DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

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

**Current Human Exposures Under Control**

**Facility Name:** Transwestern Pipeline Company, Roswell Compressor Station No.9
**Facility Address:** Highway 285,Chaves County, New Mexico 88201
**Facility EPA ID #:** NMD986676955

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?

   _X___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"IN" (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 "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (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 "contamination" 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 "Current 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 RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] 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)?

| | Yes | No | ? | Rationale / Key Contaminants |
|---|---|---|---|---|
| Groundwater | X | | | VOCs |
| Air (indoors)[2] | | | NA | |
| Surface Soil (e.g., <2 ft) | | X | | |
| Surface Water | | | NA | |
| Sediment | | | NA | |
| Subsurf. Soil (e.g., >2 ft) | X | | | VOCs, SVOCs and TPH |
| Air (outdoors) | | X | | |

_____ 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 and Reference(s):

Petroleum-related groundwater contamination is present at concentrations greater than EPA MCLs and WQCC groundwater cleanup standards beneath the surface impoundments (Pit 1 and Pit 2) and it has migrated off site. Based on the benzene concentrations reported in the Phase III Site Assessment from 1997 estimated the areal extent of the VOC contamination to be approximately 6 acres, and the areal extent of phase-separated hydrocarbons to be approximately 2-acres. Inorganic analysis for major ions indicate that groundwater samples exceed the NMWQCC standards for tota; dissolved solids, chloride, and sulfate. The generally poor water quality in the vicinity of the site is likely caused by the presence of gypsum beds within the alluvium and underlying Artesia Group. [Phase I, II, III, and IV Site Assessments (Transwestern Pipeline Company, Roswell Compressor Station No.9)]

Subsurface petroeluem-related soil contamination is present within and beneath the surface impoundments. The Phase II site assessment, conducted in 1996, reported TPH and BTEX impacted off-site soils; however, only one subsurface soil sample obtained from borings drilled off site exceeded the NMOCD regulatory standard for TPH and BTEX. [Phase I, II, III, and IV Site Assessments (Transwestern Pipeline Company, Roswell Compressor Station No.9)]

REGULATED UNIT SUMMARY

The Surface Impoundment Unit, consisting of Pit 1 and Pit 2, is the only regulated unit at Roswell Compressor Station No.9. During the Phase II Assessment, soil vapor extraction (SVE) performance testing indicated that biodegradation of hydrocarbons was occurring.. [Phase I, II, III, and IV Site Assessments (Transwestern Pipeline Company, Roswell Compressor Station No.9)]. A Work Plan for excavation of contaminated soil within and beneath the surface impoundments was prepared and approved by the NMED/HWB and NMOCD, on October 18, 2001. Remedial action, in the form of excavation and removal of affected soil, started on February 25,2002 at the site [Work Plan for Excavation and Removal of Affected Soil in the Former Surface Impoundment Areas (Transwestern Pipeline Company, Roswell Compressor Station No.9, October 2001)]. The excavated soils will be disposed of off-site at an NMOCD permitted landfarm facility and the excavation will be backfilled. The report of this remedial actions will be submitted to NMED after the excavation activities are completed. Further remedial actions and monitoring of the groundwater will be overseen by New Mexico OCD.

Footnotes:

[1] "Contamination" and "contaminated" 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 "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest 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.

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

| | Potential **Human Receptors** (Under Current Conditions) | | | | | | |
|---|---|---|---|---|---|---|---|
| **"Contaminated" Media** | Residents | Workers | Day-Care | Construction | Trespassers | Recreation | Food[3] |
| 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 | Yes | 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 "contaminated") as identified in #2 above.

2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). 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).

__X__ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

_____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):
There is a potential for construction worker exposure during the remedial excavation activities at the surface impoundment unit.

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

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" 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 "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

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

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

_____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s):
There is one potentially complete exposure pathway at the Facility. The potentially complete exposure pathway is that of a excavation worker during construction activities. Human exposures are controlled during excavation and construction activities by restricting access within the Facility, requiring work permits, implementing procedures that require conformance with health and safety requirements and by monitoring work activities in the Facility. Proper notification of encounters with contaminated media are part of the Facility SOPs and monitoring during construction activities and, if necessary, interim measures, and remedial actions are required to be implemented if contamination with any media is encountered.

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

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

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" 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 "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code.

Rationale and Reference(s):_____

6. Check the appropriate RCRIS 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):

YE 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 Transwestern Pipeline Company, Roswell Compressor Station No.9 facility, EPA ID # NMD986676955, located at Chaves County, New Mexico 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 03/27/08
(print) Dave Cobrain
(title) Geologist

Supervisor (signature) _____ Date 5/23/08
(print) Steve Pullen
(title) Water Resource Engineer
(EPA Region or State) New Mexico Environment Department

Locations where References may be found:

Transwestern Pipeline, Roswell Compressor Station, Highway 285, Chaves County, New Mexico.

New Mexico Environment Department, Hazardous Waste Bureau, 2905 Rodeo Park drive East, Building 1, Santa Fe, New Mexico 87505

Contact telephone and e-mail numbers

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**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.**