



# PADUCAH GASEOUS DIFFUSION PLANT CITIZENS ADVISORY BOARD

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## **Paducah Gaseous Diffusion Plant Citizens Advisory Board Meeting Minutes July 19, 2007**

The Citizens Advisory Board (CAB) met at the CAB office in Paducah, Kentucky, July 19, 2007, at 6 p.m.

**Board members present:** John Anderson, Allen Burnett, Judy Clayton, Shirley Lanier, John Russell and Jim Smart

**Board members absent:** Bobby Lee, Elton Priddy and Don Swearingen

**Board Liaisons and related regulatory agency employees:** Brian Begley, Todd Mullins, Edward Winner, Kentucky Division of Waste Management (KDWM); David Williams, U.S. Environmental Protection Agency (EPA); Tim Kreher, Kentucky Department of Fish and Wildlife Resources (KDFWR) and Dewey Crawford, Kentucky Radiation Health Branch (RHB)

**Deputy Designated Federal Official (DDFO):** Reinhard Knerr

**DOE Federal Coordinator:** Mitch Hicks

**U.S. Department of Energy (DOE) related employees:** Rachel Blumenfeld, Rich Bonczek, Russ Boyd, Tracey Brindley, Yvette Cantrell, Bill Clark, Kim Crenshaw, Paul Gagnon, Bruce Gardner, Guy Griswold, Steve Hampson, John King, Steve Manning, Jerry Mayes, John Morgan, Bill Murphie, Bruce Phillips, Eric Roberts, Scott Smith, Elizabeth Trawick and Cynthia Zvowar

**Public:** Kim Bonczek and Gary Vander Boegh

## Agenda

Mayes asked for modifications to the proposed July agenda. **The Board approved the agenda as submitted.**

## Minutes

Mayes asked for modifications to the draft June minutes. **The Board approved the minutes as submitted.**

## Deputy Designated Federal Official Comments

Knerr updated the CAB on the injured Paducah Remediation Services (PRS) worker that was hit by a United States Enrichment Corporation (USEC) forklift driver carrying industrial equipment last week. DOE is working with PRS and USEC for corrective actions to ensure safety of the workforce.

Knerr said a Resource Conservation Recovery Act (RCRA) 3007 request was received from EPA, which ask for historical documentation relating to the generation of the soil piles. The information should be compiled by the end of September.

DOE is working with EPA and Kentucky on the environmental indicators for the site in response to the Government Performance and Results Act (GPRA). The goal is to insure a “yes” is received for control of human health exposure. Knerr will update the CAB on the progress at the August meeting.

Knerr provided project updates to the Board. The presentation and the monthly project updates are available on the CAB Website at [www.pgpdcab.org](http://www.pgpdcab.org). Questions and answers (paraphrased) appear below.

Questions/Comments	Answers
<b>Russell:</b> It was reported that 5,400 cubic feet of the incinerator demolition both low-level and mixed low-level waste was sent to on-site and off-site disposal. How much of the waste was disposed on-site?	<b>Knerr:</b> All of the waste that was disposed in the C-746-U Landfill met the Waste Acceptance Criteria. DOE will have the amount of waste at the August CAB meeting.

## Federal Coordinator Comments

Paducah will host the Environmental Management Site Specific Advisory Board Chairs Meeting on September 26 and 27.

The CAB Annual Planning Retreat will be Saturday, August 4 at the Environmental Information Center.

## **Liaison Comments**

### **Kentucky Division of Waste Management**

Winner represented the Kentucky Division of Waste Management with the following comments:

- Kentucky is working with DOE on the environmental indicators in response to the GPRA.
- Kentucky is reviewing the soil pile data.
- The informal dispute on the Southwest Plume Site Investigation document should be resolved soon. Kentucky is reviewing the redline version of the document.

### **U.S. Environment Protection Agency**

Williams represented the EPA with the following comments:

- EPA has resolved all issues on the Sampling and Analysis Plan in for sampling in Section “I” for the soil piles.
- The Southwest Plume Site Investigation document is being reviewed. The informal dispute should be resolved soon.
- Comments on the Land Use Control Implementation Plan for C-400 have been submitted to DOE. The C-400 90% Design document is being reviewed and EPA will be reviewing the Remedy Review for the 90% Design after DOE finalizes the report.

### **Kentucky Department of Fish and Wildlife Resources**

Williams represented the KDFWR with the following comments:

- KDFWR will be working with PRS on the deer sampling next week. Five adult deer will be sampled to ensure the deer are safe to eat.
- Several projects have been conducted at the Wildlife Management Area under the DOE State Energy Program grant.
- An ecological summary of projects could be provided to the Board in September if there is interest.

Russell asked how the results of the deer sampling was provided to the hunters. Kreher said copies of the lab results are given to the hunters prior to deer season. If the samples indicate that the deer cannot be eaten, press releases would be issued and postings would be put up around the area but there has never been a problem in the past.

## **Action Items**

Knerr said a completed work plan identifying specific activities and projects in which the Board should focus would be provided at the Annual Planning Retreat in August.

Knerr said DOE, Kentucky and EPA are developing regulatory strategies and a path forward to evaluate potential on-site disposal capabilities. A meeting is scheduled for the following

week to discuss the issue. This project will be discussed at the October working session for the Board.

A briefing was presented to the Waste Disposition/Water Quality Committee on the C-746-U Landfill Assessment. The action was closed.

Hicks said the soil pile located across from the C-746-U Landfill that Russell reported was 100% surveyed but was not sampled. The survey indicated no readings above background levels. Russell asked if DOE knew the cause of the soil pile. Knerr said DOE would look for historical information on the soil pile. Kreher suggested coring a couple of the trees in that area to indicate the time period for the pile.

Knerr said the Remedy Review Report on the C-400 90% Design has not been finalized. A briefing will be given to the CAB when available.

### **Public Comments**

Vander Boegh asked if the sampling results from the deer would be available to the public. Kreher said the results are available on the Oak Ridge Environmental Information System database. Brindley said the information would also be available in the Paducah Annual Site Environmental Report.

Vander Boegh said he had requested the opportunity to tour the soil piles with DOE and would like for a KDWM person be present for the tour. In Area of Concern (AOC) 4, there is black top on the ground and suggested that this material and potentially other originated at the plant. Kreher said there were black top roads on site before the plant was built. Knerr said PRS has made numerous offers to accompany Vander Boegh to walk down certain areas and all invitations were declined until today. PRS will coordinate with Vander Boegh and DOE will ask the State to provide support. Vander Boegh said he is concerned there are additional soil piles that have not been investigated.

Burnett asked for an update on the Corps of Engineers project to investigate the gravel pits in the Kentucky Ordinance Works area. Hicks said DOE received a copy of the Corps report and the targeted area was AOC 4. The conclusion from the document was that there were no indications of radiation above background levels including the gravel pits and the black top. Kreher said the Corps is planning fieldwork on the remediation activities beginning in the winter.

### **Committee Reports**

#### **Executive Committee**

- Staff is working on arrangements for the Chairs Meeting in September and planning orientation training at the Annual Planning Retreat on August 4. Discussion of a new Chair-Elect will be discussed at the retreat.
- DOE responded positive to the CAB's recommendations, "Continued Use of the West Kentucky Wildlife Management Area During Remediation of Soil and Rubble Piles" and

Assurance of Compliance With the Waste Acceptance Criteria for the C-746-U Landfill.”  
Copies of the recommendations are in the Board packet.

## **Administrative Issues**

### **Motions**

Burnett identified the changes that were incorporated into the Operating Procedures and Bylaws at the June meeting. **The Board approved the Operating Procedures and Bylaws by consensus.** The Board will review further changes to combine the two documents at the retreat.

Burnett discussed a recommendation to DOE regarding disposition of volumetrically contaminated metals at the Paducah Gaseous Diffusion Plant. The recommendation including the following suggestions:

- **DOE should proceed with a solicitation for disposition of the nickel ingots at PGDP.**
- **The solicitation for nickel ingots at PGDP should be separate from other solicitations associated with the Expression of Interest (EOI) to maximize the potential benefit to the Paducah community.**
- **DOE should issue a solicitation for disposition of the aluminum ingots at PGDP if EOI responses indicated economic viability.**

**The Board approved the recommendation by majority vote.**

### **September Agenda**

There were suggestions for the Remedy Review Report for the C-400 90% Design, Soil Piles Investigation and Dr. Halbrooks ecological results for the September agenda. Knerr said information on the soil piles would be available at the August working session. Burnett said the presentations for the September agenda could be finalized at the August working session.

The meeting adjourned at 8:30 p.m.

# Progress at Paducah

## Paducah Citizens Advisory Board

Reinhard Knerr  
Paducah Site Lead  
July 19, 2007

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# Inactive Facilities - C-405 Incinerator



- Building structure removal completed early July
- 1,030 square foot facility
- More than 5,400 ft<sup>3</sup> of waste generated, including Low-Level Waste and Mixed Low-Level Waste
- Disposal on-site and off-site



A trackhoe equipped with special shears removes the metal structure.

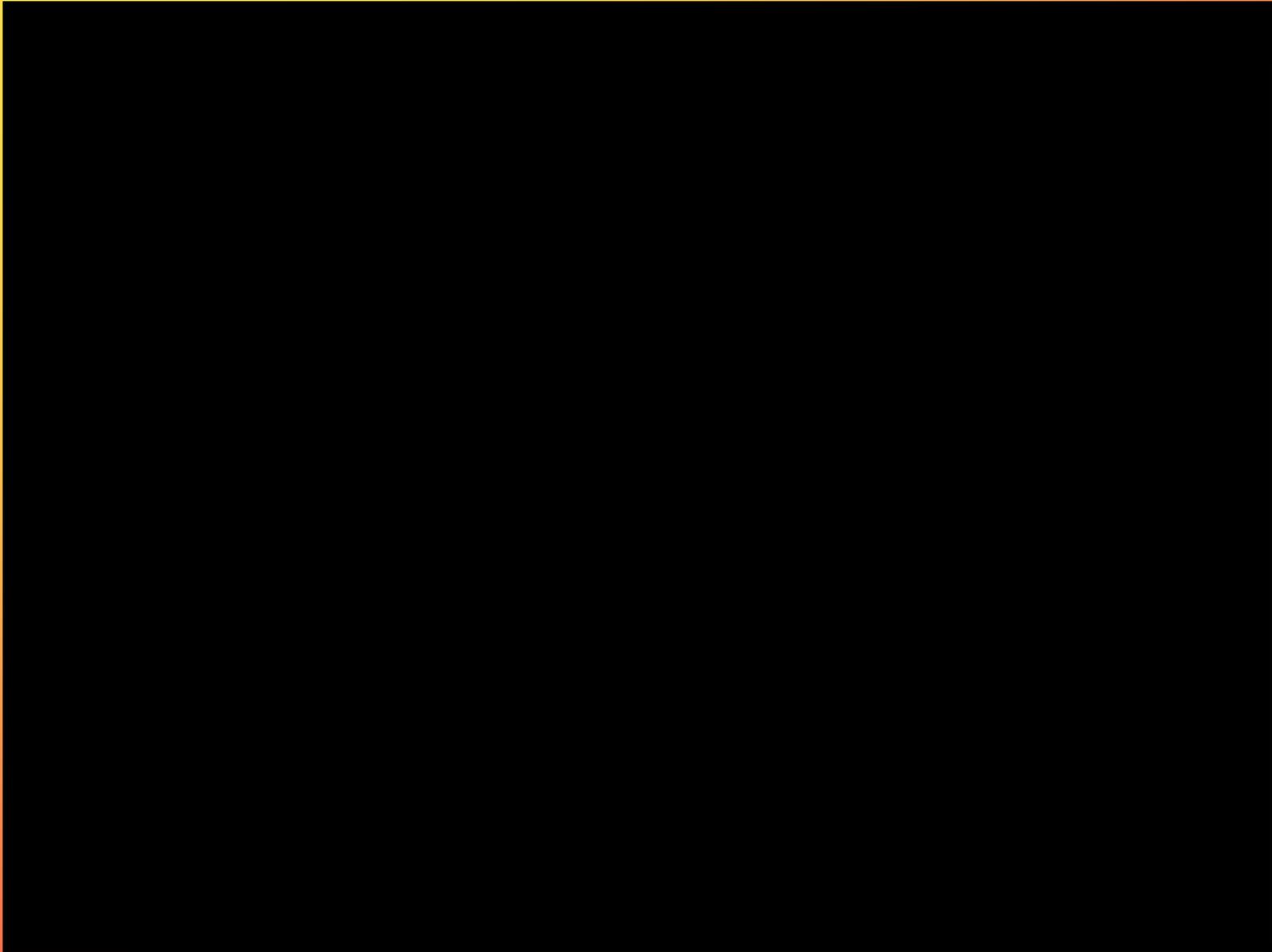


# Inactive Facilities C-405 Incinerator

Right, C-405 before demolition; far right, the smokestack is demolished; bottom, the site after demolition.



# Inactive Facilities C-405 Incinerator



# DUF6 Conversion Project

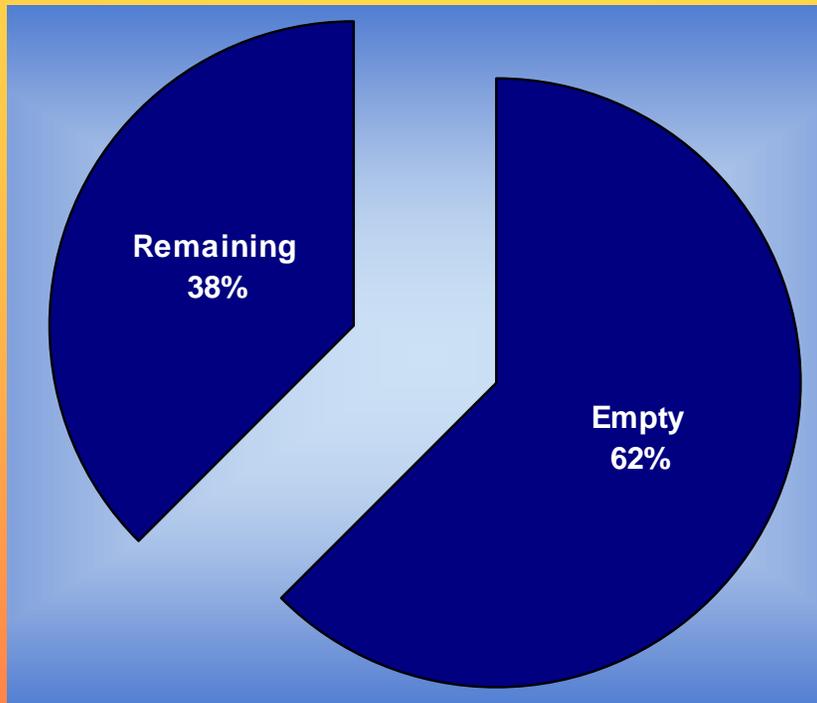


Left, workers pour the nitrogen equipment pad, the last major foundation pad to be installed; above, the site shown from the southeast side.



# DOE Material Storage Areas

100 of 160 DMSAs now completely empty



- Less than 1 percent of the total material removed from DMSAs was hazardous
- Once material is removed, additional processes must be followed to transfer DMSA to USEC
  1. RCRA closures must be performed for DMSAs containing hazardous materials (40 to date)
    - Inspection/certification by PRS/DOE that DMSA is complete
    - State verifies completion
    - No Further Action determination
  2. USEC inspection and verification



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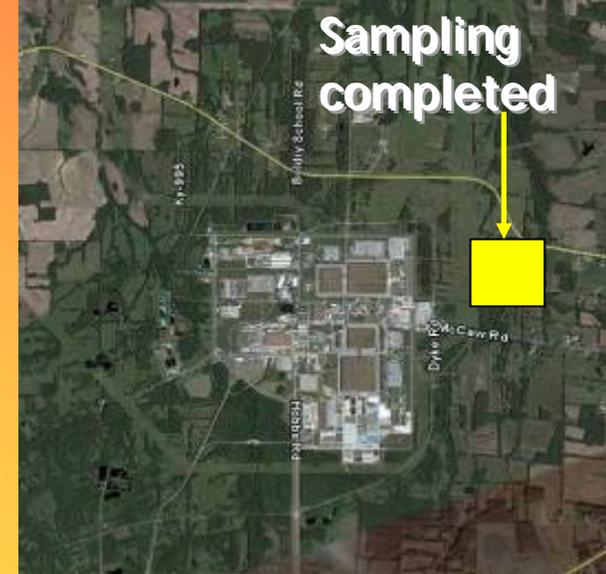
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# Soil Pile "I" Sampling



A subsurface sample is prepared for shipment to the lab for analysis.



- All sampling completed week of July 9
- Preliminary lab data beginning to be returned
- Composite field and lab data will be compared to calculate risk-based action levels as appropriate

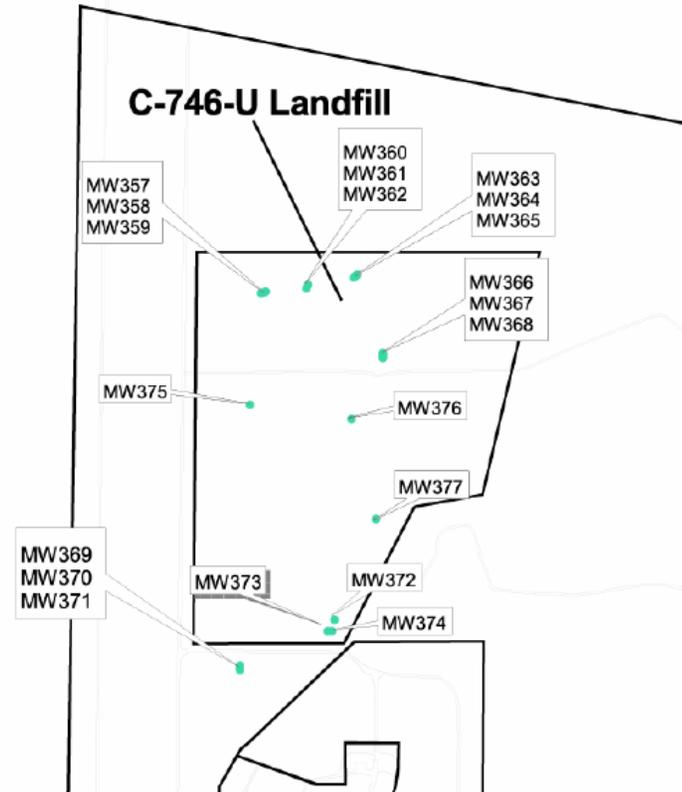




DOE Portsmouth/Paducah Project Office

# Solving Cleanup Challenges Through Risk Reduction

## C-746-U Landfill Groundwater Assessment



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## C-746-U Landfill Groundwater Assessment

### T-12 page 125 of the C-746-U Solid Waste Permit

- Monitoring: The operator of a solid waste site or facility shall be required to **prepare and submit a groundwater assessment plan if laboratory analyses** of one (1) or more monitoring wells at the site or facility shows the presence of one (1) or more parameters listed in 40 CFR 302.4, Appendix A as of October 1988, **above the maximum containment level (MCL) in 401 KAR 31:031 or significant increase over naturally occurring background levels** for parameters that have no MCL. For parameters that have no maximum contaminant levels a significant increase over background shall be determined using a statistical test as specified in Section 9 of 401 KAR 48:300. [401 KAR 48:300 Section 8(1)]



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# Solving Cleanup Challenges Through Risk Reduction

**Aug 2006: DOE received notice to submit a Groundwater Assessment Plan**

CONTAMINANT	LOCATION	WELLS	CONDITION	SUSPECTED SOURCE
Carbon Disulfide	N Central	MW362 (UCRS)	Statistical	Related to well rehab
Chem. Oxygen Demand & Total Organic Carbon	NW	MW358 (LRGA)	Statistical	Biofouling
Gross Beta & Technetium-99	N Central SE SE	MW361 (LRGA) MW372 (URGA) MW373 (LRGA)	Statistical	Known PGDP Tc-99 plumes
Manganese	E	MW366 (URGA)	Statistical	Related to well rehab
PCBs	N Central NE NE	MW361 (LRGA) MW363 (URGA) MW365 (UCRS)	Statistical	SWMU 145 for RGA source Unknown release for UCRS source
Radium-228	N Central NE NE SW	MW362 (UCRS) MW363 (URGA) MW364 (LRGA) MW369 (URGA)	Exceed MCL	Natural decay product of Th-232
Sulfate	NW N Central NE	MW359 (UCRS) MW362 (UCRS) MW365 (UCRS)	Statistical	Unknown surface release
TCE	SW SE SE	MW370 (LRGA) MW372 (URGA) MW373 (LRGA)	Exceed MCL	SWMU 145

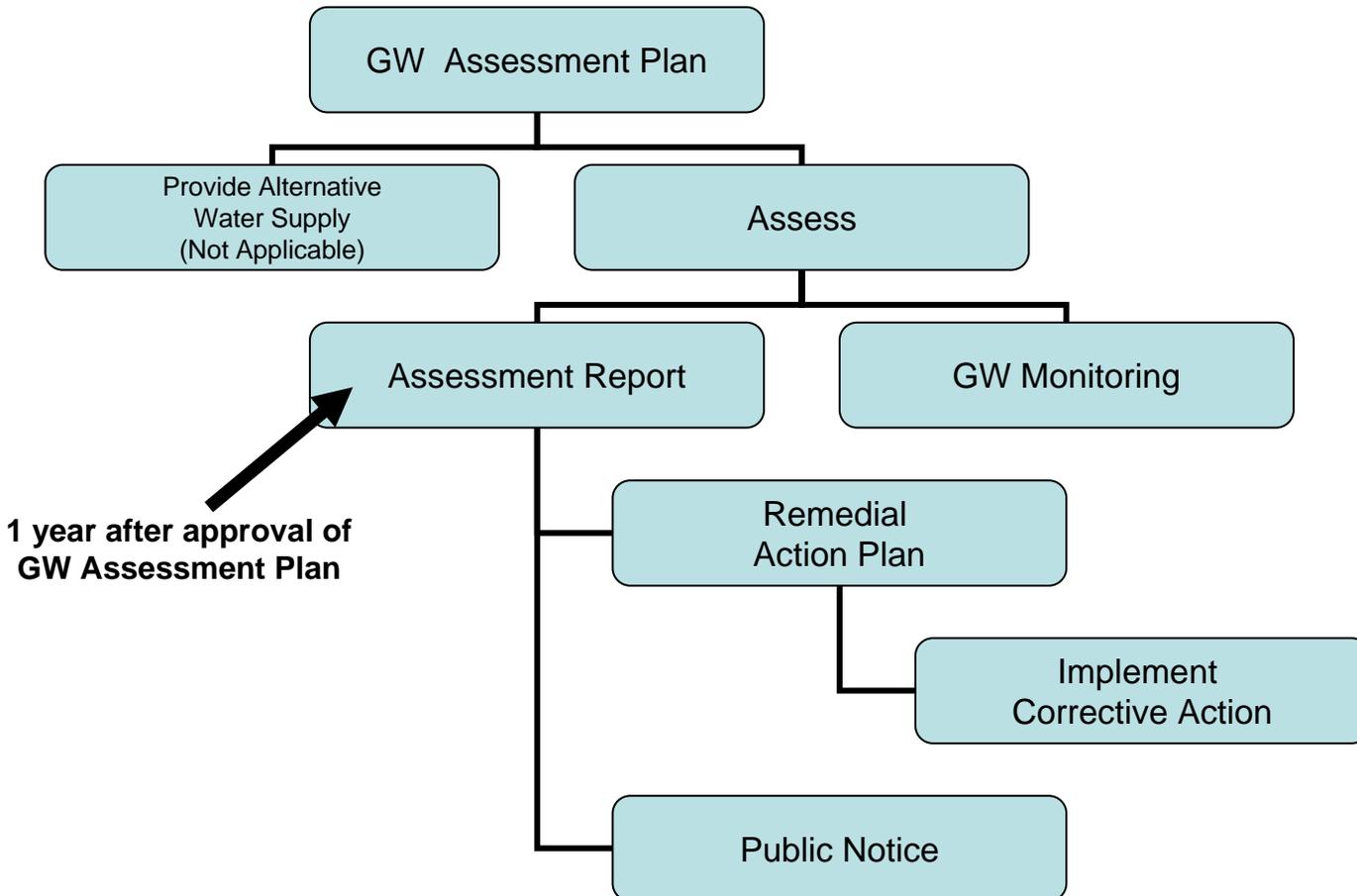


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# Solving Cleanup Challenges Through Risk Reduction

## C-746-U Landfill Groundwater Assessment



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# Solving Cleanup Challenges Through Risk Reduction

## C-746-U Landfill Groundwater Assessment

### Timeline

- **August 29, 2006: DOE received notice to submit a Groundwater Assessment Plan**
- **September 26, 2006: DOE requested extension - to incorporate results of quarterly sampling (October 2006)**
- **February 27, 2007: DOE submitted Groundwater Assessment Plan**



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# Solving Cleanup Challenges Through Risk Reduction

## C-746-U Landfill Groundwater Assessment

### Technical Notice of Deficiency – May 18, 2007

- Specify the assessment tasks for each contaminant.
- Discontinue use of sulfamic acid in well rehabilitation – may result in formation of sulfate in well.
- Clean out, sample, and abandon old homestead well (north C-746-U permit area) as soon as possible.
- Develop an approach to determine the source of the PCBs in the northern area of the landfill.

Revised Plan, addressing comments to be submitted by  
August 1, 2007



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# Solving Cleanup Challenges Through Risk Reduction

## C-746-U Landfill Groundwater Assessment

CONTAMINANT	PLANNED ASSESSMENT ACTION
Carbon Disulfide	<ul style="list-style-type: none"> <li>• Downhole video and data review to determine the presence of biofouling</li> </ul>
Chem. Oxygen Demand & Total Organic Carbon	<ul style="list-style-type: none"> <li>• Comparison of trends of Chemical Oxygen Demand and Total Organic Carbon</li> <li>• Comparison of Chemical Oxygen Demand and Total Organic Carbon trends to well rehab</li> </ul>
Gross Beta & Technetium-99	<ul style="list-style-type: none"> <li>• Comparison of trends of gross beta and Tc-99</li> <li>• Comparison of Tc-99 trends of wells to trends of known plumes</li> </ul>
Manganese	<ul style="list-style-type: none"> <li>• Comparison of manganese trend to well rehab</li> </ul>
PCBs	<ul style="list-style-type: none"> <li>• Sample and abandon homestead well</li> <li>• BGOU RI evaluate upgradient SWMU 145</li> <li>• PCB analyses of PGDP wells</li> <li>• Shallow soil investigation near the homestead well</li> </ul>
Radium-228	<ul style="list-style-type: none"> <li>• Data trending of all Ra-228 analyses</li> <li>• Additional Ra-228 and Th-232 analyses of water from C-746-U wells</li> <li>• Comparison of Ra-228 and Th-232 analyses</li> </ul>
Sulfate	<ul style="list-style-type: none"> <li>• Comparison of sulfate trend to potential surface sources</li> </ul>
TCE	<ul style="list-style-type: none"> <li>• Comparison of BGOU RI results and TCE trends in wells to C-746-S&amp;T RI results/trends</li> </ul>



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