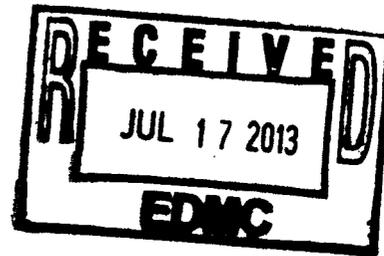


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INDEPENDENT CLOSURE CERTIFICATION OF 300 AREA PROCESS TRENCHES



Prepared by:

Samuel Ashworth, P.E.

June 22, 1998

D-3-1

**Certification of Closure of the
300 Area 316-5 Process Trenches
by an Independent, Certified
Professional Engineer**

CERTIFICATION

I, Samuel Ashworth, a certified professional engineer, hereby certify, to the best of my knowledge and belief, that I have made visual inspection(s) of the 316-5 Process Trenches at the 300 Area. Based on these observations, data checking, and discussion with appropriate parties, closure of the aforementioned facility in the 300-FF-1 Operable Unit has been performed in accordance with Part VI, Chapter 1 of the Hanford Facility Resource Conservation and Recovery Act Permit, Dangerous Waste Portion.



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6/22/98
Date

22314

State Professional Engineer License Number



EXPIRES: 9/6/98

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ACRONYMS

300 APT	300 Area Process Trenches
BHI	Bechtel Hanford, Inc.
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
COC	contaminant of concern
EPA	Environmental Protection Agency
LATA	Los Alamos Technical Associates, Inc.
LOQ	limit of quantitation
MTCA	<i>Model Toxics Control Act</i>
RCRA	<i>Resource Conservation and Recovery Act</i>
RCT	Radiation Control Technician
OU	operable unit
PCB	polychlorinated biphenyl
WAC	<i>Washington Administrative Code</i>

INDEPENDENT CLOSURE CERTIFICATION OF 300 AREA PROCESS TRENCHES

1.0 INTRODUCTION

This report was prepared to document the independent closure certification activities performed by Los Alamos Technical Associates, Inc. (LATA) under Subcontract 0300F-SC-G0006 to Bechtel Hanford, Inc. (BHI) during 1997 and 1998.

1.1 Purpose

This report provides a compilation of the documentation that lead to independent site closure certification for the 300 Area Process Trenches (300 APT), which are located within the 300-FF-1 Operable Unit (OU) at the Hanford Site in southeastern Washington State. In accordance with WAC 173-303-610(6) and WAC 173-303-040, this independent closure certification was provided by Sam Ashworth, an independent qualified registered professional engineer in the State of Washington.

1.2 Background

The 300-FF-1 OU is located in the 300 Area of the Hanford Site. The location of the Hanford 300 Area is shown in Figure 1-1; a more detailed map of the 300-FF-1 OU is shown in Figure 1-2. Over the years, fuel fabrication facilities and laboratories located in the 300 Area have released contaminants to the surface soils, vadose zone, and groundwater. Remedial investigation/feasibility study activities in the 300-FF-1 OU were initiated in 1990.

The 300 APT were built in 1975, and liquid discharges were made into them until 1994. The process trenches are composed of two trenches running north-south and are separated by an earth dike approximately 15.25 m wide (50 ft) at the base. Each trench is approximately 468 m long by 3 m wide by 3.6 m deep (1,535 ft long by 10 ft wide by 12 ft deep).

The primary contaminants of concern for the 300 APT are uranium, cobalt-60, arsenic, benzo(a)pyrene, chrysene, cadmium, polychlorinated biphenyls (PCBs), and thallium. In 1991, contaminated soils from the south end of the 300 APT were moved to the dry north end, creating the 300 APT Spoils Area. This stopped the process water from passing through the contaminated soil and driving contamination to groundwater. Uranium concentrations in the underlying groundwater decreased rapidly after the soils were moved. Discharges to the process trenches ceased in December 1994.

Figure 1-1. 300 Area

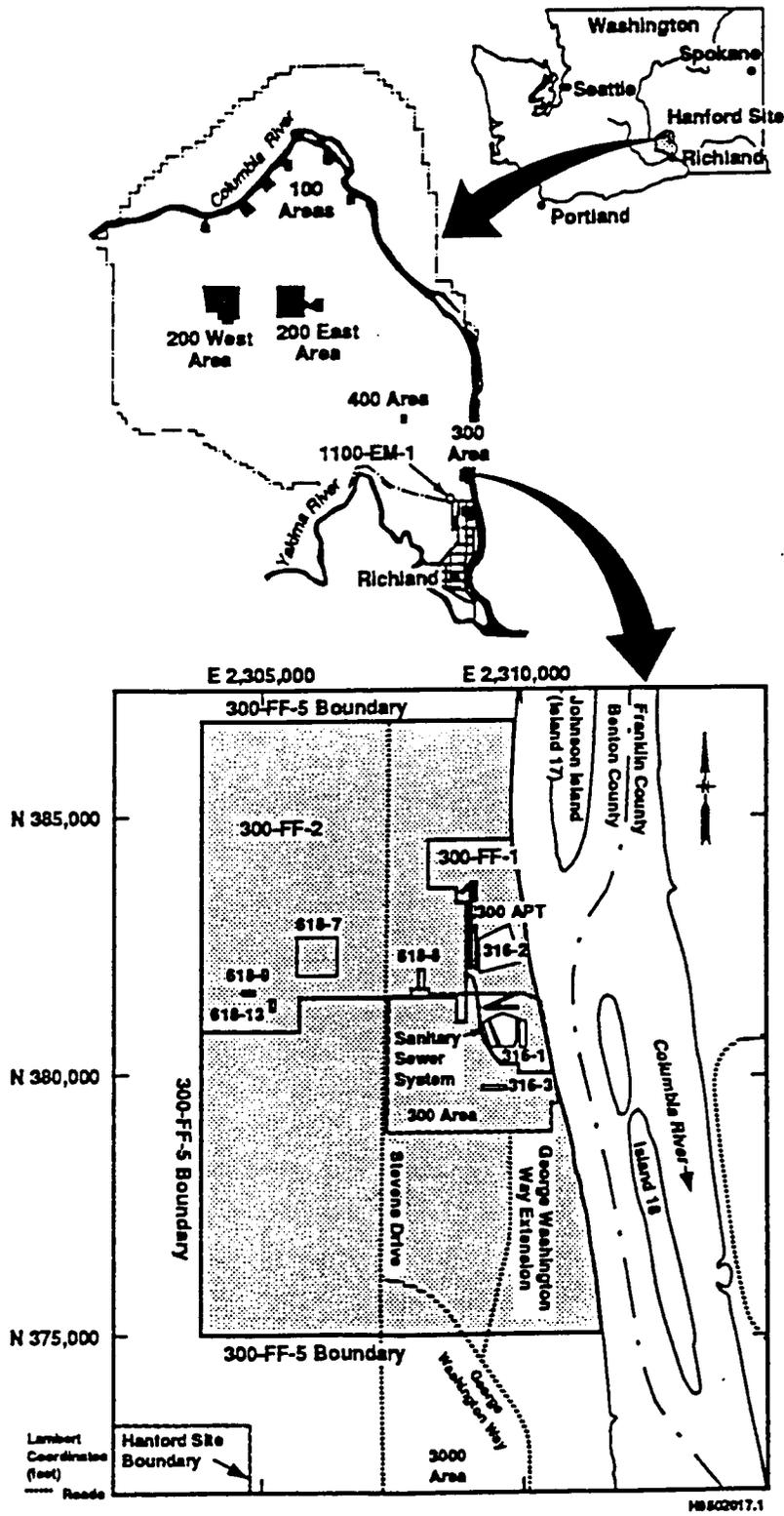
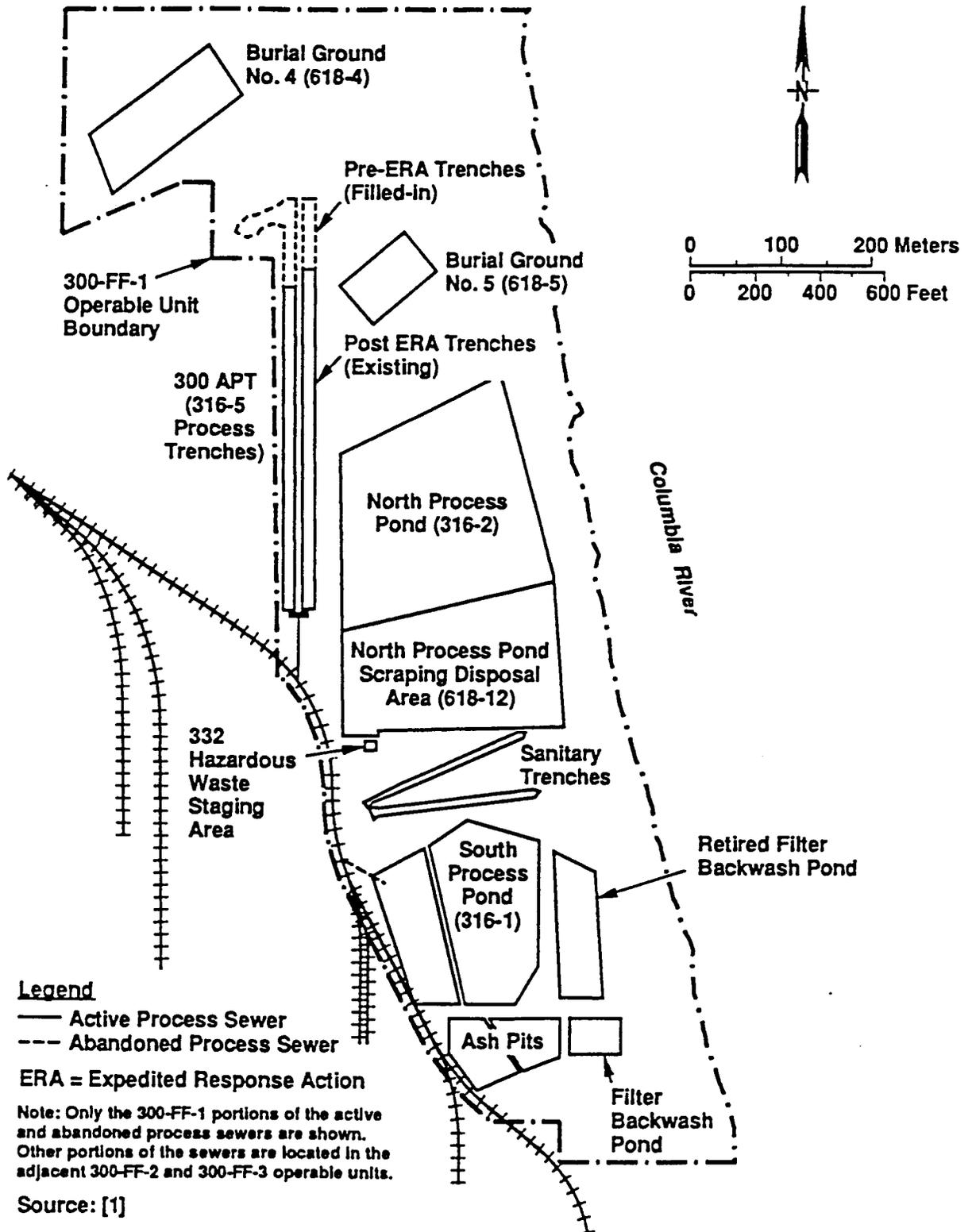


Figure 1-2. 300-FF-1 Operable Unit



Because the process trenches received dangerous waste after 1980, the trenches are a *Resource Conservation and Recovery Act* (RCRA) disposal site. The Hanford Site 300 Area was added by the Environmental Protection Agency (EPA) to the *Comprehensive Environmental Response, Compensation and Liability Act* (CERCLA) National Priorities List on November 3, 1989, and remedial, corrective and closure action within the Site have been integrated under combined EPA and Washington Department of Ecology oversight through the Hanford Federal Facility Agreement and Consent Order.

The Record of Decision for the 300-FF-1 OU was issued in July 1996 and identified selective excavation and disposal for the 300 APT. Contaminated soils and debris were disposed of at the Environmental Restoration Disposal Facility, an engineered facility located at the Hanford Site

Cleanup criteria for RCRA constituents found at the 300 APT are based on the State of Washington *Model Toxics Control Act*, Method C, *Industrial Soil Cleanup Standards*, for organic and inorganic constituents. The design criteria for the 300 APT are presented in the 300-FF-1 Remedial Design Report/Remedial Action Work Plan (DOE/RL-96-70).

1.3 Scope

This independent certification report provides the following documentation:

- Results of a review of the project documentation (Section 2.0)
- Activity log and meeting notes based on bi-monthly BHI 300 APT status/progress meetings (Section 3.0)
- LATA's site visits and monthly reports to BHI (Section 4.0)
- Checklist documenting how closure plan requirements were met (Section 5.0)
- Description of the data analysis including the process used to check closure data (physical and analytical) (Section 6.0)
- Discussion of variances from the requirements and an assessment of their impacts (Section 7.0)
- Post-closure requirements (Section 8.0)

The conclusions of the independent closure certification review are summarized in Section 9.0.

2.0 REVIEW OF PROJECT DOCUMENTATION

Key closure/remediation documents were reviewed in order to understand closure plan requirements as well as to provide a basis for independent certification that these requirements were met. Table 2-1 provides the list of the documents that were reviewed at the outset of the independent certification effort. Questions posed by LATA during the review process along with BHI responses and LATA's letter acknowledging and accepting BHI's responses can be found in Appendix A.

Table 2-1. Initial Project Documentation Reviewed

Document Number	Revision	Date	Title
DOE/RL-93-73	1		<i>300 Area Process Trenches Modified Closure/Post Closure Plan</i>
DOE/RL-94-49	0		<i>Phase III Feasibility Study Report for the 300-FF-1 Operable Unit</i>
CCN 025640		1/18/96	<i>Corrections to Phase III Feasibility Study Addendum</i>
DOE/RL-95-88	0		<i>Proposed Plan for the 300-FF-1 and 300-FF-5 Operable Units</i>
DOE/RL-96-70	0	2/97	<i>300-FF-1 Remedial Design Report/Remedial Action Work Plan</i>
WHC-SD-EN-AP-185	0		<i>Groundwater Monitoring Plan for the 300 Area Process Trenches</i>
0300F-DB-G0001		5/96	<i>Project Design Basis for the 300-FF-1 Liquid Waste Sites, Landfills, and Burial Ground 618-4</i>
0300F-DB-G0004		2/21/97	<i>Scope of Work for the 300-FF-1 Remedial Action</i>
0300X-SP-C0001		2/21/97	<i>Technical Specification, Earthwork and Excavated Materials Handling</i>
N/A		7/17/96	<i>Declaration of Record of Decision</i>
N/A	3		<i>Hanford Facility Wide RCRA Permit</i>
DRAWINGS			
0300X-DD-G0001	1	10/21/96	<i>Site Location</i>
0300X-DD-C0001	1	2/21/97	<i>Overall Project Plan</i>
0300X-DD-C0002	1	10/21/96	<i>Remediation Facilities – Panel 1</i>
0300X-DD-C0003	1	10/21/96	<i>Remediation Facilities – Panel 2</i>
0300X-DD-C0004	1	10/21/96	<i>Remediation Areas – Panel 1</i>
0300X-DD-C0005	1	10/21/96	<i>Remediation Areas – Panel 2</i>
0300X-DD-C0006	1	10/21/96	<i>Remediation Areas – Panel 3</i>
0300X-DD-C0007	1	10/21/96	<i>Remediation Areas – Panel 4</i>
0300X-DD-C0008	1	10/21/96	<i>Remediation Areas – Panel 5</i>
0300X-DD-C0013	1	10/21/96	<i>Restoration Plan – Panel 1</i>
0300X-DD-C0014	1	10/21/96	<i>Restoration Plan – Panel 2</i>
0300X-DD-C0015	1	10/21/96	<i>Restoration Plan – Panel 3</i>

Over the course of the independent certification effort, several other documents were provided by BHI for review by LATA. These documents are listed in Table 2-2. No questions on these additional documents were submitted by LATA to BHI.

Table 2-2. Project Documentation Reviewed During Independent Certification Effort

Document Number	Revision	Date	Title
BHI-01164	0	3/1998	<i>300 Area Process Trenches Verification Package</i>
BHI-01171	0	5/1998	<i>Vadose Zone Clean Closure Report for the 300 Area Process Trenches</i>
DOE/RL-98-31	01	5/1998	<i>300 Area Process Trenches Postclosure Plan</i>
CCN 057277		2/5/98	<i>Conditional Hazardous Debris Rule Contained-In Determination for Sluice Gates, Head Works Box Inlet Pipe, and Underlying Soil Located Within the 300 Area Process Trenches (300 APT)</i>
CCN 054270		12/12/97	<i>Contained-In Determination for Contaminated Concrete Debris from the 300 Area Process Trenches (APT) Weir Structure</i>
CCN 057340		3/24/98	<i>Contained-In Determination for Soil Located Within the 300 Area Process Trenches (APT) Weir Box</i>

3.0 ACTIVITY LOG AND STATUS MEETING NOTES

During the 300 APT closure process, Mr. Ashworth made regular site visits and attended bi-weekly BHI status meetings on the progress of the remediation work. Sample and analysis data and other physical data that supported closure plan requirements were also provided at these meetings.

The types of activities witnessed by Mr. Ashworth included excavation and loading of soil and debris, field screening and verification sample collection, and other related activities. Screening of soil by hand-held monitors was witnessed during loading operations. Further, Mr. Ashworth discussed the screening with the Radiation Control Technicians (RCTs) and the analytical techniques used with the chemists who performed the work. With the few exceptions noted in Section 7.0 of this report, all activities observed were performed in accordance with the 300 APT Closure Plan (DOE/RL-93-73) and/or Work Plan (DOE/RL-96-70).

Mr. Ashworth's activity log can be found in Appendix B.

4.0 MONTHLY REPORTS

LATA submitted monthly reports to BHI throughout the independent certification effort for 300 APT closure. These reports contained the following types of information:

- General description of the prior month's activities
- Issues and questions during bi-weekly status meetings
- Physical data evaluated and observed
- Laboratory data received and evaluated
- Observations during site visit(s)
- Total hour expended on project

Appendix C contains all of the monthly reports submitted by LATA to BHI during the performance of this task.

5.0 CLOSURE REQUIREMENTS CHECKLIST

This section provides an independent assessment of the success of the project in meeting the objectives and goals for the remediation of the 300 APT. Table 5-1 presents each objective/goal along with an assessment of how well each has been met.

Table 5-1. Closure Requirements Checklist

CLOSURE REQUIREMENT	ASSESSMENT
Remedial Action Objectives (DOE/RL-96-70)	
<i>Protect human and ecological receptors from exposure to contaminants in soil and debris by inhalation or ingestion of radionuclides, metals, and organics.</i>	<p>This objective was met by the following activities, which were verified by Mr. Ashworth as being done in accordance with the Work Plan (DOE/RL-96-70).</p> <ul style="list-style-type: none"> • Excavating and removing contaminated soil above cleanup standards in Method C in WAC 173-340-745 (MTCA C) • In process field screening • Sampling and analysis during excavation operations • Final site verification sampling and analysis
<i>Protect human and ecological receptors from exposure to contaminants in the groundwater and control sources of groundwater contamination within the 300-FF-1 OU to minimize future impacts to groundwater resources.</i>	<p>Removing soil that remained above MTCA C standards ensures contaminants above cleanup levels will not be transported into the groundwater. Post-closure monitoring allows verification that groundwater contamination is not occurring.</p>

Table 5-1. Closure Requirements Checklist

CLOSURE REQUIREMENT	ASSESSMENT
<i>Protect the Columbia River such that contaminants in the groundwater or remaining in the soil after remediation do not result in an impact to the river that could exceed the Washington State Surface Water Quality Standards.</i>	Removing soil that remains above the MTCA C cleanup standards eliminates the threat of contaminant transport to the Columbia River.
Remediation Goals - Contaminant-Specific Cleanup Criteria (WAC 173-340-745)	
<i>Remove contaminated soil to achieve the Washington Administrative Code (WAC) 173-340-745, "Model Toxics Control Act - Cleanup" (MTCA) Method C cleanup standards for chemical Contaminants of Concern (COCs) (metals, semivolatile organics, and PCBs). Compliance with these cleanup standards is confirmed through results of verification samples collected after completion of remedial activities. The upper 95% confidence interval on the mean for samples analyzed must be below cleanup standards. The cleanup standards also include criteria specifying that no single sample can exceed twice the cleanup level, and that not more than 10% of all results can exceed the cleanup level.</i>	Data were reviewed and results were compared to goals and cleanup standards on a bi-weekly basis. This was accomplished by discussing in-process sampling results with the RCTs on an ongoing basis and review of verification sample analysis results. Analytical results were also discussed with the project manager and technical lead from BHI. Removal strategy, based on data, was always discussed as part of the site visits. With the few exceptions noted in Section 7.0, the 300 APT closure process did not deviate from the Work Plan (DOE/RL-96-70). Note that, while MTCA Method C industrial health-based standards were the required minimum cleanup standards, MTCA Method B cleanup levels, the equivalent of "clean closure" under WAC 173-303-610(2)(b), were achieved. See Section 6.0, <i>Physical and Chemical Data Analysis</i> .
<i>Remove contaminated soil to achieve protection of groundwater and surface water. This is demonstrated by meeting the MCTA C.</i>	By meeting the objectives of soil removal, the threat of significant infiltration to the groundwater or run-off to surface waters is eliminated. Qualitative analysis of processes and conditions that affect transport of contaminants through the vadose zone concluded there would be no future impact to groundwater from residual contamination of 300-FF-1 OU soil (DOE/RL-96-70).
Closure Performance Standards [DOE/RL-93-73 and WAC 173-303-610(2)]	
<i>Minimize the need for further maintenance.</i>	Clean closure of the soil column has been achieved; no further monitoring and maintenance is required.

Table 5-1. Closure Requirements Checklist

CLOSURE REQUIREMENT	ASSESSMENT
<i>Control, minimize, or eliminate postclosure escape of dangerous waste to the extent necessary to protect human health and the environment.</i>	Soils remaining within the 300 APT meet MTCA Method B residential cleanup standards; therefore, no measures are required to prohibit or limit surface access to the site. Institutional controls to ensure that groundwater is not used as drinking water or an irrigation source so long as actionable levels of contaminants exist are outlined in the revised Postclosure Plan (DOE/RL-98-31). Groundwater monitoring and well maintenance requirements under postclosure are specified in the same document.
<i>Return land to appearance and use of surrounding land areas.</i>	After removal of contaminated soil at the 300 APT, additional clean fill was added to the site to ensure continued protection of groundwater by eliminating the migration of residual soil contamination. The site grading and revegetation effort also has begun. The appearance and future planned use of the 300 APT is consistent with that of an industrial site.

6.0 PHYSICAL AND CHEMICAL DATA ANALYSIS

Throughout the project, physical and chemical data obtained during site visits were compared to cleanup goals. These data consisted primarily of the results from in-process field screening (uranium detection and quantification) and verification sampling. During the actual excavation of contaminated soils, the data collected were used to determine where and how much material removal was required. Once excavation was completed, the main data set consisted of validated verification sample results. If the verification sample results confirmed that contaminant levels were less than the 300 APT project objectives, then remediation was considered to be completed.

Sampling, analysis, and data validation for the 300 APT closure project were performed by BHI. The data obtained were verified by Mr. Ashworth by witnessing the sampling events, comparing results with cleanup standards, and discussing problems and progress with BHI. In addition, Mr. Ashworth reviewed the *300 APT Verification Package* (BHI-01164) and the *Vadose Zone Clean Closure Report* (BHI-01171).

The Verification Package documents achievement of the remedial action objectives for the 300 APT (see Table 5.1 of this report). This package contains a review of the 300 APT remediation process, including routine in-process monitoring, and a summary of the post-excavation verification sampling and analysis, including validation and evaluation of the data obtained.

The Vadose Zone Clean Closure Report documents the achievement of closure performance standards for the 300 APT, and is intended to supplement the Verification Package. Although the Closure Plan (DOE/RL-93-73) was predicated upon modified closure of the 300 APT to industrial health-based cleanup standards (MTCA C), this plan identified clean closure as an option if remediation activities could further reduce the concentrations of dangerous waste constituents. The Vadose Zone Clean Closure Report provides the documentation needed to support clean closure of the 300 APT.

Table 6-1 summarizes the results of the verification sampling and analysis for the contaminants of concern (COCs). For each COC listed in this table, several closure performance standards are listed in the left-hand column:

- Health-based standards defined by MTCA (WAC 173-340) – both the MTCA C (industrial health-based) standard and the MTCA B (residential health-based) standard,
- Background as defined in *Hanford Site Background: Part 1, Soil Background for Nonradioactive Analytes* (DOE/RL-92-94, Rev. 2), and
- Limit of Quantitation (LOQ).

The right-hand column presents the results of verification sampling for each COC.

Evaluation of the verification sample results demonstrates that remedial action objectives were achieved, and the 300 APT no longer pose a threat to human health or the environment in an industrial setting (i.e., MTCA C standards were exceeded for all COCs). In addition, the results of the verification sampling for all COCs support clean closure of the soil column based on the residential performance standards specified in the Closure Plan (DOE/RL-93-73) (i.e., MTCA B, background, or LOQ standards were met).

Table 6-1. Site-Specific Cleanup Standards for 300Area Process Trenches RCRA Contaminants of Concern (DOE/RL 96-70)

Standards	Verification Sample Results
<p><i>Arsenic</i></p> <ul style="list-style-type: none"> • <i>MTCA C: 219 mg/kg</i> • <i>MTCA B: 1.67 mg/kg</i> • <i>Background: 6.38 mg/kg</i> • <i>LOQ: 0.13 mg/kg</i> 	<p>The 95% upper confidence level for arsenic verification samples was 2.54 mg/kg. This value is below the 90% value for the Weibull distribution documented in the sitewide background (DOE/RL-92-94, Rev. 2). No single sample concentration was greater than two times the background performance standard, and less than 10% of the sample concentrations exceeded the standard. Based on these results, the vadose zone qualifies for clean closure in accordance with the background performance standard.</p>

Table 6-1. Site-Specific Cleanup Standards for 300Area Process Trenches RCRA Contaminants of Concern (DOE/RL 96-70)

Standards	Verification Sample Results
<p><i>Benzo(a)pyrene</i></p> <ul style="list-style-type: none"> • <i>MTCA C: 18 mg/kg</i> • <i>MTCA B: 0.137 mg/kg</i> • <i>Background: Not available</i> • <i>LOQ: 0.37 mg/kg</i> 	<p>Benzo(a)pyrene was not detected in any of the 19 samples in the data set. The 95% confidence level for benzo(a)pyrene was 0.18 mg/kg, which is below the Limit of Quantification (LOQ) performance standard of 0.37 mg/kg. No single sample concentration was greater than two times the LOQ performance standard, and less than 10% of the sample concentrations exceeded the standard. Based on these results, the vadose zone qualifies for clean closure in accordance with the LOQ performance standard. The LOQ is no greater than the practical quantification limit established by the Environmental Protection Agency.</p>
<p><i>Chrysene</i></p> <ul style="list-style-type: none"> • <i>MTCA C: 18 mg/kg</i> • <i>MTCA B: 0.137 mg/kg</i> • <i>Background: Not available</i> • <i>LOQ: 0.37 mg/kg</i> 	<p>Chrysene was not detected in 18 of 19 samples in the verification data set. The quantification limit for chrysene ranged from 0.32 to 0.37 mg/kg. The 95% upper confidence level for chrysene (0.18 mg/kg) was below level of quantification performance standard of 0.37 mg/kg. No single sample concentration was greater than two times the LOQ performance standard, and less than 10% of the sample concentrations exceeded the standard. Based on these results, the vadose zone qualifies for clean closure in accordance with the LOQ performance standard. The LOQ is no greater than the practical quantification limit established by the Environmental Protection Agency.</p>
<p><i>PCBs</i></p> <ul style="list-style-type: none"> • <i>MTCA C: 17 mg/kg</i> • <i>MTCA B: 0.13 mg/kg</i> • <i>Background: Not available</i> • <i>LOQ: 0.78 mg/kg</i> 	<p>PCBs were calculated as a sum of 7 individual aroclors that were reported by the laboratory. PCBs were not detected in 17 of the 19 samples in the data set. The quantification level for summed PCB results ranged from 0.25 to 0.78 mg/kg. The 95% upper confidence level for PCBs (0.28 mg/kg) was below the level of quantification performance standard of 0.78mg/kg. No single sample concentration was greater than two times the LOQ performance standard, and less than 10% of the sample concentrations exceeded the standard. Based on these results, the vadose zone qualifies for clean closure in accordance with the LOQ performance standard. The LOQ is no greater than the practical quantification limit established by the Environmental Protection Agency.</p>

Table 6-1. Site-Specific Cleanup Standards for 300Area Process Trenches RCRA Contaminants of Concern (DOE/RL 96-70)

Standards	Verification Sample Results
<p>Thallium</p> <ul style="list-style-type: none"> • <i>MTCA C: 245 mg/kg</i> • <i>MTCA B: 5.6 mg/kg</i> • <i>Background: Not available</i> • <i>LOQ: 3.6 mg/kg</i> 	<p>Thallium was not detected in the verification sample data set. The 95% upper confidence level for thallium (1.64 mg/kg) was below the MTCA B performance standard. No single sample concentration was greater than two times the background performance standard, and less than 10% of the sample concentrations exceeded the standard. Based on these results, the vadose zone qualifies for clean closure in accordance with the MTCA B performance standard as well as the level of quantification performance standard..</p>

7.0 ANALYSIS OF VARIANCES FROM REQUIREMENTS

During the performance of the closure work, several variances from the original closure plan (DOE/RL 93-73) were noted. Each of these variances is discussed below along with an assessment of its impact on the cleanup. Class 1 change requests were approved as noted.

- **Concrete contamination.** Section 7.4.3 of the closure plan (DOE/RL-93-73) indicates, "*TSD unit structure debris would also have to be included in the contained-in determination to qualify for CERCLA site disposal.*" During remediation it was determined that contamination was associated with the headworks weir structure and the blockhouse. As a result, a contained-in determination was made by the Washington Department of Ecology after data quality objectives were determined, the samples collected, and the data analyzed. This information was provided to LATA and is summarized in the verification report (BHI-01164).

Both concrete structures were expected to be clean, rubbelized, and backfilled prior to remediation. The concrete was rubbelized and disposed at the Environmental Restoration Disposal Facility. The unexpected contamination and need for a contained-in determination are changes from the work plan (DOE/RL-96-70) and closure plan (DOE/RL-93-73). The original (prior to remediation) contained-in determination only addressed the soils in the expedited response action stockpile.

Removal of this miscellaneous material had no adverse impact on the achievement of project objectives.

- **Uranium detection equipment substitution.** The BHI made a change to the in-process screening instrument from a sodium iodide detector using global positioning system (as described in the work plan, DOE/RL-96-70) to the scintillation instrument configuration specified in BHI-01010, Rev. 0, *Survey Method for Radiological Surveys of 300-FF-1*

Operable Unit Soil and Materials. This equipment substitution is allowed under RCRA Permit Condition II.R. and was documented to the 300 APT Operating Record.

The substituted scintillator was found to produce higher accuracy data than the original equipment was capable of providing.

- **Dikes and berms not built.** Section 7.1.4.5 of the Closure Plan (DOE/RL-93-73) required dikes and berms to be constructed; however, these structures were not needed to meet the requirements of the 300 APT cleanup project. A permit change was made to include the words "as necessary".

The lack of dikes and berms had no adverse impact on the achievement of project objectives.

- **Localization of air sampling.** The Closure Plan (DOE/RL-93-73), Section 7.4.1.1, required air monitoring stations to be placed around the 300 Area. A permit modification was made to require that air monitors be set up around the 300-FF-1 OU, which includes the 300 APT. Since the monitoring requirements were specific to emissions from the OU, localized monitoring had a positive impact on the accuracy and precision of the data.
- **Barriers and Means to Control Entry.** Section 2.2.2 of the Closure Plan (DOE/RL-93-73) identifies barriers and means to control entry. In order to allow access to the trenches and to facilitate remediation activities, some sections of wire fence were removed and 6-ft red plastic construction fence was installed. This was also documented in the 300 APT Operating Record.

8.0 POST-CLOSURE REQUIREMENTS

Closure of a treatment, storage, and/or disposal unit with contamination remaining above clean closure levels but below MTCA (WAC173-340-745) industrial health-based levels is identified in the Hanford Facility Permit as modified closure. RCRA postremediation care is required for modified closure status.

The inspections, maintenance, and monitoring requirements for 300 APT postclosure were originally specified in DOE/RL-93-73, *300 Area Process Trenches Modified Closure/Postclosure Plan* (Chapter 8). The information found in this section provides a summary of the postclosure requirements discussed in more detail in that plan.

Note, however, that the original closure performance standard for 300 APT was based on MTCA C cleanup levels, and that analytical data generated through verification sampling indicated that cleanup of the 300 APT soil column achieved MTCA Method B cleanup levels. As MTCA B cleanup levels are the equivalent of "clean closure" under WAC 173-303-610(2)(b), the post-closure requirements are in the process of being modified. The requirements referred to in the following sections are from the currently approved closure/post-closure plan (DOE/RL-93-73).

8.1 MODIFIED CLOSURE CARE

Until final closure, modified closure must meet the requirements of institutional controls and periodic assessments of WAC 173-303-440 and -410, respectively, as they are specified in the *Hanford Facility Dangerous Waste Permit* (Conditions II.K.3.a and II.K.3.b) and the *Postclosure Permit Application*. Institutional controls to be employed include physical control measures and administrative and legal control mechanisms. Periodic assessments will include compliance monitoring - primarily protection and confirmation monitoring.

8.2 INSPECTIONS

The postclosure inspection plan will include compliance monitoring activities, security equipment, inspections for displacement, subsidence and erosion effects, and inspections for well conditions. Operations personnel will conduct inspections for site integrity, erosion, and security devices; groundwater sampling personnel will inspect monitoring well conditions.

8.3 GROUNDWATER MONITORING

Groundwater monitoring, in accordance with WAC 173-303-645, WAC 173-303-610(7), WAC 173-303-410, and WAC 173-340-820, will be performed for the 300 APT until final RCRA closure of the site. The objectives of the groundwater monitoring program will be to

- obtain samples that are representative of existing groundwater conditions;
- identify key monitoring constituents attributable to past operations of the 300 APT;
- determine applicable groundwater protection standards; and
- determine whether the concentration limit(s) for a given parameter(s) are exceeded.

8.4 MAINTENANCE PLAN

Plans for maintenance of the 300 APT during the compliance monitoring period are required for modified closure. Elements of this plan include repair of security devices, erosion damage, correction of subsidence or displacement, and well replacement.

8.5 PERSONNEL TRAINING

During the postclosure period, the personnel required to maintain 300 APT in a safe and secure configuration will be trained as required by 40 CFR 265.16, WAC 173-303-330, and Condition II.C.2 of the *Hanford Federal Facility Dangerous Waste Permit*.

8.6 HAZARD PREVENTION

As required under 40 CFR 265.14 and WAC 173-303-310, the procedures to prevent hazards from occurring at the closed unit will be developed. Procedures to ensure proper security at the site include surveillance measures, intrusion barrier requirements, warning signs, and waiver declarations.

9.0 CONCLUSIONS

The following activities were performed by Mr. Ashworth, PE, in order to certify the closure of the 300 APT:

- The excavation of soils from the 300 APT was witnessed throughout the project - from the beginning of the excavation process to the final verification sampling.
- Data collected during the execution of the project and during the final verification/validation step were also reviewed.
- Periodic interaction and discussion occurred among Mr. Ashworth (LATA, Professional Engineer), staff from the Washington State Department of Ecology, and BHI's project manager and technical lead. All problems and strategies used were discussed in advance with the Professional Engineer and the Washington Department of Ecology when possible.

The project was accomplished in a straight-forward, efficient manner, and was completed in accordance with the Work Plan (DOE/RL-96-70), 300 APT Performance Standards, and Record of Decision dated 7/17/96. All variances were dealt with and handled in accordance with the documentation. Verification sampling results support clean closure of the 300 APT soil column.

APPENDIX A

CLOSURE/REMEDIATION DOCUMENT REVIEW

Letter, LATA to BHI, dated 5/8/97 A-2
LATA Document Review A-3
BHI Response to Questions A-6
LATA Letter to BHI Acknowledging and Accepting Comment Responses A-9

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

May 8, 1997

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

Subject: Task 1, Review of Project Documentation
Milestone, present any questions within 10 days (due May 9, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting the attached list of questions, comments and clarifications regarding the project documentation ("Document Review for FF-300-OU-1"). LATA has reviewed the documents listed in Attachment "F," and we require further information/clarification as the review outlines.

We look forward to your reply. If you have any questions or wish to schedule a meeting to discuss these issues, please feel free to call me at 946-2988.

Sincerely,



James S. Millar
Program Manager
Pacific Northwest Division

Attachment: Document Review for FF-300-OU-1

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

DOCUMENT REVIEW FOR FF-300-OU-1
8 May 1997

LATA has reviewed the project documents for closure of the 300-FF-OU-1 Process Trench. The documents reviewed as well as LATA's questions, comments, and clarifications are included in the table below.

Document	Review Status	Questions, Comments, and Clarifications
300 Area Process Trenches Modified Closure/Postclosure Plan, DOE/RL-93-73 REV 1	Reviewed	Sampling/Analysis Plan not included. It is not clear from the documents what the exact scope of this action is. The documents show contaminated areas throughout the OU but our understanding is that this action only involves the trench.
RDR/RAWP, DOE/RL-96-70	Reviewed	Sample Plan included here, not clear on how this will be field implemented. What if Uranium detector specified cannot be found? Also, how are other contaminants that are not of concern dealt with?
Permit Modification B (Hanford Facility RCRA)	Reviewed	
Proposed Plan for the 300-FF-1 and 300-FF-5 Operable Units, DOE/RL-95-88	Reviewed	
Phase III FS, DOE/RL-94-49	Reviewed	
Corrections to FS, CCN 025640	Reviewed	

Document	Review Status	Questions, Comments, and Clarifications
Project Design Basis, 0300F-DB-G0001	Reviewed	ERDF acceptance criteria; what about PCBs (TSCA appears not to apply for the PCB as it is less than 50 ppm)? The doc mentions OSHA but not Washington version (WISHRA?)
ROD	Reviewed	
Scope of work for Remedial Action, 0300F-SW-G0004	Reviewed	
Technical Specification Earthwork and Excavated Materials Handling, 0300X-SP-C0001	Reviewed	
Drawings 0300X-DD-G0001 and 0300X-DD-C0001 through C0008 and C0013-C0015	Reviewed	

In conjunction with the review of the documents above, we have also utilized the following documents:

- *Guidance for Clean Closure of Dangerous Waste Facilities*, Washington Department of Ecology (WDOE) Publication #94-111
- WAC 173-303-610, *Closure and Postclosure*
- WAC 173-340, *Model Toxics Control Act-Cleanup*
- 40 CFR 761, *Toxic Substances Control Act*, Subpart D - *Storage and Disposal*

As LATA's principal activities are closure and post-closure, the *300 Area Process Trenches Modified Closure/Postclosure Plan*, DOE/RL-93-73 REV 1, was reviewed in more detail and compared to guidance from WDOE (*Guidance for Clean Closure of Dangerous Waste Facilities*, Publication #94-111). The following table links plan coverage to the guidance to that contained in the plan.

Ecology Guidance	Plan Coverage	Questions, Comments, Observations, and Clarifications
Performance Standard	Appropriate standards are cited (i.e., WAC-173-303-610 and WAC-173-340)	The action in plan appears nebulous (e.g., if statement about modified closure on page 6-3, line 15). It is not clear on how standards will be implemented.
Waste Removal Procedures	Procedures for FS options given in Section 7.	Procedures not detailed enough as required. The plan focuses on the options rather than on the procedures of how it is to be performed.
Decontamination Procedures	none included	Should be included
Sampling & Analysis Procedures	none included	Is included in RDR/RAWP, DOE/RL-96-70, however it is not clear on how it will be implemented
Closure Time Line Discussion	none included	Is included in RDR/RAWP, DOE/RL-96-70

Based on the above review, it is our opinion that the required information is not present in the approved closure/post closure plan. It appears that the information is available but is contained in various other documents, which makes it difficult to follow and perform independent certification. Also, it is not clear how implementation will be accomplished, particularly the sampling plan and the Washington Administrative Code.

BHI Responses to LATA Review Questions
14 May 97

<p>DOCUMENT: 300 Area Process Trenches Modified Closure/Postclosure Plan, DOE/RL-93-73 REV 1</p>	<p>QUESTION: Sampling/Analysis Plan not included. It is not clear from the documents what the exact scope of this action is. The documents show contaminated areas throughout the OU but our understanding is that this action only involves the trench.</p>
<p>RESPONSE: It is correct to state that the Sampling and Analysis Plan is not included in the 300 Area Process Trenches Modified Closure/Postclosure Plan (Closure Plan). It is included in the 300-FF-1 Remedial Design Report/Remedial Action Workplan (RDR/RAWP), Appendix C. Section 7.3.1 of the Closure Plan indicates that A copy of the SAP and QAPjP, or portions applicable to the TSD unit closure, will be added to this closure plan as Appendix 7A after approval. A memo is forthcoming from the Washington State Department of Ecology indicating approval of applicable portions of the RDR/RAWP Sampling and Analysis plan. The approval memo will indicate that the RDR/RAWP SAP as submitted meets the intent of Section 7.3.1 of the Closure Plan. Final closure of this item will be a Class 1 modification to the Hanford Site Permit removing the requirement to specifically include the SAP in the Closure Plan.</p> <p>The scope of the 300-FF-1 Operable Unit remedial action includes waste sites within the operable unit. The 300 Area Process Trenches is but one RCRA TSD unit within the OU. The scope of the Independent Closure Certification is for the 300 Area Process Trenches only. Many of the reference documents provided for review are OU documents which include the Process Trenches. Therefore, only applicable information related to the Process Trenches from such documents are pertinent to the subcontract scope. Section 1.2 of the Closure Plan summarizes the intent to integrate RCRA and CERCLA processes.</p>	
<p>DOCUMENT: RDR/RAWP, DOE/RL-96-70</p>	<p>QUESTION: Sample Plan included here, not clear on how this will be field implemented. What if Uranium detector specified cannot be found? Also, how are other contaminants that are not of concern dealt with?</p>
<p>RESPONSE: It may be useful to read the Process Trench sections of the RDR/RAWP which provides descriptions of the remedial action objectives and how goals attainment will be performed. A plastic scintillation detector has been identified and calibrated to site specific soil conditions. Uranium detection will not be an issue. There is a technical basis document which is currently 90% complete that describes the uranium detection equipment, calibration, etc. Only contaminants of concern will be analyzed for during verification sampling as delineated in the SAP. There are additional requirements for the two samples under the concrete apron at the headworks as delineated in the SAP.</p>	

BHI Responses to LATA Review Questions
14 May 97

DOCUMENT: Project Design Basis, 0300F-DB-G0001	QUESTION: ERDF acceptance criteria; what about PCBs (TSCA appears not to apply for the PCB as it is less than 50 ppm)? The doc mentions OSHA but not Washington version (WISHRA?)
RESPONSE: The Project Design Basis was a basis to perform the remedial design for the 300-FF-1 Operable Unit. There was a thorough review of ARARs for the project. It is correct that the PCB levels are below 50 ppm and the TSCA regulations would not be applicable. The Washington version of OSHA was not required to be used on the Hanford Site per letter from Roger Freeberg, DOE-RL, to Joe Nemec, President BHI, dated July 5, 1995.	
ECOLOGY GUIDANCE: Performance Standard	QUESTION: The action in plan appears nebulous (e.g., if statement about modified closure on page 6-3, line 15). It is not clear on how standards will be implemented.
RESPONSE: The WAC 173-303 and Ecology guidance should not be used to evaluate what the appropriate requirements are for closure of the 300 APT. The closure plan has been incorporated into the Hanford Site Wide RCRA Permit and provides the enforceable requirements that must be met. Details of the specific actions to be taken for closure were not available during the preparation of the closure plan; therefore, the closure plan provided reference to CERCLA documents that would contain the necessary detail. Section 6.3 of the closure plan states that closure activities will be implemented during the remedial action phase based on the descriptions in the remedial action work plan and its support documents. The actions in these document are the actions that will be taken to meet the closure performance standards. Section 6.1 states that TSD unit soil cleanup levels and methods will be in accordance with the remedial action objectives and the remediation methods specified in the ROD for the 300-FF-1 Operable Unit. MTCA Method C industrial cleanup levels are specified in the 300-FF-1 ROD.	
ECOLOGY GUIDANCE: Waste Removal Procedures	QUESTION: Procedures not detailed enough as required. The plan focuses on the options rather than on the procedures of how it is to be performed.
RESPONSE: Please refer to the 300-FF-1 RDR/RAWP, design drawings, remedial action scope of work and Earthwork specifications for specific actions to be taken to remediate the Process Trenches.	
ECOLOGY GUIDANCE: Decontamination Procedures	QUESTION: Should be included.

**BHI Responses to LATA Review Questions
14 May 97**

<p>RESPONSE: Please refer to the 300-FF-1 RDR/RAWP for a summary discussion of decontamination procedures. The RDR/RAWP SAP also addresses how decontamination water will be sampled and disposed. Specific procedures for decontamination of personnel and/or equipment can be made available for review, but are not contained in subject documentation.</p>	
<p>ECOLOGY GUIDANCE: Sampling & Analysis Procedures</p>	<p>QUESTION: Is included in RDR/RAWP, DOE/RL-96-70, however it is not clear on how it will be implemented.</p>
<p>RESPONSE: Specific sampling and analysis procedures are referenced in the SAP and are included in BHI manuals. The manuals include references for field screening, quality assurance, verification sampling, data validation procedures, training, etc.. The subcontractor may review specific procedures if required.</p>	
<p>ECOLOGY GUIDANCE: Closure Time Line Discussion</p>	<p>QUESTION: Is included in RDR/RAWP, DOE/RL-96-70</p>
<p>RESPONSE: The closure time line is included in section 7.8, Schedule of Closure. This is the controlling time line for the Process Trenches.</p>	

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

May 19, 1997

RECEIVED
JUN - 2 1997
BY DIS

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

Subject: Task 1, Review of Project Documentation
Milestone, provide a completion letter (due May 30, 1997)

Reference: 1) Subcontract 0300F-SC-G0006
2) Letter J. S. Millar, to C. R. Johnson, dated May 8, 1997

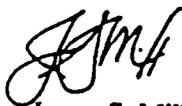
Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting this completion letter to close out Task 1, "Review of Project Documentation." LATA received final clarification of questions and issues on May 16, 1997 (documented in my letter to you, May 8, 1997). The review of the project documentation, per Attachment "F" of the reference contract, is complete. No outstanding issues or questions regarding the documents supporting closure of the 300 Area Process Trenches exist.

This completes Task 1 three weeks ahead of the original schedule (June 6, 1997). I hope this will help you meet your goal of expediting your excavation and closure of the 300 Area Process Trenches. Please keep us informed so that we may continue to progress on this project.

If you have any questions or require any further information, please feel free to call me at 946-2988.

Sincerely,



James S. Millar
Program Manager
Pacific Northwest Division

cc: M. A. Hughes (BHI MSIN)
S. C. Ashworth
BH200 File

BECHTEL HANFORD, INC.										JOB NO. 22192		
SUBCONTRACTOR/SUPPLIER DOCUMENT STATUS STAMP												
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3. <input type="checkbox"/> Revise and resubmit. Work may proceed subject to resolution of indicated comments.												
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5. <input type="checkbox"/> Permission to proceed not required.												
Permission to proceed does not constitute acceptance or approval of design details, calculations, analyses, test methods, or materials developed or selected by the subcontractor/supplier, and does not relieve subcontractor/supplier from full compliance with contractual obligations or release any "holds" placed on the contract.												
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BY <u>Charlie R. Johnson</u> DATE <u>6/4/97</u>												

0300F-MR-G000 6-4-003-01

APPENDIX B
ACTIVITY LOG

ACTIVITY LOG

- 6/20/97 Witness process trench test pits, got HASP and contingency plan training.
- 7/7/97 Reviewed test pit results from trench. Several spikes and one thick layer above cleanup level of 350 pCi/g. Pre-job meeting. Discussed safety, radiation issues, and plan for the day. Witnessed first (and several following) bucket of gravel/soil from the trench soils pile being loaded into containers mounted on trucks. Discussed events with project leaders and radiation protection personnel.
- 7/21/97 Attended bi-weekly meeting on safety and schedule-1pm to 3 pm
- 7/23/97 Made site visit. Good progress has been made ($\approx 30\%$). Obtained test pit data and up-to-date spoils analytical data including everything from previous site visits. Evaluated data. Anomalous waste pile, consisting of colored clay like material, is cordoned off awaiting disposition. Data appears to be as expected. One U result was higher by laboratory than in field--redoing sample in laboratory to check. Some of the PCB results were given in mg/kg when expected $\mu\text{g}/\text{kg}$, having lab check units.
- 8/11/97 Attended bi-weekly meeting. Meeting included heat safety, schedule updates, an open item discussion and status.
- 8/12/97 Made site visit. Data will be easier to obtain on HLAN. Attended data presentation and approach to undetermined trench area. The test pits indicated a spike and some generalized zones of contamination above cleanup levels. BHI presented a graded approach to remove this material. LATA concurs with this method. The meeting was presented to regulators from DOE, EPA, and Ecology.
- 9/2/97 Attended bi-weekly meeting and discussed schedule.
- 9/3/97 Made site visit. Excavation still occurring at spoils pile. The blockhouse is being analyzed for asbestos and lead paint. In process of getting data hard copies. No luck as yet in getting any information off of HLAN.
- 9/15/97 Attended bi-weekly meeting and discussed schedule.
- 9/19/97 Attended progress meeting with Ecology. Made site visit. Working small hump in spoils pile (ACL). Working trench in undetermined areas where some re-contamination is occurring during operations. The logistics of operations is being worked out to avoid the recontamination. There is contamination of the headworks, blockhouse (which also has asbestos), and the birdscreens. LATA concurs with BHI position to demolish and send to ERDF if the waste acceptance criteria are met. Received some data from BHI concerning headworks, blockhouse, and birdscreens. In process of evaluating data.

- 10/7/97** Made site visit. Witnessed sampling of headworks/under apron (now demolished). Examined uncontaminated piece of VCP. Witnessed blockhouse demo. Examined data that included lead in paint higher than LDR but preliminary TCLP shows acceptable.
- 11/6/97** Made bi-weekly meeting with Rich Carlson. Originally planned on witnessing verification sampling but this has been postponed until 11/11/97. Obtained sample data including TCLP for paint chips. There appears to be a variance from the test plan involving some non-matching waste types but this will be verified via BHI memo when final.
- 11/12/97** Made site visit for verification sampling. Witnessed verification sampling event.
- 11/25/97** Made bi-weekly meeting with Rich Carlson. Went over several items including potential variances from plan. The verification samples witnessed last time are not back yet. LATA will check the WAC codes for independent certification for groundwater monitoring issue. BHI wants to try for clean closure instead of modified closure. This may not be possible with the GW contamination. Received 3 memos for later reading. Pipe contaminated with lead paint has not been dispositioned, will pass TCLP as whole pipe but not as paint chips removed and tested alone. Waiting disposition on sediments (stored in drums), preferred method is to return to trench if meeting MCTA C. The self-assessment revealed some potential variances including:
- concrete contamination
 - substituted scintillator of higher accuracy
 - dikes and berms were not built (not needed either but required in plan)
 - air sampling was localized around OU instead of 300 Area per plan
- 12/18/97** Made bi-weekly meeting with Rich Carlson. Discussed clean-closure versus modified clean-closure. Discussed verification sample results. One U value was above cleanup levels at 361 pCi/g (cleanup is 350) which might require further action depending on negotiations with Ecology. A sample validation report is forthcoming. Schedule is to start writing certification report after Ecology's letter is received.

APPENDIX C
MONTHLY PROGRESS REPORTS

May 1997 Report C-2
June 1997 Report C-4
July 1997 Report C-6
August 1997 Report C-8
September 1997 Report C-10
October 1997 Report C-12
November 1997 Report C-14
December 1997 Report C-16
January 1998 Report C-18
February 1998 Report C-20
March 1998 Report C-22
April 1998 Report C-24

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

6/5
May 22, 1997

RECEIVED
JUN - 9 1997
BY DIS

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (June 6, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for May. This report includes activities from the beginning of the project (March 27, 1997) through the end of May.

Highlights include the completion of Task 1—Review of Project Documentation. There are no outstanding issues at this point in time. The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,



James S. Millar
Program Manager
Pacific Northwest Division

BECHTEL HANFORD, INC.										JOB NO. 22192																																					
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Attachment: Monthly Report for May

0300F-MF-0006-4-001-01

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

***Independent Closure Certification of 300 Area Process Trenches
Monthly Report for May***

Date Issued: June 5, 1997
Period of Performance: March 27, 1997 through May 31, 1997
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

LATA received the notice of award for this project on March 24, 1997. The contract was signed and project files and accounting codes were established. LATA attended the BHI project kickoff on April 23, 1997. LATA requested a contractor waiver for training per the Scope of Work (SOW, page 9), as discussed at the kickoff meeting, by letter on April 23, 1997.

On April 28, 1997, LATA received the project documentation to be reviewed (Task 1 of the SOW). Questions, in the form of a "Document Review for FF-300-OU-1," were submitted on May 8, 1997. BHI provided draft responses to these questions on May 14, 1997 and a Questions and Comment Resolution Meeting was held on May 17, 1997. Task 1—Review of Project Documentation was completed on May 19, 1997 and documented in a letter of completion transmitted the same day. This task was completed three weeks ahead of schedule.

Remediation of the 300 Area Process Trenches has not begun. Therefore, no laboratory data reviews or observations have been made. The first Bi-Weekly Meeting is to be held June 5, 1997 at BHI.

LATA Los Alamos Technical Associates, Inc.

3423 Louisiana Blvd., NE, Building 1, Suite 400 / Albuquerque, NM 87110 / Telephone (505) 884-3800 / FAX (505) 880-3560

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
JUL 10 1997
BY DIS

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (July 7, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for June. This report includes activities during the month of June.

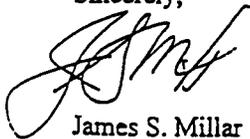
Highlights include:

- Witnessing of the trench test pit sampling
- Sam Ashworth received on-site safety and contingency plan training
- Methodology on test pit sample locations by Golder was examined

LATA is waiting for the data from the test pit sampling and the detailed schedule of field activities. The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,



James S. Millar
Program Manager
Pacific Northwest Division

BECHTEL HANFORD, INC.										JOB NO 22192																																								
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*Particulars to be stated (and not necessarily restricted to) approval of design details, construction, approval, test methods, or materials developed or fabricated by the subcontractor/supplier, and shall not require re-approval/revision from the contractor with contractor obligations of filling any "holds" stated on the contract.																																																		
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Attachment: Monthly Report for June 0300F-MR-G0006-4-001-02

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

***Independent Closure Certification of 300 Area Process Trenches
Monthly Report for June***

Date Issued: July 3, 1997
Period of Performance: June 1, 1997 through June 30, 1997
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

Sam Ashworth and Jim Millar attended a 300 APT project biweekly meeting on June 5, 1997. The overall project schedule was discussed and upcoming activities were planned. It was suggested that the detailed schedule for field work be provided to LATA for subcontract work planning. At issue is the number of site visits required.

Sam Ashworth witnessed trench test pit sampling activities during a site visit on June 20, 1997. The sampling activities were in accordance with documented test procedures. No deviations were noted. Data from the samples have not been received. LATA will evaluate the data upon receipt.

Sam Ashworth received on-site safety and contingency plan training on June 20, 1997.

The methodology on test pit sample locations by Golder was examined.

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

August 7, 1997

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (August 7, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

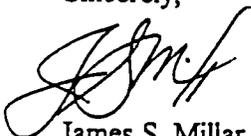
Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for June. This report includes activities during the month of July.

LATA is waiting for the data for the last two site visits (July 7 and July 23). Data from these visits will be reviewed upon receipt. The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,



James S. Millar
Program Manager
Pacific Northwest Division

Attachment: Monthly Report for June

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

BECHTEL HANFORD, INC.										JOB NO 22192																																																																									
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BY	Charlie Johnson										DATE	8/8/97																																																																							

0300F-MR-G0006-4-001-03

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for July*

Date Issued: August 7, 1997
Period of Performance: July 1, 1997 through July 31, 1997
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

On July 7, 1997, Sam made a site visit. Some data and test pit results from the trench were received and reviewed for the June 20 site visit. Several spikes and one thick layer above the cleanup level of 350 pCi/g were noted. A pre-job meeting was held which discussed safety, radiation issues, and the plan for the day. Witnessed first (and several following) bucket of gravel/soil from the trench soils pile being loaded into containers mounted on trucks. Discussed events with project leaders and radiation protection personnel.

Sam attended a 300 APT project biweekly meeting on July 21, 1997. Safety and the overall project schedule was discussed and upcoming activities were planned.

On July 23, 1997 Sam made a site visit. Good progress has been made ($\cong 30\%$). Obtained remaining test pit data and up-to-date spoils analytical data from the previous site visit (June 20, 1997). Evaluated data. Anomalous waste pile, consisting of colored clay like material, is cordoned off awaiting disposition. Data appears to be as expected. One U result was higher by laboratory than in field—redoing sample in laboratory to check. Some of the PCB results were given in mg/kg when expected $\mu\text{g}/\text{kg}$, having lab check units.

Site visit on June 20, 1997 and review of data is complete.

LTA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

September 8, 1997

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
OCT - 6 1997
BY DIS

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (September 8, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

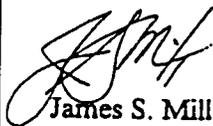
Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for August. This report includes activities during the month of August.

The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,



James S. Millar
Program Manager
Pacific Northwest Division

Attachment: Monthly Report for August

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

BECHTEL HANFORD, INC.										JOB NO. 22102																																					
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0300F-MP-30006-4-001-04

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for August*

Date Issued: September 8, 1997
Period of Performance: August 1, 1997 through August 30, 1997
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

- On 8/11/97, Sam attended a biweekly meeting. The meeting included heat safety, schedule updates, an open item discussion, and a status report.
- On 8/12/97, Sam made site visit. Attended data presentation and approach to undetermined trench area. The test pits indicated a spike and some generalized zones of contamination above cleanup levels. BHI presented a graded approach to remove this material. LATA concurs with this method. The meeting was presented to regulators from DOE, EPA, and Ecology.
- Arrangements are being made to access HLAN from the LATA office. This will greatly simplify and expedite project data access.

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

October 3, 1997

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
OCT - 9 1997
BY DIS

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (October 7, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for September. This report includes activities during the month of September.

The project is on schedule and within budget. LATA received a contract modification on September 30, 1997 to extend the end date of the contract to March 30, 1998.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,

James S. Millar
Program Manager
Pacific Northwest Division

BECHTEL HANFORD INC.						JOB NO 22182																																									
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CHECKED BY: _____ REVIEWED BY: _____ BY: <u>Charlie Johnson</u> DATE: <u>10/13/97</u>																																															

Attachment: Monthly Report for September

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for September*

Date Issued: October 7, 1997
Period of Performance: September 1, 1997 through September 30, 1997
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

- 9/2/97 Sam attended a biweekly meeting to discussed the project and schedule.
- 9/3/97 Sam made a site visit. Excavation is still occurring at the spoils pile. The blockhouse is being analyzed for asbestos and lead paint. In process of getting data hard copies. No luck as yet in getting any information off of HLAN.
- 9/15/97 Sam attended a biweekly meeting to discussed the project and schedule.
- 9/19/97 Sam attended a progress meeting with Ecology. He also made a site visit. Working small hump in spoils pile (ACL). Working trench in undetermined areas where some re-contamination is occurring during operations. The logistics of operations is being worked out to avoid the recontamination. There is contamination of the headworks, blockhouse (which also has asbestos), and the birdscreens. LATA concurs with BHI's position to demolish and send to ERDF if the WAC is met. Received some data from BHI concerning headworks, blockhouse, and birdscreens. In process of evaluating data.

LTA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

November 4, 1997

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
NOV 06 1997
BY DIS

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (November 7, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for October. This report includes activities during the month of October.

The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,

James S. Millar
Program Manager
Pacific Northwest Division

Attachment: Monthly Report for October

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

BECHTEL HANFORD, INC.						JOB NO. 22192																																									
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BY <u>Charlie Johnson</u> DATE <u>11/7/97</u>																																															

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for October*

Date Issued: November 4, 1997
Period of Performance: October 1, 1997 through October 30, 1997
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

On October 7, 1997 Sam made a site visit. He witnessed the sampling of the headworks/under apron (now demolished), examined an uncontaminated piece of VCP, and witnessed the blockhouse demo. He also examined data that included lead in paint higher than LDR but preliminary TCLP shows acceptable.

LTA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

December 5, 1997

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
DEC 09 1997
BY DIS

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (December 5, 1997)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for November. This report includes activities during the month of November.

The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,



James S. Millar
Program Manager
Pacific Northwest Division

BECHTEL HANFORD, INC.		JOB NO. 22192	
SUBCONTRACTOR/SUPPLIER DOCUMENT STATUS STAMP			
1. <input checked="" type="checkbox"/> Work may proceed. 2. <input type="checkbox"/> Submit final document. Work may proceed. 3. <input type="checkbox"/> Review and resubmit. Work may proceed subject to resolution of indicated comments. 4. <input type="checkbox"/> Review and resubmit. Work may not proceed. 5. <input type="checkbox"/> Permission to proceed not required.			
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BECHTEL ENGINEERING			
DESIGN	ELE	MECH	CHEMICAL PROCESS
CONTROL SYSTEMS	ELC TECH	SAFETY EMCA	NUCLEAR OLD
ENV ENGR	SAFETY & HEALTH	FIELD SUPPORT	CADD QA
REVIEWED BY			
BY	Charlie Johnson		DATE 12/16/97

Attachment: Monthly Report for November

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File 0300F-MR-G0006-4-001-07

LTA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

January 9, 1998

Mr. C. R. Johnson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
JAN 08 1998
BY DIS

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (January 9, 1998)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

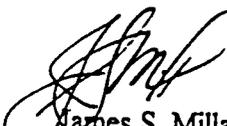
Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for December. This report includes activities during the month of December.

The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2988.

Sincerely,


James S. Millar
Program Manager
Pacific Northwest Division

BECHTEL HANFORD, INC.										JOB NO. 22192																																																																											
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Attachment: Monthly Report for December

cc: M. A. Hughes (BHI MSIN H0-04) 0300F-MR-G0006-4-001-08
S. C. Ashworth
BH200 File

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for December*

Date Issued: January 9, 1998
Period of Performance: December 1, 1997 through December 31, 1997
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

On December 12, 1997 Sam attended a biweekly meeting with Rich Carlson. They discussed clean-closure versus modified clean-closure and verification sample results. One U value was above cleanup levels at 361 pCi/g (cleanup is 350) which might require further action depending on negotiations with Ecology. A sample validation report is forthcoming. The schedule is to start writing the certification report after Ecology's letter is received.

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

February 6, 1998

Mr. R. A. Carlson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
FEB 13 1998
BY DIS

Subject: Task 2, Monthly Progress Report
Milestone, due at the fifth working day of each month (February 6, 1998)

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Johnson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for January. This report includes activities during the month of January.

The project is on schedule and within budget.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2945.

Sincerely,

M. M. (Peggy) McCarthy
Program Manager
Pacific Northwest Division

Attachment: Monthly Report for January

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

0300F-MR-G0006-4-001-09

BECHTEL HANFORD, INC.		JOB NO 22192																																																																					
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BY	K. Carlson										DATE	2/19/98																																																											

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for January*

Date Issued: February 6, 1998
Period of Performance: January 1, 1998 through January 31, 1998
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

There were no activities during the month of January, LATA is awaiting word that all debris has been removed from the trench so verification can be preformed.

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

March 13, 1998

Mr. R. A. Carlson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

Subject: Task 2, Monthly Progress Report

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

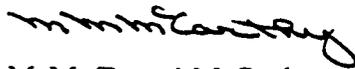
Dear Mr. Carlson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for February. This report includes activities during the month of February.

The project is on schedule and within budget. However, a no cost time extension is required in order to complete the project.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2945.

Sincerely,



M. M. (Peggy) McCarthy
Program Manager
Pacific Northwest Division

Attachment: Monthly Report for February

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for February*

Date Issued: March 13, 1998
Period of Performance: February 1, 1998 through February 28, 1998
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

During the month of February, LATA completed a site inspection on 27 February 98. Preparation of the final draft report will commence upon receipt of concurrence from Ecology that the work is complete. A no cost time extension is required to accommodate the extended schedule for completion of the work.

LATA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

April 9, 1998

Mr. R. A. Carlson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
APR 13 1998
BY DIS

Subject: Task 2, Monthly Progress Report

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Carlson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for March. This report includes activities during the month of March.

The project is within budget; however, a no cost time extension has been approved to accommodate the Washington State Department of Ecology review of closure data.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2945.

Sincerely,

M. M. (Peggy) McCarthy

M. M. (Peggy) McCarthy
Program Manager
Pacific Northwest Division

Attachment: Monthly Report for March

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

BECHTEL HANFORD, INC.										JOB NO. 22182																																																	
SUBCONTRACTOR/SUPPLIER DOCUMENT STATUS STAMP																																																											
1. <input checked="" type="checkbox"/> Work may proceed. 2. <input type="checkbox"/> Submit final document. Work may proceed. 3. <input type="checkbox"/> Revise and resubmit. Work may proceed subject to resolution of indicated comments. 4. <input type="checkbox"/> Revise and resubmit. Work may not proceed. 5. <input type="checkbox"/> Permission to proceed not required.																																																											
Permission to proceed does not constitute acceptance or approval of design details, dimensions, analysis, test methods, or materials developed or selected by the subcontractor/supplier, and does not release subcontractor/supplier from full compliance with contractual obligations or release any "holds" placed on the contract.																																																											
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0300F-MR-G0006-4-DD1-11

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for March*

Date Issued: April 9, 1998
Period of Performance: March 1, 1998 through March 31, 1998
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

There was no activity during the month of March. Preparation of the final draft report will commence upon receipt of concurrence from Ecology that the work is complete. A no cost time extension has been approved to accommodate the extended schedule for completion of the work.

LTA Los Alamos Technical Associates, Inc.

309 Bradley Blvd. / Richland, WA 99352 / Telephone (509) 946-8100 / FAX (509) 946-8700

May 11, 1998

Mr. R. A. Carlson
300 Area Task Lead
MSIN L6-06
Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

RECEIVED
MAY 18 1998
BY DIS

Subject: Task 2, Monthly Progress Report

Reference: Subcontract 0300F-SC-G0006
"Independent Closure Certification of 300 Area Process Trenches"

Dear Mr. Carlson:

In accordance with the Statement of Work for the reference subcontract, we are submitting six copies of the attached Monthly Report for April. This report includes activities during the month of April.

The project is within budget; however, a no cost time extension has been approved to accommodate the Washington State Department of Ecology review of closure data.

If you have any questions or wish to discuss the Monthly Report, please feel free to call me at 946-2945.

Sincerely,



M. M. (Peggy) McCarthy
Program Manager
Pacific Northwest Division

Attachment: Monthly Report for April

cc: M. A. Hughes (BHI MSIN H0-04)
S. C. Ashworth
BH200 File

BECHTEL HANFORD, INC.										JOB NO 22192		
SUBCONTRACTOR/SUPPLIER DOCUMENT STATUS STAMP												
1. <input checked="" type="checkbox"/> Work may proceed. 2. <input type="checkbox"/> Submit final document. Work may proceed. 3. <input type="checkbox"/> Revise and resubmit. Work may proceed subject to resolution of indicated comments. 4. <input type="checkbox"/> Revise and resubmit. Work may not proceed. 5. <input type="checkbox"/> Permission to proceed not required.												
Permission to proceed does not constitute acceptance or approval of design details, calculations, analyses, test methods or materials developed or selected by the subcontractor/supplier, and does not relieve subcontractor/supplier from full compliance with contractual obligations or release any "holds" placed on the contract.												
SPECIAL ENGINEERING												
CSA	ELE	MECH	MECHANICAL INSTRUMENTATION	SYSTEMS	GEN TECH	SAFETY ENGR	NUCLEAR ENGR	ENV ENGR	SAFETY & HEALTH	FIELD SUPPORT	CADD	QA
DATE REVIEW COMPLETED												
REVIEWED BY												
BY	Richard A. Carlson										DATE	5/19/98

*Independent Closure Certification of 300 Area Process Trenches
Monthly Report for April*

Date Issued: May 11, 1998
Period of Performance: April 1, 1998 through April 30, 1998
BHI Contract: 0300F-SC-G0006
LATA Project: BH200

Activities

There was no activity during the month of April. Preparation of the final draft report will commence upon receipt of concurrence from Ecology that the work is complete, currently expected by the first of June.