

Texas Commission on Environmental Quality

CHECKLIST WORKSHEET

IHW RCRA INTERIM STATUS CME GROUNDWATER CHECKLIST 2

Regulating Entity Name

Date :

Additional I D:

Investigator Name:

| | | | |
|-----------------------|--------------------|--|-------------------------|
| Item Number | Description | GROUNDWATER MONITORING SYSTEM (Interim Status) | |
| | Answer | Citations | Notes |
| Item Number | Description | SECTION A: INTRODUCTION | |
| | Answer | Citations | Notes |
| Item Number 1 | Description | RCRA Ground-Water Monitoring Status: Complete the table for each RCRA Waste Management Unit (WMU) (Attachment #). | |
| | Answer | Citations | Notes |
| Item Number 2 | Description | Do the locations of the monitoring wells on the site diagram(s) of the WMUs (Attachment #) compare with the locations of the wells spot-checked in the field? | |
| | Answer | Citations | Notes |
| Item Number 3 | Description | Site Location Map - (Attachment #) (indicate site location directly on map or reproduction). | |
| | Answer | Citations | Notes |
| Item Number | Description | SECTION B: MONITOR WELL SYSTEM REVIEW | |
| | Answer | Citations | Notes |
| Item Number 1 | Description | Changes to the RCRA Monitor Well System: | |
| | Answer | Citations | Notes |
| Item Number A | Description | Have any monitor wells been installed or replaced? | |
| | Answer | Citations | Notes |
| Item Number A1 | Description | If wells have been installed or replaced has a copy of the well installation diagram including lithologic logs for each new well been submitted to the TCEQ? If not, copies of these are included as (Attachment #). | |
| | Answer | Citations | Notes |
| Item Number B | Description | Have any monitor wells been designated as inactive since the last CME/O&M (still in place but not being used)? | |
| | Answer | Citations | Notes |
| Item Number B1 | Description | If YES, list: | |
| | Answer | Citations | Notes |
| Item Number C | Description | Have any monitor wells been removed/plugged? | |
| | Answer | Citations | Notes |
| Item Number C1 | Description | If YES, has the plugging report been submitted to the TCEQ? | |
| | Answer | Citations | Notes |
| Item Number C2 | Description | If YES, list and describe abandonment procedures: | |
| | Answer | Citations | Notes |
| Item Number 2 | Description | Field Observation of Monitor Wells: | |
| | Answer | Citations | 335.163(1) Notes |
| Item Number A | Description | General condition around monitor wells: | |
| | Answer | Citations | Notes |
| Item Number A1 | Description | Is access to the wells maintained? | |
| | Answer | Citations | Notes |
| Item Number A2 | Description | Are there any indications of herbicide, pesticide, or other chemical use near the well that could influence the quality of samples? | |

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| | | Answer | Citations | Notes |
|-----------------------|--------------------|---|------------------|--------------|
| Item Number A3 | Description | Are there "bumper poles/protector pipes" around the well to prevent collision damage where necessary? | | |
| | | Answer | Citations | Notes |
| Item Number B | Description | Is the monitor well identification number clearly visible? | | |
| | | Answer | Citations | Notes |
| Item Number C | Description | Is the monitor well equipped with a cap capable of being locked? | | |
| | | Answer | Citations | Notes |
| Item Number C1 | Description | If not, are there other provisions for security of well? | | |
| | | Answer | Citations | Notes |
| Item Number C2 | Description | If applicable, describe: | | |
| | | Answer | Citations | Notes |
| Item Number D | Description | Monitor Well Casing: | | |
| | | Answer | Citations | Notes |
| Item Number D1 | Description | Is there an outer protective casing? | | |
| | | Answer | Citations | Notes |
| Item Number D2 | Description | Is the casing in good condition? | | |
| | | Answer | Citations | Notes |
| Item Number E | Description | Monitor Well Surface Pad: | | |
| | | Answer | Citations | Notes |
| Item Number E1 | Description | Does the monitor well have a surface pad? | | |
| | | Answer | Citations | Notes |
| Item Number E2 | Description | Are there indications of surface water infiltration down the borehole annulus? | | |
| | | Answer | Citations | Notes |
| Item Number E3 | Description | If YES, describe the Company's actions to correct this condition: (If applicable, document indications of damage to surface seal with photographs.) | | |
| | | Answer | Citations | Notes |
| Item Number F | Description | Are water level measuring points permanently marked on each RCRA well? | | |
| | | Answer | Citations | Notes |
| Item Number G | Description | Have water level measuring points been surveyed? | | |
| | | Answer | Citations | Notes |
| Item Number G1 | Description | Date of most recent survey: | | |
| | | Answer | Citations | Notes |
| Item Number H | Description | Complete a Well Dimension Table for wells observed during this investigation. Attachment#). | | |
| | | Answer | Citations | Notes |
| Item Number 3 | Description | Verification of Groundwater flow directions and well placement | | |
| | | Answer | Citations | Notes |
| Item Number A | Description | Examine operator's records to make the following determinations: | | |
| | | Answer | Citations | Notes |
| Item Number A1 | Description | For units in interim status detection monitoring, does the operator evaluate the Ground-Water flow direction in the uppermost aquifer on at least an annual basis to verify well placement? | | |
| | | Answer | Citations | Notes |
| | | | 335.112(a)(5) | |

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| Item Number A2 | Description | For units in interim status assessment monitoring, does the operator determine, on a quarterly basis, the Groundwater flow direction in the uppermost aquifer for use in determining the rate and direction of migration of hazardous constituents? | |
| | Answer | Citations | 335.112(a)(5) Notes |
| Item Number B | Description | Are the monitor wells of the well system properly designated as to upgradient (or background) or downgradient/point of compliance relative to Ground-Water flow direction? | |
| | Answer | Citations | Notes |
| Item Number C | Description | Describe operator's actions to address apparent well location errors in response to 40 CFR 265.93(f). | |
| | Answer | Citations | Notes |
| Item Number | Description | SECTION C: MONITORING SYSTEM COMPLIANCE WITH INTERIM STATUS RULES | |
| | Answer | Citations | Notes |
| Item Number 1 | Description | Does the site have units/monitoring systems under Interim Status Detection Monitoring? (if NO, Section C question 1 is N/A): | |
| | Answer | Citations | Notes |
| Item Number A | Description | Upgradient/background monitor well(s) | |
| | Answer | Citations | Notes |
| Item Number A1 | Description | Does the monitoring system consist of at least one upgradient well capable of yielding ground-water samples for analysis? | |
| | Answer | Citations | 265.91(a)(1) Notes |
| Item Number A2 | Description | List upgradient/background well(s) in CME Investigation as Attachment #. | |
| | Answer | Citations | Notes |
| Item Number A3 | Description | Is number, location, and depth of the upgradient well(s) sufficient to yield ground-water samples that are representative of background ground-water quality in the uppermost aquifer and not affected by the facility? | |
| | Answer | Citations | 265.91(a)(1) Notes |
| Item Number B | Description | Downgradient wells | |
| | Answer | Citations | Notes |
| Item Number B1 | Description | Does the monitoring system consist of at least three downgradient wells installed at the limit of the WMU? | |
| | Answer | Citations | 335.112(a)(5) Notes |
| Item Number B2 | Description | List downgradient wells in CME Investigation as Attachment #. | |
| | Answer | Citations | Notes |
| Item Number B3 | Description | Is number, locations, and depths of downgradient wells sufficient to ensure immediate detection of any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the WMU to the uppermost aquifer? | |
| | Answer | Citations | 265.92(a)(2) Notes |
| Item Number C | Description | Are well casings screened or perforated, and packed with gravel or sand where necessary, to enable sample collection at depths where appropriate aquifer flow zones exit? | |
| | Answer | Citations | 265.91(c) Notes |
| Item Number D | Description | Is the annular space above the sampling depth sealed with a suitable material (e.g., bentonite slurry) to prevent contamination of samples and the ground-water? | |
| | Answer | Citations | 265.91(c) Notes |

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| Item Number 2 | Description | Interim Status Assessment Monitoring: Does the site have units/monitoring systems under Interim Status Assessment Monitoring? (If no units, Section C2 is N/A): | |
| | | Answer | Citations |
| | | | Notes |
| Item Number A | Description | Does the monitoring system allow the owner/operator to determine the rate and extent of migration of the hazardous waste and hazardous waste constituents in ground-water and the concentration of hazardous waste or hazardous waste constituents in ground-water? | |
| | | Answer | Citations |
| | | | 265.93(d)(4) Notes |
| Item Number B | Description | List assessment monitoring parameters as Attachment # (analyzed on a quarterly basis): | |
| | | Answer | Citations |
| | | | Notes |
| Item Number 3 | Description | Has an enforcement order been issued to the facility that contains provisions or technical recommendations (TR) that address groundwater or groundwater monitoring? | |
| | | Answer | Citations |
| | | | Notes |
| Item Number A | Description | Is the facility compliant with all provisions of the enforcement order concerning ground-water monitoring, assessment and corrective action? | |
| | | Answer | Citations |
| | | | Notes |