



U.S. Department of Energy
Office of River Protection

0057784

P.O. Box 450
Richland, Washington 99352

JUL 31 2002

02-OMD-049

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336

RECEIVED
AUG 07 2002
EDMC

Dear Mr. Wilson:

TRANSMITTAL OF THE THIRD QUARTERLY REPORT FOR THE FISCAL YEAR (FY) 2002 AND COMPLETION OF MILESTONE D-001-00-R13 IN SUPPORT OF THE SINGLE-SHELL TANK (SST) INTERIM STABILIZATION (IS) CONSENT DECREE.

This letter provides the third quarterly report and data (Attachment 1) for FY 2002, submitted in compliance with the quarterly reporting requirements for Milestone D-001-00-R13 established in the SST IS Consent Decree No. CT-99-5076-EFS, filed with the U.S. District Court on September 30, 1999. The status and issues in this letter and in attachments have been communicated to your staff.

Substantial progress was made during the last quarter. Pumping was initiated in tank 241-U-111 and pumping resumed in two tanks, 241-U-107 and 241-U-108. The transfer line to replace the failed SX over-ground line was successfully tested and flushing of the U farm transfer line was successful in that most of the blockage was removed. Pump replacements were successfully completed in 241-S-102 and 241-SX-101. The replacement pump for the 244-BX Double Contained Receiver Tank was sent off-site for testing and repairs.

The final data for stabilization of tanks 241-U-102 and 241-U-109 were received from the Contractor. Tank SX-105 continues to be under evaluation but the liquid levels appear to now be at equilibrium so the evaluation should be completed within the next month.

For the third quarter, about 283,000 gallons of waste have been removed from SSTs. This brings the total transfer to 2.1 million gallons. During the quarter, the percent of pumpable liquid remaining was reduced from 44 percent to about 30 percent. The D-001-12V milestone to leave no more than 18 percent is due on September 30, 2002.

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Mr. Michael A. Wilson
02-OMD-049

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The amount of pumpable liquid in the 29 tanks in the Consent Decree is not precisely known and the Consent Decree permits a recalculation on an annual basis. Estimates of pumpable liquid are constantly being refined based on new information. These estimates and refinements, currently in process, are subjected to a rigorous peer review so there is a sound technical rationale to support the calculated volume in each tank. Even with this rigor, substantial differences are sometimes found between estimates and actual liquid pumped from individual tanks. Preliminary refinements in calculations indicate that the current estimate of 4 million gallons of pumpable liquids may be high by as much as 300 thousand gallons. The process of making these recalculations has been discussed in meetings with the staff from Ecology.

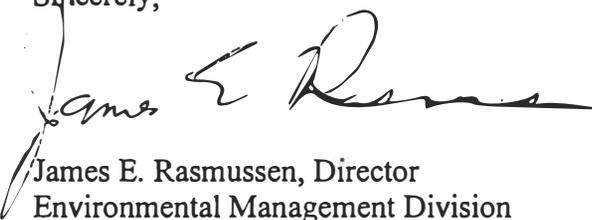
Based on the schedule for tank starts, restarts, and recent improvements in operations, the Consent Decree waste volume Milestone D-001-12V is due on September 30, 2002, appears to be achievable, but continues to be a concern. While some of the issues affecting pumping have been resolved, some still persist as noted in the Attachment 1. The best possible effort is being made to resolve all issues that can be controlled by the U.S. Department of Energy (DOE) or the Contractor. DOE and the Contractor are developing information to determine whether the deadline continues to be achievable.

The data for the quarterly report is contained in more detail in attachment 1. Please note that the graph of total WASTE VOLUME vs. ACTUALS has been updated to show data after the end of the quarter in order to reflect the most current information for this important subject area.

Four letters of direction were sent to the Contractor during this quarter and are shown in Attachments 2-5.

If you have any questions, please contact me, or your staff may contact Andrew Stevens, Operations and Maintenance Division, (509) 376-8235.

Sincerely,



James E. Rasmussen, Director
Environmental Management Division

OMD:AJS

Attachments (5):

1. Consent Decree Reporting Data
2. 02-OMD-010
3. 02-OMD-019
4. 02-OMD-023
5. 02-OMD-032

cc: See page 3

JUL 31 2002

Mr. Michael A. Wilson
02-OMD-049

-3-

cc w/attach:

D. I. Allen, CHG
W. T. Dixon, CHG
J. G. Field, CHG
F. R. Miera, CHG
T. R. Pauly, CHG
M. A. Payne, CHG
W. E. Ross, CHG
D. J. Washenfelder, CHG
R. Gay, CTUIR
M. J. Zevenbergen, DOJ
J. Lyon, Ecology
D. G. Singleton, Ecology
R. F. Stanley, Ecology
D. Bartus, EPA c/o Ecolgoy
M. L. Goldstein, EPA
J. S. Hertzal, FHI
O. S. Kramer, FHI
T. Martin, HAB
P. Sobotta, NPT
K. Niles, Oregon Energy
E. M. Mattlin, RL
R. Jim, YN
TPA Administrative Record

CONSENT DECREE REPORTING DATA

ITEM 1: ACCOMPLISHMENTS AND ISSUES

Third Quarter Accomplishments: FY 2002

- Replaced the 241-S-102 pump/leg assembly and resumed pumping.
- Replaced the 241-SX-101 pump assembly.
- Successfully tested the SL-117 line to accelerate resumption of pumping of SX farm tanks.
- Isolated the failed SX transfer line.
- Successfully back-flushed the transfer line between SY farm and U farm restoring it to approximately 75 percent capacity.
- Resumed pumping 241-U-107 and 241-U-108.
- Completed equipment installation and initiated pumping in 241-U-111.
- Completed equipment installation for pumping initiation in 241-S-101.
- Transferred about 283k gallons of waste out of single-shell tanks.
- Transferred waste from the Double Shell Tank (DST) receiving tank, 241-AP-102 to 241-AP-107.
- Issued a revision to the estimated volume of pumpable liquid (HNF-2978, Revision 3), which indicated a potential reduction of about 300k gallons from the previous estimate.
- Performed additional flushes of the 244-BX transfer pump, but was not successful in returning it to operation. A spare pump has been sent to the vendor for pre-installation testing.
- Issued the Interim Stabilization Evaluation Form for 241-U-102 and 241-U-109.

Six-Month Look Ahead

- Replace the pump in 244-BX and resume pumping 241-BY-105 and 241-BY-106.
- Activate the SL-117 transfer line and resume pumping from SX farm.
- Remove the failed SX transfer line and perform a failure evaluation.
- Complete installation of replacement hose-in-hose transfer systems (HIHTS) to support the operation of the tanks in S farm.
- Initiate saltcake retrieval activities in 241-U-107.
- Complete equipment installation and initiate pumping in 241-C-103, 241-S-101, 241-S-107, and 241-S-112.
- Complete the data evaluation on tank 241-SX-105 to verify that the Interim Stabilization criteria have been met.
- Perform a waste transfer from 241-SY-102 to 241-SY-101.
- Perform a cross-site transfer (241-SY-102 to 241-AP-102).
- Perform a waste transfer from 241-AP-102 to 241-AP-107.
- Perform a waste transfer from 241-SY-102 to 241-SY-101.
- Perform caustic flush of the U farm transfer line to clear the obstruction.

Issues and Recovery

1. The volume of waste that has been transferred has been less than had been anticipated as a result of an accumulation of waste drainage properties, and equipment/facility failures.

All new pump starts and restart of pumps are being accelerated. Resources are being better organized in order to keep pumps running. Some examples are; establishing a project lead for future tank starts, use of additional personnel especially on the back-shift operations, identification and correction of major causes for downtime and critical spare parts have been ordered. One example of acceleration is that pumping in 241-C-103 is being moved from March 2003 to September 2002.

2. The HIHTS between SX and S farms failed when the contractor tried to clear an obstruction from the line, preventing further transfers from SX farm until the line is replaced. There are potential implications on the integrity of other HIHTS.

CHG has inspected the other HIHTS, and finding no indication of potential failures, has certified the lines for continued use.

A direct buried line has been tested, and will be used for transfers out of SX Farm.

Design and procurement are underway for a replacement line.

3. The transfer line between U farm and SY farm is partially obstructed and pumping had been suspended until the obstruction can be cleared. Continued pumping would risk completely plugging the line making clearing the obstruction much more difficult.

CHG has performed a hot water back flush and was successful in restoring the line to about 75 percent capacity. Pumping from U farm has been resumed and will be accompanied by frequent water flushes to monitor the condition of the line, and to assure the line remains open. Subsequent periods of operation and flushes performed after the first several weeks of pumping have showed substantial (40%) degradation of the flow capacity. The line opening is still capable of handling pumping from two of the three U farm tanks.

The Contractor is also fabricating equipment and developing work packages to dissolve the obstruction using a caustic solution if the existing procedures are not successful in maintaining an operable line.

4. The BY transfer pump is currently inoperable. This is preventing transfers from 241-BY-105 and 241-BY-106.

Additional flushing was not successful in restoring the pump to operational status. A spare pump has been identified and sent for vendor testing prior to installation. An innovative approach allowed this pump to be installed without removing the failed pump, which significantly reduced the complexity and hazard of the job. The spare pump is scheduled to be installed in mid-July.

ITEM 2: SCHEDULE COMPLIANCE

FY 2002 Consent Decree Milestones

No Consent Decree milestones were due during the quarter ending June 30, 2002. Pumping in tank 241-U-111 was initiated on June 14, 2002, ahead of schedule.

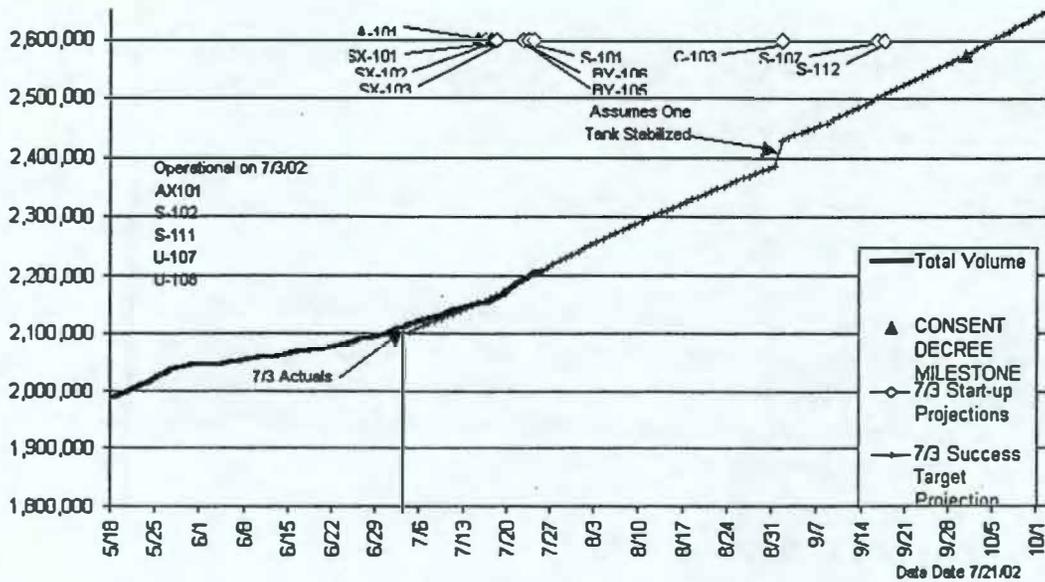
Consent Decree Schedule Status

The next scheduled milestone, D-001-012V, calls for the contractor to reduce the volume of pumpable liquid remaining in unstabilized tanks to less than 18 percent of the total liquid by September 30, 2002.

The total volume of pumpable waste available to be pumped on June 1, 1998, is being updated based on data from the Best Basis Inventory. It appears the total estimated volume will be reduced from 4.0M gallons to about 3.7M gallons. This has the effect of reducing the volume remaining to be pumped to meet the 18 percent criteria from a nominal 720k gallons to about 660k gallons.

Milestone D-001-13 requires pumping to be initiated in five additional tanks (241-U-111, 241-S-109, 241-S-112, 241-S-101, and 241-S-107) by November 30, 2002. Pumping has been initiated in two tanks (241-S-109, and 241-U-111), and the contractor is on schedule to initiate pumping in the remaining three tanks.

7/3/02 TOTAL WASTE VOLUME PROJECTION VS. ACTUALS



ITEM 3: SCHEDULE RECOVERY ACTIONS

Interim Stabilization is currently facing several potentially serious maintenance issues as indicated in the preceding sections. Interim Stabilization is using other resources from within the Contractor's immediate organization and from outside to expedite resolution of these issues.

ITEM 4: BUDGET/COST STATUS

The FY2002 3rd quarter budget increased from \$28.3M to \$35.3M. The increases were due to BCR's; RPP-02-064/072, \$2.7M; RPP-02-080, \$1.8M; and RPP-02-081, \$2.5M. Performance through the 3rd quarter was -13.2% schedule variance (-3,296K) and +4.7% cost variance (\$1,018K). Schedule variance is comprised of tank preparation work for starting tanks 241-S-101, 241-C-103, 241-S-112, 241-S-107, and 241-U-107 Saltcake start-up. Variance affected by unanticipated efforts to address failed/plugged transfer lines in S/SX and U-Farms. The positive cost variance is due to efficiencies in shift operations & training accounts.

ITEM 5: DOE DIRECTIVES

ORP issued four directives to the contractor during this quarter. The letters are listed as attachments in the cover letter.



U.S. Department of Energy
Office of River Protection

P.O. Box 450
Richland, Washington 99352

APR 01 2002

02-OMD-010

Mr. E. S. Aromi, President
and General Manager
CH2M HILL Hanford Group, Inc.
Richland, Washington 99352

Dear Mr. Aromi:

CONTRACT NO. DE-AC27-99RL14047 – RECOMMENDATION TO PROCEED WITH
INTERIM STABILIZATION (IS) OF TANK 241-C-103

Reference: CHG letter from E. S. Aromi to H. L. Boston, ORP, "Recommendation to
Proceed With Interim Stabilization of Tank 241-C-103," CHG-0200473, dated
February 7, 2002.

The above referenced letter recommended that IS begin in Tank 241-C-103 without removal of the separable organic layer. This recommendation is based on new samples, which show a much thinner layer, between ¼-inch and ⅜-inch, of organic material than previously found. This thin layer would be difficult to remove and would adhere to the solids in the bottom of the tank as the aqueous liquid is pumped out. In that condition, the organic material would not violate the specification for the Waste Treatment and Immobilization Plant high-level waste feed specification.

The U.S. Department of Energy, Office of River Protection concurs with your recommendation to begin IS without removal of the organic layer in Tank 241-C-103 and has requested concurrence from State of Washington Department of Ecology. Please commence activities to interim stabilize 241-C-103 without organic separation. Actual pumping should not begin until ORP provides additional direction to start pumping.

If you have any questions, please contact me, or your staff may contact Andrew Stevens, Operations and Maintenance Division, (509) 376-8235.

Sincerely,

A handwritten signature in cursive script that reads "Michael K. Barrett".

Michael K. Barrett
Contracting Officer

OMD:AJS

Mr. E. S. Aromi
02-OMD-010

-2-

APR 9 1 2002

bcc: OMD Off File
OMD Rdg File
MGR Rdg File
J. S. O'Connor, AMIC
J. F. Schwier, AMIC
J. H. Swailes, AMO
M. E. Burandt, EMD
J. E. Rasmussen, EMD
D. C. Bryson, OMD
A. J. Stevens, OMD
S. D. Stubblebine, ORP
R. Carreon, REQ
K. K. Fick, SIO

RECORD NOTE: CHG requested response to their letter by February 28, 2002. They (Bill Ross) were asked if a later reply would have any impacts and there are none. Their baseline is based on IS without prior removal of organics since no funding was found for that operation. CHG operational planning will show C-103 pumping.

This subject was discussed at a meeting between ORP and Ecology on March 12, 2002. There were no issues.

Subject has been discussed / agreed to between Mr. Stubblebine and Department of Justice's Mr. Zevenbergen. A letter to Ecology is being processed.

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P.O. Box 450
Richland, Washington 99352

APR 17 2002

02-OMD-019

Mr. E. S. Aromi, President
and General Manager
CH2M HILL Hanford Group, Inc.
Richland, Washington 99352

Dear Mr. Aromi:

CONTRACT NO. DE-AC27-99RL14047 - DIRECTION TO CONDUCT AN OPERATIONAL READINESS REVIEW (ORR) FOR 244-AR VAULT INTERIM STABILIZATION AND READINESS ASSESSMENTS FOR SINGLE-SHELL TANK INTERIM STABILIZATION SCHEDULED AFTER MAY 5, 2002

Reference: CHG letter from M. P. DeLozier to H. L. Boston, ORP, "Transmittal of Startup Notification Report," CHG-0106764, dated December 12, 2001.

The U.S. Department of Energy (DOE), Office of River Protection (ORP) is directing that an ORR be conducted for the 244-AR Vault Interim Stabilization activity listed in the referenced quarterly Startup Notification Report (SNR). DOE Headquarters, Assistant Secretary for Environmental Management, will be the authorization authority, and ORP will conduct an independent ORR.

ORP is also directing that Readiness Assessments (RA) be conducted for all initial operations for newly installed saltwell pumping systems, consistent with DOE O 425.1B requirements. ORP intends to delegate the restart authorization authority for these activities to CH2M HILL Hanford Group, Inc. management, and to conduct routine oversight of the contractor's RA. Since new saltwell pumps are being installed and started on a regular basis, the effective date for this direction will be based on the planned approval date of the next submitted quarterly SNR (second quarter Calendar Year 2002), May 1, 2002. Readiness review activities for initial startups of saltwell pumping performed prior to this date shall be conducted in accordance with current contractor procedures and methods, and do not require an RA.

Within 30 days from receipt of this letter, please advise this office, in writing, of all potential impacts associated with the direction provided in this letter. As part of your impact assessment, please advise ORP of any baseline changes anticipated, consistent with meeting Hanford Federal Facility Agreement and Consent Order milestones.

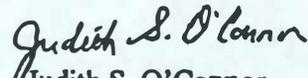
Mr. E. S. Aromi
02-OMD-019

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APR 17 2002

If you have questions, please contact me, (509) 373-9373.

Sincerely,


Judith S. O'Connor
Contracting Officer

OMD:MCB

cc: D. I. Allen, CHG
D. O. Dobson, CHG
A. F. Erhart, CHG
C. V. Phillips, CHG
W. E. Ross, CHG



U.S. Department of Energy
Office of River Protection

P.O. Box 450
Richland, Washington 99352

MAY 07 2002

02-OMD-023

Mr. E. S. Aromi, President
and General Manager
CH2M HILL Hanford Group, Inc.
Richland, Washington 99352

Dear Mr. Aromi:

CONTRACT NO. DE-AC27-99RL14047 – REPLACEMENT OF TRANSFER PUMP FOR
244-BX DOUBLE CONTAINED RECEIVER TANK (DCRT)

Reference: CHG letter from R. F. Wood to J. S. O'Connor, ORP, "Notification of CH2M HILL Hanford Group, Inc. Undertaking New Workslope Initiatives to Replace a Failed Transfer Pump at 244-BX Double Contained Receiver Tank," CHG-0201728, dated April 17, 2002.

In the Referenced letter, CH2M HILL Hanford Group, Inc. (CHG) advised the U.S. Department of Energy, Office of River Protection (ORP) that replacement of the transfer pump in DCRT 244-BX is being undertaken and is not currently in the detail scope baseline. However, it does fall within the general scope of Section C of the Contract. ORP concurs that CHG should proceed with this work. It is necessary and should begin in a timely manner in order to remove impediments to meeting the Consent Decree Milestone due on September 30, 2002.

ORP recognizes this pump replacement as a valid use of the risk mitigation budget currently in the baseline and agrees with the inclusion of this change in the Baseline Change Request (BCR) resulting from the Baseline Improvement/Baseline Review Team (BRT) process currently underway. The acceleration of the risk mitigation budget from Fiscal Year (FY) 2005 into FY 2002 for the replacement of this pump must be clearly documented in the BRT record notebooks for the specific planning package where this work resides. The BRT record notebooks will be the back up support for the various BCRs expected to cover the CHG life cycle baseline.

If you have any questions, please contact me, or your staff may contact Andrew Stevens, Operations and Maintenance Division, (509) 376-8235.

Sincerely,


Judith S. O'Connor
Contracting Officer

OMD:AJ5

Mr. E. S. Aromi
02-OMD-019

-3-

APR 17 2002

bcc: OMD OFF File
OMD RDG File
MGR Rdg File
J. H. Swailes, AMO
J. S. O'Connor, AMIC
J. F. Schwier, AMIC
R. C. Barr, AMSQ
J. E. Rasmussen, EMD
M. J. Royack, OMD
M. C. Brown, OSO
W. L. Smoot, QA
D. L. Noyes, TOD

RECORD NOTE: This letter provides CHG direction that the 244-AR Vault Interim Stabilization pumping activities be conducted using an ORR, consistent with the direction provided in the DOE memorandum from Jessie Hill Roberson, DOE-HQ EM-1, to Harry Boston, ORP, "Nuclear Startup Readiness Reviews," dated March 19, 2002. This letter also communicates ORP management's decision that initial saltwell startups be conducted using RA's.

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Mr. E. S. Aromi
02-OMD-023

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MAY 07 2002

bcc: OMD Off File
OMD Rdg File
MGR Rdg File
J. H. Swailes, AMO
J. S. O'Connor, AMIC
J. F. Schwier, AMIC
M. J. Royack, OMD
A. J. Stevens, OMD

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MAY 07 2002

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U.S. Department of Energy
~~OFFICE OF RIVER PROTECTION~~

P.O. Box 450
Richland, Washington 99352

02-OMD-032

JUN 25 2002

Mr. E. S. Aromi, President
and General Manager
CH2M HILL Hanford Group, Inc.
Richland, Washington 99352

Dear Mr. Aromi:

CONTRACT NO. DE-AC27-99RL14047 – INTERIM STABILIZATION (IS)
PERFORMANCE AND PLANS

- References:
1. CHG letter from R. F. Wood, to J. S. O'Connor, ORP, "Interim Stabilization Consent Decree Milestone D-001-12V," CHG-0200070 R3, dated May 13, 2002.
 2. CHG letter from R. F. Wood, to J. S. O'Connor, ORP, "Interim Stabilization Consent Decree Milestone D-001-12V," CHG-0200070 R4, dated June 13, 2002.
 3. ORP letter from J. S. O'Connor to M. P. DeLozier, CHG, "The U.S. Department of Energy, Office of River Protection (ORP) Direction to the CH2M HILL Hanford Group, Inc. (CHG) of Notification of Inability to Meet Interim Stabilization (IS) Consent Decree CT-95-5076-EFS Milestones," 01-OMD-025, dated August 08, 2001.
 4. CHG letter from R. F. Wood, to J. S. O'Connor, ORP, "Interim Stabilization Consent Decree Milestone D-001-12V," CHG-0200070 R5, dated June 14, 2002.

Your letter of June 14, 2002, Reference 4, was received suggesting that "[I]n parallel with the ongoing efforts for recovery, CH2M HILL Hanford Group, Inc. (CHG) believes it would be prudent to pursue an extension of the September 30, 2002, Consent Decree milestone date." The progress made to date in pumping of 2.06 million gallons of the expected 2.57 million gallons is a significant accomplishment and represents progress in meeting the consent decree milestone for reducing pumpable liquid to 18 percent of initial volume. However, the variation in CHG's estimates of completion that have occurred over the last eight (8) weeks is unexplained. The basis for CHG's new estimate is unsubstantiated and inconsistent with CHG previous weekly estimates and presentations to ORP as recently as late May 2002. In addition, the actions being taken to meet the milestone on the due date appear insufficient to predict a schedule with appropriate degree of certainty.

JUN 25 2002

Mr. E. S. Aromi
02-OMD-032

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ORP appreciates that CHG's request for a 16 week extension to the milestone was intended to provide a high-degree of confidence that a revised date would be met. ORP also understands per CHG's letter that CHG's goal continues to be achieving the current consent decree milestone for September 30, 2002.

The activities discussed in Reference 4, however, do not provide sufficient detail. The following information is required:

1. A detailed schedule for IS, including the status of the September 30, 2002, milestone;
2. The basis of the probability of meeting the milestone;
3. A date CHG proposes, with a high level of confidence, for meeting the 18 percent pumpable liquid milestone;
4. What can be done to recover the September 30, 2002, milestone and to accelerate performance specifically, and
5. The schedule status for meeting: (a) initiation of pumping milestone by November 30, 2002, (b) the September 30, 2003 milestone to reduce pumpable liquids to 2 percent, and (c) the milestone to complete interim stabilization by September 30, 2004.

In the event that CHG projects that any of these milestones are not recoverable, then sufficient information shall be provided to fully support a request for a change to the Consent Decree. This is consistent with the Reference 3.

There are two performance indicators of particular concern that directly affect the number of gallons of waste pumped from Single-Shell Storage Tanks. One indicator is the number of total hours pumped per week. Attachment 1, clearly shows that the hours of pumping per week have been very low in the past year, especially considering the number of pumps that have already met the pump start milestones. The second indicator, shown in Attachment 2, shows that pumping efficiency averages below 40 percent and has declined in the last year. This historical data points out that the number of pumps kept operating must be improved in order to meet our milestones. CHG's plans to accelerate performance, indicated in item (4) above, shall address specific improvements that must be made and the schedule for implementation.

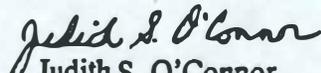
JUN 25 2002

Mr. E. S. Aromi
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If you have any questions, please contact me, or your staff may contact Andrew J. Stevens,
Operations and Maintenance Division, (509) 376-8235.

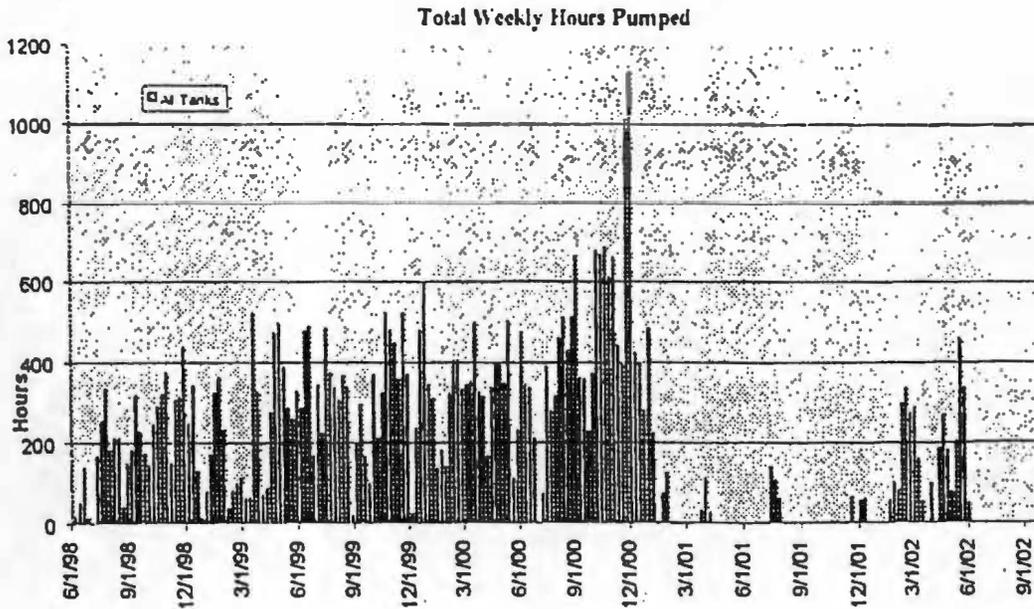
Sincerely,


Judith S. O'Connor
Contracting Officer

OMD:AJS

Attachments (2)

cc w/ attaches:
W. E. Ross, CHG
M. Zevenbergen, DOJ



Pump Operations Efficiency

