

APPENDIX B

**2008 ANNUAL REMEDY
PERFORMANCE CHECKLISTS**

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2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

I. GENERAL SITE INFORMATION			
Facility Name: WATS Groundwater Treatment System			
Facility Address, City, State: Former Naval Air Station Moffett Field Moffett Field, CA 94035 EPA Region 9			
Checklist completion date:	EPA Site ID: CA21700900078		
Site Lead: <input type="checkbox"/> Fund <input type="checkbox"/> PRP <input type="checkbox"/> State <input type="checkbox"/> State Enforcement <input checked="" type="checkbox"/> Federal Facility <input type="checkbox"/> Other, specify:			
Site Remedy Components (include other reference documents for more information, as appropriate): West-Side Aquifers Treatment System (WATS) is a groundwater pump and treat system. WATS currently consists of nine extraction wells, an advanced oxidation process (AOP), and a liquid phase granular activated carbon (GAC) adsorber. The AOP unit destroys the majority of the influent volatile organic compounds (VOCs). The liquid phase GAC units polish the effluent of any remaining VOCs. See <i>Final West-Side Aquifers Treatment System Operation and Maintenance Manual Addendum 4, Appendix A</i> (Tetra Tech FW, Inc., 2005) for record drawings.			
II. CONTACTS			
<u>List important personnel associated with the Site:</u> Name, title, phone number, e-mail address:			
	Name/Title	Phone	E-mail
PRP / Facility Representative	Darren Newton, BEC Department of the Navy	619-532-00963	darren.newton@navy.mil
PRP Contractor/ Consultant	Mike Lewis, PM SES-TECH	619-564-8059	michael.lewis@sealaska.com
O&M Contractor	Duanne Harrison, Site Supervisor SES-TECH	650-564-9868	duane.harrison@tteci.com
Other			

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

III. O&M COSTS (OPTIONAL)														
What is your annual O&M cost total for the reporting year? _____ \$760,644 Breakout your annual O&M cost total into the following categories (use either dollars or %):														
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">• Analytical (e.g., lab costs):</td> <td style="border-bottom: 1px solid black; text-align: right;">15%</td> </tr> <tr> <td>• Labor (e.g., site maintenance, sampling):</td> <td style="border-bottom: 1px solid black; text-align: right;">20%</td> </tr> <tr> <td>• Materials (e.g., treatment chemicals):</td> <td style="border-bottom: 1px solid black; text-align: right;">25%</td> </tr> <tr> <td>• Oversight (e.g., project management):</td> <td style="border-bottom: 1px solid black; text-align: right;">10%</td> </tr> <tr> <td>• Utilities (e.g., electric, gas, phone, water):</td> <td style="border-bottom: 1px solid black; text-align: right;">10%</td> </tr> <tr> <td>• Reporting (e.g., NPDES, progress):</td> <td style="border-bottom: 1px solid black; text-align: right;">15%</td> </tr> <tr> <td>• Other (e.g., capital improvements):</td> <td style="border-bottom: 1px solid black; text-align: right;">5%</td> </tr> </table>	• Analytical (e.g., lab costs):	15%	• Labor (e.g., site maintenance, sampling):	20%	• Materials (e.g., treatment chemicals):	25%	• Oversight (e.g., project management):	10%	• Utilities (e.g., electric, gas, phone, water):	10%	• Reporting (e.g., NPDES, progress):	15%	• Other (e.g., capital improvements):	5%
• Analytical (e.g., lab costs):	15%													
• Labor (e.g., site maintenance, sampling):	20%													
• Materials (e.g., treatment chemicals):	25%													
• Oversight (e.g., project management):	10%													
• Utilities (e.g., electric, gas, phone, water):	10%													
• Reporting (e.g., NPDES, progress):	15%													
• Other (e.g., capital improvements):	5%													
Describe unanticipated/unusually high or low O&M costs (go to section [fill in] to recommend optimization methods): O&M costs were normal.														
IV. ON-SITE DOCUMENTS AND RECORDS (Check all that apply)														
<input checked="" type="checkbox"/> O&M Manual <input checked="" type="checkbox"/> O&M Maintenance Logs <input checked="" type="checkbox"/> O&M As-built drawings <input checked="" type="checkbox"/> O&M reports <input checked="" type="checkbox"/> Daily access/Security logs <input checked="" type="checkbox"/> Site-Specific Health & Safety Plan <input checked="" type="checkbox"/> Contingency/Emergency Response Plan <input checked="" type="checkbox"/> O&M/OSHA Training Records <input type="checkbox"/> Settlement Monument Records <input type="checkbox"/> Gas Generation Records <input checked="" type="checkbox"/> Groundwater monitoring records <input type="checkbox"/> Leachate extraction records <input checked="" type="checkbox"/> Discharge Compliance Records <input type="checkbox"/> Air discharge permit <input checked="" type="checkbox"/> Effluent discharge permit <input type="checkbox"/> Waste disposal, POTW permit														
Are these documents currently readily available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, where are records kept?														
V. INSTITUTIONAL CONTROLS (as applicable)														
List institutional controls called for (and from what enforcement document): Institutional controls implemented by NASA. Status of their implementation: Where are the ICs documented and/or reported? ICs are being properly implemented and enforced? <input type="checkbox"/> Yes <input type="checkbox"/> No, elaborate below ICs are adequate for site protection? <input type="checkbox"/> Yes <input type="checkbox"/> No, elaborate below														
Additional remarks regarding ICs:														

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

VI. SIGNIFICANT SITE EVENTS

Check all Significant Site Events since the Last Checklist that Affects or May Affect Remedy Performance

- Community Issues
- Vandalism
- Maintenance Issues
- Other:

Please elaborate on Significant Site Events: No significant site events occurred in 2007.

VII. REDEVELOPMENT

Is redevelopment on property planned? Yes No

If yes, what is planned? Please describe below.

Is redevelopment plan complete Yes, date: _____; No ? Not Applicable

Redevelopment proposal in progress? Yes, elaborate below

No; If no, is a proposal anticipated? Yes No

Is the redevelopment proposal compatible with remedy performance? Yes No

Elaborate on redevelopment proposal and how it affects remedy performance:

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST
(Continued)

VIII. GROUNDWATER REMEDY (reference isoconcentration, capture zone maps, trend analysis, and other documentation to support analysis)	
<u>Groundwater Quality Data</u>	
List the types of data that are available:	What is the source report?
<u>2008 Data Table, Historical Data Table Plume Maps,</u>	<u>2008 Annual Groundwater Report for</u>
<u>Estimated and Simulated Capture Zone Maps,</u>	<u>WATS and EATS (SES-TECH 2009)</u>
<u>Long-Term VOC Time Series Plots</u>	
<input checked="" type="checkbox"/> Contaminant trend(s) tracked during O&M (i.e., temporal analysis of groundwater contaminant trends). <input checked="" type="checkbox"/> Groundwater data tracked with software for temporal analyses. <input type="checkbox"/> Reviewed MNA parameters to ensure health of substrate (e.g., DO, pH, temperature), if appropriate?	
<u>Groundwater Pump & Treat Extraction Well and Treatment System Data</u>	
List the types of data that are available:	What is the source report?
<u>Volume & Mass Process Data; Downtime</u>	<u>Quarterly and Annual National Pollutant Discharge</u>
<u>Summary; and Influent and Effluent Data Tables</u>	<u>Elimination System (NPDES) Self-Monitoring Report</u>
<u>Compliance Evaluation Summary</u>	<u>for WATS</u>
<input checked="" type="checkbox"/> The system is functioning adequately. <input type="checkbox"/> The system has been shut down for significant periods of time in the past year. Please elaborate below.	
<u>Discharge Data</u>	
List the types of data that are available:	What is the source report?
<u>Effluent Data Tables</u>	<u>Quarterly and Annual NPDES</u>
<u>Compliance Evaluation Summary</u>	<u>Self-Monitoring Report for WATS</u>
<input checked="" type="checkbox"/> The system is in compliance with discharge permits.	
<u>Slurry Wall Data</u>	
List the types of data that are available:	What is the source report?
<u>Not applicable to WATS.</u>	
Is slurry wall operating as designed? <input type="checkbox"/> Yes <input type="checkbox"/> No If not, what is being done to correct the situation? _____ _____	
<u>Elaborate on technical data and/or other comments:</u>	
_____ _____ _____	

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

IX. AIR MONITORING/VAPOR INTRUSION PATHWAY EVALUATION (Include in Annual Progress Report and reference document)
Walk-throughs/Surveys: No WATS area air monitoring surveys were conducted or planned.
Summary of Results: Problems Encountered: Recommendations/Next Steps:
Schedule:
X. REMEDY PERFORMANCE ASSESSMENT
A. Groundwater Remedies
What are the remedial goals for groundwater? <input checked="" type="checkbox"/> Plume containment (prevent plume migration); <input checked="" type="checkbox"/> Plume restoration (attain ROD-specific cleanup levels in aquifer); <input type="checkbox"/> Other goals, please explain: _____
Have you done a trend analysis? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No; If Yes, what does it show? (Is it inconclusive due to inadequate data? Are the concentrations increasing or decreasing?) Explain and provide source document reference _____
If plume containment is a remedial goal, check all that apply: <input checked="" type="checkbox"/> Plume migration is under control (explain basis below) <input type="checkbox"/> Plume migration is not under control (explain basis below) <input type="checkbox"/> Insufficient data to determine plume stability (explain below) (Include attachments that substantiate your answers, e.g., reference plume, trend analysis, and capture zone maps in source document)
Elaborate on basis for determining that plume containment goal is being met or not being met: Capture zone estimation based on potentiometric surface map interpretation, and capture zone simulations using reverse particle tracking modeling show complete capture of the regional plume in the target capture zone. Historical concentration graphs show long-term trends for samples from upper and lower A aquifer monitoring wells located downgradient of the target capture zone with decreasing or the same trichloroethene (TCE) concentration.
If plume restoration is a cleanup objective, check all that apply: <input checked="" type="checkbox"/> Progress is being made toward reaching cleanup levels (explain basis below) <input type="checkbox"/> Progress is not being made toward reaching cleanup levels (explain basis below) <input type="checkbox"/> Insufficient data to determine progress toward restoration goal (explain below)

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

Elaborate on basis for determining progress or lack of progress toward restoration goal:

TCE, cis-1,2-dichloroethene (cis-1,2-DCE), and tetrachloroethene (PCE) plume maps in 2008 show contaminant plumes consistent in size and shape with plumes from previous years indicating contaminant plume stability. Historical VOC concentration graphs show decreasing or stable long-term trends for samples from monitoring wells considered representative of chemical conditions in the WATS area.

Although WATS is functioning as intended, dissolved VOCs in the regional plume continue to migrate into the WATS area with groundwater underflow from upgradient of the WATS area. The upgradient source is contributing contaminants to the WATS area at concentrations greater than cleanup standards. As long as there is contaminant flow into the WATS area above cleanup standards, the remedial objective to restore WATS area groundwater quality to cleanup standards cannot be reached.

B. Vertical Migration

Have you done an assessment of vertical gradients? Yes No; If Yes, what does it show? (Is it inconclusive due to inadequate data?)

Are the concentrations increasing or decreasing? Explain and provide source document reference.

C. Source Control Remedies

What are the remedial goals for source control?

Continue to pump and treat. Reduce the contaminants to cleanup standards and contain the regional plume to keep it from migrating offsite.

Elaborate on basis for determining progress or lack of progress toward these goals:

XI. PROJECTIONS

Administrative Issues

Dates of next monitoring and sampling events for next annual reporting period: Monthly NPDES sampling and Quarterly NPDES reporting; March and November 2009 base wide water gauging; November/December 2009 Annual Groundwater sampling; 2009 Annual Report for EATS and WATS due June 2010.

A. Groundwater Remedies - Projections for the upcoming year and long-term (Check all that apply)

Remedy Projections for the upcoming year (2009)

- No significant changes projected.
- Groundwater remedy will be converted to monitored natural attenuation. Target date:
- Groundwater Pump & Treat will be shut down. Target date:
- Groundwater cleanup standards to be modified. Target date:
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Change in the number and/or types of analytes being analyzed. Increasing or decreasing?
Target date:
- Change in groundwater extraction system. Expansion or minimization (i.e., number of extraction wells and/or pumping rate)? Target date:
- Modification on groundwater treatment? Elaborate below. Target date:
- Change in discharge location. Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

Elaborate on Remedy Projections:

Remedy Projections for the long-term (Check all that apply)

- No significant changes projected.
- Groundwater remedy will be converted to monitored natural attenuation. Target date:
- Groundwater Pump & Treat will be shut down. Target date:
- Groundwater cleanup standards to be modified. Target date:
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Change in the number and/or types of analytes being analyzed. Increasing or decreasing?
Target date:
- Change in groundwater extraction system. Expansion or minimization (i.e., number of extraction wells and/or pumping rate)? Target date:
- Modification on groundwater treatment? Elaborate below. Target date:
- Change in discharge location. Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

Elaborate on Remedy Projections:

B. Projections – Slurry Walls (Check all that apply)

Remedy Projections for the upcoming year

- No significant changes projected.
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

Elaborate on Remedy Projections:

Remedy Projections for the long-term

- No significant changes projected.
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

Elaborate on Remedy Projections:

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

C. Projections – Other Remedial Options Being Reviewed to Enhance Cleanup

Progress implementing recommendations from last report or Five-Year Review

Has optimization study been implemented or scheduled? Yes; No; If Yes, please elaborate.

The *WATS Optimization Work Plan* (Foster Wheeler Environmental Corporation, 2003) has been implemented. The system will continue to be monitored for opportunities to optimize.

XII. ADMINISTRATIVE ISSUES (Check all that apply)

- Explanation of Significant Differences in progress ROD Amendment in progress
 Site in operational and functional ("shake down") period;
 Notice of Intent to Delete in progress Partial site deletion in progress TI Waivers
 Other administrative issues:

Date of Next EPA Five-Year Review: **September 30, 2009**

XIII. RECOMMENDATIONS

Continue to operate, maintain, and monitor WATS and WATS area monitoring wells as scheduled.

Evaluate long-term alternatives to pump and treat technology for WATS area contamination.

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

I. GENERAL SITE INFORMATION			
Facility Name: EATS Groundwater Treatment System			
Facility Address, City, State: Former Naval Air Station Moffett Field Moffett Field, CA 94035 EPA Region 9			
Checklist completion date:		EPA Site ID: CA21700900078	
Site Lead: <input type="checkbox"/> Fund <input type="checkbox"/> PRP <input type="checkbox"/> State <input type="checkbox"/> State Enforcement <input checked="" type="checkbox"/> Federal Facility <input type="checkbox"/> Other, specify:			
Site Remedy Components (include other reference documents for more information, as appropriate): East-Side Aquifer Treatment System (EATS) is a groundwater pump and treat system. EATS consists of five extraction wells, an air stripper, and a liquid phase granular activated carbon (GAC) adsorber in series. See <i>Final East-Side Aquifer Treatment System Operation and Maintenance Manual, Appendix A</i> (Tetra Tech EM, Inc., 2000) for record drawings. EATS remained off-line during the 2004 through 2007 reporting periods as part of the <i>Final East-Side Aquifer Treatment System Evaluation Work Plan</i> (Foster Wheeler Environmental Corporation [FWENC], 2003) implementation.			
II. CONTACTS			
<u>List important personnel associated with the Site:</u> Name, title, phone number, e-mail address:			
	Name/Title	Phone	E-mail
PRP / Facility Representative	Darren Newton, BEC Department of the Navy	619-532-0963	darren.newton@navy.mil
PRP Contractor/ Consultant	Mike Lewis, PM SES-Tech	619-564-8059	michael.lewis@sealaska.com
O&M Contractor	Duane Harrison, Site Supervisor SES-Tech.	650-564-9868	duane.harrison@tteci.com
Other			

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

III. O&M COSTS (OPTIONAL)
<p>What is your annual O&M cost total for the reporting year? _____ \$35,400</p> <p>Breakout your annual O&M cost total into the following categories (use either dollars or %):</p> <ul style="list-style-type: none"> • Analytical (e.g., lab and validation costs): _____ 40% • Labor (e.g., site maintenance, sampling): _____ 40% • Materials (e.g., treatment chemicals): _____ 10% • Oversight (e.g., project management): _____ 5% • Utilities (e.g., electric, gas, phone, water): _____ 2% • Reporting (e.g., NPDES, progress): _____ 2% • Other (e.g., capital improvements): _____ 1%
<p>Describe unanticipated/unusually high or low O&M costs (go to section [fill in] to recommend optimization methods):</p> <p>2008 O&M costs were appropriate for work performed at EATS. Rather than incurring costs related to system operation, as in previous years, or to planning, evaluation, and execution of monitored natural attenuation enhanced by addition of Hydrogen Release Compound in 2004 and 2005, costs were incurred to execute and monitor.</p>
IV. ON-SITE DOCUMENTS AND RECORDS (Check all that apply)
<p> <input checked="" type="checkbox"/> O&M Manual <input checked="" type="checkbox"/> O&M Maintenance Logs <input checked="" type="checkbox"/> O&M As-built drawings <input checked="" type="checkbox"/> O&M reports <input checked="" type="checkbox"/> Daily access/Security logs <input checked="" type="checkbox"/> Site-Specific Health & Safety Plan <input checked="" type="checkbox"/> Contingency/Emergency Response Plan <input checked="" type="checkbox"/> O&M/OSHA Training Records <input type="checkbox"/> Settlement Monument Records <input type="checkbox"/> Gas Generation Records <input checked="" type="checkbox"/> Groundwater monitoring records <input type="checkbox"/> Leachate extraction records <input checked="" type="checkbox"/> Discharge Compliance Records <input type="checkbox"/> Air discharge permit <input checked="" type="checkbox"/> Effluent discharge permit <input type="checkbox"/> Waste disposal, POTW permit </p> <p>Are these documents currently readily available? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, where are records kept?</p>
V. INSTITUTIONAL CONTROLS (as applicable)
<p>List institutional controls called for (and from what enforcement document):</p> <p>Institutional controls implemented by NASA.</p> <p>Status of their implementation:</p> <p>Where are the ICs documented and/or reported?</p> <p>ICs are being properly implemented and enforced? <input type="checkbox"/> Yes <input type="checkbox"/> No, elaborate below</p> <p>ICs are adequate for site protection? <input type="checkbox"/> Yes <input type="checkbox"/> No, elaborate below</p> <p>Additional remarks regarding ICs:</p>

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

VI. SIGNIFICANT SITE EVENTS

Check all Significant Site Events since the Last Checklist that Affects or May Affect Remedy Performance

- Community Issues
- Vandalism
- Maintenance Issues
- Other:

Please elaborate on Significant Site Events: EATS remained off-line during the 2008 reporting period as part of the *Final East-Side Aquifer Treatment System Evaluation Work Plan* (FWENC, 2003) implementation. The Work Plan was implemented to evaluate plume stability, contaminant rebound, natural attenuation, and the efficiency of Hydrogen Release Compound® in remediating plume hot spots. Recommendations for continued EATS system operation, modifications, and/or alternative long-term remedial strategies are summarized in the *Site 26, East-Side Aquifer Treatment System Evaluation Report* (TtEC, 2008a) and the *Final Site 26 Technical Memorandum (Optimization Evaluation)* (TtEC 2008c). The Navy is currently drafting a Work Plan for the IR Site 26 pilot test to address these alternative long-term remedial strategies.

VII. REDEVELOPMENT

Is redevelopment on property planned? Yes No

If yes, what is planned? Please describe below.

Is redevelopment plan complete Yes, date: _____; No ? Not Applicable

Redevelopment proposal in progress? Yes, elaborate below

No; If no, is a proposal anticipated? Yes No

Is the redevelopment proposal compatible with remedy performance? Yes No

Elaborate on redevelopment proposal and how it affects remedy performance:

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

VIII. GROUNDWATER REMEDY (reference isoconcentration, capture zone maps, trend analysis, and other documentation to support analysis)	
<u>Groundwater Quality Data</u> List the types of data that are available:	What is the source report?
2007 Data Table,	2007 Annual Groundwater Report for
Historical Data Table Plume Maps,	WATS and EATS (T N & Associates, Inc., 2008)
Long-Term VOC Time Series Plots	
<input checked="" type="checkbox"/> Contaminant trend(s) tracked during O&M (i.e., temporal analysis of groundwater contaminant trends). <input checked="" type="checkbox"/> Groundwater data tracked with software for temporal analyses. <input type="checkbox"/> Reviewed MNA parameters to ensure health of substrate (e.g., DO, pH, temperature), if appropriate?	
<u>Groundwater Pump & Treat Extraction Well and Treatment System Data</u> List the types of data that are available:	What is the source report?
EATS remained off-line during the 2008 reporting period.	
<input type="checkbox"/> The system is functioning adequately. <input checked="" type="checkbox"/> The system has been shut down for significant periods of time in the past year. Please elaborate below.	
<u>Discharge Data</u> List the types of data that are available:	What is the source report?
EATS remained off-line during the 2008 reporting period.	
<input checked="" type="checkbox"/> The system is in compliance with discharge permits.	
<u>Slurry Wall Data</u> List the types of data that are available:	What is the source report?
Not applicable to EATS.	
Is slurry wall operating as designed? <input type="checkbox"/> Yes <input type="checkbox"/> No If not, what is being done to correct the situation?	
<u>Elaborate on technical data and/or other comments:</u> EATS was shut down and placed on standby status in July 2003 to evaluate plume stability, chemical of concern (COC) rebound, natural attenuation, and the efficiency of Hydrogen Release Compound [®] in remediating plume hot spots. EATS remained off-line for the entire 2004 through 2008 reporting periods. Recommendations for continued EATS system operation, modifications, and/or alternative long-term remedial strategies are summarized in the <i>Site 26, East-Side Aquifer Treatment System Evaluation Report</i> (TtEC, 2008a) and the <i>Final Site 26 Technical Memorandum (Optimization Evaluation)</i> (TtEC 2008c). The Navy is currently drafting a Work Plan for the IR Site 26 pilot test to address these alternative long-term remedial strategies.	

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

IX. AIR MONITORING/VAPOR INTRUSION PATHWAY EVALUATION (Include in Annual Progress Report and reference document)
Walk-throughs/Surveys: No EATS area air monitoring surveys were conducted or planned.
Summary of Results: Problems Encountered: Recommendations/Next Steps:
Schedule:
X. REMEDY PERFORMANCE ASSESSMENT
A. Groundwater Remedies
What are the remedial goals for groundwater? <input checked="" type="checkbox"/> Plume containment (prevent plume migration); <input checked="" type="checkbox"/> Plume restoration (attain ROD-specific cleanup levels in aquifer); <input type="checkbox"/> Other goals, please explain: _____
Have you done a trend analysis? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No; If Yes, what does it show? (Is it inconclusive due to inadequate data? Are the concentrations increasing or decreasing?) Explain and provide source document reference _____
If plume containment is a remedial goal, check all that apply: <input checked="" type="checkbox"/> Plume migration is under control (explain basis below) <input type="checkbox"/> Plume migration is not under control (explain basis below) <input type="checkbox"/> Insufficient data to determine plume stability (explain below) (Include attachments that substantiate your answers, e.g., reference plume, trend analysis, and capture zone maps in source document)
Elaborate on basis for determining that plume containment goal is being met or not being met: The general COC plume locations and shapes were stable during 2008 compared to previous years, which is significant since EATS was turned off in July 2003 and remained off throughout 2004 through 2008. The PCE and TCE plumes have remained stable since 2001.
If plume restoration is a cleanup objective, check all that apply: <input checked="" type="checkbox"/> Progress is being made toward reaching cleanup levels (explain basis below) <input type="checkbox"/> Progress is not being made toward reaching cleanup levels (explain basis below) <input type="checkbox"/> Insufficient data to determine progress toward restoration goal (explain below)

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

Elaborate on basis for determining progress or lack of progress toward restoration goal:

Trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), tetrachloroethene (PCE), and vinyl chloride (VC)
2008 plume maps show contaminant plumes consistent in size and shape with plumes from previous years indicating contaminant plume stability.

B. Vertical Migration

Have you done an assessment of vertical gradients? Yes No; If Yes, what does it show? (Is it inconclusive due to inadequate data?)

Are the concentrations increasing or decreasing? Explain and provide source document reference.

C. Source Control Remedies

What are the remedial goals for source control?

All potential sources have been identified, and remedial action/closure has taken place. There are no other known sources at this time.

Elaborate on basis for determining progress or lack of progress toward these goals:

XI. PROJECTIONS

Administrative Issues

Dates of next monitoring and sampling events for next annual reporting period: Monthly National Pollutant Discharge Elimination System (NPDES) sampling and Quarterly NPDES reporting; March and November 2009 base wide water level gauging; November/December 2009 Annual Groundwater sampling; 2009 Annual Report for EATS and WATS due June 2010.

A. Groundwater Remedies - Projections for the upcoming year and long-term (Check all that apply)

Remedy Projections for the upcoming year (2009)

- No significant changes projected.
- Groundwater remedy will be converted to monitored natural attenuation. Target date:
- Groundwater Pump & Treat will be shut down. Target date:
- Groundwater cleanup standards to be modified. Target date:
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Change in the number and/or types of analytes being analyzed. Increasing or decreasing?
Target date:
- Change in groundwater extraction system. Expansion or minimization (i.e., number of extraction wells and/or pumping rate)? Target date:
- Modification on groundwater treatment? Elaborate below. Target date:
- Change in discharge location. Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

Elaborate on Remedy Projections:

EATS remained off-line for the 2004 through 2008 reporting period to evaluate plume stability, COC rebound, natural attenuation, and the efficiency of Hydrogen Release Compound® in remediating plume hot spots. Data are currently being evaluated. EATS system operation, modifications, and/or alternative long-term remedial strategies are included in the *Site 26, East-Side Aquifer Treatment System Evaluation Report* (TtEC, 2008a) and the *Final Site 26 Technical Memorandum (Optimization Evaluation)* (TtEC 2008c). The Navy is currently drafting a Work Plan for the IR Site 26 pilot test to address these alternative long-term remedial strategies.

Remedy Projections for the long-term (Check all that apply)

- No significant changes projected.
- Groundwater remedy will be converted to monitored natural attenuation. Target date:
- Groundwater Pump & Treat will be shut down. Target date:
- Groundwater cleanup standards to be modified. Target date:
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Change in the number and/or types of analytes being analyzed. Increasing or decreasing?
Target date:
- Change in groundwater extraction system. Expansion or minimization (i.e., number of extraction wells and/or pumping rate)? Target date:
- Modification on groundwater treatment? Elaborate below. Target date:
- Change in discharge location. Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

Elaborate on Remedy Projections:

EATS remained off-line for the 2004 through 2008 reporting period to evaluate plume stability, COC rebound, natural attenuation, and the efficiency of Hydrogen Release Compound® in remediating plume hot spots. Data are currently being evaluated. EATS system operation, modifications, and/or alternative long-term remedial strategies are included in the *Site 26, East-Side Aquifer Treatment System Evaluation Report* (TtEC, 2008a) and the *Final Site 26 Technical Memorandum (Optimization Evaluation)* (TtEC 2008c). The Navy is currently drafting a Work Plan for the IR Site 26 pilot test to address these alternative long-term remedial strategies.

B. Projections – Slurry Walls (Check all that apply)

Remedy Projections for the upcoming year

- No significant changes projected.
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

Elaborate on Remedy Projections:

Remedy Projections for the long-term

- No significant changes projected.
- PRP will request remedy modification. Target date of request:
- Change in the number of monitoring wells. Increasing or decreasing? Target date:
- Other modification(s) anticipated: _____ Elaborate below. Target date:

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

(Continued)

Elaborate on Remedy Projections:

C. Projections – Other Remedial Options Being Reviewed to Enhance Cleanup

Progress implementing recommendations from last report or Five-Year Review

Has optimization study been implemented or scheduled? Yes; No; If Yes, please elaborate.

The *Final East-Side Aquifer Treatment System Evaluation Work Plan* (FWENC, 2003) was implemented in 2004. Data are continually being evaluated. Recommendations for continued EATS system operation, modifications, and/or alternative long-term remedial strategies are summarized in the *Site 26, East-Side Aquifer Treatment System Evaluation Report* (TtEC, 2008a) and the *Final Site 26 Technical Memorandum (Optimization Evaluation)* (TtEC 2008c). The Navy is currently drafting a Work Plan for the IR Site 26 pilot test to address these alternative long-term remedial strategies.

XII. ADMINISTRATIVE ISSUES (Check all that apply)

- Explanation of Significant Differences in progress ROD Amendment in progress
 Site in operational and functional ("shake down") period;
 Notice of Intent to Delete in progress Partial site deletion in progress TI Waivers
 Other administrative issues:

Date of Next EPA Five-Year Review: **September 30, 2009**

XIII. RECOMMENDATIONS

- Continue to monitor EATS area wells as scheduled.
- Implement EATS Evaluation Report and Site 26 Technical Memorandum (Optimization Evaluation) recommendations.