

Kathleen Hartnett White, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Larry R. Soward, *Commissioner*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 24, 2004

Mr. Jerry S. Johnson
Assistant Area Manager
Department of Energy
Albuquerque Field Office
P.O. Box 30030
Amarillo, Texas 79120

Re: U.S. Department of Energy (DOE), Pantex Plant
TCEQ Solid Waste Registration No. 30459
TCEQ Hazardous Waste Permit No. HW-50284
EPA ID No. TX4890110527

Conditional Approval: Baseline Risk Assessment (BRA) Work Plan

1. Revised Final Baseline Risk Assessment (BRA) Work Plan for the U.S. Department of Energy dated February 2003
2. Final Site-Wide Ecological Risk Assessment (ERA) Work Plan Addendum dated February 2004, and supplemental DOE materials dated March 8, 2004

Dear Mr. Johnson:

The Texas Commission on Environmental Quality (TCEQ) has conducted a technical review of the above referenced BRA Work Plan submittals. The Revised BRA Work Plan (both human health and ecological) focuses on modifications to the approach and methodology for evaluating human health and ecological risk associated with potential exposure to contaminants identified in environmental media at the Pantex Plant. The modifications outlined in the referenced BRA Work Plans accommodate BWXT's programmatic changes along with changes/modifications to the documents and procedures requested by the TCEQ and Environmental Protection Agency (EPA).

Under correspondence identified in Attachment A to this letter, the TCEQ has commented and/or conditionally approved the referenced work plans. Attachment B of this letter identifies EPA's conditions of approval and concurrence with the TCEQ correspondence. Therefore, based on the comments and conditions established in the correspondence in Attachments A and B, the referenced Revised BRA Work Plan is approved by the TCEQ and EPA.

To document compliance with the Texas Professional Geoscience Act, the Remediation Division will not review reports and documents received on or after September 1, 2004 that contain unsealed geoscience services or work. Reports and documents with unsealed geoscience services or work will be returned to the submitting party. For further information, see the Texas Board of Professional Geoscientists website

Mr. Jerry S. Johnson
Page 2
August 24, 2004

(<http://www.tbpg.state.tx.us>). Please direct all questions regarding what constitutes geoscience to the Board (512/936-4400).

Questions concerning this letter should be directed to me at (512) 239-2243. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TCEQ Region 1 Office in Amarillo. The TCEQ Solid Waste Registration Number should be referenced in all submittals.

Sincerely,



Robert Musick, P.G., Project Manager
Team I, Corrective Action Section
Remediation Division
Texas Commission on Environmental Quality

REM/rm

cc: Mr. Jim McWilliams, Region Pantex Project Manager, TCEQ Region 01 Office - Amarillo
Ms. Camille Hueni, Superfund Division, Texas Section (6SF-AP), USEPA Region VI
Ms. Shannon Ethridge, Office of Chief Engineer (MC-109)
Mr. Larry Champagne, Remediation Division (MC-168)

Attachment A, Pages 1 through 37: TCEQ Correspondence to the BLRA Work Plan

- TNRCC Interoffice Memorandum dated June 16, 2003: RE Comments on the Revised Final Baseline Risk Assessment Work Plan dated February 2003.
- TCEQ Letter dated January 12, 2004: RE: Approach to Calculating the Exposure Point Concentration for the Ecological Risk Assessment dated November 26, 2003
- TCEQ Letter dated July 15, 2004 RE: Conditional Approval - Ecological Risk Assessment Work Plan Addendum dated February 2004 and supplemental DOE materials dated March 8, 2004;
- TCEQ Letter dated August 9, 2004 RE: Approach to Calculating the Exposure Point Concentration (EPC) for the Human Health Risk Assessment dated April 1, 2004

Attachment B, Pages 1 through 2: Environmental Protection Agency (EPA) concurrence letter

- EPA Letter dated August 19, 2004: RE: Concurrence with TCEQ Approvals: for Revised Final Baseline Risk Assessment (BRA) Work Plan for the U.S. Department of Energy/National Nuclear Security Administration Pantex Plant, Amarillo, Texas dated February 2003; Final Site-Wide Ecological Risk Assessment (ERA) Work Plan Addendum to the Baseline Risk Assessment Work Plan, dated February 2004; Pantex Plant Superfund Site - EPA Site ID TX 4890110527

Mr. Jerry S. Johnson
Attachment

Attachment A Pages 1 through 37

TCEQ Correspondence to the BLRA Work Plan

- TNRCC Interoffice Memorandum dated June 16, 2003: RE Comments on the Revised Final Baseline Risk Assessment Work Plan dated February 2003
Page 1 of Attachment A
- TCEQ Letter dated January 12, 2004: RE: Approach to Calculating the Exposure Point Concentration for the Ecological Risk Assessment dated November 26, 2003;
Pages 2 through 5 of Attachment A
- TCEQ Letter dated July 15, 2004 RE: Conditional Approval - Ecological Risk Assessment Work Plan Addendum dated February 2004 and supplemental DOE materials dated March 8, 2004; Pages 6 through 33 of Attachment A
- TCEQ Letter dated August 9, 2004 RE: Approach to Calculating the Exposure Point Concentration (EPC) for the Human Health Risk Assessment dated April 1, 2004; Pages 34 through 37 of Attachment A

Texas Natural Resource Conservation Commission

INTEROFFICE MEMORANDUM

To: Robert Musick, Project Manager
Corrective Action Section
Remediation Division

Date: June 16, 2003

From: Shannon E. Ethridge, M.S. *SEE*
Toxicology and Risk Assessment Section
Office of Permitting, Remediation, and Registration

Subject: Toxicology and Risk Assessment (TARA) Section Comments on the Revised Final Baseline Risk Assessment Work Plan (February 2003) for the US DOE National Nuclear Security Administration Pantex Plant, Amarillo, Carson County, TX

As requested, staff of the Toxicology and Risk Assessment Section (TARA) have reviewed the Revised Final Baseline Risk Assessment Work Plan (February 2003) for the Pantex Plant. Our review was conducted to ensure compliance with the 1993 Risk Reduction Rule (1993 RRR) and the July 23, 1998 memorandum entitled *Implementation of the Existing Risk Reduction Rule (Consistency Document)*. Our review focused on the sections of the report dealing with human health risks and hazards associated with potential exposure to site contaminants. Review of the sections on ecological evaluation, groundwater modeling, and radionuclide issues has been deferred and should be conducted by appropriate TCEQ staff.

Reviews of a number of RCRA Facility Investigations being conducted by the Corrective Action Section of the TCEQ are still outstanding. As such, additional TARA comments or modifications of comments on the report may be required if site information changes substantially.

Overall, the Revised Final Baseline Risk Assessment Work Plan adequately addresses previous TARA review comments (February 1998 and August 1999).

If you have any questions please contact me at (512)239-1822.

Received
JUN 17 2003
Remediation Division
Corrective Action Section

Attachment A, Page 1

Kathleen Hartnett White, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Larry R. Soward, *Commissioner*
Margaret Hoffman, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 12, 2004

Mr. Jerry S. Johnson
Assistant Area Manager
Department of Energy
Albuquerque Field Office
P.O. Box 30030
Amarillo, Texas 79120

Re: U.S. Department of Energy (DOE), Pantex Plant
TCEQ Solid Waste Registration No. 30459
TCEQ Hazardous Waste Permit No. HW-50284
EPA ID No. TX4890110527

Conditional Approval: *Approach to Calculating the Exposure Point Concentration for the Ecological Risk Assessment, Dated November 26, 2003*

Dear Mr. Johnson:

The Texas Commission on Environmental Quality (TCEQ) has conducted a technical review of the above referenced letter which contains the statistical approach to establish the exposure point concentration (EPC) for the ecological portion of the Baseline Risk Assessment (BRA). The EPC represents the chemical concentration that an ecological receptor will likely encounter during the exposure period. Please find attached, the TCEQ's comments on the statistical approach and the conditions of approval.

Questions concerning this letter should be directed to me at (512) 239-2243. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TCEQ Region 1

Attachment A Page 2

Mr. Jerry S. Johnson
Page 2
January 12, 2004

Office in Amarillo. The TCEQ Solid Waste Registration Number should be referenced in all submittals.

Sincerely,



Robert Musick, P.G., Project Manager
Team I, Corrective Action Section
Remediation Division
Commission on Environmental Quality

REM/rm

cc: Mr. Richard Lee, Project Manager, TCEQ Region 01 Office - Amarillo
Ms. Camille Hueni, Superfund Division, Texas Section (6SF-AP), USEPA Region VI

Enclosure: TCEQ Interoffice Memorandum: Pantex: Transmittal of Approach to Calculating the Exposure Point Concentration for the Ecological Risk Assessment

Attachment A Page 3

Mr. Jerry S. Johnson
Enclosure

Enclosure 1

TCEQ Interoffice Memorandum

**Pantex: Transmittal of Approach to Calculating the Exposure Point
Concentration for the Ecological Risk Assessment**

Attachment A Page 4

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Robert Musick / Corrective Action Date: January 7, 2004

From: *PFL* Peter F. Lodde / Technical Support

Subject: Pantex: Transmittal of Approach to Calculating the Exposure Point Concentration for the Ecological Risk Assessment

As requested I have reviewed the above referenced transmittal, from BWXT Pantex to OPRR regarding the regulations, guidance, and statistical methods relevant for determining Exposure Point Concentrations (EPCs) for Ecological Risk Assessments to be completed by BWXT Pantex.

The transmittal does an excellent job of summarizing the relevant statistical issues and assessing the content of the EPA guidance Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites. The methodology outlined in the transmittal for computing EPCs for Ecological Risk Assessments substantially mirror the methodologies that will be recommended in TRRP-15 for computing representative concentrations and therefore I am recommending that the methodology in the transmittal be approved, as written.¹

However, I would like to stipulate that these methodologies are approved for computing EPCs for Ecological Risk Assessments only in conjunction with agreement between the TCEQ and BWXT Pantex regarding the areas over which individual EPCs are to be computed. Furthermore, I would like to remind BWXT Pantex that the TCEQ reserves the option, after careful consideration of the available data and consultation with BWXT Pantex, to require that localized "hot spots" be analyzed independently from any EPCs that might otherwise characterize them.

If you have any questions or comments regarding this memorandum please let me know (6628).

¹ One minor comment on terminology: the symbol "t" appearing in the conventional formula for computing a UCL for realizations from a normal distribution (Equation 1 in the transmittal) does not denote the "Student's t-statistic". Rather the symbol "t" denotes the "t distribution" a probability density function that serves as the sampling distribution for several statistics commonly used in elementary inferential statistics. Several of these statistics are commonly referred to as the "Student's "t" statistic".

Kathleen Hartnett White, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Larry R. Soward, *Commissioner*
Margaret Hoffman, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 15, 2004

Mr. Jerry S. Johnson
Assistant Area Manager
Department of Energy
Albuquerque Field Office
P.O. Box 30030
Amarillo, Texas 79120

Re: U.S. Department of Energy (DOE), Pantex Plant
TCEQ Solid Waste Registration No. 30459
TCEQ Hazardous Waste Permit No. HW-50284
EPA ID No. TX4890110527

Conditional Approval: Ecological Risk Assessment (ERA) Work Plan Addendum dated February 2004, and supplemental DOE materials dated March 8, 2004.

Dear Mr. Johnson:

The Texas Commission on Environmental Quality (TCEQ) has conducted a technical review of the ERA Work Plan Addendum dated February 2004 along with supplemental DOE materials submitted to the TCEQ under DOE-Pantex cover letter dated March 8, 2004 (Enclosure 1 to this letter). The ERA Work Plan Addendum dated February 2004 supercedes the Site-Wide Base-Line Risk Assessment (BRA) Work Plan, Volume III dated February 1999. The ERA Work Plan Addendum dated February 2004 and the supplemental materials (March 8, 2004) will be utilized by Pantex to evaluate risk associated with the ecological receptors at Pantex.

The TCEQ conditionally approves the ERA Work Plan Addendum based on the modifications/agreements identified in the December 17-18th, 2003 meeting and the March 8, 2004 teleconference between DOE, TCEQ and the Environmental Protection Agency (EPA). The Environmental Protection Agency (EPA) is currently evaluating the ERA in accordance with the December 21, 1994 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and the TCEQ. The EPA will address any concerns with the ERA in a separate letter

Attachment A Page 6

Mr. Jerry S. Johnson
Page 2
July 15, 2004

to DOE-Pantex. DOE-Pantex must address the comments in the EPA's letter as a condition of TCEQ approval.

Questions concerning this letter should be directed to me at (512) 239-2243. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TCEQ Region 1 Office in Amarillo. The TCEQ Solid Waste Registration Number should be referenced in all submittals.

Sincerely,



Robert Musick, P.G., Project Manager
Team I, Corrective Action Section
Remediation Division
Texas Commission on Environmental Quality

REM/rm

cc: Mr. Jim McWilliams, Region Pantex Project Manager, TCEQ Region 01 Office - Amarillo
Ms. Camille Hueni, Superfund Division, Texas Section (6SF-AP), USEPA Region VI

Enclosure 1: DOE Letter dated March 8, 2004 with the attached meeting summary (December 17, 18, 2003) and teleconference summary (January 28, 2004)

Enclosure 2: TCEQ Interoffice Memorandum: Pantex: Final Site-Wide ERA Work Plan Addendum to BRA Work Plan, Pantex Plant.

Attachment A Page 7

Mr. Jerry S. Johnson
Enclosure

Enclosure 1

Agreements and Modifications

DOE Cover Letter Dated March 8, 2004 with the attached meeting
summary (December 17, 18, 2003) and teleconference
summary (January 28, 2004)



U. S. Department of Energy
 National Nuclear Security Administration
 Pantex Site Office
 P. O. Box 30030
 Amarillo, TX 79120-0030
 MAR 8 2004

TIF (HW) 30459 CO
 RP
 WWC COMM # 10590297
 PROJ. MGR. R. MUSICK
 National Nuclear Security Administration
 10542269

FEDERAL EXPRESS

Mr. Robert Musick, Pantex Project Manager
 Office of Permitting Remediation and Registration
 Texas Commission on Environmental Quality
 Corrective Action Section, MC-127
 P.O. Box 13087
 Austin, TX 78711-3807

COPY Received
 MAR 17 2004
 Remediation Division
 Corrective Action Section

Re: U.S. Department of Energy, National Nuclear Security Administration, Pantex Plant
 TCEQ Solid Waste Registration No. 30459; TCEQ Hazardous Waste Permit No. HW-50284
 EPA ID No. TX 4890110527; Transmittal of the Final Site-Wide Ecological Risk Assessment
 (ERA) Work Plan Addendum to the Baseline Risk Assessment Work Plan

Dear Mr. Musick:

The enclosed Final ERA Work Plan Addendum describes our approach for the final ERA at Pantex. It incorporates changes based on agreements from the Focus Team meeting held December 17-18, 2003, and the subsequent teleconference held January 28, 2004.

To document the changes that occurred in the Final Work Plan Addendum, the final meeting summary from the Focus Team meeting and subsequent teleconference is enclosed. The summary has been reviewed and approved by all Focus Team members, following the January 28 teleconference. The meeting summary is provided to document agreements regarding changes required within the work plan in order to satisfy regulatory requirements to evaluate risk to Pantex ecological receptors.

A table of document changes is also enclosed to assist with final review and approval of the work plan. This table provides a listing of changes made to the Draft Final Work Plan to produce the final version, as well as a crosswalk of changes agreed upon and documented in the meeting summary.

A separate transmittal has been supplied to Mr. Larry Champagne, TCEQ Focus Team member, for his review and approval recommendation. As discussed at the December Focus Team Meeting, Pantex is on a schedule to complete the ERA in a timely manner to support final site closure by 2008. Pantex requests a response within 30 calendar days so that work may continue on this project.

If you have questions, please contact me at (806) 477-3125, or Dennis Huddleston at (806) 477-6508.

Sincerely,

Jerry S. Johnson
 Assistant Manager for Environmental
 & Site Engineering Programs

Enclosures

cc: See page 2

SS:FY04:099; FY04:15961:SS

Attachment A Page 7

Pantex Work Plan Addendum
Ecological Risk Assessment Focus Group

Technical Meeting Summary

Austin, Texas
December 17-18, 2003

And

Teleconference Meeting Summary

January 28, 2004

Contents

Technical Meeting Summary	2
Teleconference Summary	3
Technical Team Meeting Participants	4
Table 1: Action Items.....	5
Table 2: Agreements	7
Table 3: ERA Report and Review Schedule.....	13
Directory	14
Attachment 1: Reptile Scenario for the Pantex ERA.....	15

Technical Meeting Summary

The Pantex Ecological Risk Assessment Focus Team meeting was held at TCEQ Headquarters in Austin, December 17-18, 2003. The objective of the meeting was to gain approval of the Work Plan Addendum as drafted or to reach an agreement regarding the revisions necessary to gain approval. The purpose of the Work Plan Addendum is to update and finalize the ecological risk assessment strategy for Pantex Plant based on regulator comments, TCEQ and EPA guidance, meetings with TCEQ and EPA, input from the Natural Resource Trustees, and Core Team discussions.

Action Items

- Action Items from this meeting are summarized in Table 1.

Agreements

- Agreements reached by the focus team are summarized in Table 2.

Future Meetings

- Tentative meeting in late 2004 to discuss the draft Site-Wide ERA results.

Teleconference Summary

A teleconference was held January 28, 2004 as a follow-up to the December 17-18 meeting, to discuss the reptile analysis, discuss previous action items, and close-out the meeting notes from the December meeting. The teleconference included the following focus team members and participants:

Focus Team Member

Larry Champagne
Jon Rauscher
Michelle Bolwahn
Vicki Battley

Participant

Mike Barta
Sharon Robers
Laura Obloy

The technical meeting notes are updated to reflect the discussions held during the teleconference. The reptile analysis scenario was finalized during the teleconference; and some other issues regarding toxicity reference values (TRVs), uptake factors, and the calculation of the exposure point concentration with regard to hotspots were discussed during the teleconference.

Action Items

- Action items were updated for those items closed out.
- New action items were added to Table 1 due to discussions regarding the various TRVs.

Agreements and Outstanding Issues

- The attached agreements reflect discussions from the January 28, 2004, teleconference, as well as agreements reached during the December technical meeting.

Technical Team Meeting Participants
December 17-18, 2003

Focus Team:

Vicki Battley, PWT/DOE
Michelle Bolwahn, BWXT Pantex
Larry Champagne, TCEQ
Jon Rauscher, EPA-Region 6

NRT Representatives:

Keith Tischler, Texas General Land Office
Don Pitts, Texas Parks and Wildlife
Richard Seiler, TCEQ

Participants:

Denise Brooks, SECO
Roger Mulder, SECO
Camille Hueni, EPA-Region 6
Robert Musick, TCEQ CAS
Jerry Johnson, NNSA Pantex
Dennis Huddleston, BWXT Pantex
Don Hemon, BWXT Pantex
Richard P. Lee, TCEQ, Amarillo
Andrew Gorton, TEES
Mike Barta, SAIC
Laura Obloy, SAIC
Sharon Robers, SAIC

Facilitation Team:

Jeff Smyth, Sapere Consulting
Kate Carman, Sapere Consulting

Table 1: Action Items

Action Item	Responsible Party/Resolution	Due Date/Status
1. Prior to approval of WPA, EPA will issue a letter closing out previous ERA comments and deferring to December Meeting comments on the WPA. If any comments are still applicable, those comments will be provided in the letter to Pantex.	C. Hueni - EPA, Region 6	Due Date: February 2004 In progress
2. EPA will provide newer benchmarks to replace Region 5 ESLs.	J. Rauscher - EPA, Region 6	Due Date: February 4, 2004. Complete February 9, 2004
3. BWXT Pantex and TCEQ will conduct a teleconference to conclude the discussion regarding the omission of a reptile as a receptor for evaluation.	M. Bolwahn - BWXT Pantex L. Champagne- TCEQ	Due Date: 1 st week of January 2004. Complete January 28, 2004
4. After their statistician has reviewed the WPA Exposure Point Concentration derivation approach, EPA will provide suggestions for improvement or issue a letter of concurrence.	C. Hueni - EPA, Region 6	Due Date: 2 nd week of January 2004. Complete January 28, 2004
5. After their statistician has reviewed the WPA Exposure Point Concentration derivation, TCEQ will provide suggestions for improvement or issue a letter of concurrence.	R. Musick - TCEQ CAS	Due Date: 2 nd week of January 2004. Complete January 12, 2004 and discussed on January 28, 2004
6. FS-5 ERA will not be included in the Site-Wide ERA or an RFIR, since TCEQ has formally approved its closure. EPA must provide concurrence on the ERA with either the approval of closure of FS-5 or through a separate letter submittal concurring/approving the FS-5 ERA.	C. Hueni - EPA, Region 6/ M. Bolwahn - BWXT Pantex	Due Date: February 2004 This item will be resolved separate of the ERA. Delivery date of Tier 1 to EPA: February 2004 EPA review and closure of FS-5: Either separate submittal for ERA, or with approval of FS-5 closure or the radiological document

Action Item	Responsible Party/Resolution	Due Date/Status
7. TCEQ to provide reptile/horned lizard information including qualitative and quantitative risk approaches.	L. Champagne – TCEQ	Due Date: January 15, 2004 Received: January 8, 2004 New Horned Lizard Information Due Date: February 11, 2004
8. Pantex to provide pertinent Talmage information used for TRVs.	M. Bolwahn – BWXT Pantex	Due Date: January 15, 2004 Complete January 28, 2004
9. TCEQ review of LANL benchmarks and TRVs.	L. Champagne – TCEQ	Due Date: February 13, 2004 TCEQ provided verbal response February 6, 2004

Table 2: Agreements

Topic	Agreement
Work Plan Addendum (WPA) Objectives	
<p>Review Schedule</p> <p>Review Timeframe</p>	<ol style="list-style-type: none"> 1. 60-day regulator/NRT review for RFI Tier 2 assessments. 2. 90-day regulator/NRT review for Site-Wide ERA. 3. Finalize approvals and path forward for all upland units not included in the Site-Wide ERA by September 30, 2004 4. Pantex to stagger resubmittal of RFI Tier 2 assessments to allow adequate review time for regulators and NRTs. <p>Note:</p> <ul style="list-style-type: none"> -Any Tier 2 that goes beyond Step 6 of the process will be mailed directly to NRTs to avoid time delays for notification of NRTs within the comment process -Notification of intent to provide comments, as well as any comments from NRTs will be routed through TCEQ for transmittal to Pantex. -WPA comments are provided from NRTs, EPA , and TCEQ during the December 17-18, 2003, meeting; therefore, no other comments will be provided from trustees that did not attend the meeting. -ERA Report and Review Schedule is included as Table 3.
Lead Agency	Agreed that TCEQ is the lead agency. EPA provides concurrence, serving as lead agency for radiological issues.
Use of TCEQ Guidance (2001)	Agreed to use TCEQ Guidance (2001).
Separate Evaluation of Playas and Ditches in the Site-Wide ERA	<p>Agreed to approach for evaluating playas and ditches, as proposed in the draft WPA.</p> <p>Scope of the Site-Wide ERA must:</p> <ul style="list-style-type: none"> - List all sites that are undergoing a RCRA facility investigation and their ERA status. - List all sites that are subject to an ERA in the future. This includes active facilities that are not undergoing a RCRA Facility Investigation. -Provide assessment of playas and associated ditches.
Evaluation of all other sites in the RFIR	<p>Agreed to general approach for evaluating sites as proposed in the draft WPA.</p> <p>Playas and associated ditches will be deferred to the Site-Wide ERA; Evaluations of all other sites will be documented as follows:</p> <ul style="list-style-type: none"> -All Tier 1 checklists in RFIR. -Tier 2 ERAs for upland units in RFIR. Due to changing methodology, these Tier 2 ERAs will require revision and resubmittal to the agency.
Radiological Approach	<p>Agreed to approach as proposed in the draft WPA.</p> <p>Scope of the Site-Wide ERA must include a discussion of the radiological areas and how they meet the human health closure criteria.</p>
Previous Comment Resolution TCEQ	<p>TCEQ Comments:</p> <p>TCEQ requested that the Site-Wide ERA include a crosswalk of previous comments, noting which comments have been addressed and how, and which comments are still applicable to the current process.</p>

Topic	Agreement
Previous Comment Resolution (continued) EPA	EPA Comments: By February 2004, prior to approval of WPA, EPA will review previous TechLaw comments on the previous ERA; and issue a letter closing out all previous ERA comments, and deferring to December Meeting WPA comments and/or provide applicable comments that require resolution in the Site-Wide ERA from the previous TechLaw comments. It is anticipated that any comments that remain after EPA's review of the TechLaw comments will be answered in the Site-Wide ERA, as will be done for the TCEQ comments.
Tier 1 Approach	
Tier 1 Exclusion Approach Industrial areas Ditches Playas Upland Units De minimus	Agreed to overall approach as proposed in the draft WPA. The specific application of the Tier 1 exclusion approach will be evaluated as RFIRs are submitted.
Tier 2 Approach	
Sources for Benchmarks Soil Sediment Water	Agreed to additional sources for benchmarks as proposed in the draft WPA. First source for benchmarks will be TCEQ, as provided in TCEQ guidance or subsequent updates posted on the TCEQ website. Note: -By the second week of January 2004, EPA will provide newer benchmarks to replace Region 5 ESLs. LANL benchmarks will be considered by TCEQ; however, Pantex does not plan to use benchmarks in the LANL database unless approved by TCEQ. If no approval is received, Pantex will continue to use Region 5 ESLs or USEPA Region 6 benchmarks.
COPC Development for the ERA: Previous Agreement Development of Soil COPCs Development of Sediment COPCs Development of Surface Water COPCs TDCJ Sampling for use in COPC selection at the playas	Agreed with COPC development for ERA as proposed in WPA Note: -Will conduct a background screen, using the RRRG as a source for applicable values. -EPA requested that a separate assessment of background risk be placed in the appendix, and discussed in the uncertainty analysis within Tier 2s. -Evaluation of background risk is limited to benchmark evaluation, using available range of benchmarks; as well as ranges of site-specific information, such as minimum and maximum detected concentrations and 95% UCL.

Topic	Agreement
Receptors for Evaluation Upland/Dry Playa Wet Playa	Agreed to overall approach as proposed in the draft WPA with the following additions and modifications: -A reptile scenario will be added for the Texas horned lizard species. The calculation of the risk to the wren will be considered protective of reptiles in general; however, a specific scenario will be set up for the horned lizard. The general scenario information, as proposed during the January 28, 2004 teleconference, is contained in Attachment 1 to these meeting notes. -When surrogate species are representative of more than one taxonomic group, justification/rationale and an outline of pros and cons of the use of the surrogate species will be provided.
Use of Soil and Sediment Depths in Evaluation Upland, ditch, and playa soil depths	Agreed to overall approach as proposed in the draft WPA -Uplands- upper 2 feet will be used. Where data for the upper 6 inches is available, preference will be given to this data for calculation of ecological risk. -Ditches and Playas -Upper 6 inches will be used and applied, based on new data, as well as 0-2 feet data for plants.
Relationship of Soil and Sediment Depths to Receptors Terrestrial receptors Burrowing Animals Terrestrial Plants Sediment Receptors Aquatic Plants	Agreed to approach as proposed in draft WPA.
Fate and Transport and Toxicity Profiles for Primary Chemical Classes	Agreed to approach as proposed in draft WPA. Note: -If unacceptable risk is found, specific chemical profiles will be provided in applicable Tier 2 analysis or Site-Wide ERA. Profiles will include links to on-line resources.
Setup of Exposure Equations Receptor specific for: Upland/Dry Playa Wet Playa	Agreed to approach as proposed in draft WPA.

Topic	Agreement
<p>General Sources for Uptake Factors</p> <p>Terrestrial plant and invertebrate Animal-to-animal Other sources</p>	<p>Agreed with general uptake factors proposed:</p> <ul style="list-style-type: none"> -USEPA 1999 will serve as the primary source for terrestrial plant and soil invertebrate uptake factors -HAZWRAP 1994 will serve as the primary source for animal-to-animal uptake factors. -Other sources will be presented in the Tier 2 SLERAs, contained in the RFI Reports and in the Site-Wide ERA Report, as necessary. <p>Note:</p> <ul style="list-style-type: none"> -Based on TCEQ request, EPA 1999 will be used where possible. -When hierarchy of factors is not used, a justification for choosing one factor over another will be included in the applicable Tier 2 analysis.
Diet Assumptions	<p>Agreed to general approach, as proposed in draft WPA. Justification for using the mouse to represent hawk ingestion will be strengthened and/or expanded. Pantex must ensure that if the diet assumptions deviate from the life history of an animal, an explanation must be provided for the use of other information.</p>
Sources for wildlife toxicity reference values	<p>Agreed to TRV sources proposed in draft WPA. However, EPA suggested other sources such as the Eco-SSLs and the LANL database; and TCEQ recommended the use of USEPA 1999. TCEQ did agree to the use of a hierarchy of sources, but the exact order in which the sources would be used was not agreed upon.</p> <p>Based on the teleconference discussions, TCEQ and EPA will agree with the use of the Eco-SSLs as a primary source for TRVs. As the LANL database has not been reviewed by TCEQ, a clear path forward for other tiered levels was not developed. Pantex will plan to provide a justification for use of a hierarchy within the text of the WPA, using a limited comparison of values between the four sources, as well as a discussion of how each source treated and documented TRVs. The final suggested hierarchy will be provided with the final WPA.</p> <p>Note: Pantex will not use the Eco-SSL or LANL TRVs based on a calculated geometric mean. Rather, one of the underlying values will be selected and modified according to the TCEQ guidance (i.e., scaling) to derive the TRV.</p>
Use of uncertainty factors for: Allometric Scaling TRVs	<p>Agreed to use of allometric scaling of TRVs as proposed in draft WPA.</p> <p>Agreed to general application of uncertainty factors with the following additions and modifications:</p> <ul style="list-style-type: none"> -Although application of TRVs based on a chronic NOAEL derived from a subchronic LOAEL should be avoided, when this application is necessary the following uncertainty factors (UF) apply: <ul style="list-style-type: none"> -Will use UF of 100 in conservative analysis. -Will use UF of 20 in refined analysis. -Will ensure that the NOAEL and LOAEL TRVs are within a factor of 10. -UFs for reptiles are discussed in Attachment 1 of these meeting notes.
Exposure Point Concentration	<p>Agreed to general approach as proposed in draft WPA. TCEQ issued a</p>

Topic	Agreement
Derivation Normal Lognormal Nonparametric	letter providing a conditional approval of the approach. The TCEQ is concerned with hotspots in units that are large and may involve smaller ranging species of concern. Pantex is to look at the effect of hot spots on smaller ranging receptors in the uncertainty analysis. A general HQ of 50 or greater will be used as a working definition of a hotspot for a receptor during the uncertainty analysis.
Uncertainty Analysis General methods Use of AVS/SEM data Use of tissue data	Agreed with general approach to uncertainty analysis as proposed. Note: -AVS/SEM and other bioavailability information may be moved into the quantitative analysis rather than discussed in the uncertainty analysis. Must include an analysis of hotspots for smaller ranging receptors.
Site-Wide ERA	
Content of the Site-Wide ERA Report	Agreed with content of the Site-Wide ERA Report as proposed. Note: -ERA will include summaries of previous activities, along with full status of each SWMU. -All Tier 2 assessments of the <u>playas and ditches</u> will be included.
Extension of TCEQ guidance for use in site-wide analysis	Agreed with Extension of TCEQ guidance for use in site-wide analysis.
Playas as the focus of the Site-Wide ERA Report	Agreed that playas will be the focus of the Site-Wide ERA Report; focus will also include portions of contributing industrialized ditches.
Site-wide Analysis Grouping of playas for integration of receptor risk Receptors assumed to forage equally from each playa	Agreed to approach as proposed in draft WPA. Note: -Playas will be addressed on an individual, as well as collective, basis. -Risk will be addressed on an individual basis, even when not found on a site-wide basis. -Use of AUF and TUF must be complementary. -Must provide a first analysis with AUF = 1, then adjust AUF to the home range of the species for the second and third analysis.
Additional data collection for Tier 2s and site-wide analysis	Agreed to approach as proposed in draft WPA. Note: -No new biological data is proposed for collection. -Will include tissue data in uncertainty analysis, or primary Tier2 analysis, as appropriate. -Will include population data in uncertainty analysis, as appropriate. -Will include separate section on lines of evidence. -Will not be held to new benchmarks until they are available; benchmarks will become effective when posted online. The benchmarks will be incorporated into new Tier 2 assessments after posting occurs. -New benchmarks will not be applicable to analytical detection limits for samples collected under the current sampling plan as the sampling was designed for the current benchmarks.

Topic	Agreement
Strategy for completing Tier 2s and site-wide analysis if playas remain dry until July 2004	Agreed to approach as proposed. If no surface water is present to sample, then sediment-only samples will be collected from biologically active zone for use in wet playa evaluation (Playa 3 and TDCJ only). Additional justification will need to be added to explain why older USACE data from the original playa investigations are not pertinent for use as sediment, as well as reasons for not including the compliance sediment data.

Table 3: ERA Report and Review Schedule

Reports	Operational Zone RFI Report or Corrective Action Units	Report Content	Anticipated/Actual Delivery Date	Tier 2 Resubmittal Date	Approval/Concurrence	Review Completion Dates
Ecological Screens in RCRA Facility Investigation Reports	Burning Ground RFIR	Tier 1 ERA	March-03	NA	TCEQ (A) EPA (C)	June-04
	FTA Burn Pits RFIR	Tier 1 ERA	March-03	NA	TCEQ (A) EPA (C)	June-04
	Zone 10 Soils RFIR	Tier 1 and 2 ERA	April-03	May-04	TCEQ (A) EPA (C)	Tier 1 - June 04 Tier 2 - July 04
	Zone 11 Soils RFIR	Tier 1 ERA	February-03	NA	TCEQ (A) EPA (C)	June-04
	Zone 12 Soils RFIR	Tier 1 and 2 ERA	September-03	March-04	TCEQ (A) EPA (C)	Tier 1 - June 04 Tier 2 - May 04
	Ditches & Playas RFIR	Tier 1 and 2 ERA	September-03	April-04	TCEQ (A) EPA (C)	Tier 1 - June 04 Tier 2 - June 04
	Groundwater and Independent Sites RFIR	Tier 1 and 2 ERA	February-04	May-04	TCEQ (A) EPA (C)	May-04
Ecological Risk Assessment (ERA) Work Plan Addendum	All units	Overall Assessment Plan	December-03	Feb-04	TCEQ (A) EPA (C)*	December-03
ERA Sampling & Analysis Plan	Playas and associated ditches	Sampling Requirements	December-03	NA	NA	NA
Final Site-Wide ERA Report	Playas 1, 2, 3, and 4, Pantex Lake and associated ditches	Summary of Tier 1 results for all units, summary of Tier 2 results from upland units, and all Tier 2 SLERAs for playas and associated ditches	Draft December 04 Final May 05	NA	TCEQ (A)^ EPA (C)	February-05
Summary Report for the Public	All units	All units	September-05	NA	NA	NA

*EPA approval for radiological issues

^NRT Review Comments Included

Directory

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Attachment 1. Reptile Scenario for the Pantex ERA

- TCEQ is agreeable to use of birds as surrogates for non-T&E reptiles; therefore, Pantex will use the wren as a surrogate for reptiles other than the horned lizard.
- Pantex proposes a qualitative and quantitative analysis specific to the Texas horned lizard.
 - Will use exposure factors specific to the horned lizard.
 - Will use available information for home range and uptake factors, where data are available.
 - Will apply this scenario only to the upland sites:
 - Horned lizards will not use the playa bottoms, as their primary food source occurs on the slopes or uplands.
 - When reptile TRVs are available, Pantex will use reptile TRVs.
 - Will use avian TRV when no reptile TRV is available.
 - Apply a UF only when warranted, based on a literature search regarding chemical classes and known reptile sensitivity to the chemical class.
 - Where a UF is warranted, the UF will be based on comparison of a reptile TRV to an avian TRV, where information is available.
 - Where no comparison can be made between TRVs, a UF of up to 10 will be used in the initial conservative estimate, based on an understanding of reptile sensitivity to a chemical class.
 - The UF will not be used in the less conservative analysis, and the differences will be discussed qualitatively.

Note: Specific UFs will not be presented in the Work Plan Addendum. Those UFs will be presented in the various Tier 2 assessments, as applicable. Uptake factors will be discussed with regard to development of uptake for worms and ants, with a preference for use of ant factors. Other exposure factors and diet assumptions will be presented in the Work Plan Addendum.

Crosswalk of Agreements and Changes to Revised Work Plan Addendum

Topic	Agreement	Location of Change in Work Plan Addendum
Work Plan Addendum (WPA) Objectives		
Review Schedule	<ol style="list-style-type: none"> 1. 60-day regulator/NRTI review for RFI Tier 2 assessments. 2. 90-day regulator/NRTI review for Site-Wide ERA. 3. Finalize approvals and path forward for all upland units not included in the Site-Wide ERA by September 30, 2004 4. Pantex to stagger resubmittal of RFI Tier 2 assessments to allow adequate review time for regulators and NRTs. 	No changes required in WPA.
Review Timeframe	<p>Note:</p> <ul style="list-style-type: none"> -Any Tier 2 that goes beyond Step 6 of the process will be mailed directly to NRTs to avoid time delays for notification of NRTs within the comment process -Notification of intent to provide comments, as well as any comments from NRTs will be routed through TCEQ for transmittal to Pantex. -WPA comments are provided from NRTs, EPA, and TCEQ during the December 17-18, 2003, meeting; therefore, no other comments will be provided from trustees that did not attend the meeting. -ERA Report and Review Schedule is included as Table 3. 	No changes required in WPA.
Lead Agency	Agreed that TCEQ is the lead agency. EPA provides concurrence, serving as lead agency for radiological issues.	No changes required in WPA.
Use of TCEQ Guidance (2001)	Agreed to use TCEQ Guidance (2001).	No changes required in WPA.
Separate Evaluation of Playas and Ditches in the Site-Wide ERA	<p>Agreed to approach for evaluating playas and ditches, as proposed in the draft WPA.</p> <p>Scope of the Site-Wide ERA must:</p> <ul style="list-style-type: none"> - List all sites that are undergoing a RCRA facility investigation and their ERA status. - List all sites that are subject to an ERA in the future. This includes active facilities that are not undergoing a RCRA Facility Investigation. - Provide assessment of playas and associated ditches. 	No changes required in WPA.
Evaluation of all other sites in the RFIR	<p>Agreed to general approach for evaluating sites as proposed in the draft WPA.</p> <p>Playas and associated ditches will be deferred to the Site-Wide ERA; Evaluations of all other sites will be documented as follows:</p> <ul style="list-style-type: none"> - All Tier 1 checklists in RFIR. 	No changes required in WPA.

Crosswalk of Agreements and Changes to Revised Work Plan Addendum

Topic	Agreement	Location of Change in Work Plan Addendum
	<p>-Tier 2 ERAs for upland units in RFIR. Due to changing methodology, these Tier 2 ERAs will require revision and resubmittal to the agency.</p> <p>Agreed to approach as proposed in the draft WPA.</p>	
Radiological Approach	<p>Scope of the Site-Wide ERA must include a discussion of the radiological areas and how they meet the human health closure criteria.</p>	<p>No changes required in WPA. Site-Wide ERA will include discussion of radiological areas.</p>
Previous Comment Resolution TCEQ EPA	<p>TCEQ Comments: TCEQ requested that the Site-Wide ERA include a crosswalk of previous comments, noting which comments have been addressed and how, and which comments are still applicable to the current process.</p> <p>EPA Comments: By February 2004, prior to approval of WPA, EPA will review previous TechLaw comments on the previous ERA; and issue a letter closing out all previous ERA comments, and deferring to December Meeting WPA comments and/or provide applicable comments that require resolution in the Site-Wide ERA from the previous TechLaw comments. It is anticipated that any comments that remain after EPA's review of the TechLaw comments will be answered in the Site-Wide ERA, as will be done for the TCEQ comments.</p>	<p>No changes required in WPA.</p>
Tier 1 Approach		
Tier 1 Exclusion Approach Industrial areas Ditches Playas Upland Units De minimus	<p>Agreed to overall approach as proposed in the draft WPA.</p> <p>The specific application of the Tier 1 exclusion approach will be evaluated as RFIRs are submitted.</p>	<p>No changes required in WPA.</p>
Tier 2 Approach		
Sources for Benchmarks	<p>Agreed to additional sources for benchmarks as proposed in the draft WPA. First source for benchmarks will be TCEQ, as provided in TCEQ guidance or subsequent updates posted on the TCEQ website.</p>	<p>Section 5.3.2.2</p>

Crosswalk of Agreements and Changes to Revised Work Plan Addendum

Topic	Agreement	Location of Change in Work Plan Addendum
Soil Sediment Water	<p>Note: -By the second week of January 2004, EPA will provide newer benchmarks to replace Region 5 ESLs. LANL benchmarks will be considered by TCEQ; however, Pantex does not plan to use benchmarks in the LANL database unless approved by TCEQ. If no approval is received, Pantex will continue to use Region 5 ESLs or USEPA Region 6 benchmarks. Agreed with COPC development for ERA as proposed in WPA</p>	
COPC Development for the ERA:	<p>Note: -Will conduct a background screen, using the RRRG as a source for applicable values. -EPA requested that a separate assessment of background risk be placed in the appendix, and discussed in the uncertainty analysis within Tier 2s. -Evaluation of background risk is limited to benchmark evaluation, using available range of benchmarks; as well as ranges of site-specific information, such as minimum and maximum detected concentrations and 95% UCL.</p>	Section 5.3.2.1
Previous Agreement Development of Soil COPCs Development of Sediment COPCs Development of Surface Water COPCs TDCJ Sampling for use in COPC selection at the playas	<p>Agreed to overall approach as proposed in the draft WPA with the following additions and modifications: -A reptile scenario will be added for the Texas horned lizard species. The calculation of the risk to the wren will be considered protective of reptiles in general; however, a specific scenario will be set up for the horned lizard. The general scenario information, as proposed during the January 28, 2004 teleconference, is contained in Attachment 1 to these meeting notes. -When surrogate species are representative of more than one taxonomic group, justification/rationale and an outline of pros and cons of the use of the surrogate species will be provided.</p>	Section 5.3.4.1 Section 5.3.4.2 Table 5-2 Table 5-4
Receptors for Evaluation Upland/Dry Playa Wet Playa	<p>Agreed to overall approach as proposed in the draft WPA</p>	Section 5.4.1.13
Use of Soil and Sediment Depths in		

Crosswalk of Agreements and Changes to Revised Work Plan Addendum

Topic	Agreement	Location of Change in Work Plan Addendum
Evaluation Upland, ditch, and playa soil depths	-Uplands- upper 2 feet will be used. Where data for the upper 6 inches is available, preference will be given to this data for calculation of ecological risk. -Ditches and Playas -Upper 6 inches will be used and applied, based on new data, as well as 0-2 feet data for plants. Agreed to approach as proposed in draft WPA.	
Relationship of Soil and Sediment Depths to Receptors Terrestrial receptors Burrowing Animals Terrestrial Plants Sediment Receptors Aquatic Plants	Agreed to approach as proposed in draft WPA.	No changes required in WPA.
Fate and Transport and Toxicity Profiles for Primary Chemical Classes	Agreed to approach as proposed in draft WPA. Note: -If unacceptable risk is found, specific chemical profiles will be provided in applicable Tier 2 analysis or Site-Wide ERA. Profiles will include links to on-line resources. Agreed to approach as proposed in draft WPA.	No changes required in WPA.
Setup of Exposure Equations Receptor specific for: Upland/Dry Playa Wet Playa	Agreed with general uptake factors proposed: -USEPA 1999 will serve as the primary source for terrestrial plant and soil invertebrate uptake factors -HAZWRAP 1994 will serve as the primary source for animal-to-animal uptake factors. -Other sources will be presented in the Tier 2 SLERAs, contained in the RFI Reports and in the Site-Wide ERA Report, as necessary. Note: -Based on TCEQ request, EPA 1999 will be used where possible.	No changes required in WPA.
General Sources for Uptake Factors Terrestrial plant and invertebrate Animal-to-animal Other sources	Agreed with general uptake factors proposed: -USEPA 1999 will serve as the primary source for terrestrial plant and soil invertebrate uptake factors -HAZWRAP 1994 will serve as the primary source for animal-to-animal uptake factors. -Other sources will be presented in the Tier 2 SLERAs, contained in the RFI Reports and in the Site-Wide ERA Report, as necessary. Note: -Based on TCEQ request, EPA 1999 will be used where possible.	No changes required in WPA.

Crosswalk of Agreements and Changes to Revised Work Plan Addendum

Topic	Agreement	Location of Change in Work Plan Addendum
Diet Assumptions	<p>-When hierarchy of factors is not used, a justification for choosing one factor over another will be included in the applicable Tier 2 analysis.</p> <p>Agreed to general approach, as proposed in draft WPA. Justification for using the mouse to represent hawk ingestion will be strengthened and/or expanded. Pantex must ensure that if the diet assumptions deviate from the life history of an animal, an explanation must be provided for the use of other information.</p>	Section 5.4.1.6
Sources for wildlife toxicity reference values	<p>Agreed to TRV sources proposed in draft WPA. However, EPA suggested other sources such as the Eco-SSLs and the LANL database; and TCEQ recommended the use of USEPA 1999. TCEQ did agree to the use of a hierarchy of sources, but the exact order in which the sources would be used was not agreed upon.</p> <p>Based on the teleconference discussions, TCEQ and EPA will agree with the use of the Eco-SSLs as a primary source for TRVs. As the LANL database has not been reviewed by TCEQ, a clear path forward for other tiered levels was not developed. Pantex will plan to provide a justification for use of a hierarchy within the text of the WPA, using a limited comparison of values between the four sources, as well as a discussion of how each source treated and documented TRVs. The final suggested hierarchy will be provided with the final WPA.</p> <p>Note: Pantex will not use the Eco-SSL or LANL TRVs based on a calculated geometric mean. Rather, one of the underlying values will be selected and modified according to the TCEQ guidance (i.e., scaling) to derive the TRV.</p>	Section 5.4.2
Use of uncertainty factors for: Allometric Scaling TRVs	<p>Agreed to use of allometric scaling of TRVs as proposed in draft WPA.</p> <p>Agreed to general application of uncertainty factors with the following additions and modifications:</p> <ul style="list-style-type: none"> -Although application of TRVs based on a chronic NOAEL derived from a subchronic LOAEL should be avoided, when this application is necessary the following uncertainty factors (UF) apply: <ul style="list-style-type: none"> -Will use UF of 100 in conservative analysis. -Will use UF of 20 in refined analysis. -Will ensure that the NOAEL and LOAEL TRVs are within a factor of 10. -UFs for reptiles are discussed in Attachment 1 of these meeting notes. 	Section 5.4.2
Exposure Point	<p>Agreed to general approach as proposed in draft WPA. TCEQ issued a letter providing a</p>	

Crosswalk of Agreements and Changes to Revised Work Plan Addendum

Topic	Agreement	Location of Change in Work Plan Addendum
Concentration Derivation	conditional approval of the approach. The TCEQ is concerned with hotspots in units that are large and may involve smaller ranging species of concern. Pantex is to look at the effect of hot spots on smaller ranging receptors in the uncertainty analysis. A general HQ of 50 or greater will be used as a working definition of a hotspot for a receptor during the uncertainty analysis.	Section 5.4.1.13
Normal Lognormal Nonparametric		
Uncertainty Analysis	Agreed with general approach to uncertainty analysis as proposed.	
General methods Use of AVS/SEM data Use of tissue data	Note: -AVS/SEM and other bioavailability information may be moved into the quantitative analysis rather than discussed in the uncertainty analysis. Must include an analysis of hotspots for smaller ranging receptors.	Section 5.4.1.12 Section 5.4.1.13 Section 5.7
Site-Wide ERA		
Content of the Site-Wide ERA Report	Agreed with content of the Site-Wide ERA Report as proposed.	No changes required in the WPA.
Extension of TCEQ guidance for use in site-wide analysis	Note: -ERA will include summaries of previous activities, along with full status of each SWMU. -All Tier 2 assessments of the playas and ditches will be included. Agreed with Extension of TCEQ guidance for use in site-wide analysis.	No changes required in WPA.
Playas as the focus of the Site-Wide ERA Report	Agreed that playas will be the focus of the Site-Wide ERA Report; focus will also include portions of contributing industrialized ditches.	No changes required to WPA.

Crosswalk of Agreements and Changes to Revised Work Plan Addendum

Topic	Agreement	Location of Change in Work Plan Addendum
<p>Site-wide Analysis</p> <p>Grouping of playas for integration of receptor risk</p> <p>Receptors assumed to forage equally from each playa</p>	<p>Agreed to approach as proposed in draft WPA.</p> <p>Note:</p> <ul style="list-style-type: none"> -Playas will be addressed on an individual, as well as collective, basis. -Risk will be addressed on an individual basis, even when not found on a site-wide basis. -Use of AUF and TUF must be complementary. -Must provide a first analysis with AUF = 1, then adjust AUF to the home range of the species for the second and third analysis. 	<p>No changes required to WPA.</p>
<p>Additional data collection for Tier 2s and site-wide analysis</p>	<p>Agreed to approach as proposed in draft WPA.</p> <p>Note:</p> <ul style="list-style-type: none"> -No new biological data is proposed for collection. -Will include tissue data in uncertainty analysis, or primary Tier2 analysis, as appropriate. -Will include population data in uncertainty analysis, as appropriate. -Will include separate section on lines of evidence. -Will not be held to new benchmarks until they are available; benchmarks will become effective when posted online. The benchmarks will be incorporated into new Tier 2 assessments after posting occurs. -New benchmarks will not be applicable to analytical detection limits for samples collected under the current sampling plan as the sampling was designed for the current benchmarks. 	<p>Section 5.6 for tissue data, 5.7 for population data, and 5.8 for lines of evidence. No other changes required in the WPA.</p>
<p>Strategy for completing Tier 2s and site-wide analysis if playas remain dry until July 2004</p>	<p>Agreed to approach as proposed. If no surface water is present to sample, then sediment-only samples will be collected from biologically active zone for use in wet playa evaluation (Playa 3 and TDCJ only). Additional justification will need to be added to explain why older USACE data from the original playa investigations are not pertinent for use as sediment, as well as reasons for not including the compliance sediment data.</p>	<p>No changes required to WPA. Additional justification will be added to Tier 2 and Site-Wide ERA Reports concerning why USACE and compliance data were not used in evaluating ecological risk.</p>

Mr. Jerry S. Johnson
Enclosure

Enclosure 2

TCEQ Concurrence Letter

TCEQ Interoffice Memorandum: Pantex: Final Site-Wide ERA Work Plan
Addendum to BRA Work Plan, Pantex Plant Dated May 20, 2004.

Kathleen Hartnett White, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Larry R. Soward, *Commissioner*
Margaret Hoffman, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 9, 2004

Mr. Jerry S. Johnson
Assistant Area Manager
Department of Energy
Albuquerque Field Office
P.O. Box 30030
Amarillo, Texas 79120

Re: U.S. Department of Energy (DOE), Pantex Plant
TCEQ Solid Waste Registration No. 30459
TCEQ Hazardous Waste Permit No. HW-50284
EPA ID No. TX4890110527
Approach to Calculating the Exposure Point Concentration (EPC) for the Human Health Risk Assessment (HHRA) dated April 1, 2004

Dear Mr. Johnson:

The Texas Commission on Environmental Quality (TCEQ) has conducted a technical review of the above referenced letter which contains the statistical approach to establish the exposure point concentration (EPC) for the human health portion of the Baseline Risk Assessment (BRA). The EPC represents the chemical concentration that a human receptor will likely encounter during an exposure period. Please find attached, the TCEQ's comments on the statistical approach and the concerns regarding the application of the statistical approach.

Questions concerning this letter should be directed to me at (512) 239-2243. When responding by mail, please submit an original and one copy of all correspondence and reports to the Corrective Action Section at Mail Code MC-127 with an additional copy submitted to the TCEQ Region 1 Office in Amarillo. Please submit responses to this letter within 60 days of the date of this letter or

Mr. Jerry S. Johnson
Page 2
August 9, 2004

an alternate approved date. The TCEQ Solid Waste Registration Number information should be referenced in all submittals.

Sincerely,



Robert Musick, P.G., Project Manager
Team I, Corrective Action Section
Remediation Division
Texas Commission on Environmental Quality

REM/rm

cc: Mr. Jim McWilliams, Project Manager, TCEQ Region 01 Office - Amarillo
Ms. Shannon Ethridge, Chief Engineers Office (MC168)
Ms. Camille Hueni, Superfund Division, Texas Section (6SF-AP), USEPA Region VI

Enclosure: TCEQ Comments

Attachment A Page 35

Mr. Jerry S. Johnson
Enclosure

Enclosure 1
TCEQ Comments

Attachment A, Page 36

Enclosure 1 - TCEQ Comments

1. Statistical Approach

The Human Health Risk Assessment (HHRA) Work Plan defines the statistical approach for establishing the exposure point concentration (EPC) when normal and lognormal distribution occurs in the closure data set, but does not address when parametric estimators are not applicable or when the number of non-detects in the data set exceed 50 percent. The proposed statistical approach identified in the Pantex letter dated April 1, 2004 is appropriate when:

- 1) Sample size is sufficiently large (greater than 20); and,
- 2) Samples have been located with no intent to underestimate the exposure point concentration.

The TCEQ approves the statistical approach for human health that is proposed by Pantex in the April 1, 2004 letter based on the conditions discussed above regarding sample size and sample locations within the exposure area.

2. Application of the Statistical Approach to Calculate the Exposure Area

The Pantex letter dated April 1, 2004 established the statistical approach to determine the EPC for human health, but did not establish how the statistical approach will be applied to determine the human health EPC for an exposure area and the associated risk. While we approve the statistical approach, the TCEQ is concerned about how the statistical process will be applied to establish risk in an exposure area since the exposure area is set at 12 acres for inactive areas and 6 acres for active areas. It is our understanding that Pantex will be using the geographical information system "Arc View" to select and define exposure areas, which could skew the population of points and impact the EPC calculation.

The TCEQ is requesting additional clarification regarding the application of the statistical approach within the exposure area, and also regarding how each exposure area will be defined.

Mr. Jerry S. Johnson
Attachment

Attachment B

EPA Concurrence Letter, Pages 1 through 2

- EPA Letter dated August 19, 2004: RE: Concurrence with TCEQ Approvals: for Revised Final Baseline Risk Assessment (BRA) Work Plan for the U.S. Department of Energy/National Nuclear Security Administration Pantex Plant, Amarillo, Texas dated February 2003; Final Site-Wide Ecological Risk Assessment (ERA) Work Plan Addendum to the Baseline Risk Assessment Work Plan, dated February 2004; Pantex Plant Superfund Site - EPA Site ID TX 4890110527



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1445 ROSS AVENUE, SUITE 1200

DALLAS TEXAS 75202-2733

August 19, 2004

Mr. Robert Musick
Pantex Project Manager
Texas Commission on Environmental Quality
Corrective Action Section, MC-127
P.O. Box 13087
Austin, Texas 78711-3087

Re: **Concurrence with TCEQ Approvals**: for ***Revised Final Baseline Risk Assessment (BRA) Work Plan for the U.S. Department of Energy/National Nuclear Security Administration Pantex Plant, Amarillo, Texas***, dated February 2003; ***Final Site-Wide Ecological Risk Assessment (ERA) Work Plan Addendum to the Baseline Risk Assessment Work Plan***, dated February 2004; Pantex Plant Superfund Site - EPA Site ID TX4890110527

Dear Mr. Musick,

The U.S. Environmental Protection Agency (EPA) Region 6 has completed the review of the *Revised Final Baseline Risk Assessment (BRA) Work Plan* for the U.S. Department of Energy/National Nuclear Security Administration Pantex Plant, Amarillo, Texas, dated February 2003 (received August 19, 2003) and the *Final Site-Wide Ecological Risk Assessment (ERA) Work Plan Addendum to the Baseline Risk Assessment Work Plan*, dated February 2004 (received March 8, 2004). The Agency concurs with the Texas Commission on Environmental Quality (TCEQ) approval of both documents, with the following considerations.

The *Revised Final Baseline Risk Assessment (BRA) Work Plan* was reviewed by Mr. David Riley, Region 6 toxicologist, and was amended by a June 9, 2004, letter from J. Johnson to C. Hueni, Re: *Updated Radiological Risk Equations for the Baseline Risk Assessment (BRA) Work Plan*. The letter clarifies how risk will be calculated for radionuclides in the risk assessment process, primarily for soils. Calculations for radionuclides in ground water were not changed in the work plan "because there are no radiological contaminants that are currently required to be assessed in the groundwater." There are, however, comments still outstanding on the Pantex Plant Radiological Investigation Report, January 2004, so the investigation phase cannot yet be considered closed. Fate and transport modeling will also be used as a predictive tool to better understand future potential impacts from soil to ground water. If future impacts are indicated in the model (for radionuclides), we can discuss any changes to the work plan at that time.

RCRA Facility Investigations for soils, for most part, have been completed. Conditional approvals recommend Risk Reduction Standard No. 3 closures for most sites, which will require that all Constituents of Potential Concern (COPCs), radiological and chemical, go forward for

Attachment B, Page 1

further evaluation under the Baseline Risk Assessment. The TCEQ, EPA, and Pantex/BWXT have also discussed how the Exposure Point Calculation (EPC) will be applied in the calculation of risk for human health and ecological assessments. EPA concurs with the statistical approach to derive the EPC, but has questions in how the geographical information system ArcView will be used to select and define exposure areas. Pantex/BWXT is currently applying the risk assessment procedure, defined in the *BRA Work Plan*, to the Burning Grounds Area, to demonstrate the ArcView application. Any remaining regulatory questions will be addressed through discussion of the Burning Grounds risk assessment.

Also, Mr. Jon Rauscher, Region 6 toxicologist, has reviewed the *Final Site-Wide Ecological Risk Assessment (ERA) Work Plan*, and supporting documents amending the work plan (*Pantex Work Plan Addendum - Ecological Risk Assessment Work Group. Re: Technical Meeting Summary, December 17-18, 2003, and Teleconference Meeting Summary, January 28, 2004; Crosswalk of Agreement and Changes to Revised Work Plan Addendum, February 2004*). He concurs with the TCEQ's recommendation for approval of the ERA Work Plan and confirms that the Work Plan addresses those ecological risk assessment issues previously identified in the April 27, 2001, *TechLaw Technical Memorandum to EPA (Pantex - RI/FS Oversight; Comments on DOE/s Response to Comments)*.

The EPA has provided these comments to support the TCEQ reviews and approvals for the referenced Work Plan documents. Please let me know if you have any questions concerning these comments. I can be reached at (214) 665-2231.

Sincerely,

[signed 8/19/04]

Camille D. Hueni, P.G.
Remedial Project Manager
Region 6 Superfund Division

cc: Mr. Jerry Johnson, Department of Energy
Mr. Dennis Huddleston, BWXT

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N N S A

memorandum

National Nuclear Security Administration
Pantex Site Office

DATE: SEP -7 2004
REPLY TO
ATTN OF: PXSO:SS:HGH

SUBJECT: Conditional Approval; Baseline Risk Assessment (BRA) Work Plan

1. Revised Final Baseline Risk Assessment (BRA) Work Plan for U.S. Department of Energy dated February 2003
2. Final Site-Wide Ecological Risk Assessment (ERA) Work Plan Addendum dated February 2004, and supplemental DOE materials dated March 8, 2004

TO: Larrie Trent, ES&H, BWXT Pantex LLC

Please reference the attached Texas Commission on Environmental Quality (TCEQ) letter, dated August 24, 2004, subject as above. Referenced letter provides conditional approval of subject work plans. Based upon the attached, if there are outstanding issues still requiring further direction or clarification, request you prepare the applicable correspondence on behalf of the Pantex Site Office.

If you have any questions, please contact Hugh Hanson of my staff at extension 3164.



Jerry S. Johnson
Assistant Manager for Environmental
& Site Engineering Programs

Attachment

cc w/attachment (via email):
J. Guelker, SS, PXSO
D. Huddleston, SS, BWXT
D. Hernon, SS, BWXT
V. Battley, PWT, Pantex