLOE CONSUTLING, INC.

Item(s) Inspected:

The site inspector performed inspection of structural steel located at the Pretreatment Facility (PTF) (+) 55'-0" elevation. The inspection included evaluation of the final weld condition to determine compliance with AWS D1.1 visual acceptance criteria.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Code, *AWS D1.1 – Structural Welding Code – Steel*, 2000 edition
- Drawing 24590-PTF-SS-S15T-00037, *Pretreatment Facility Structural Steel Framing Floor Plan El 55'-0"*, Revision 12, dated April 13, 2007
- Drawing 24590-PTF-SS-S15T-00406, *Pretreatment Facility Structural Steel Framing Connection Sections Detail*, Revision 10, dated April 13, 2007
- Field Change Notice 24590-WTP FC-C-08-002, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-94, *Bechtel Welding Procedure Specification P1-F(75Ar-25CO2)*, Revision 0, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *PCS0066*
- Field Welding Checklist – *24590-PTF-FWCL-CON-08-00014*

Installation Program Adequacy:

The site inspector confirmed Construction Work Package *PCS0066* contained or referenced sufficient details to provide for correct installation of the structural components. Field Welding Checklist *24590-PTF-FWCL-CON-08-00014* specified an appropriate welding procedure specification *Bechtel Welding Procedure Specification P1-F(75Ar-25CO2)*, filler material (E71T-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Structural material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-F(75Ar-25CO2)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – FCAW
- Welding filler material – E71T-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Records (WQTRs) confirmed welder I-13 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination, and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-PTF-FWCL-CON-08-00014* had been completed. The inspection records identified the items examined, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI acceptably completed a weld for structural steel located in the Pretreatment Facility. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *E. Enloe* Reviewed By: *Jem Berger* Approved by: *K. Mc*
Date: _____ Date: *6/18/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-105

Inspector Name(s): EF Enloe **Dates of Inspection:** June 2, 2008
ENLOE CONSULTING, INC.

Item(s) Inspected:

The site inspector performed visual field weld (FW) fit-up inspections of a Waste Feed Receipt Process System (FRP) split encasement between pipe spool BOF-FRP-PZ-01749-F and pipe spool BOF-FRP-PZ-01749-H located at the (+) 662'-11 3/16" elevation. The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was designated as a DOE witness point.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007
- Drawing 24590-BOF-P4-FRP-00001, *BOF-FRP-PZ-01749-W62-F, Pipe Fabrication and Support Location Drawing*, Revision 2, dated July 12, 2006
- Procedure 24590-WTP-MN-CON-01-001-03-03, *Bechtel Welding Procedure Specification P1-AT-Lh*, Revision 5, dated December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0123*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00031*

Installation Program Adequacy:

The site inspector determined Construction Work Package *BPU0123* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00031* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-AT-Lh*), filler material (ER70S-2), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-AT-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER70S-2
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-150 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00031* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a BOF pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *E Enloe* Reviewed By: *Jim Berger* Approved by: *KWA*
 Date: *6/23/08* Date: *6/23/08* Date: *7/15/08*

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-o* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW Machine Welding
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-73 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-04030 had been completed. The inspection records identified the item examined, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: EF Enloe Reviewed By: Jim Berger Approved by: KMA
Date: 6/16/08 Date: 6/16/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-107

Inspector Name(s): EF Enloe Dates of Inspection: June 4, 2008
ENLOE CONSULTING, INC.

Item(s) Inspected:

The site inspector performed visual inspection of a circumferential butt weld (GB001) to replace a slip-on flange with a weldneck flange for pipe spool BOF-PSA-GK09760001-B. The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was not a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-CHW-WL04148001, *BOF Balance of Facilities Isometric*, Revision 0, dated May 26, 2004
- Field Change Notice 24590-WTP-FC-P-08-0169, dated May 29, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-02, *Bechtel Welding Procedure Specification P1-A-c-Lh*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPI0043*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00325*

Installation Program Adequacy:

The site inspector found Construction Work Package *BPI0043* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00325* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-c-Lh*), filler material (E6016 & E7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified the contractor had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-c-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above list of "Design/Installation Documents Reviewed":

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E6010 & E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-63 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-BOF-FWCL-CON-08-00325* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Balance of Facilities pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *J Enloe* Reviewed By: *Jem Berger* Approved by: *K Wa*
Date: *6/24/08* Date: *6/24/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-108

Inspector Name(s): RI Taylor
Taylor Consulting Inc
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 4-5, 2008

Item(s) Inspected:

The site inspector witnessed the placement, testing, and consolidation of approximately 75 cubic yards of concrete for Pretreatment Facility (PTF) Slab PCC2832, at elevation +28, on the South side of PTF.

The site inspector also performed forms, rebar, embeds (FRE), and electrical grounding inspections of the one foot thick slab.

Design/Installation Documents Reviewed:

- 24590-PTF-CPC-CON-08-011, *-Concrete Pour Card*
- 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 26, 2007
- 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 29, 2007
- 24590-BOF-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2007
- 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated June 22, 2005

Work Activities:

For the placement listed above, the inspector observed quality control staff performing concrete receipt activities and observed their review of the batch tickets, as required by Section 3.11.2 of *Concrete Operations (Including Supply)*. The inspector concluded these activities were performed in accordance with established requirements.

The inspector observed the Materials Testing subcontractor field technicians performing concrete receipt activities, observed the review of batch tickets, and observed recording of information required by Section 3.2.1 of the *Engineering Specification for Material Testing Services*. The inspector concluded these activities and documents were performed or completed in accordance with the specification.

The inspector examined the conduct of testing for concrete temperature, slump, and unit weight. The inspector concluded the Material Testing subcontractor technicians were performing these testing activities in accordance with their procedures, the applicable American Society for Testing and Materials (ASTM) standards, and BNI's specifications.

The inspector witnessed concrete placement PTF PCC2832 and concluded the concrete was being produced, placed, consolidated, and tested in accordance with procedures, specifications, and required codes and standards. The inspector determined the concrete was being delivered within the acceptable concrete temperature ranges.

The inspector reviewed primary structural design documents listed on the Concrete Pour Card for the slab placement. Other drawings referenced on the primary drawings were also used for this inspection.

The site inspector also performed forms, rebar, embeds (FRE), and electrical grounding inspections of the one foot thick slab. Items such as clear cover, rebar tying, edge distance, rebar sizing, and location were verified.

Adequacy of Final Records:

The inspector examined Concrete Pour Card 24590-PTF-CPC-CON-08-011, and concluded the required signatures were in place prior to the start of the placement.

Conclusion:

For slab placements PTF PCC2832, BNI had installed forms, reinforcement, embeds, electrical grounding, and concrete work, in an acceptable manner in accordance to design requirements.

BNI had batched, placed, consolidated, and tested the concrete for this placement in accordance with engineering specifications and the specified standards in the Safety Requirement Document.

Inspector: R. Taylor Reviewed By: Sam Berger Approved by: K. Kelle
Date: 7-2-08 Date: 7/2/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, Quality Class: ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-109

Inspector Name(s): Debra Wallace

Dates of Inspection: June 4, 2008

Item(s) Inspected:

Inspection of 20-amp branch circuit added to Mobile Office T-7B panelboard L2 (circuit 18) for new card reader, as per Construction Utilities Group Work Package 24590-WTP-CUG-T-E-08-0227 and Temporary Electrical Installation Request Form TEIR-24590-WTP-EIP-CON-08-085.

Design/Installation Documents Reviewed:

- 2002 National Electrical Code
- *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008

Work Activities:

The ORP electrical inspector verified the following attributes were acceptable in accordance with the National Electrical Code:

- Equipment listed by Nationally Recognized Testing Laboratory (NRTL)
- Electrical equipment not damaged and suitable for the environment
- Correct wiring method installed
- Correct overcurrent protection provided
- Equipment was installed in a neat and workmanlike manner
- Raceway correctly supported

Conclusion:

BNI had installed the new card reader branch circuit, at Mobile Office T-7B, in accordance with the 2002 NEC.

Inspector: D. Wallace Reviewed By: Jim Berger Approved by: [Signature]
 Date: 6-23-08 Date: 6/23/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW X LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-110

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 5, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a weld (FW-5) on reinforcing steel located at elevation 0'-0" of the High Level Waste (HLW) Building. The inspection included evaluation of the weld fit-up condition to determine compliance with the welding procedure specification.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-HLW-DG-S13T-00002, *HLW Vitrification Building Concrete Reinforcement Plan (Top) At El 0'-0"*, Revision 7, dated March 30, 2006
- Change Notice 24590-WTP-FC-C-08-0091, *HLW – Slab 1012 Weld Splice in Lue [sic] of HRC Coupler*, Revision 0, dated April 17, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-10, *Bechtel Welding Procedure Specification P1-Rebar (0.64 CE)*, Revision 2, dated August 15, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-11, *Bechtel Nondestructive Examination Standard Visual Examination VT-AWS D1.4*, Revision 5, dated August 15, 2006
- Qualification Record, 24590-WTP-WQTR-CON-07-0136, *Welder Qualification Test Record (WR-1-D1.4) – I-108*, Revision 0, dated October 10, 2007
- Construction Work Package (CWP) – *HCC1012*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00059*

Installation Program Adequacy:

The site inspector determined Construction Work Package *HCC1012* contained or referenced sufficient details to provide for correct installation of the reinforcing steel components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00059* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-Rebar (0.64 CE)*), filler material (E8018-B2), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-AWS D1.4*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-Rebar (0.64 CE)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above list of documents:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E8018-B2
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination, and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that the welder (I-108) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-HLW-FWCL-CON-08-00059 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed fit-up for a weld on High Level Waste Building reinforcing steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 7/2/08 Date: 7/2/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW X LAW ___ LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-111

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.

Dates of Inspection: June 5, 2008

Item(s) Inspected:

The site inspector performed a surveillance of field applied protective coatings for steel items. Coatings were applied by subcontractor FD Thomas, Inc., on structural steel ledger angles in the Main Electrical Room 1 area of the High Level Waste Building.

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-AFPS-T0003, *Field Applied Special Protective Coatings for Steel Items and Equipment*, Revision 2 dated April 26, 2007
- Drawing 24590-HLW-A5-A19T-05201001, *HLW Vitrification Building Architectural Room finish Schedule El 0'-0"*, Revision 2, dated August 1, 2006
- Subcontractor Submittal 24590-CM-HC2-AFPH-00001-17-01, *Field Preparation and Coating Work Procedures*, Revision 00J, dated October 29, 2007
- Subcontractor Submittal 24590-CM-HC2-AFPH-00001-017-00013, *Procedure – Product Data Sheet and MSDS for Cold Galvanized Compound*, Revision 00A, dated May 23, 2006

Installation Program Adequacy:

The F.D. Thomas program is based on their procedure titled "*Field Preparation and Coating Work Procedures*" (Subcontractor Submittal 24590-CM-HC2-AFPH-00001-17-01 noted in the list of Design/Installation Documents Reviewed above). When used in conjunction with the product data sheet (Subcontractor Submittal 24590-CM-HC2-AFPH-00001-017-00013 in the list of Design/Installation Documents Reviewed above), this provided sufficient guidance for correct application of the specified product.

Acceptability of Material Being Used:

The site inspector verified F.D. Thomas was using pre-qualified coating material as listed in Specification 24590-WTP-3PS-AFPS-T0003, paragraph 7.5.6. The material applied was Sherwin Williams Sprayon S00740. Material containers were marked to show manufacturer's name and product designation.

Work Activities:

The site inspector observed the following attributes and activities and determined they were being performed or completed in accordance with the specifications and procedure noted in the list of "Design/Installation Documents Reviewed" above.

- Surface preparation was acceptable
- Subcontractor determined substrate temperature and environmental conditions were within acceptable range
- Coating product was applied in accordance with manufacturer's recommendations

Training and Qualification of Personnel:

F.D. Thomas certification records showed the Level II inspector had been qualified in accordance with their procedure: "*Certification Program for Waste Treatment Plant Construction Site*". Inspector certification records were current, including inspector's visual acuity examination.

Adequacy of Final Records:

Inspection forms and checklists were completed with all pertinent attributes addressed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected, and provided evidence that the work had been performed correctly.

Conclusion:

FD Thomas applied and examined field applied protective coatings for steel items in accordance with specification, and procedures. Materials were acceptable; application was in accordance with the approved procedure and specification; subcontractor's quality control performed the requisite checks; personnel training and qualification were appropriate, and inspection records provided evidence that the work had been performed correctly.

Inspector: W. Thelley Reviewed By: Jim Berger Approved by: KWA
Date: _____ Date: 6/27/08 Date: 7/15/08

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SURVEILLANCE REPORT

Facility: PTF ____, HLW ____, LAW ____, LAB ____, BOF X, **Quality Class:** ITS ____, BOP X

Dangerous Waste Permit Affecting: Yes ____ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-112

Inspector Name(s): Debra Wallace
Wallace Consulting, Inc.

Dates of Inspection: June 9, 2008

Item(s) Inspected:

Inspection of three 20-amp receptacle circuits (13, 15, & 17) added to panelboard T15-L5 for Combo Shop Office, as per Construction Utilities Group Work Package 24590-WTP-CUG-T-E-08-0157 and Temporary Electrical Installation Request Form TEIR-24590-WTP-EIP-CON-08-074.

Design/Installation Documents Reviewed:

2002 National Electrical Code.

Control of Temporary Electrical Installations, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008.

Work Activities:

With exception to the one code deficiency listed below, the ORP site inspector verified the following attributes were acceptable in accordance with the National Electrical Code:

- Correct overcurrent protection provided
- Grounding/bonding met requirements of Article 250
- Equipment was installed in a neat and workmanlike manner
- Raceway correctly supported

Article 210.7(C) requires where more than one branch circuit supplies more than one receptacle on the same yoke, a means to simultaneously disconnect the ungrounded conductors supplying those receptacles shall be provided at the panelboard where the branch circuits originate. This safety requirement was added to the 2002 code to provide means to simultaneously disconnect all ungrounded conductors.

Branch circuits 13 & 15 fed a duplex receptacle (same yoke) from two single-pole 20-amp circuit breakers, one receptacle fed the refrigerator and the other fed the microwave.

BNI agreed with this requirement and the reason it was added to the 2002 code and immediately replaced the two single-pole circuit breakers with a 2-pole 20-amp breaker, thus meeting the above requirements. This resolves this issue.

Conclusion:

With one minor exception, which was corrected immediately, BNI had installed the three receptacle circuits at the Combo Shop in accordance with the 2002 NEC.

Inspector: OO. Wallace Reviewed By: Jem. Barger Approved by: K. Mc
Date: 6-12-08 Date: 6/12/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-113

Inspector Name(s): EF Enloe **Dates of Inspection:** June 5, 2008
ENLOE CONSULTING, INC

Item(s) Inspected:

The site inspector witnessed BNI perform tension control bolt assembly testing on 3 different lengths of A325 high strength bolts (7/8" Dia.). Lots of three bolts were placed into a calibrated tension measuring device (*Skidmore*), hand tightened, then tensioned to exceed 41 thousand pounds (*kips*) in compliance with *American Society for Testing and Materials* (ASTM). The bolts were randomly selected from several *Material Receiving Reports* (MRR). The bolts tested from each lot were found acceptable for use at the Waste Treatment Plant site (WTP).

Design/Installation Documents Reviewed:

- American Institute of Steel Construction (AISC), *AISC 348 Specification for Structural Joints Using ASTM A325 or A490 Bolts*, June 23, 2000, Section 8, Installation
- 24590-WTP-GPP-CON-3206, *Structural Steel Installation and On-Site Fabrication*, Revision 3, dated May 26, 2005 including *Procedure/Guide Change Notice* (PGCN) A, dated January 17, 2008
- 24590-WTP-3PS-SS02-T0001, *Engineering Specification for Erection of Structural Steel*, Section 4.6, Revision 2, dated June 5, 2005
- 24590-PTF-TCB-CON-08-0001, *Tension Control Bolt Pre-Installation Verification Report*

Acceptability of Material Being Used:

The site inspector verified that all required identification marks for acceptable bolt, nut, and washer assemblies were in accordance with *Specification for Structural Joints Using ASTM A325 or A490 Bolts prior to testing*.

Work Activities:

The site inspector witnessed BNI testing randomly selected A325 bolt assemblies. After testing, the test assemblies were taken out-of-service.

Adequacy of Final Records:

The site inspector reviewed BNI's Tension Control Bolt Pre-Installation Verification Reports and no problems were identified.

Conclusion:

The site inspector concluded BNI performed and documented the required testing of A325 bolts, 7/8" diameter high strength bolts using a calibrated tension measuring device in accordance with American Institute of Steel Construction (AISC), *AISC 348 Specification for Structural Joints Using ASTM A325 or A490 Bolts*.

Inspector: F Enlal Reviewed By: Jim Berger Approved by: Kate
Date: 6/25/08 Date: 6/25/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-114

Inspector Name(s): EF Enloe **Dates of Inspection:** June 9, 2008
ENLOE CONSULTING, INC

Item(s) Inspected:

The site inspector witnessed BNI perform tension control bolt assembly testing on A325 and A490 high strength bolts (1 1/8" Dia.), A325 (7/8" Dia.). Lots of three bolts were placed into a calibrated tension measuring device (*Skidmore*), hand tightened, then tensioned to exceed (1 1/8" bolt) 84 thousand pounds (*kips*) and (7/8" bolt) 41 thousand pounds (*kips*) in compliance with *American Society for Testing and Material* (ASTM). The bolts were randomly selected from several *Material Receiving Reports* (MRR). The bolts tested from each lot were found acceptable for use at the Waste Treatment Plant (WTP).

Design/Installation Documents Reviewed:

- American Institute of Steel Construction (AISC), *AISC 348 Specification for Structural Joints Using ASTM A325 or A490 Bolts*, June 23, 2000, Section 8, Installation
- 24590-WTP-GPP-CON-3206, *Structural Steel Installation and On-Site Fabrication*, Revision 3, dated May 26, 2005 including *Procedure/Guide Change Notice* (PGCN) A, dated January 17, 2008
- 24590-WTP-3PS-SS02-T0001, *Engineering Specification for Erection of Structural Steel*, Section 4.6, Revision 2, dated June 5, 2005
- 24590-LAW-TCB-CON-08-0001, *Tension Control Bolt Pre-Installation Verification Report*
- 24590-LAW-TCB-CON-08-0002, *Tension Control Bolt Pre-Installation Verification Report*
- 24590-LAW-TCB-CON-08-0003, *Tension Control Bolt Pre-Installation Verification Report*
- 24590-LAW-TCB-CON-08-0004, *Tension Control Bolt Pre-Installation Verification Report*
- 24590-LAW-TCB-CON-08-0005, *Tension Control Bolt Pre-Installation Verification Report*

Acceptability of Material Being Used:

The site inspector verified required identification marks for acceptable bolt, nut, and washer assemblies were in accordance with *Specification for Structural Joints Using ASTM A325 or A490 Bolts prior to testing*.

Work Activities:

The site inspector witnessed BNI testing randomly selected A325 bolt assemblies, and A490 bolt assemblies. After testing; the test assemblies were taken out-of-service.

Adequacy of Final Records:

The site inspector reviewed BNI's Tension Control Bolt Pre-Installation Verification Reports and no problems were identified.

Conclusion:

BNI performed and documented the required testing of A325 bolts (7/8" Dia.), and A490 bolts (1 1/8" Dia.) high strength bolts using a calibrated tension measuring device in accordance with American Institute of Steel Construction (AISC); *AISC 348 Specification for Structural Joints Using ASTM A325 or A490 Bolts*.

Inspector: Henal Reviewed By: Jim Berger Approved by: KML
Date: 6/24/08 Date: 6/24/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-115

Inspector Name(s): WT Meloy
CDI/PAC

Dates of Inspection: June 10, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a field weld on pipe support LAW-ISA-H20195 located at the (+) 28'- 0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of final weld condition to determine compliance with visual acceptance criteria for AWS D1.1-2000.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-ISA-GL38489001, *LAW Vitrification Building Isometric – ISA-GL-38489-S10A-1*, Revision 0, dated August 11, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-85, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 3, dated December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI4501*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-00065*
- Qualification Record 24590-WTP-WQTR-CON-07-0133, *Welder Performance Qualification Test Record – P-148*, Revision 0, dated October 3, 2007

Installation Program Adequacy:

The site inspector determined Construction Work Package *LPI4501* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-08-00065* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination, and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-148 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-00065 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe support. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: [Signature] Reviewed By: [Signature] Approved by: [Signature]
Date: 6/25/08 Date: 6/25/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-116

Inspector Name(s): WT Meloy
CDI/PAC

Dates of Inspection: June 11, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a field weld (FW002) between pipes spool LAW-LVP-PW00009012-A and LAW-LVP-PW00009012-B located at the (+) 48'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the weld fit-up condition to determine compliance with visual acceptance criteria established by ASME B31.3.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LVP-PW00009012, *LAW Vitrification Building Isometric – LVP-PW-00009-S11N-18*, Revision 0, dated July 5, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0059*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04943*
- Qualification Record 24590-WTP-WQTR-CON-07-0146, *Welder Performance Qualification Test Record – P-149*, Revision 0, dated October 17, 2007

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0059* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04943* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above list of “Design/Installation Documents Reviewed”:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination, and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-149 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level III for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-LAW-FWCL-CON-07-04943* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for Low Active Waste Building piping. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *John P. [Signature]* Reviewed By: *Sam Berger* Approved by: *KPA*
Date: *6/25/08* Date: *6/25/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF HLW LAW LAB BOF **Quality Class:** ITS BOP

Dangerous Waste Permit Affecting: Yes No

Surveillance Report Number: S-08-WCD-RPPWTP-002-117

Inspector Name(s): MD Evarts
Evarts Enterprise, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 11, 2008

Item(s) Inspected:

The inspector performed a final weld inspection on rework of structural steel crane rail beam N-11 in accordance with NCR-WTP-NCR-CON-05-0221. The crane rail beams were re-inspected because the original inspection was performed to EPRI-5380 acceptance criteria which was in violation of ASME N690 which required cyclically loaded welds to be inspected to AWS D1.1 criteria. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-PTF-FWCL-CON-08-00288
- Welding Procedure Specification (WPS) – P1-A-LH, Revision 4
- Drawing – 24590-PTF-SS-S15T-00603, Revision 5
- Visual Weld Inspection Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI used the correct filler material per the above listed WPS.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Final weld acceptance
- Welding filler material used
- Welder Qualification

Training and Qualification of Personnel:

The inspector verified the welder (I-125) was qualified to make the crane rail beam weld repairs.

The inspector verified BNI's weld inspector was qualified to perform the final weld inspection on the above welds in accordance with the visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptably to the point of this inspection.

Conclusion:

BNI re-inspected and repaired PTF crane rail beam N-11 using the correct filler metal and a qualified welder in accordance with the appropriate design and welding program requirements. BNI's weld inspector was qualified to perform the final acceptance of the welds.

Inspector: MD [Signature] Reviewed By: Gem Deagen Approved by: [Signature]
Date: 7-2-08 Date: 7/2/08 Date: 7/15/08

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SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS X BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-118

Inspector Name(s): MD Evarts
Evarts Enterprise, Inc.

Dates of Inspection: June 11, 2008

Item(s) Inspected:

Follow-up inspection for non-cited Finding S-08-WCD-RPPWTP-001-N01: Intermech had not established and implemented a formal program to ensure receipt and fabrication inspectors were knowledgeable and qualified to perform these functions. Failure of BNI to ensure Intermech adequately implemented this NQA-1 requirement was a non-cited finding (S-08-WCD-RPPWTP-001-N01) against BNI Quality Assurance Manual. (Note: At the time of the Intermech inspection that resulted in this non-cited Finding, Intermech's inspectors were found to have substantial knowledge and experience and the impact of this qualification program weakness was considered minor).

Design/Installation Documents Reviewed:

- WCD Surveillance Report – S-08-WCD-RPPWTP-001-20
- BNI Condition Report – 24590-WTP-CRPT-QA-08-055, Revision 0
- Intermech Procedure – W/IP-WTP-10.10, *Qualification and Certification of Inspection and Test Personnel*, Revision 1, dated May 8, 2008

Installation Program Adequacy:

The CRPT 24590-WTP-CRPT-QA-08-055 required Intermech to establish a program for certifying inspectors, such as receiving, coatings, fasteners, dimensional, etc. in accordance with NQA-1. Intermech wrote procedure W/IP-WTP-10.10 for certifying NQA-1 inspectors. The inspector also verified Intermech certified their inspectors to this above procedure. As stated above, the current Intermech inspectors were knowledgeable and experienced and resolving this issue addressed a minor programmatic inspector qualification issue.

Conclusion:

Intermech developed and implemented a formal program to certify receiving, coatings, fasteners, dimensional, etc. inspectors in accordance with NQA-1. Intermech's knowledgeable and experience QC inspectors were formally certified to these procedural requirements. This closes non-cited Finding S-08-WCD-RPPWTP-001-N01.

Because this issue was a minor programmatic inspector qualification issue with no past or current hardware effecting consequences, a future effectiveness review is considered unnecessary.

Inspector: MD-Rant Reviewed By: Jerry Bergeron Approved by: K. Miller
Date: 6-25-08 Date: 6/25/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___, HLW ___, LAW ___, LAB ___, BOF X, Quality Class: ITS ___, BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-119

Inspector Name(s): Debra Wallace
Wallace Consulting, Inc.
(Sub-contractor to PAC),
Supporting ORP

Dates of Inspection: June 12, 2008

Item(s) Inspected:

Surveillance of the following cable pull as per Construction Work Package BEC0016:

- CHWMSTR00007H01 (three single conductor 750 kcmil) and CHWMSTR00007AG01 (#2 AWG bare equipment grounding conductor) routed from 480 volt Loadcenter LVE-LC-91003-02A located in BOF Switchgear Building 91 to Building 82 Chill Water Motor Starter CHW-MSTR-00007A.

Design/Installation Documents Reviewed:

- 1999 National Electrical Code
- Construction Work Package BEC0016
- Set Route Cable Installation Card, Record Number 24590-BOF-SCC-E-08-0020, Revision 0
- 24590-WTP-GPP-CON-3304, *Electrical Cable Installation Construction Procedure*, Revision 1, dated September 12, 2005
- 24590-WTP-3PS-E00X-T0004, *Engineering Specification for Installation of Cables in Conduit and Cable Tray*, Revision 4, dated April 6, 2006

Work Activities:

One specification deficiency was identified by BNI's field engineer pertaining to *Engineering Specification for Installation of Cables in Conduit and Cable Tray*, paragraph 4.7.2 requirement to not stop and restart the cable pull, unless for safety reasons. Per the specification, if a cable pull is intentionally stopped, construction is required to re-evaluate the cable pulling based on the requirements of the pulling activity, prior to resuming the pull. The craft had stopped the pull to go to break. BNI issued Quality Bulletin (CNN # 181101) to address this specification requirement.

The ORP electrical inspector verified the following attributes were acceptable in accordance with the above design, specification and cable installation procedure:

- Size and type

- Routing
- Cable pulling lubrication properly applied
- Cable pulleys correctly installed

Conclusion:

Other than the one deficiency identified by BNI field engineering, the cable pulled from BOF Switchgear Building 91 Loadcenter LVE-LC-91003-02A to Building 82 Chill Water Motor Starter CHW-MSTR-00007A was acceptable in accordance with the established design, specifications, and procedures.

Inspector: D.O. Wallace Reviewed By: Jem Bergen Approved by: KWA
Date: 6-30-08 Date: 6/30/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-120

Inspector Name(s): WT Meloy
CDI/PAC

Dates of Inspection: June 12, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a field weld (FW001) between pipe spool LAW-PSA-GQ00154001-A and LAW-PSA-GQ00171007-C located at the (+)28'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the weld fit-up condition to determine compliance with visual acceptance criteria established by ASME B31.3.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-PSA-GQ00154001, *LAW Vitrification Building Isometric – PSA-GQ-00154-C12A-1*, Revision 2, dated June 7, 2005
- Drawing 24590-LAW-P3-PSA-GQ00171007, *LAW Vitrification Building Isometric – PSA-GQ-00171-C12A-3*, Revision 0, dated September 29, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-35, *Bechtel Welding Procedure Specification P1-T*, Revision 3, dated December 11, 2006
- Construction Work Package (CWP) – *LPI0059*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04257*
- Qualification Record 24590-WTP-WQTR-CON-03-0072, *Welder Performance Qualification Test Record – P-23*, Revision 0, dated September 3, 2003

Installation Program Adequacy:

The site inspector determined Construction Work Package *LPI0059* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04257* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-T*), filler material (ER70S-2), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-T* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER70S-2
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-23 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist.

Adequacy of Final Records:

The appropriate attributes on Field Weld Checklist – 24590-LAW-FWCL-CON-07-04257 had been completed. The inspection records provided for item identification, examination dates, examiner identification, type of observation, and results of acceptability. Records were legible and identifiable to the items examined.

Conclusion:

BNI completed a weld fit-up for Low Active Waste Building piping. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 6/25/08 Date: 6/25/08 Date: 7/15/08

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SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, **Quality Class:** ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-121

Inspector Name(s): Debra Wallace
Wallace Consulting, Inc.
(Sub-contractor to PAC),
Supporting ORP

Dates of Inspection: June 9, 2008

Item(s) Inspected:

Perform surveillance inspection of "Fire Alarm Circuits" at the WTP Construction Office Building T-1, Combination Shop T-15, and Craft Lunchroom T-05, for compliance to NFPA 72 and *Fire Alarm and Detection Systems Specification*.

Design/Installation Documents Reviewed:

- NFPA 72 - National Fire Alarm Code, 2002 Edition
- 24590-WTP-3PS-JQ05-T0001, *Engineering Specification for Fire Alarm and Detection Systems*, Revision 2, dated April 26, 2004

Work Activities:

The ORP electrical inspector discussed the following BNI specification and National Fire Alarm Code requirement issues with BNI's Construction Utility Group manager:

- BNI Specification 24590-WTP-3PS-JQ05-T0001 paragraph 2.2.1.1 requires circuit breakers to be marked red, be fitted with a suitable guard, and used only for fire alarms. NFPA 72 paragraph 4.4.1.4.2.2 requires circuit disconnecting means to have a red marking, be accessible only to authorized personnel, and be identified as "FIRE ALARM CIRCUIT."

Building T-05 - Panelboard L1 met the above requirements. The circuit breakers were painted red, with approved guards, and were correctly identified as a fire alarm circuit.

Building T-01 – Panelboard L2 circuits 36 & 38 had incorrect locking devices installed (capable of being locked in the open position versus guards restricting switching the circuit breaker to the off position). Although this panelboard was installed in a locked room and accessible only to authorized personnel (thus meeting NFPA 72 requirement), the locking devices did not meet the above BNI specification requirement for suitable guards.

Building T-15 – Panelboard L1 did not meet the above requirements. The three fire alarm circuit breakers did not have suitable guards and circuit #2 was not identified red.

Failure to install the correct breaker guards and to correctly identify the fire alarm circuits (red) is consider a Finding regarding the requirement specified in Section C.7(f) of the Contract (requirement to comply with National Fire Protection Code). This deficiency is being tracked by BNI's corrective action program (PIER Report #24590-WTP-PIER-MGT-08-1146). Because these issues had minor safety significance, were not a repeat of a similar finding, were not willful, and were entered into the Contractor's corrective action program, this issue will be characterized as a **Non-cited Finding S-08-WCD-RPPWTP-002-N05**.

Conclusion:

BNI failed to ensure fire alarm circuits installed at the temporary building (T-1, T-15, & T-5) met the requirements of NFPA 72 and the BNI Fire Alarm and Detection Systems Specification (incorrect guards installed on fire alarm circuit breakers and breakers not identified red). Because these issues had minor safety significance, were not a repeat of a similar finding, were not willful, and were entered into the Contractor's corrective action program, this issue will be tracked as a **Non-cited Finding S-08-WCD-RPPWTP-002-N05**.

Inspector: D.O. Wallace Reviewed By: Jem Hagen Approved by: [Signature]
Date: 6-30-08 Date: 6/30/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, **Quality Class:** ITS___, BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-122

Inspector Name(s): Debra Wallace
Wallace Consulting, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 12, 2008

Item(s) Inspected:

Inspection of temporary power installed to Transformer LTE-XFMR-82001A and Lighting Panelboard LTE-PNL-82001A in Chiller Compressor Building 82, as per Temporary Modification Control Form #24590-BOF-TMOD-CON-08-0008, Hazardous Energy Work Packages 24590-WTP-CUG-T-B-08-0083 and 24590-WTP-CUG-T-B-08-0266.

Design/Installation Documents Reviewed:

- 1999 National Electrical Code
- Hazardous Energy Work Packages 24590-WTP-CUG-T-B-08-0083
- Hazardous Energy Work Packages 24590-WTP-CUG-T-B-08-0266
- Subcontract Submittal 24590-CM-FC3-AKBP-00001-69-02, *Electrical Calculations for Bechtel National Inc. Chiller/Compressor Plant Building #82*, Revision 00E, dated April 24, 2006

Background:

May 19, 2008 - BNI issued Construction Utilities Group Work Package 24590-WTP-CUG-T-E-08-0083 to install a temporary feeder routed from General Distribution Rack GDR-067, Disconnect DS-2 (fused 50-amp) to the supply side of Transformer LTE-XFMR-82001A, as per Temporary Modification Control Form 24590-BOF-TMOD-CON-08-0008.

May 20, 2008 – BNI Field Engineering performed an inspection of the wiring between LTE-XFMR-82001A and Panelboard LTE-PNL-82001A.

May 21, 2008 – The main breaker in Lighting Panelboard LTE-PNL-82001A was energized and immediately tripped out. Since all the branch circuits were in the off/open position, the main breaker was energized a second time and again it did not hold. Work was stopped and the temporary power to Transformer LTE-XFMR-82001A was de-energized.

Although Department of Energy (DOE), Office of River Protection (ORP), had an agreement with BNI that they would notify the ORP site inspector of final BNI electrical inspections

leading to energization of electrical equipment, BNI failed to make this notification. As a result, ORP was not able to perform an independent inspection of the final configuration of this installation prior to BNI energizing the temporary power installed for Transformer LTE-XFMR-82001A and Panelboard LTE-PNL-82001A. This issue was discussed with BNI and they agreed to notify ORP when the sub-contractor was on site to trouble shoot why the main breaker was not holding.

Work Activities:

June 12, 2008 - Work Package 24590-WTP-CUG-B-CM-08-0266 was issued to disconnect power at GDR-067 to troubleshoot vender wiring. The sub-contractor performed an inspection and electrical testing (megger & continuity testing) of Transformer LTE-XFMR-82001A and Panelboard LTE-PNL-82001A. BNI field engineering witnessed the electrical testing and also performed an inspection. The testing did not identify any defects in the wiring or equipment, nor were any deficiencies identified during the inspection.

The ORP site inspector performed an inspection of the transformer and panelboard and verified the following attributes were acceptable in accordance with design and the National Electrical Code:

- Equipment listed by Nationally Recognized Testing Laboratory (NRTL)
- Electrical equipment not damaged and suitable for the environment
- Working clearance requirements met
- Panel directory completed/accurate
- Equipment was installed in a neat and workmanlike manner
- Raceway correctly supported
- Test Equipment had current calibration sticker

Unrelated to the cause of the breaker trip discussed above, the ORP site inspector discussed the following requirements and installation issues with the Contractor:

- Article 250-64(c) – Requires the grounding electrode conductor to be installed in one continuous length without a splice or joint, unless spliced by an irreversible compression-type connector or exothermic welding process.

The grounding electrode conductor installed at Lighting Panelboard LTE-PNL-82001A was spliced with a split-bolt, thus not meeting the above requirement.

The sub-contractor immediately replaced the split-bolt with an irreversible compression-type connector. This resolved the issue. Failure to comply with Section C.7(f) of the Contract (requirement to comply with National Electrical Code) is considered a Finding, but because this issue was corrected immediately, had no safety implications, and BNI issued NEC Bulletin (Volume1, Issue 10) to address this code requirement; this issue will be characterized as **non-cited finding S-08-WCD-RPPWTP-002-N06** for trending purposes and was both opened and closed in this Surveillance Report. The installation of the

panelboard was done by Apollo (Townsend Controls) and inspected by BNI field engineering and, therefore, is not a repeat finding.

- Subcontract Submittal 24590-CM-FC3-AKBP-00001-69-02 required Lighting Panelboard LTE-PLL-82001A rating to be 125 amperes, with an 80-amp main breaker.

The maximum allowable ampere rating, per the panelboards nameplate, was 80-amps.

Failure to establish an adequate method of controlling/inspecting this electrical equipment at the Chiller Compressor Building, to ensure compliance with design, is considered a Finding (against the Contractor's QA Manual Policy Q-05.1, Section 3.1.1 regarding the requirement to have and use documented instructions to perform activities affecting quality). Since this deficiency had no safety implications, was not a repeat finding, and is being tracked by BNI's field inspection process (FIR 24590-WTP-FIR-CON-08-082), this issue will be tracked as a **Non-cited Finding S-08-WCD-RPPWTP-002-N07**.

Conclusion:

BNI's process failed to ensure all deficiencies associated with Lighting Panelboard LTE-PNL-82001A had been identified and either been corrected or considered before concluding electrical equipment was safe to energize. Failure to establish an adequate method of controlling/inspecting this electrical equipment at the Chiller Compressor Building, to ensure compliance with design and codes and ensure it was safe to energize, is considered a Finding (against the Contractor's QA Manual Policy Q-05.1, Section 3.1.1 regarding the requirement to have and use documented instructions to perform activities affecting quality). The Panelboard rating not agreeing with design requirements will be tracked as **non-cited finding S-08-WCD-RPPWTP-002-N07**. The grounding deficiency identified was corrected immediately, had no safety implications, and BNI issued NEC Bulletin (Volume1, Issue 10) to address this code requirement; therefore, this issue will be characterized as a **non-cited finding S-08-WCD-RPPWTP-002-N06** for trending purposes and was both opened and closed in this Surveillance Report.

Inspector: NO Wallace Reviewed By: Jason Bringer Approved by: KWA
Date: 7-9-08 Date: 7/9/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-123

Inspector Name(s): RI Taylor
Taylor Consulting Inc
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 16-30, 2008

Item(s) Inspected:

The site inspector witnessed hydrostatic pressure testing of Fire Service Water system piping (FSW) on the North side of the High Level Waste Facility located midway between the HLW and the Pretreatment Facility, during the month of June.

Design/Installation Documents Reviewed:

- NFPA 24, 1995, *National Fire Protection Association*
- Procedure – 24590-WTP-GPP-CON-3504, *Pressure Testing of Piping, Tubing, and Components*, Revision 6, dated January 10, 2008
- Procedure – 24590-WTP-3PS-PS02-T0003, *Field Fabrication and Installation of piping*, Revision 6, dated February 27, 2007

Acceptability of Material Being Used:

The site inspector verified piping material or installed correct spools were in accordance with the piping codes referenced on the pressure test data sheets listed below.

Work Activities:

The site inspector verified the proper test boundaries were specified, valve line-ups were thorough, and the required test parameters had been specified. The inspector verified the calibration of the pressure gauges was current, with appropriate calibration stickers affixed, and the gauge ranges conformed to the requirements of the above procedure. The inspector observed the conduct of hydrostatic testing in accordance with the BNI's established requirements and the applicable code. The inspector verified the system tests conformed to established requirements regarding leakage and time at pressure.

The site inspector witnessed the following pressure tests:

- 24590-BOF-PPTR-CON-08-0007
- 24590-BOF-PPTR-CON-08-0024

- 24590-BOF-PPTR-CON-08-0027

Training and Qualification of Personnel:

The site inspector verified the field engineer's training to 24590-WTP-GPP-CON-3504, *Pressure Testing of Piping, Tubing, and Components* was current at the time of testing.

Adequacy of Final Records:

The site inspector reviewed the pressure test reports and found the reports had been acceptably completed.

Conclusion:

The site inspector concluded BNI had accomplished hydrostatic testing in accordance with established requirements of NFPA 24 *National Fire Protection Association* code and 24590-WTP-GPP-CON-3504 *Pressure Testing of Piping, Tubing, and Components*. The inspector verified the system testing conforms to established requirements regarding leakage and time at pressure.

Inspector: R. Taylor Reviewed By: Jim Boyer Approved by: [Signature]
Date: 7-1-08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes X No ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-124

Inspector Name(s): EF Enloe **Dates of Inspection:** June 12, 2008
ENLOE CONSULTING, INC

Item(s) Inspected:

The site inspector performed a visual fit-up inspection of a circumferential butt weld (FW001) at pipe spool LAW-LVP-JS00001001-A to LAW-LVP-ZY00014001-A located at the (+) 29'-11 9/16" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the fit-up weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007
- Drawing 24590-LAW-P3-LVP-JS00001001, *LAW Vitrification Building Isometric*, Revision 0, dated February 26, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0049*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04817*

Installation Program Adequacy:

The site inspector determined Construction Work Package *LPI0049* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04817* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above list of "Design/Installation Documents Reviewed":

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-90 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-LAW-FWCL-CON-07-04817* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *J. Enlal* Reviewed By: *Jim Bongon* Approved by: *J. Ma*
Date: *6/25/08* Date: *6/25/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF X HLW LAW LAB BOF **Quality Class:** ITS X BOP

Dangerous Waste Permit Affecting: Yes No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-125

Inspector Name(s): MD Evarts **Dates of Inspection:** June 16, 2008
Evarts Enterprise, Inc.
(Sub-Contractor to PAC),
Supporting ORP

Item(s) Inspected:

The inspector performed a final weld re-inspection of structural steel crane rail beam N-09 and S-08 in accordance with NCR 24590-WTP-NCR-CON-05-0221. The crane rail beams were re-inspected because the original inspection was performed to acceptance criteria defined in EPRI-5380 which was in violation of ASME N690 which required cyclically loaded welds to be inspected to AWS D1.1. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-PTF-FWCL-CON-08-00299
- Welding Procedure Specification (WPS) – P1-A-LH, Revision 4
- Drawing – 24590-PTF-SS-S15T-00603, Revision 5
- Visual Weld Inspection Procedure – VT-AWS D1.1, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI used the correct filler material per the above WPS.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Final weld acceptance
- Welding filler material used
- Welder Qualification

Training and Qualification of Personnel:

The inspector verified the welders (I-125 & I-111) were qualified to make the crane rail beam weld repairs.

The inspector verified the BNI's weld inspector was qualified to perform the final weld inspections on the above welds in accordance with the visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed to the point of this inspection.

Conclusion:

BNI re-inspected and repaired crane rail beams N-09 and S-08 using the correct filler metal, and a qualified welder in accordance with the appropriate design and welding program requirements. BNI's weld examiner was qualified to perform the final acceptance of the welds.

Inspector: *MD [Signature]* Reviewed By: *Jim Barger* Approved by: *[Signature]*
Date: 6-30-08 Date: 6/30/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-126

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Sub-Contractor to PAC),
Supporting ORP

Dates of Inspection: June 17, 2008

Item(s) Inspected:

The site inspector performed visual inspection of welds (FW-165, -166, -167, and -168) on structural steel located at elevation 0'-0" of the High Level Waste (HLW) Building. The inspection included evaluation of the final weld condition to determine compliance with AWS D1.1-2000 edition.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-HLW-SS-S15T-00037, *HLW Vitrification Building Structural Steel Framing Partial Plan At El 14'-0" (Area 7)*, Revision 8, dated May 23, 2008
- Field Change Notice 24590-WTP-FC-C-08-0199, *HLW Column Base Plate Washer Weld Two Sides Option*, Revision 0, dated May 15, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Qualification Record, 24590-WTP-WQTR-CON-08-0067, *Welder Qualification Test Record – I-121*, Revision 0, dated March 27, 2008
- Construction Work Package (CWP) – *HCS2014*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00056*

Installation Program Adequacy:

The site inspector determined Construction Work Package *HCS2014* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00056* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material configuration, types, and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh*) requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examination and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed the welder (I-121) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed that the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-HLW-FWCL-CON-08-00056 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed selected welds on High Level Waste Building structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 7/1/08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-127

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Sub-contractor to PAC),
Supporting ORP

Dates of Inspection: April 7, 2008 -
June 18, 2008

Item(s) Inspected:

The site inspector performed a surveillance of field applied special protective coatings for concrete surfaces. Coatings were applied by subcontractor FD Thomas, Inc., on walls and floors in the Dewatering Control Room (Room P-120C) and adjacent areas of the Pretreatment (PT) Building.

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-AFPS-T0004, *Engineering Specification for Field Applied Special Protective Coatings for Concrete Surfaces*, Revision 2, dated November 13, 2007
- Drawing 24590-PTF-A5-A19T-05201001, *Pretreatment Facility Architectural Room Finish Schedule El 0'-0"*, Revision 0, dated May 27, 2004
- FD Thomas Submittal 24590-CM-HC2-AFPH-00001-016-01, *Certification Program for Waste Treatment Plant Construction Site*, Revision 00D, dated September 13, 2004
- FD Thomas Submittal 24590-CM-HC2-AFPH-00001-17-01, *Field Preparation and Coating Work Procedures for Waste Treatment Plant Construction Site*, Revision 00J, dated October 29, 2007

Installation Program Adequacy:

Subcontractor's installation program is based on their procedure titled "*Field Preparation and Coating Work Procedures for Waste Treatment Plant Construction Site*". This procedure, implemented the requirements of Specification 24590-WTP-3PS-AFPS-T0004, *Field Applied Special Protective Coatings for Concrete Surfaces*, and when used with coating manufacturer's recommendations, provided sufficient guidance for correct application of the specified products.

Acceptability of Material Being Used:

The inspector verified the Subcontractor was using pre-qualified coating material as listed in Specification 24590-WTP-3PS-AFPS-T0004, Appendix B. The finish coat material applied was Cor Cote HP for floors and Macropoxy 646 for walls. Material containers were marked in accordance with specification 24590-WTP-3PS-AFPS-T0004 requirements to show:

manufacturer's name, product designation, batch or lot number, location, and date of manufacture, and shelf life expiration date.

Work Activities:

The site inspector observed the following attributes and activities and determined they were being performed or completed in accordance with the specifications and procedure noted in the above list of "Design/Installation Documents Reviewed".

- Surface preparation
- Prior to base coat, concrete surface was determined to be dry by using the plastic sheet method described in ASTM D4263
- Subcontractor determined substrate temperature, and environmental conditions were within acceptable range
- Coating materials were mixed and applied in accordance with procedure *Field Preparation and Coating Work Procedures for Waste Treatment Plant Construction Site*
- Subcontractor performed wet film measurements to verify sufficient coating thickness

Training and Qualification of Personnel:

The Subcontractor's certification records showed the coating applicators and the Level II inspector had been qualified in accordance with their procedure: *Certification Program for Waste Treatment Plant Construction Site*. Applicator and inspector certification records were current, including inspector's eye examination.

Adequacy of Final Records:

Inspection forms and checklists were completed with all pertinent attributes addressed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

FD Thomas applied and examined special protective coatings for concrete in accordance with procedures, and drawings noted in the list of "Design/Installation Documents Reviewed" above. Materials were acceptable; application was in accordance with the approved procedure (*Field Preparation and Coating Work Procedures for Waste Treatment Plant Construction Site*) and specification (*Field Applied Special Protective Coatings for Concrete Surfaces*); subcontractor's quality control performed the requisite checks and measurements, personnel training and qualification were appropriate, and inspection records provided evidence that the work had been performed correctly.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 6/30/08 Date: 6/30/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF X **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-128

Inspector Name(s): WT Meloy Conner-Donagan, Inc. (Subcontractor to PAC), Supporting ORP	R Taylor Taylor Consulting, Inc. (Subcontractor to PAC), Supporting ORP	Dates of Inspection: June 12, 2008
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Item(s) Inspected:

This pertains to review and closure of non-cited Finding S-08-WCD-RPPWTP-001-N09a, b, and c. The non-cited Finding regarded BNI's failure to implement the requirements of Procedure 24590-WTP-GPP-MGT-022, *Project Issues Evaluation Reporting*. Specifically, issues raised via the Project Issues Evaluation Reporting (PIER) program had not been processed in accordance with procedural requirements. This deficiency was identified in Surveillance Report S-08-WCD-RPPWTP-001-124.

Design/Installation Documents Reviewed:

- BNI Procedure 24590-WTP-GPP-MGT-022, *Project Issues Evaluation Reporting*, Revision 3, dated January 9, 2008
- Condition Report 24590-WTP-CRPT-QA-08-116, *Site Inspectors Reviewed 28 Construction Related PIER Documents*, Revision 0, dated April 2, 2008

Follow-up:

BNI issued and subsequently closed Condition Report 24590-WTP-CRPT-QA-08-166 regarding PIER condition evaluation and resolution. The inspectors reviewed/verified the following corrective actions taken by BNI:

- Regarding PIERs closed before corrective action was complete: BNI performed an investigation to determine extent-of-condition. Of 112 PIERs randomly selected for review, one non-construction related PIER was found to have further action pending. Quality Assurance Information System item 24590-WTP-QAIS-08-463 was generated to track this item to closure. In addition, BNI issued a Quality Bulletin highlighting the requirement for PIER actions to be completed prior to PIER closure.
- Regarding electrical cables potentially degraded by water submersion, and electrical switchgear exposed to moisture: BNI conducted an ex post facto investigation and concluded electrical cables were rated for use in wet locations and electrical switchgear was found to be free of moisture.

- Regarding removal of tape residue from stainless steel piping: BNI asserted any residual adhesive would have been removed during cleaning pursuant to Specification 24590-WTP-3PS-NW00-T0002, *Chemical Requirements for Materials Used in Contact With Austenitic Stainless Steel and Nickel Based Alloys*.

Conclusion:

BNI has closed Condition Report 24590-WTP-CRPT-QA-08-116 regarding BNI's degree of compliance with Procedure BNI Procedure 24590-WTP-GPP-MGT-022, *Project Issues Evaluation Reporting*.

Based on the closure of Condition Report 24590-WTP-CRPT-QA-08-116 and verification of the actions taken by BNI, **non-cited Findings S-08-WCD-RPPWTP-001-N09a, b, and c** are closed.

A specific planned effectiveness review for closed non-cited Findings **S-08-WCD-RPPWTP-001-N09a, b, and c** is not required since this issue was minor and monitoring of mechanical and electrical work, including review of actions to close construction related PIERS is a continual WTP Construction Oversight and Assurance Division (WCD) activity.

R. Jankla 7-1-08
 Inspector: [Signature] Reviewed By: [Signature] Approved by: [Signature]
 Date: 7/1/08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-129

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 18, 2008

Item(s) Inspected:

The site inspector examined reworked areas of field welds (FW-89 and FW-95) on the PIH Overhead Mast Power Manipulator Runway structural steel for installation at the (+) 33'-6" elevation of the Pretreatment Facility (PTF). The inspection included evaluation of final weld condition to determine compliance with AWS D1.1 visual acceptance criteria for cyclically loaded non-tubular connections. Welds had been reworked pursuant to BNI non conformance report 24590-NCR-CON-05-0221.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-PTF-SS-S15T-00604, *Pretreatment Facility Structural PIH Overhead Mast Power Manipulator Runway Sections and Details*, Revision 7, dated October 27, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 13, 2008
- Non-conformance report 24590-NCR-CON-05-0221, *CAR 05-024 Embed Welding NDE Issues*, Revision 0, dated May 27, 2005
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *PCS0400*
- Field Weld Checklist – *24590-PTF-FWCL-CON-08-00300*
- Qualification Record 24590-WTP-WQTR-CON-07-0022, *Welder Performance Qualification Test Record – I-107*, Revision 0, dated April 18, 2007

Installation Program Adequacy:

The site inspector determined Construction Work Package *PCS0400* contained or referenced sufficient details to provide for rework of the structural components. Field Welding Checklist *24590-PTF-FWCL-CON-08-00300* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above listed "Design/Installation Documents Reviewed":

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner and welding personnel. BNI's welder qualification list and Welder Qualification Test Records (WQTR) confirmed welder I-107 and I-125 were qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records indicated the weld examiner had been certified as NDE Level II for special processes, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-PTF-FWCL-CON-08-00300 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed weld rework on PIH Overhead Mast Power Manipulator Runway structural steel for installation in the Pretreatment Facility. The configuration and orientation of the items conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *[Signature]* Reviewed By: *Sam Berger* Approved by: *[Signature]*
Date: 7/1/08 Date: 7/1/08 Date: 7/1/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW X LAW ___ LAB ___ BOF ___ Quality Class: ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-130

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 18, 2008

Item(s) Inspected:

The site inspector witnessed the placement, testing, and consolidation of concrete for HLW wall 1125. Prior to the placement of concrete the site inspector verified interior wall cleanliness, clear cover between wall forms and reinforcing steel, and reinforcing steel wire ties (some wire ties had been left in place since before the 2005 shutdown).

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 26, 2007
- Specification 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 29, 2007
- Specification 24590-BOF-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2007
- Drawing 24590-HLW-DBS13T-00002, *HLW Vitrification Building Concrete Overall Plan At El 0'-0"*, Revision 4, dated August 17, 2007
- Procedure 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated June 22, 2005
- Project Record 24590-HLW-CPC-CON-05-019, *Concrete Pour Card*

Installation Program Adequacy:

The site inspector found the specifications, drawings, and procedure noted above contained or referenced sufficient detail to provide for correct placement of concrete.

Acceptability of Material Being Used:

The site inspector found Concrete Pour Card 24590-HLW-CPC-CON-05-019 specified an appropriate mix design for placement 1125.

Work Activities:

Prior to concrete placement, the site inspector performed visual inspection of various rebar wire ties occurring within the placement volume. The wire ties were found to be acceptable. The wall placement had been inspected by BNI for deficient rebar ties and any questionable wire ties were removed and replaced to avoid shifting of the rebar during concrete placement.

For the placement identified above, the site inspector observed the following attributes and activities and determined they were being performed or completed in accordance with the specifications and procedure noted in the above list of "Design/Installation Documents Reviewed".

- The interior of the formed area was clean and free of debris.
- BNI's quality control staff performed concrete receipt activities and reviewed batch tickets, as required by Section 3.11.2 of *Concrete Operations (Including Supply)*.
- The materials testing subcontractor's field technicians performed concrete receipt activities, reviewed batch tickets, and recorded information as required by Section 3.2.1 of the *Engineering Specification for Material Testing Services*.
- The materials testing subcontractor's field technicians tested concrete for temperature, slump, and unit weight in accordance with their procedures, the applicable American Society for Testing and Materials (ASTM) standards, and BNI specifications.
- Concrete was being delivered within the acceptable concrete temperature ranges.
- Concrete was conveyed, placed, and consolidated in accordance with procedures, specifications, and required codes and standards.

Training and Qualification of Personnel:

Training and qualification records for concrete testing personnel have been reviewed. Personnel have been trained and certified in accordance with specification requirements.

Adequacy of Final Records:

The site inspector observed that batch tickets were reviewed and the information required by Section 3.2.1 of the *Engineering Specification for Material Testing* had been recorded. The site inspector examined Concrete Pour Card 24590-HLW-CPC-CON-05-019, and concluded the required signatures were in place prior to the start of the placement.

Conclusion:

For wall placement 1125 at the High Level Waste facility, BNI had placed, consolidated, and tested concrete in accordance with procedures, engineering specifications, required codes and standards, and the Safety Requirement Document (SRD). Quality control and testing personnel had been trained and certified for the examination and test methods used, and pertinent attributes of quality assurance documentation had been completed.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 7/1/08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X ___

Dangerous Waste Permit Affecting: Yes ___ No X ___

Surveillance Report Number: S-08-WCD-RPPWTP-002-131

Inspector Name(s): MD Everts
Everts Enterprise, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 18, 2008

Item(s) Inspected:

The inspector performed a final weld inspection on an 8" lateral to pipe connection of the Plant Wash and Disposal System for field weld FW-01 in the PTF building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-PTF-FWCL-CON-08-00100
- Welding Procedure – P8-T-AG, Revision 7
- Drawing – 24590-PTF-P3-PWD-WU001440003, *Pretreatment Facility Isometric*, Revision 1, dated July 13, 2005
- Visual Weld Procedure – VT-ASME, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI was using the correct weld filler material in accordance with the above welding procedure.

The inspector verified BNI installed the correct pipe spools in accordance with the above drawing.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Final weld acceptance
- Welding filler material
- Welder qualification
- Configuration/orientation acceptable

Training and Qualification of Personnel:

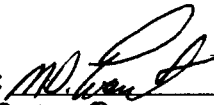
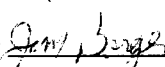
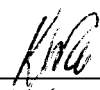
The inspector verified the welder (P-14) was qualified to make the field weld and BNI's examiner was qualified to perform the final weld inspection per the above listed visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be acceptably completed to the point of this inspection.

Conclusion:

BNI welded selected Plant Wash and Disposal System pipe spools together in accordance with the approved drawing using the correct filler metal and a qualified welder and examiner, in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 7-1-08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-132

Inspector Name(s): RI Taylor
Taylor Consulting Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 18, 2008

Item(s) Inspected:

The site inspector performed inspection of a field weld between clamp plates to the silo skirt anchor located at the Glass Former Storage Facility. The weld is used to attach the silo skirt to the embedded anchor bolt at the base of silo GFR-TK-00005, (*Glass Formers Reagent System*). The inspection included evaluation of the final weld condition to determine compliance with the AWS D1.1 Structural welding Code.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-DB-S13T-00059, *Glass Former Storage Facility Foundation Embed Plan and Details*, Revision 4, dated May 10, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *Bechtel Nondestructive Examination Standard Visual Examination VT-AWS D1.1*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *BMS0022*
- Field Weld Checklist – *24590-BOF-FWCL-CON-08-00238*
- Qualification Record 24590-WTP-WQTR-CON-06-0017, *Welder Performance Qualification Test Record – B-28*, Revision 1, dated June 6, 2006

Installation Program Adequacy:

The site inspector determined Construction Work Package *BMS0022* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-08-00238* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh*), filler material (E-7018), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-AWS D1.1*).

Acceptability of Material Being Used:

Plate material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above listed "Design/Installation Documents Reviewed":

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E-7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder B-28 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination and his visual acuity records were current.

Adequacy of Final Records:

All inspection attributes on Field Welding Checklist 24590-BOF-FWCL-CON-08-00238 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed welding for a selected skirt clamp plate located at the Glass Former Facility; silo GFR-TK-00005. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Inspector: R. Santos Reviewed By: Gene Bergeron Approved by: [Signature]
 Date: 7-1-08 Date: 7/19/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB X BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-133

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 18, 2008

Item(s) Inspected:

The site inspector observed leak testing of a section of C2 exhaust stack for the Analytical Laboratory Building (LAB). The test included an approximately 70 foot portion of stack that had been installed in its steel support structure prior to erection. Testing was accomplished under Intermech's Work Data Packages WDP364020C-1.

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-MDH0-T0002, *Engineering Specification for Heating, Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (CM)*, Revision 1, dated March 8, 2004
- Drawing 24590-LAB-M8-SDJ-00001, *Analytical Lab Plant Room V&ID Stack Monitoring System*, Revision 0, dated December 30, 2003
- Drawing change Notice 24590-LAB-M8N-SDJ-00002, *LAB C2V Ventilation Stack Material Change*, Revision 0, dated August 3, 2006
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-70-00097, *Drawing - HVAC Construction Drawing, HVAC Vent Stacks – Elevation 41 Ft – 0 in – Task Order 20 (3387-4B-210)*, Revision 00C, dated July 17, 2007
- Subcontractor Submittal 24590-QL-SRA-MDHM-00001-06-81, *HVAC Housing/Duct Structural Capability and Leak Testing*, Revision F, dated May 2, 2006

Installation Program Adequacy:

The quality level designator for the stack section tested was Construction Material (CM). A review of the subcontractor's work packages and procedure showed that testing was being performed in accordance with specification requirements. The constant pressure method was used. For the C2 system, an allowable leak rate of 5%, and a Maximum Operating Pressure (MOP) of +8" water gage (wg), were specified in the ductwork designators on Drawing Change Notice 24590-LAB-M8N-SDJ-00002.

Acceptability of Material Being Used:

The calibration/certification stickers affixed to the measurement & test equipment (M&TE) used to perform the test indicated the M&TE calibration/certification was current. Test equipment configuration conformed to procedural requirements.

Work Activities:

For the stack section tested, construction, modifications, and rework affecting the test boundary were complete and the inlet and discharge openings were sealed before the test was started. Test equipment, including flow measurement and pressure indicating devices, was installed and the stack was pressurized. Test pressure was required to be at least Maximum Operating Pressure (MOP) per Specification 24590-WTP-3PS-MDH0-T0002, *Engineering Specification for Heating Ventilating and Air Conditioning System Seismic Category III and IV Ductwork (CM)*, and Intermech Procedure *HVAC Housing/Duct Structural Capability and Leak Testing*. MOP and minimum test pressure were +8.0" water gauge. The specified test pressure was attained and leak rate was measure at well below allowable. Allowable leak rate for the section tested was 587.74 CFM; measure leak rate was 2.81 CFM.

Training and Qualification of Personnel:

Testing personnel had been certified as Level II in accordance with Intermech's *HVAC Housing/Duct Structural Capability and Leak Testing* procedure noted above.

Adequacy of Final Records:

Duct and Housing Leak Rate Test forms were completed with all attributes addressed. Test records included: identification of the items tested, reference to applicable test procedure, test dates, identification of the test conductor, type of test, and the results of acceptability.

Conclusion:

Intermech successfully tested a section of the C2 exhaust stack for the Analytical Laboratory (LAB). Testing was performed in accordance with the applicable specifications and written procedures. Test equipment was configured properly, and Measurement and Test Equipment (M&TE) was properly calibrated. Testing was performed in accordance with approved procedures and provided verification that the stack sections conformed to the leakage criteria specified in contract documents. Intermech's testing personnel had been trained and certified for the test method used, and test records were adequate.

Inspector: *DTM* Reviewed By: *Jim Berger* Approved by: *[Signature]*
Date: *7/1/08* Date: *5/1/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS X BOP___

Dangerous Waste Permit Affecting: Yes X No___

Surveillance Report Number: S-08-WCD-RPPWTP-002-134

Inspector Name(s): EF Enloe ENLOE CONSULTING INC Dates of Inspection: June 18, 2008

Item(s) Inspected:

The site inspector a performed visual fit-up inspection of field welds (FW-01 & FW-02) on pipe support LAW-LVP-H30007 located at the (+) 64'-5 1/16" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for AWS D1.1-2000.

FW-01 was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007
- Drawing 24590-LAW-M6-LVP-00002, *P & ID-LawSecondary Offgas/Vessel Vent Process System and Stack Discharge Monitorint System*, Revision 3, dated February 1, 2007
- Drawing 24590-LAW-P3-LVP-PW00009012, *LAW Vitrification Building Isometric -- LVP-PW-00009-S11N-18*, Revision 0, dated July 5, 2007
- Drawing 24590-WTP-LVP-H30007, *Pipe Support Drawing*, Revision 0, dated July 5, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 4, dated February 7, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI0059*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04947*

Installation Program Adequacy:

The site inspector determined Construction Work Package *LPI0059* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04947* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh* filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification PI-A-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's weld examiner, and welding personnel. BNI's welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-149 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI's records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-04947 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for a Low Activity Waste Building pipe support. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI's examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *J Enloe* Reviewed By: *Jim Boyer* Approved by: *KMc*
Date: 6-24-08 Date: 6/24/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW ___ LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-135

Inspector Name(s): MD Everts
 Everts Enterprise, Inc.
 (Subcontractor to PAC),
 Supporting ORP

Dates of Inspection: June 24, 2008

Item(s) Inspected:

The inspector reviewed the a PTF structural steel work package and performed a walk down of the existing structural steel installed from the 0'-0" elevation to +28-0" elevation and from column line 17 to column line 26 in the PTF building for accuracy and completeness.

Design/Installation Documents Reviewed:

- Work Package – 24590-PTF-SMIR-CON-04-040, *Structural or Miscellaneous Steel Inspection Report*
- Construction Procedure – 24590- WTP-GPP-CON-3206, *Structural Steel Installation & On-site Fabrication*, Revision 3, dated 5-26-05

Acceptability of Material Being Used:

The inspector verified the installed structural steel beams were as specified on the design drawings.

Work Activities:

The inspector verified the structural steel beams were installed in the correct location per the design drawings and the bolted connection had the correct bolts installed and tighten (end of the bolt broken off) as required by the design documents.

Adequacy of Final Records:

The inspector reviewed the final work package for completeness and accuracy and found it to be acceptable in accordance with the construction procedure listed above.

Conclusion:

BNI installed PTF beams in the correct location, installed the correct bolts, and tighten bolts in accordance with the applicable design and installation documents.

Inspector: *MD* Reviewed By: *Jim Bang* Approved by: *VTC*
Date: *7-2-08* Date: *7/2/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-136

Inspector Name(s): EF Enloe **Dates of Inspection:** June 24, 2008
ENLOE CONSULTING INC

Item(s) Inspected:

As part of the Office of River Protection's (ORP) responsibilities regarding functioning as the Owner's Inspector for American Society of Mechanical Engineers B31.3 Code requirements specified in Section 340, ORP is conducting a review of weld and test records associated B31.3 construction activities at the Waste Treatment and Immobilization Plant (WTP) Project. These inspection activities were defined in a letter to Bechtel on May 11, 2006 (06-WTP-028) as follows:

Review of all completed system or partial system packages (depending on how BNI chooses to package completed work) to verify the pipe fabrication and installation meets ASME B31.3 requirements. The onsite inspection staff will annotate each completed package with unique markings to indicate the owner's determination that the package meets ASME B31.3 requirements.

The inspector reviewed three final Aboveground Piping Inspection Records (APIR) from the Balance of Facilities (BOF) as part of this owners Inspection process.

Design/Installation Documents Reviewed:

24590-WTP-GPP-CON-3503, *Aboveground Piping Installation*, Revision 3, dated March 24, 2005.

Adequacy of Final Records:

The inspector reviewed 3 APIRs for conformity to criteria established in WD-3, and found them to be acceptable with no errors.

Conclusion:

Three reviewed APIRs had been completed in accordance with 24590-WTP-GPP-CON-3503, *Aboveground Piping Installation*.

Inspector: EF Enloe **Reviewed By:** Jim Berger **Approved by:** [Signature]
Date: 6-26-08 **Date:** 6/26/08 **Date:** 7/15/08

SURVEILLANCE REPORT

Facility: PTF X HLW X LAW X LAB X BOF X Quality Class: ITS X BOP X

Dangerous Waste Permit Affecting: Yes X No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-137

Inspector Name(s): EF Enloe R Taylor Dates of Inspection: June, 2008
ENLOE CONSULTING INC Taylor Consulting Inc
(Subcontract to PAC), (Subcontract to PAC),
Supporting ORP Supporting ORP

Item(s) Inspected:

As part of the Office of River Protection's (ORP) responsibilities regarding functioning as the Owner's Inspector for American Society of Mechanical Engineers B31.3 Code requirements specified in Section 340, ORP is conducting a review of weld and test records associated B31.3 construction activities at the Waste Treatment and Immobilization Plant (WTP) Project. These inspection activities were defined in a letter to Bechtel on May 11, 2006 (06-WTP-028) as follows:

Review of all completed system or partial system packages (depending on how BNI chooses to package completed work) to verify the pipe fabrication and installation meets ASME B31.3 requirements. The onsite inspection staff will annotate each completed package with unique markings to indicate the owner's determination that the package meets ASME B31.3 requirements.

The Site Inspectors reviewed final Field Weld Checklists (FWCL) from the High Level Waste (HLW), Low Activity Waste Facility (LAW), Laboratory Building (LAB), Pretreatment Facility (PTF) and Balance of Facilities (BOF) as part of this owner's Inspection process.

Design/Installation Documents Reviewed:

- Dangerous Waste Portion of the Resource Conservation and Recovery Act Permit for the Treatment, Storage and Disposal of Dangerous Waste at the *Hanford Waste Treatment and Immobilization Plant*, Revision October 2007
- Code ASME B31.3 *American Society of Mechanical Engineers*, 1996 Edition
- 24590-WTP-MN-CON-01-001-08-01, *Welding Documentation (WD-3)*, Revision 17, dated November 30, 2006

Adequacy of Final Records:

The Site Inspectors reviewed 2,738 FWCLs for conformity to criteria established in WD-3 and ASME B31.3. The Site Inspectors determined they were acceptable with a few minor errors. BNI corrected the minor errors.

Conclusion:

The Site Inspectors completed review of WTP Site Field Weld Check List (FWCL) records stored in Project Data Control (PDC) as of this date.

BNI had acceptably completed 2,738 FWCLs in accordance with contract requirements and procedure 24590-WTP-MN-CON-01-001-08-01, *Welding Documentation (WD-3)*.

R. Taylor 7-1-08
Inspector: ET Enloe Reviewed By: Jim Angus Approved by: [Signature]
Date: 7/1/08 Date: 7/1/08 Date: 7/5/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-138

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 24, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a field weld (FW001) on pipe spool LAW-LVP-ZY00013001-B located at the (+)28'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of weld fit-up condition to determine compliance with visual acceptance criteria established by ASME B31.3.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LVP-ZY00013001, *LAW Vitrification Building Isometric –LVP-ZY-00013-S11M-4*, Revision 0, dated February 15, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0049*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04823*
- Qualification Record 24590-WTP-WQTR-CON-05-0058, *Welder Performance Qualification Test Record – P-90*, Revision 0, dated February 1, 2005

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0049* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04823* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above listed documents:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed the welder (P-90) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate attributes on Field Welding Checklist 24590-LAW-FWCL-CON-07-04823 had been completed. The inspection records provided for item identification, examination dates, examiner identification, type of observation, and results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed weld fit-up for a section of Low Active Waste Building piping. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
Date: 7/2/08 Date: 7/2/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ **Quality Class:** ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-139

Inspector Name(s): WT Meloy

Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 24, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a field weld on pipe support LAW-LMP-H20072 located at the (+)28'-0" elevation of the Low Active Waste (LAW) Building. The weld occurred between the support steel L3x3x3/8 and building structural steel. The inspection included evaluation of the weld fit-up condition to determine compliance with visual acceptance criteria established by ASME B31.3.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-LMP-GL90242001, *LAW Vitrification Building Isometric –LMP-GL-90242-S10A-2*, Revision 0, dated January 26, 2007
- Drawing 24590-WTP-PH-50-00003001, *Standard Pipe Support Details Cantilever – Cantilever CC*, Revision 4, dated September 25, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-85, *Bechtel Welding Procedure Specification P1-A-Lh (Structural)*, Revision 3, dated December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LPI0054*
- Field Weld Checklist – *24590-LAW-FWCL-CON-07-04469*
- Qualification Record 24590-WTP-WQTR-CON-05-0009, *Welder Performance Qualification Test Record – P-90*, Revision 0, dated January 12, 2005

Installation Program Adequacy:

The site inspector determined Construction Work Package *LPI0054* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-07-04469* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh (Structural)*), filler material (E7018-1), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh (Structural)* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above list of "Design/Installation Documents Reviewed":

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018-1
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-90 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination, and visual acuity records were current.

Adequacy of Final Records:

The appropriate attributes on Field Welding Checklist *24590-LAW-FWCL-CON-07-04469* had been completed. The inspection records provided for item identification, examination dates, identification of the examiner, type of observation, and results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a Low Active Waste Building pipe support. The configuration and orientation of the items installed conformed to the drawings, and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *John T. May* Reviewed By: *Gene Berger* Approved by: *[Signature]*
 Date: *7/1/08* Date: *7/1/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-140

Inspector Name(s): EF Enloe

Dates of Inspection: June 24, 2008

Item(s) Inspected:

The site inspector performed a visual inspection of a circumferential butt weld (FW003); pipe spool LAW-NLD-WT01615002-A located at the (+) 22'-11 15/16" elevation of the Low-Activity Waste Facility (LAW). The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for ASME B31.3 normal fluid service.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-P3-NLD-WT01615002, *LAW Vitrification Building Isometric, NLD-WT-01615002-S—B-6*, Revision 2, dated January 26, 2007
- Drawing 24590-LAW-M6-NLD-00001, *LAW-P&ID-Non-Radioactive Liquid Waste Disposal System C1/C2 Drains/Sump Collection*, Revision 4, dated October 14, 2004
- Procedure 24590-WTP-MN-CON-01-001-03-21, *Bechtel Welding Procedure Specification P8-T-Ag*, Revision 7, dated November 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *LPI0065*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01683*

Installation Program Adequacy:

The site inspector found Construction Work Package *LPI0065* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01683* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P8-T-Ag*), filler material (ER316L), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P8-T-Ag* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of “Design/Installation Documents Reviewed” above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER316L
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed welder P-46 was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records showed the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-LAW-FWCL-CON-08-01683 had been completed. The inspection records identified the item examined, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welding for a LAW pipe spool. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used and inspection records were adequate.

Inspector: *J. Enloe* Reviewed By: *Jim Berger* Approved by: *KWA*
Date: *6/25/08* Date: *6/25/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW X LAB___ BOF___ Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-141

Inspector Name(s): RI Taylor
Taylor Consulting Incorporated/
Project Assistance Corporation

Dates of Inspection: June 26, 2008

Item(s) Inspected:

The site inspector performed a pre-placement inspection including verification of forms, rebar, embedments and clear cover, (FRE) for installation of a concrete mechanical slab LAW-143A located at elevation 71'-0", in the Low Activity Waste Facility (LAW). The site inspector also witnessed placement of concrete at this slab LAW-143A location.

Design/Installation Documents Reviewed:

- 24590-LAW-CPC-CON-08-003, *Concrete Pour Card*
- Construction Work Package (CWP) LCC0143A
- 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 26, 2007
- 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 29, 2007
- 24590-BOF-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2007
- 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated December 22, 2007

Work Activities:

The site inspector verified the correct size and configuration of re-steel being installed was acceptable in accordance with CWP listed on the concrete pour card.

Clear cover of the rebar mat on the sides of the forms as well was achieved by use of stand off blocks, and verified by the inspector.

The site inspector witnessed placement of concrete for mechanical slab LAW-143A via use of a one cubic yard concrete bucket. Concrete testing was performed by the Material Testing subcontractor technicians, and found to be acceptable to the applicable American Society for Testing and Materials (ASTM) standards and BNI's specifications. These tests are documented for HLW wall placement 1133.

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI's civil inspectors, and BNI's records indicated the civil inspectors had been certified as Civil Level II for examiners. Visual acuity records were current.

Adequacy of Final Records:

The site inspector examined Concrete Pour Card 24590-LAW-CPC-CON-08-003, and concluded the required signatures were in place prior to the start of the placement.

Conclusion:

BNI had installed forms, rebar, and embedments, and established clear cover, in an acceptable manner. BNI was found to be batching, placing, consolidating, and testing concrete for a mechanical slab LAW-143A located at elevation 71'-0", in the LAW Facility, in accordance with engineering specifications and the SRD.

Inspector: Robert Taylor Reviewed By: Jim Dargatzis Approved by: KAC
Date: 6-26-08 Date: 6/26/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-142

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.

Dates of Inspection: June 26, 2008

Item(s) Inspected:

The site inspector performed visual inspection of a weld (FW-04) on shielding steel for a 32" dry shielding window to be installed at elevation 14'-0" of the High Level Waste (HLW) Building. The inspection included evaluation of the weld final condition to determine compliance with AWS D1.1-2000 edition.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Subcontractor Submittal 24590-QL-POA-ADDP-00001-19-00019, *Drawing – 32 Inch Vertical Dry Shielding Window – Bechtel Job #24590 PTI Shop #C-4722-NQA-1 – Frame Addition Assem. & Details*, Revision 00D, dated May 15, 2008
- Drawing 24590-HWL-P1-P23T-00210, *HLW Vitrification Building Equipment Location Plan El. 14 ft – 0 in – Area 210*, Revision 2, dated May 25, 2005
- Field Change Notice 24590-WTP-FC-M-08-0131, *HLW Additional Weld for 30-Liner Shielding Modifications*, Revision 0, dated June 11, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Qualification Record, 24590-WTP-WQTR-CON-07-0010, *Welder Qualification Test Record – I-105*, Revision 0, dated February 16, 2007
- Construction Work Package (CWP) – *HCC2137*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00159*

Installation Program Adequacy:

The site inspector found Construction Work Package *HCC2137* contained or referenced sufficient details to provide for correct installation of the shielding steel components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00159* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material configuration, types, and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above "Design/Installation Documents Reviewed" list:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed that the welder (I-105) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-HLW-FWCL-CON-08-00159 had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds on High Level Waste Building window shielding steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *John T. Moly* Reviewed By: *Gene Bergen* Approved by: *KWA*
 Date: *7/1/08* Date: *7/1/08* Date: *7/15/08*

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-143

Inspector Name(s): MD Evarts
Evarts Enterprise, Inc.
(Sub-Contractor to PAC),
Supporting ORP

Dates of Inspection: June 19, 2008

Item(s) Inspected:

The inspector performed a Fit-up inspection on a 1" pipe to socket-o-let on the Demineralized Water System on field weld FW-01 on the +28 elevation of the LAW building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-LAW-FWCL-CON-08-00150
- Welding Procedure – P8-T-AG, Revision 7
- Drawing – 24590-LAW-P3-DIW-WE03662001, *LAW Vitrification Building Isometric*, Revision 0, dated February 16, 2007
- Visual Weld Procedure – VT-ASME, Revision 6

Acceptability of Material Being Used:

The inspector verified the Contractor installed the correct spools in accordance with the above listed drawing.

The inspector verified the Contractor was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Spool orientation and configuration
- Welding filler material
- Welder Qualification
- Fit-up Acceptable

Training and Qualification of Personnel:

The inspector verified the welder (P-136) was qualified to make the field welds.


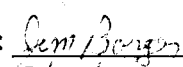
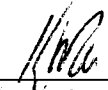
BNI's inspector was qualified to perform the Fit-up inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded the correct pipe spool on the LAW Demineralized Water System using the correct flange filler metal, and a qualified welder and examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 7-10-08 Date: 7/10/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW X LAW ___ LAB ___ BOF ___ **Quality Class:** ITS X BOP ___

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-144

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 26, 2008

Item(s) Inspected:

The site inspector witnessed the placement, testing, and consolidation of concrete for High Level Waste facility wall placement HLW1133. Prior to the placement of concrete the site inspector verified interior wall cleanliness, clear cover between wall forms and reinforcing steel, and reinforcing steel wire ties (some wire ties had been left in place since before the 2005 shutdown).

Design/Installation Documents Reviewed:

- Specification 24590-WTP-3PS-D000-T0001, *Engineering Specification for Concrete Work*, Revision 7, dated March 26, 2007
- Specification 24590-WTP-3PS-DB01-T0001, *Engineering Specification for Furnishing and Delivering Ready-Mixed Concrete*, Revision 8, dated March 29, 2007
- Specification 24590-BOF-3PS-C000-T0001, *Engineering Specification for Material Testing Services*, Revision 4, dated March 26, 2007
- Drawing 24590-HLW-DBS13T-00002, *HLW Vitrification Building Concrete Overall Plan At El 0'-0"*, Revision 4, dated August 17, 2007
- Procedure 24590-WTP-GPP-CON-3203, *Concrete Operations (Including Supply)*, Revision 9, dated June 22, 2005
- Project Record 24590-HLW-CPC-CON-08-018, *Concrete Pour Card*

Installation Program Adequacy:

The site inspector determined the specifications, drawings, and procedure noted in the above list of documents contained or referenced sufficient detail to provide for correct placement of concrete.

Acceptability of Material Being Used:

The site inspector found Concrete Pour Card 24590-HLW-CPC-CON-08-018 specified an appropriate mix designs for placement HLW 1133.

Work Activities:

Prior to concrete placement, the site inspector performed visual inspection of various rebar wire ties occurring within the placement volume. The wire ties were determined to be acceptable. The wall placement had been inspected by BNI for deficient rebar ties and any questionable wire ties were removed and replaced to avoid shifting of the rebar during concrete placement.

For the placement identified above, the site inspector observed the following attributes and activities and determined they were being performed or completed in accordance with the specifications and procedure noted in the above list of documents.

- The interior of the formed area was clean and free of debris.
- BNI's quality control staff performed concrete receipt activities and reviewed batch tickets, as required by Section 3.11.2 of *Concrete Operations (Including Supply)*.
- The materials testing subcontractor's field technicians performed concrete receipt activities, reviewed batch tickets, and recorded information as required by Section 3.2.1 of the *Engineering Specification for Material Testing Services*.
- The materials testing subcontractor's field technicians tested concrete for temperature, slump, and unit weight in accordance with their procedures, the applicable American Society for Testing and Materials (ASTM) standards, and BNI specifications.
- Concrete was being delivered within the acceptable concrete temperature ranges.
- Concrete was conveyed, placed, and consolidated in accordance with procedures, specifications, and required codes and standards.

Training and Qualification of Personnel:

Training and qualification records for concrete testing personnel have been reviewed. Personnel have been trained and certified in accordance with specification requirements.

Adequacy of Final Records:

The site inspector observed that batch tickets were reviewed and the information required by Section 3.2.1 of the *Engineering Specification for Material Testing* had been recorded. The site inspector examined Concrete Pour Card 24590-HLW-CPC-CON-08-018, and concluded the required signatures were in place prior to the start of the placement.

Conclusion:

The site inspector witnessed concrete placement at the High Level Waste facility and concluded BNI had placed, consolidated, and tested concrete in accordance with procedures, engineering specifications, required codes and standards, and the Safety Requirement Document (SRD). Quality control and testing personnel had been trained and certified for the examination and test methods used, and pertinent attributes of quality assurance documentation had been completed.

Inspector: Don T. Heflan Reviewed By: Sam Berger Approved by: [Signature]
Date: 7/1/08 Date: 7/1/08 Date: 7/5/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW X LAB ___ BOF ___ **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-145

Inspector Name(s): EF Enloe
ENLOE CONSULTING INC
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 26, 2008

Item(s) Inspected:

The site inspector performed final weld inspection of field welds on electrical support LAW-E2-E53T-00226 located at the (+) 40'-0" elevation of the Low Active Waste (LAW) Building. The inspection included evaluation of the final weld condition to determine compliance with visual acceptance criteria for AWS D1.1-2000.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-LAW-E2-E53T-00226, -- *LAW Vitrification Building Electrical Cable Tray Plan at EL (+)28'*, Revision 2, dated April 27, 2007
- Drawing 24590-WTP-FC-E-08-0228 – *LAW (+)28 Cable Tray Support Modification*, dated June 20, 2008
- Procedure 24590-WTP-MN-CON-01-001-03-37, -- *Bechtel Welding Procedure Specification P1-A-Lh*, Revision 4, dated February 7, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Construction Work Package (CWP) – *LER0029*
- Field Weld Checklist – *24590-LAW-FWCL-CON-08-01687*

Installation Program Adequacy:

The site inspector determined Construction Work Package *LER0029* contained or referenced sufficient details to provide for correct installation of the support components. Field Welding Checklist *24590-LAW-FWCL-CON-08-01687* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification*) *P1-A-Lh* filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material types and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list of "Design/Installation Documents Reviewed" above:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld final condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed the welder (E-2) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination and visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist *24590-LAW-FWCL-CON-08-01687* had been completed. The inspection records identified the item inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI completed welds for a Low Activity Waste Building pipe support. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *F Enloe* Reviewed By: *Jim Borger* Approved by: *KPA*
 Date: *7/1/08* Date: *7/1/08* Date: *7/5/08*

SURVEILLANCE REPORT

Facility: PTF___ HLW X LAW___ LAB___ BOF___ **Quality Class:** ITS X BOP___

Dangerous Waste Permit Affecting: Yes___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-146

Inspector Name(s): WT Meloy
Conner-Donagan, Inc.
(Subcontractor to PAC),
Supporting ORP

Dates of Inspection: June 26, 2008

Item(s) Inspected:

The site inspector performed visual inspection of welds (FW-04A and FW-11A) on structural steel at the 14'-0" elevation of the High Level Waste (HLW) Building. The inspection included evaluation of weld fit-up (FW-04A), and final condition (FW-11A) to determine compliance with AWS D1.1-2000 edition.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-HLW-SS-S15T-00031, *HLW Vitrification Building Structural Steel Framing Partial Plan At El 14'-0" (Area 1)*, Revision 5, dated August 23, 2007
- Drawing 24590-HLW-SS-S15T-00032, *HLW Vitrification Building Structural Steel Framing Partial Plan At El 14'-0" (Area 2)*, Revision 5, dated August 23, 2007
- Drawing 24590-HLW-SS-S15T-00265, *HLW Vitrification Building Structural Typical Connection Details*, Revision 5, dated May 16, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-37, *Bechtel Welding Procedure Specification P1-A-Lh*, Revision 4, dated February 13, 2008
- Procedure 24590-WTP-MN-CON-01-001-10-10, *VT-AWS D1.1 – Visual Examination Standard*, Revision 6, dated August 15, 2006
- Qualification Record, 24590-WTP-WQTR-CON-08-0074, *Welder Qualification Test Record – I-122*, Revision 0, dated April 2, 2008
- Construction Work Package (CWP) – *HCS2001*
- Field Weld Checklist – *24590-HLW-FWCL-CON-08-00141*

Installation Program Adequacy:

The site inspector determined Construction Work Package *HCS2001* contained or referenced sufficient details to provide for correct installation of the structural steel components. Field Welding Checklist *24590-HLW-FWCL-CON-08-00141* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-A-Lh*), filler material (E7018), and inspection procedure (*VT-AWS D1.1 – Visual Examination Standard*).

Acceptability of Material Being Used:

Material configuration, types, and sizes conformed to design requirements and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed welding correctly in accordance with *Bechtel Welding Procedure Specification P1-A-Lh* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the above listed documents:

- Material type, orientation, and configuration
- Welding process – SMAW
- Welding filler material – E7018
- Weld fit-up (FW-04A) and final (FW-11A) condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examination and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed the welder (I-122) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination; visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-HLW-FWCL-CON-08-00141 had been completed. The inspection records identified the items inspected, the dates of examination, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item examined.

Conclusion:

BNI performed welding on High Level Waste Building structural steel. The configuration and orientation of the items installed conformed to the drawings and welding met the specified criteria. BNI used correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination method used, and inspection records were adequate.

Inspector: *[Signature]* Reviewed By: *[Signature]* Approved by: *[Signature]*
 Date: 7/1/08 Date: 5/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___, HLW___, LAW___, LAB___, BOF X, **Quality Class:** ITS___, BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-147

Inspector Name(s): Debra Wallace
Wallace Consulting, Inc.
(Sub-contractor to PAC),
Supporting ORP

Dates of Inspection: June 30, 2008

Item(s) Inspected:

Closure of Finding S-07-WCD-RPPWTP-020-F01 (a-e) pertaining to the NEC electrical violations associated with an electrical panel/enclosure located in the Central Pre-mix Boiler Storage Conex. The following deficiencies were identified in Operational Awareness Report S-07-WCD-RPPWTP-020:

- NEC Article 384-18 requires panelboards to be mounted in cabinets, cut-out boxes, or enclosures designed for the purpose and shall be dead-front.

The cabinet was not completely dead-front resulting in exposed conductors in part of the cabinet (Finding S-07-WCD-RPPWTP-020-F01a). This condition had immediate potential for shock hazard when energizing the light switch inside the cabinet.

An electrical sub-contractor for Central Pre-Mix (CPM) installed Plexiglas over the switches on the enclosure door and provided a dead-front for the cabinet, thus providing a barrier to prevent contact of live parts when switching the panelboard circuit breakers. This resolves this issue.

- NEC Article 110-27(C) requires entrances to rooms and other guarded locations that contain exposed live parts to be marked with conspicuous warning signs forbidding unqualified persons to enter.

The panel door was missing a warning sign (Finding S-07-WCD-RPPWTP-020-F01b) for the shock hazard potential inside the panel.

The CPM Safety Representative immediately placed a warning sign "De-energize before Servicing" on the cabinet door. This resolves this issue.

- NEC article 110-26 requires panelboard/control cabinets to have a minimum three foot working clearance.

There was water piping within the working clearance required for the electrical panel (Finding S-07-WCD-RPPWTP-020-F01c).

The water pipe was shortened by CPM maintenance crew; therefore, meeting the above working clearance requirement. This resolves this issue.

- NEC Article 240-83(D) requires circuit breakers used as switches in 120-volt and 277-volt fluorescent lighting circuits to be listed or marked SWD or HID.

A circuit breaker was found to be used as the switch for the Conex fluorescent lights; however, it could not be determined if it was listed or marked SWD or HID (Finding S-07-WCD-RPPWTP-020-F01d).

CPM electrical sub-contractor added a light switch outside of the panelboard enclosure; therefore, eliminating the above requirement. This resolves this issue.

- NEC Article 110-12(a) requires unused cable or raceway openings in cabinets to be effectively closed.

The surveillants noted the cabinet had an unused panel opening that was not closed (Finding S-07-WCD-RPPWTP-020-F01e).

CPM electrical sub-contractor installed a knockout seal in the unused opening. This resolves this issue.

The site inspector also performed an inspection of 45 KVA three phase Transformer, 100-amp Boiler Disconnect (fused 50-amp), five conductor #4 SOW cable, and 60-amp Boiler Room Conex Disconnect.

Design/Installation Documents Reviewed:

- 1999 National Electrical Code
- *Control of Temporary Electrical Installations*, 24590-WTP-GPP-CON-3311, Revision 3E, dated March 19, 2008

Follow-up:

BNI closed Condition Report 24590-WTP-CRPT-QA-08-019 tracking the above issues. The inspector reviewed/verified the following actions taken by BNI, per CCN 171512 - *Response to Finding A-07-WCD-RPPWTP-020(a-e)*:

- CPM and/or electrical sub-contractor reworked the above NEC violations.
- Documented corrective actions taken in Field Inspection Report 24590-WTP-FIR-CON-08-013.

- Briefed American Electric Electricians on their responsibility to ensure that equipment meets applicable codes and standards prior to installation and/or subsequent third party inspections. (Reference Correspondence Control Number CCN 173780)
- CPM and BNI performed an inspection on 25% of similar enclosures located at the CPM facilities to evaluate extent of condition for similar grounding, labeling, exposed wires, open holes, improper switches, incorrect conductor sizing, and equipment exposed to damage issues. Results were documented on field inspection report 24590-WTP-FIR-CON-08-044 and corrected on field inspection report 24590-WTP-FIR-CON-08-045.
- Since the 25% sampling inspection identified several items that were not NEC compliant, BNI extended the inspection/correction to include 100% of all similar Batch Plant electrical enclosures. The initial Batch Plant NEC Inspection was performed by Bresina Electric, April 30, 2008, and the follow-up inspection was completed May 22, 2008. This inspection was documented and submitted as CCN 178836.

Conclusion:

BNI closed Condition Report 24590-WTP-CRPT-QA-07-019 tracking Finding S-07-WCD-RPPWTP-020-F01 (a-e) identified in Operational Awareness Report S-07-WCD-RPPWTP-020 regarding NEC violations associated with an electrical panel/enclosure located in the Central Pre-mix Boiler Storage Conex.

Based on the verified actions taken by BNI per CCN-171512, CCN-178836, and closure of Condition Report Number 24590-WTP-CRPT-QA-08-019, **Finding S-07-WCD-RPPWTP-020-F01 (a-e)** is closed.

A specific planned effectiveness review for closed Finding S-07-WCD-RPPWTP-020-F01 (a-e) is not required because continuing motoring of electrical work is an ongoing WTP Construction Oversight and Assurance Division (WCD) activity.

Submitted By: C. O. Walker Reviewed By: Jenn Boren Approved by: [Signature]
 Date: 7-1-08 Date: 7/1/08 Date: 7/5/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X Quality Class: ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-148

Inspector Name(s): MD Everts
Evarts Enterprise, Inc.
(Sub-Contractor to PAC),
Supporting ORP

Dates of Inspection: June 25, 2008

Item(s) Inspected:

The inspector performed a fit-up weld (FW-9/FW-11) inspection on a 6" outer pipe to outer pipe (clam shell) connection on pipe spool BOF-PSA-GK09763001-B on the Radioactive Liquid Waste Disposal System on the north side of the PTF building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-BOF-FWCL-CON-05-00513
- Welding Procedure – P1-T , Revision 3
- Drawing – 24590-BOF-P3-RLD-ZS03383052, *Balance of Facilities Isometric*, Revision 1, dated April 28, 2007
- Visual Weld Procedure – VT-ASME, Revision 6

Acceptability of Material Being Used:

The inspector verified BNI installed the correct outer pipe spool (clam shell) material in accordance with the above drawing.

The inspector verified the Contractor was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Outer pipe (clam shell) material/orientation and configuration
- Welding filler material
- Welder Qualification
- Fit-up Weld Acceptance

Training and Qualification of Personnel:

The inspector verified the welder (P-140) was qualified to make the field weld.

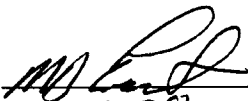
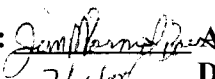

BNI's examiner was qualified to perform the fit-up inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptably to the point of this inspection.

Conclusion:

BNI welded an outer pipe (clam shell) to the pipe spool on the Radioactive Liquid Waste Disposal System using the correct spool and filler metal, with a qualified welder and examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 7-1-08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF ___ HLW ___ LAW ___ LAB ___ BOF X **Quality Class:** ITS ___ BOP X

Dangerous Waste Permit Affecting: Yes ___ No X

Surveillance Report Number: S-08-WCD-RPPWTP-002-149

Inspector Name(s): MD Evarts
Evarts Enterprise, Inc.
(Sub-Contractor to PAC),
Supporting ORP

Dates of Inspection: June 26, 2008

Item(s) Inspected:

The inspector performed a fit-up weld (FW-1C1) inspection on a 6" pipe to tee connection on pipe spool BOF-CHW-WL04161001-B on the Chilled Water System in the Chiller/Compressor building. This was a DOE witness point.

Design/Installation Documents Reviewed:

- Field Weld Checklist - 24590-BOF-FWCL-CON-08-00344
- Welding Procedure – P1-A-C-LH , Revision 2
- Drawing – 24590-BOF-P3-CHW-WL04161001, *Balance of Facilities Isometric*, Revision 2, dated March 4, 2005
- Visual Weld Procedure – VT-ASME, Revision 6

Installation Program Adequacy:

The inspector verified the Contractor installed the correct pipe spool in accordance with the above drawing.

The inspector verified the Contractor was using the correct weld filler material and found it to be acceptable in accordance with the above welding procedure.

Work Activities:

The inspector verified the following attributes were acceptable in accordance with the above welding procedure and drawing:

- Pipe spool orientation and configuration
- Welding filler material
- Welder Qualification
- Fit-up Weld Acceptance

Training and Qualification of Personnel:

The inspector verified the welder (P-63) was qualified to make the field weld.

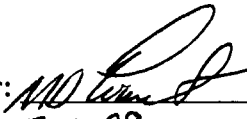
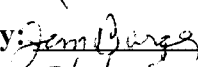
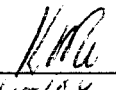
BNI's examiner was qualified to perform the Fit-up inspection per the above visual procedure.

Adequacy of Final Records:

The inspector reviewed the field weld checklist and found it to be completed acceptable to the point of this inspection.

Conclusion:

BNI welded the correct pipe spool on the Chilled Water System using the correct pipe spool material and filler metal, with a qualified welder and examiner in accordance with the appropriate design and welding program requirements.

Inspector:  Reviewed By:  Approved by: 
Date: 7-1-08 Date: 7/1/08 Date: 7/15/08

SURVEILLANCE REPORT

Facility: PTF___ HLW___ LAW___ LAB___ BOF X Quality Class: ITS___ BOP X

Dangerous Waste Permit Affecting: Yes X No___

Surveillance Report Number: S-08-WCD-RPPWTP-002-150

Inspector Name(s): RI Taylor
Taylor Consulting Inc
(Sub-Contractor to PAC),
Supporting ORP
Dates of Inspection: June 18, 2008

Item(s) Inspected:

The site inspector performed an evaluation of the weld fit-up condition of field welds (FW-09 and FW-11, clam shell welds) between 6" carbon steel co-axial piping. This was for BOF Process Radioactive Condensate System (LERF) piping spools 24590-BOF-P3-RLD-ZS03382052-G and 24590-BOF-P3-RLD-ZS03382052-F, located in the Balance of Facilities LERF piping trench. The inspection included evaluation of the weld fit-up condition to determine compliance with the welding procedure specification.

This was a DOE Witness point inspection.

Design/Installation Documents Reviewed:

- Drawing 24590-BOF-P3-RLD-ZS03382052, *Balance of Facilities Isometric*, Revision 1, dated January 5, 2007
- Procedure 24590-WTP-MN-CON-01-001-03-35, *Bechtel Welding Procedure Specification P1-T*, Revision 3, dated December 11, 2006
- Procedure 24590-WTP-MN-CON-01-001-10-09, *Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*, Revision 6, dated November 27, 2006
- Construction Work Package (CWP) – *BPU0157*
- Field Weld Checklist – *24590-BOF-FWCL-CON-05-00551*
- Qualification Record 24590-WTP-WQTR-CON-07-0075, *Welder Performance Qualification Test Record – P-140*, Revision 0, dated July 7, 2007

Installation Program Adequacy:

The site inspector determined Construction Work Package *BPU0157* contained or referenced sufficient details to provide for correct installation of the piping components. Field Welding Checklist *24590-BOF-FWCL-CON-05-00551* specified an appropriate welding procedure specification (*Bechtel Welding Procedure Specification P1-T*), filler material (ER70S-2), and inspection procedure (*Bechtel Nondestructive Examination Standard Visual Examination VT-ASME*).

Acceptability of Material Being Used:

Piping material types and sizes conformed to design requirements, and the welding filler material classification met the requirements of the welding procedure specification.

Work Activities:

The site inspector verified BNI had performed the weld fit-up correctly in accordance with *Bechtel Welding Procedure Specification P1-T* requirements and the following attributes were acceptable in accordance with the procedures and drawings noted in the list above:

- Material type, orientation, and configuration
- Welding process – GTAW
- Welding filler material – ER70S-2
- Weld fit-up condition

Training and Qualification of Personnel:

The site inspector reviewed qualification and training records for BNI’s weld examiner and welding personnel. BNI’s welder qualification list and the Welder Qualification Test Record (WQTR) confirmed the welder (P-140) was qualified to use the Welding Procedure Specification (WPS) listed on the field welding checklist. BNI’s records indicated the weld examiner had been certified as NDE Level II for visual examination and his visual acuity records were current.

Adequacy of Final Records:

The appropriate inspection attributes on Field Welding Checklist 24590-BOF-FWCL-CON-05-00551 had been completed. The inspection records identified the item inspected, the dates of inspection, the examiner, the type of observation, and the results of acceptability. Records were legible and identifiable to the item inspected.

Conclusion:

BNI completed a fit-up for pipe spools located in the Balance of Facilities LERF piping trench. The configuration and orientation of the items installed conformed to the drawings, and preparation for welding met the specified criteria. BNI used the correct materials and welded with the correct filler material using processes and personnel qualified in accordance with the applicable requirements. BNI’s examination personnel had been trained and certified for the examination methods used, and inspection records were adequate.

Submitted By: R. Taylor Reviewed By: Jerry Barajas Approved by: [Signature]
Date: 7-1-08 Date: 7/1/08 Date: 7/15/08