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: Motiva Enterprises LLC - Port Neches Terminal

Facility Address: Intersection of Spur 136 and Grigsby Ave. Port Neches, TX

Facility EPA ID #: TX980626022

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			**Groundwater is affected in one area**
Air (indoors)[2]		X		**Buildings are not located over SWMUs**
Surface Soil (e.g., <2 ft)	X			**Surface soils are affected in one area**
Surface Water		X		**Affected groundwater does not enter Neches River**
Sediment		X		
Subsurf. Soil (e.g., >2 ft)	X			**Subsurface soils are affected in one area**
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):

- **Site investigations have delineated an area of dense non-aqueous phase liquids (DNAPLs) at the facility. The DNAPLs are solvent-like in nature and are located in the subsurface in a small area of the site. Recovery of the DNAPLs is currently underway. Sampling confirms that groundwater has been affected by dissolved-phase constituents in excess of regulatory standards in the immediate vicinity of the DNAPLs. However, the dissolved-phase plume is limited in extent, and does not extend to nearby monitor wells or the Neches River.**
- **LNAPL has been found on a recurring basis at two monitoring wells near the No. 3 Dock. The LNAPL found in the uppermost saturated zone, the "X" Sand, has been characterized as a heavy oil. No constituents have been found at concentrations exceeding risk-based criteria. Current recovery consists of the use of absorbent socks since the layer of LNAPL is too thin to allow phase-separated pumping. The socks are changed out on a routine basis. Based on the most recent semi-annual sampling event (July 2002), the contaminant plume in the "X" Sand is limited to a relatively small area in the vicinity of the docks.**
- **Site investigations and groundwater monitoring at the facility are being conducted under terms of a 1988 EPA Region VI Consent Agreement/Final Order (CA/FO). The CA/FO included closure of two SWMUs. Closure activities for these units are complete and certifications reviewed by the TNRCC. Rodriguez Reservoir was clean closed. The Oil Recovery Reservoir was closed as a hazardous waste unit.**
- **Several small areas of surface contamination exist. These contain off-specification road asphalt materials from historic operations at the facility.**

References

1988 EPA Consent Agreement/Final Order dated June 27, 1988, RCRA Docket VI-722-H.

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 ~~Air indoors)~~	No	No	No	Yes	No	No	No
Soil (surface, e.g., <2 ft) ~~Surface Water Sediment~~	No	Yes	No	Yes	No	No	No
Soil (subsurface e.g., >2 ft) ~~Air (outdoors)~~	No	Yes	No	Yes	No	No	No

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)

- **Potential construction worker or company employee exposure from surface or subsurface soils that contain off-specification road asphalt material may exist. Current OSHA health & safety protocols combined with facility work permit system requirements are in place to mange potential exposures during these scenarios.**
- **Potential construction and remediation worker exposure to groundwater that contains concentrations of DNAPL constituents could occur as part of groundwater sampling, monitoring, or future remedial activities. OSHA health & safety protocols are in place to manage potential exposure during these scenarios.**

References:

[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)

- **The potential exposure from soil and groundwater pathways to construction worker or company employees is considered insignificant because of the controls in place at the facility that restrict access to soil and/or groundwater contamination. In addition, the depth to affected groundwater and subsurface soils beneath ground surface at the facility is beyond normal construction activities.**
- **Current OSHA health & safety protocols are in-place at the facility to manage potential exposures to surface soils during construction worker or company employee scenarios.**
- **Exposure to groundwater by employees or contractors during semi-annual sampling events is managed through use of OSHA health and safety protocols in-place at the facility.**
- **A manned guard gate controls access to the facility. Therefore, potential trespassers and recreational exposure scenarios are highly unlikely.**

[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):

__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 **Motiva Enterprises LLC** facility, EPA ID # **TX980626022,** located at the **Intersection of Spur 136 and Grigsby Ave in Port Neches, 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) Brenda Allen Date 8/3/04

(print) Brenda Allen

(title) Env. Specialist

Robert L Dodson 12.1.4

Supervisor (signature) Date 8/5/04

(print) RICHARD STRUSSE

(title) Environmental Manager

(EPA Region or State) TEXAS

Cathy Helms 12/1/04

Locations where References may be found:

- **EPA Region VI offices in Dallas, Texas**
- **TNRCC offices in Austin, Texas**
- **Motiva Enterprises' offices in Port Arthur, Texas**

Motiva contact-telephone and e-mail numbers

(name) **Brenda Allen** Date: **07/26/04**

(phone #) **409-989-7649**

(e-mail) **bjallen@motivaenterprises.com**

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.

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name: Motiva Enterprises LLC - Port Neches Terminal
Facility Address: Intersection of Spur 136 and Grigsby Ave. Port Neches, TX
Facility EPA ID #: TX980626022

1.Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, 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 #8 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 "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "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 "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

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. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

__X__ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):
Groundwater contamination and DNAPLs have been found at one well location. Groundwater constituents are:

Key Constituents	Appropriate Protective Levels (1)
• **1,2-dichloroethane**	**5.0E-03 mg/l**
• **1,2-dichloropropane**	**5.0E-03 mg/l**
• **1,1,2-Trichloroethane**	**5.0E-03 mg/l**
• **Vinyl Chloride**	**2.0E-03 mg/l**
• **Bis (2-Chloroethyl) ether**	**7.7E-04 mg/l**
• **2,2'-oxybis (1-Chloropropane)**	----------
• **Naphthalene**	**9.8E-01 mg/l**
• **2-Methylnaphthalene**	**2.9E-00 mg/l**
• **Phenanthrene**	**7.3E-01 mg/l**

(1) Assuming current TNRCC Risk Rule Standards for conservative Tier 1 Protective Concentration Limits (PCLs) for Class 2 groundwaters and residential exposure scenario assumptions.

References:

• **Monitor Well Sampling and Fifth Quarterly Progress Report - Star Enterprise Port Neches Terminal - GeoMonitoring Services, November 1995.**

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 appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

X If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

Rate and extent studies have confirmed the boundaries of the DNAPLs located at the facility. Dissolved-phase constituents associated with the DNAPLs are present within a limited area and do not extend to monitor wells installed at the perimeters of the DNAPL area.

References:

- **Semiannual Groundwater Monitoring Progress Report - Star Enterprise Port Neches Terminal, July 2004.**
- **Semiannual Groundwater Monitoring Progress Report - Motiva Enterprises Port Neches Terminal, January 2004.**

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[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

_____ If yes - continue after identifying potentially affected surface water bodies.

__X__ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

- **Groundwater samples taken from groundwater monitor wells in the vicinity of DNAPL contamination and Neches River do not indicate presence of either DNAPLs or dissolved-phase constituents associated with these DNAPLs.**

References:

- **Semiannual Groundwater Monitoring Progress Report - Star Enterprise Port Neches Terminal, July 2004.**
- **Semiannual Groundwater Monitoring Progress Report - Motiva Enterprises Port Neches Terminal, January 2004.**

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR
2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):

[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

__X__ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):_____

Semi-annual groundwater monitoring under the EPA approved Groundwater Quality Assessment Plan will continue until such time as the EPA agrees Motiva has fulfilled its obligations under the EPA Region VI 1988 Consent Agreement/Final Order.

The Groundwater Quality Assessment Plan was submitted July 31, 1996, and approved by the EPA on December 18, 1996.

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

__X__ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the **Motiva Enterprises LLC** facility, EPA ID # **TX980626022,** located at the **Intersection of Spur 136 and Grigsby Ave in Port Neches, Texas.** Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

_____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

_____ IN - More information is needed to make a determination.

Completed by (signature) Brenda Allen Date 8/3/04
(print) Brenda Allen
(title) Env. Specialist

Supervisor (signature) Date 8/5/04
(print) Richard Strauss
(title) Env Mgr
(EPA Region or State) Texas

Locations where References may be found:

EPA Region VI offices in Dallas, Texas
TNRCC offices in Austin, Texas
Motiva Enterprises offices in Port Arthur, Texas

Motiva contact-telephone and e-mail numbers

(name) **Brenda Allen** Date: **07/26/04**
(phone #) **409-989-7649**
(e-mail) **bjallen@motivaenterprises.com**

Enclosure C - Schedule for Achievement of GPRA Goals

Facility Name **Motiva Enterprises LLC - Port Neches Terminal**
Facility Location **Port Neches, Texas**
TNRCC Solid Waste Registration # **30017**
TNRCC Compliance Plan/Permit # **N/A**
Date of TNRCC Enforcement Order **N/A**

EPA ID # **TX980626022**
Date of EPA Enforcement Order **7/1988**

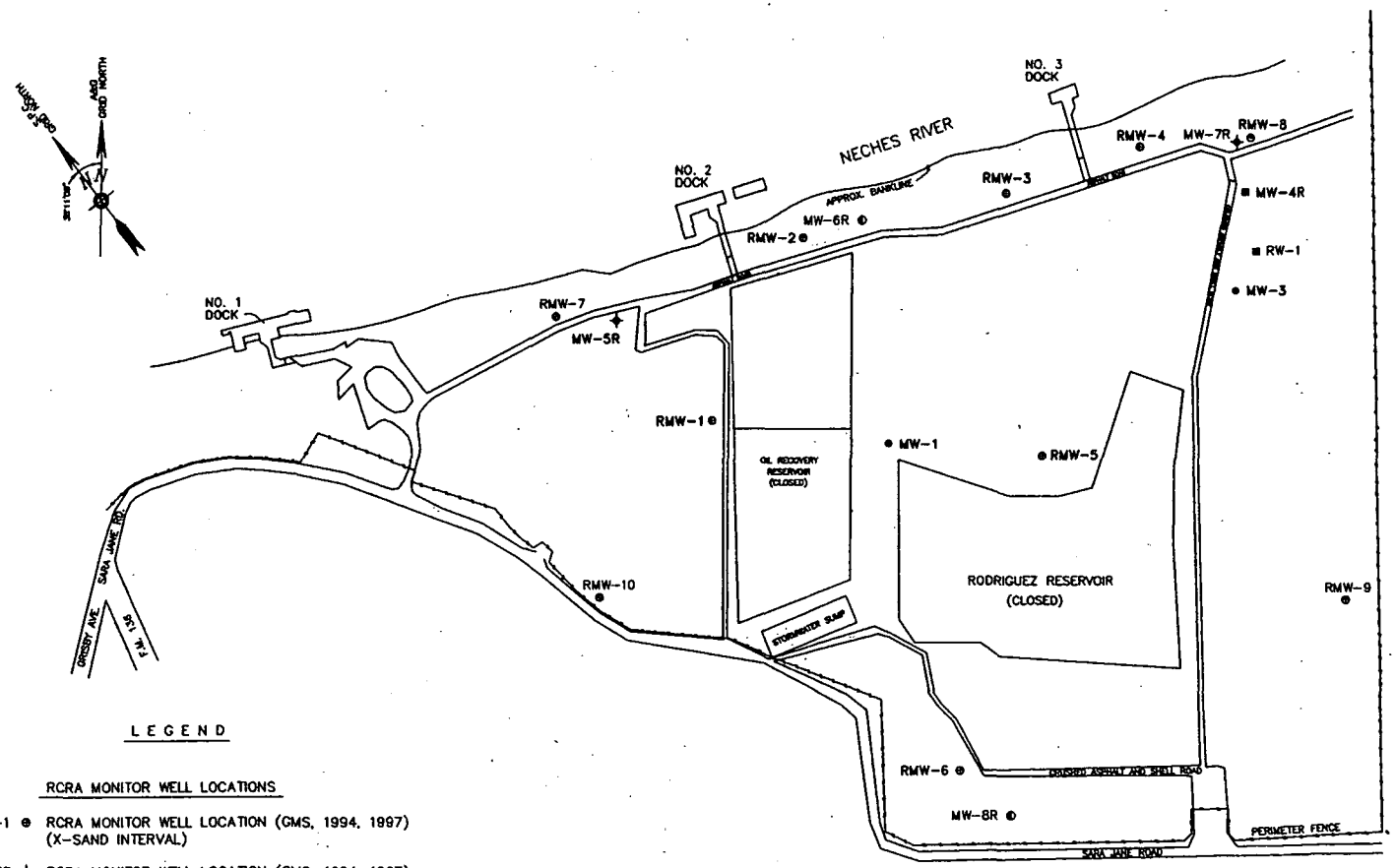
Please provide the approval date (month/day/year), submittal date or projected submittal date for Reports; the implementation date or projected implementation date for Stabilization Measures/Corrective Actions; and, the initial control date or projected control date for Human Exposures and Groundwater Releases. Projected dates for goals to occur should result in a facility-wide CA725 and CA750 determination by the year 2005. *Make copies of this table, as necessary.*

Name of RCRA Unit, SWMU, or Waste Management Area	Final RFI Report (Total extent of contamination determined)			CMS Report (n/a if CMS Report not applicable based upon the RFI Report)			CMI Report (n/a if CMI Report not applicable based upon the RFI and/or CMS Reports)			Stabilization Measures and/or Corrective Actions Implemented (yes, no, or n/a)		Human Exposures Controlled (yes, no, or n/a)		Groundwater Releases Controlled (yes, no, or n/a)	
	Date Approved	If not approved, provide date submitted	If not submitted, projected submittal date	Date Approved	If not approved, provide date submitted	If not submitted, projected submittal date	Date Approved	If not approved, provide date submitted	If not submitted, projected submittal date	If yes, implementation date	If no, projected implementation date	If yes, initial date exposures controlled	If no, projected date exposures will be controlled	If yes, initial date releases controlled	If no, projected date releases will be controlled
Unit 001 Rodriguez Reservoir	N/A			N/A			N/A			July, 1986		Oct. 1986		N/A	
Unit 002 Oil Recovery Reservoir Section A - Closed RR Std #3	N/A			N/A			N/A			Feb. 1995		July, 1995		N/A	
Unit 002 Oil Recovery Reservoir Section B - Closed RR Std #2	N/A			N/A			N/A			Feb. 1995		July, 1995		N/A	

Facility-Wide Environmental Indicators. Please indicate if the Environmental Indicators have been achieved on a facility-wide basis by circling the appropriate response in the boxes to the right (yes, no, or n/a). If yes, provide the date the Environmental Indicator was achieved. If no, provide the projected date the Environmental Indicator will be achieved. Please note that it may not be necessary to achieve all the interim goals (CMS/CMI approved or Stabilization Measures/Corrective Actions implemented) to achieve a CA 725 or CA 750 determination.

	Human Exposures Controlled CA 725	Groundwater Releases Controlled CA 750
	Yes - ~~No~~ - ~~n/a~~	~~Yes~~ - ~~No~~ - n/a
Date achieved	July, 1995	N/A
If not achieved, date projected to be achieved		

YC-172839 0



LEGEND

RCRA MONITOR WELL LOCATIONS

RMW-1 ⊕ RCRA MONITOR WELL LOCATION (GMS, 1994, 1997) (X-SAND INTERVAL)

MW-5R ✦ RCRA MONITOR WELL LOCATION (GMS, 1994, 1997) (A-SAND INTERVAL)

MW-6R ⊕ PROPOSED RCRA A-SAND MONITOR WELL LOCATION (WELL NOT COMPLETED DUE TO LACK OF PERMEABLE ZONE)

MW-1 ● RCRA MONITOR WELL LOCATION (ERT, 1986) (A-SAND INTERVAL)

RW-1 ■ RECOVERY WELL LOCATION (GMS, 1997)

NOTE:
MW4-R CONVERTED TO SERVICE AS A RECOVERY WELL ONLY

0 250 500
SCALE IN FEET

MOTIVA ENTERPRISES LLC
PORT ARTHUR REFINERY

PNT
WELL LOCATIONS
MONITOR WELL AND RECOVERY
FIGURE 1

INITIALS	DATES
DRAWN BY: MB	12/12/01
DESIGN BY:	
CHKD BY:	

YC-172839 0

NOTICE

BY	DATE	REVISIONS	NO.	APPROVED	DATE	CHANGE	B.M.	DATE
						DPOSE		
						CHANGE		

SAFETY---A LIFETIME COMMITMENT

SAFETY---A LIFETIME COMMITMENT
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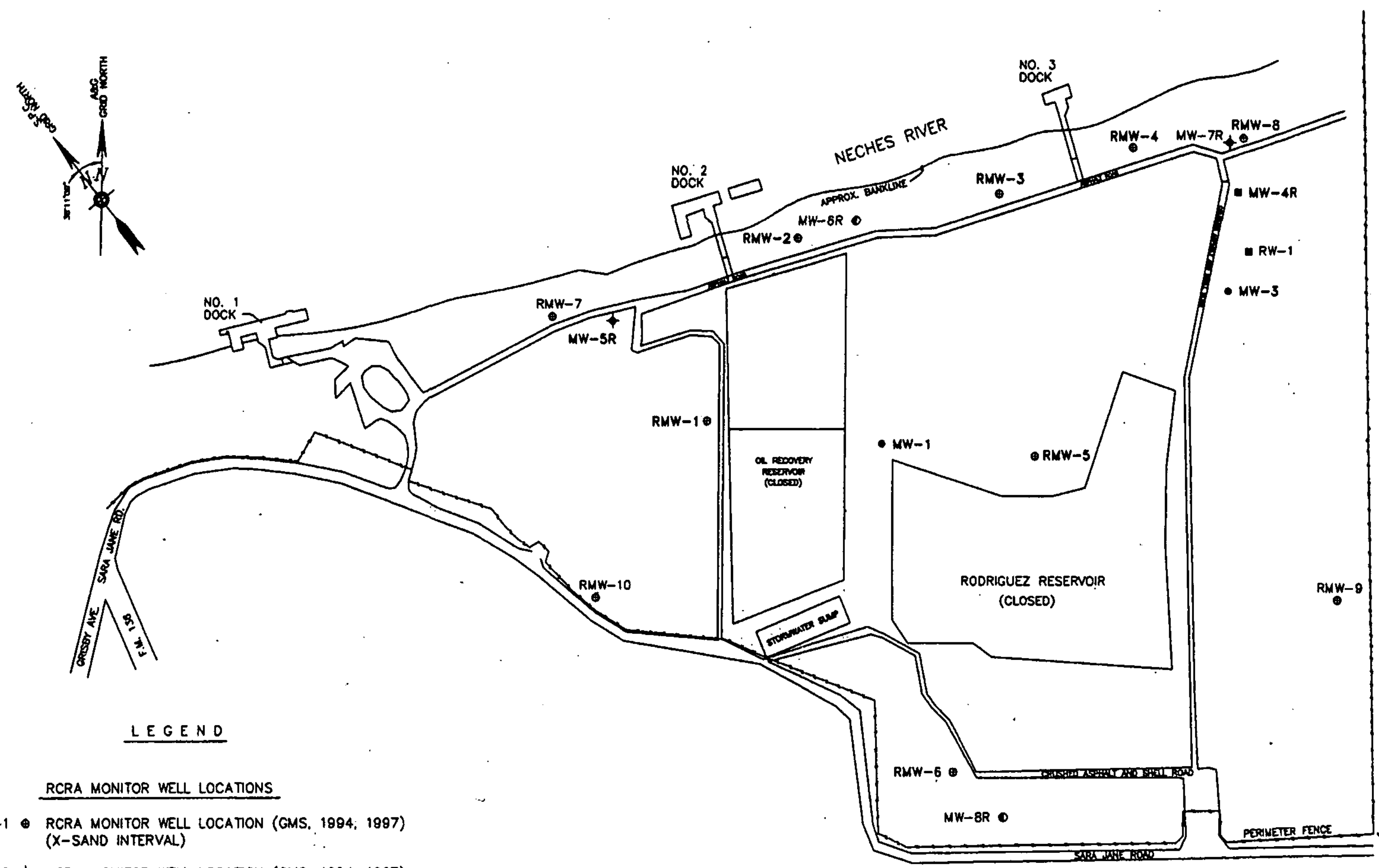

0 250 500

SCALE IN FEET

LEGEND

RCRA MONITOR WELL LOCATIONS

RMW-1 ⊕ RCRA MONITOR WELL LOCATION (GMS, 1994, 1997) (X-SAND INTERVAL)

MW-5R ✦ RCRA MONITOR WELL LOCATION (GMS, 1994, 1997) (A-SAND INTERVAL)

MW-6R ◐ PROPOSED RCRA A-SAND MONITOR WELL LOCATION (WELL NOT COMPLETED DUE TO LACK OF PERMEABLE ZONE)

MW-1 • RCRA MONITOR WELL LOCATION (ERT, 1986) (A-SAND INTERVAL)

RW-1 ■ RECOVERY WELL LOCATION (GMS, 1997)

NOTE:

MW4-R CONVERTED TO SERVICE AS A RECOVERY WELL ONLY

MOTIVA ENTERPRISES LLC

PORT ARTHUR REFINERY

PNT
WELL LOCATIONS
MONITOR WELL AND RECOVERY
FIGURE 1

NOTICE

BY	DATE	REVISIONS	NO.	APPROVED	DATE	CHARGE	B.M.	DATE

INITIALS	DATES	
DRAWN BY: MS	12/12/01	NUMBER ASSIGNED AND TRACING RECORD ENTERED
DESIGN BY:		
CHKD BY:		

YC-172839 0

SAFETY---A LIFETIME COMMITMENT