

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

**RCRA Corrective Action  
Environmental Indicator (EI) RCRAInfo code (CA725)**

**Current Human Exposures Under Control**

**Facility Name:** P Chem Inc  
**Facility Address:** 100 Old Latexo Road; Latexo, Texas; 75849  
**Facility EPA ID #:** TXD098874308

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

\_\_\_\_\_ If yes - check here and continue with #2 below.

\_\_\_\_\_ If no - re-evaluate existing data, or

\_\_\_\_\_ If data are not available skip to #6 and enter AIN@ (more information needed) status code

**BACKGROUND**

**Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

**Definition of ACurrent Human Exposures Under Control@ EI**

A positive ACurrent Human Exposures Under Control@ EI determination (AYE@ status code) indicates that there are no Aunacceptable@ human exposures to Acontamination@ (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all Acontamination@ subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

**Relationship of EI to Final Remedies**

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The ACurrent Human Exposures Under Control@ EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program=s overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

**Duration / Applicability of EI Determinations**

EI Determinations status codes should remain in RCRAInfo national database ONLY as long as they remain true (i.e., RCRAInfo status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be “contaminated”<sup>1</sup> above appropriately protective risk-based “levels” (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater	X			See rationale below
Air (indoors) <sup>2</sup>		X		See rationale below
Surface Soil (e.g., <2 ft)		X		See rationale below
Surface Water		X		See rationale below
Sediment		X		See rationale below
Subsurf. Soil (e.g., >2 ft)	X			See rationale below
Air (outdoors)		X		See rationale below

—— If no (for all media) - skip to #6, and enter “YE” status code after providing or citing appropriate “levels”, and referencing sufficient supporting documentation demonstrating that these “levels” are not exceeded.

X —— If yes (for any media) - continue after identifying key contaminants in each “contaminated” medium, citing appropriate “levels” (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

—— If unknown (for any media) - skip to #6 and enter “IN” status code.

**Rationale**

An Internet search on P Chem, Inc, using the Google Search engine indicates P Chem Inc. is an active manufacturer of production, refining, petrochemical, drilling, mining and road building chemicals located at 100 Old Latexo Road, in Latexo, Texas (Reference 8). A query run on the Central Registry at [www.tceq.com](http://www.tceq.com) did not find P Chem, Inc. as a match within the registry. Based on the limited file material available in TCEQ files, it appears that the site has investigated and closed a landfill known as both the “Indian Mound” and Unit No. 2. A Final Site Closure Report was submitted by P Chem on December 27, 2000 and approved by TNRCC on May 17, 2001 (Reference 3). However, no copy of the Final Site Closure Report was found in the available file materials. The TNRCC approval letter approved the closure of the soils at the landfill meeting Risk Reduction Standard No.2 for non residential soils and considered the landfill closure complete.

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<sup>1</sup> Acontamination@ and Acontaminated@ describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based Alevels@ (for the media, that identify risks within the acceptable risk range).

<sup>2</sup> Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggests that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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In the approval letter, TNRCC concurs with P Chem that the lead concentrations in the groundwater do not appear to be associated with the landfill; however, the TNRCC required that the lead concentrations observed in the groundwater be evaluated under the Texas Risk Reduction Program (TRRP) rule. No further information, including analytical data regarding lead concentrations, additional releases or other solid waste management units were available in the file materials.

According to the Deed Certification, the following contaminants remain in place:

<u>Contaminant</u>	<u>Results (Ug/Kg)</u>
Toluene	589
Ethyl Benzene	<250
Xylenes	345
Bis(2ethylhexyl)phthalate	445
Phenol	<333
Nitrobenzene	<333

TNRCC approved the deed certification releasing the facility from post –closure care responsibilities on September 11, 2001. P Chem requested approval to plug and abandon all groundwater monitoring wells on September 20, 2001. TNRCC granted this approval on November 27, 2001. No additional information was found in available file materials.

#### **References**

1. Transmittal Letter to Kenneth Davis, TNRCC; from Robert Garret, Garrett Consulting, Inc; RE: Final Site Closure Report for P Chem Site Closure; dated December 27, 2000.
2. Transmittal Letter to Ken Davis, TNRCC; from Lois Waits, P Chem Inc.; Regarding Lab Analysis Report for samples taken August 1999; dated May 17, 2001.
3. Letter to Lois Waits, P Chem, Inc.; from Kenneth Davis, TNRCC; Re: Approval of Closure Final Report – Risk Reduction Standard No.2 Landfill; dated May 23, 2001.
4. Letter to Kenneth Davis, TNRCC; from Lois Waits, P Chem, Inc.; Re: Deed Certification of Closure of “Indian Mound”; dated July 10, 2001.
5. Letter to Lois Waits, P Chem, Inc.; from Kenneth Davis, TNRCC; Re: Acceptance of Deed Certification and Release from Post- Closure Care Responsibilities; dated September 11, 2001.
6. Letter to Kenneth Davis, TNRCC; from Lois Waits, P Chem, Inc.; Re: Landfill – Notice of Registration Unit No. 2; dated September 20, 2001.
7. Letter to Lois Waits, P Chem, Inc; from Kenneth Davis, TNRCC; Re: Request to Close Monitor Well; dated November 27, 2001.
8. Internet Search, P Chem, Inc.; dated May 30, 2006

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3. Are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

<u>“Contaminated” Media</u>	Potential <u>Human Receptors</u> (Under Current Conditions)						
	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater	NO	NO	NO	NO	NO	NO	NO
Air (indoors)							
Soil (surface, e.g., <2 ft)							
Surface Water							
Sediment							
Soil (subsurface e.g., >2 ft)	NO	NO	NO	NO	NO	NO	NO
Air (outdoors)							

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors= spaces for Media which are not Acontaminated@ as identified in #2 above.
2. enter Ayes@ or Ano@ for potential Acompleteness@ under each AContaminated@ Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential AContaminated@ Media - Human Receptor combinations (Pathways) do not have check spaces (A\_\_@). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

— If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter @YE@ status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

— If yes (pathways are complete for any AContaminated@ Media - Human Receptor combination) - continue after providing supporting explanation.

— If unknown (for any AContaminated@ Media - Human Receptor combination) - skip to #6 and enter AIN@ status code.

Rationale and Reference(s):

Based on available file materials, P Chem closed the landfill meeting criteria for TRRP standards for non residential soils, which requires a deed certification be filed to identify the concentrations and location of contaminants left in

<sup>3</sup> Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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place. TNRCC approved the deed certification, releasing the facility from post -closure care responsibilities on September 11, 2001. P Chem requested approval to plug and abandon all groundwater monitoring wells on September 20, 2001. TNRCC granted this approval on November 27, 2001. No additional information was found in available file materials.

It is assumed that lead contaminants found in the groundwater either met RRP criteria or were determined to be from an offsite source (as proposed by the facility) since TNRCC approved the abandonment of groundwater monitoring wells in 2001.

P Chem appears to remain an active facility and has recorded the deed certification to minimize exposure pathways.

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4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **Asignificant**<sup>4</sup> (i.e., potentially **Aunacceptable** because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable **Alevels** (used to identify the **Acontamination**); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable **Alevels**) could result in greater than acceptable risks)?

— If no (exposures can not be reasonably expected to be significant (i.e., potentially **Aunacceptable**) for any complete exposure pathway) - skip to #6 and enter **AYE** status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to **Acontamination** (identified in #3) are not expected to be **Asignificant**.

— If yes (exposures could be reasonably expected to be **Asignificant** (i.e., potentially **Aunacceptable**) for any complete exposure pathway) - continue after providing a description (of each potentially **Aunacceptable** exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to **Acontamination** (identified in #3) are not expected to be **Asignificant**.

— If unknown (for any complete pathway) - skip to #6 and enter **AIN** status code

Rationale and Reference(s):

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<sup>4</sup> If there is any question on whether the identified exposures are **Asignificant** (i.e., potentially **Aunacceptable**) consult a human health Risk Assessment specialist with appropriate education, training and experience.

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5. Can the Asignificant@ **exposures** (identified in #4) be shown to be within **acceptable** limits?

—— If yes (all Asignificant@ exposures have been shown to be within acceptable limits) - continue and enter AYE@ after summarizing and referencing documentation justifying why all Asignificant@ exposures to Acontamination@ are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

—— If no (there are current exposures that can be reasonably expected to be Aunacceptable@)- continue and enter ANO@ status code after providing a description of each potentially Aunacceptable@ exposure.

—— If unknown (for any potentially Aunacceptable@ exposure) - continue and enter AIN@ status code

Rationale and Reference(s):

6. Check the appropriate RCRAInfo status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

  X   YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the P Chem, Inc. facility, EPA ID # TXD098874308, located at Latexo, Texas under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

       NO - "Current Human Exposures" are NOT "Under Control."

       IN - More information is needed to make a determination.

Completed by    (signature) \_\_\_\_\_ Date \_\_\_\_\_  
                   (print) \_\_\_\_\_  
                   (title) \_\_\_\_\_

Researched by    (signature) Elisa Durum Date April 21, 2006  
                   (print) Elisa Durum TechLaw Inc./US EPA  
                   (title) Consultant

Supervisor        (signature) \_\_\_\_\_ Date \_\_\_\_\_  
                       (print) \_\_\_\_\_  
                       (title) \_\_\_\_\_  
                       (EPA Region or State) \_\_\_\_\_

Locations where References may be found:  
 Texas Commission on Environmental Quality  
 Bldg. E, File Room  
 12118 N I-35  
 Austin, TX 78753

Filed Under:  
 SWR 31743

Contact telephone and e-mail numbers

(name) \_\_\_\_\_  
 (phone #) \_\_\_\_\_  
 (e-mail) \_\_\_\_\_

**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**

**FURTHER ACTIONS:**

1. There are no file materials which indicate there are any additional units requiring corrective action or history of release. If possible, obtain additional information on the facility to verify this determination.
2. Resolution of the review of lead concentrations in comparison to TRRP standards, as required in the TNRCC approval letter should be documented.
3. In order for the file to be complete, EPA may wish to integrate a copy of the 'Final Site Closure Report' into the records.