

Tier 1 Accuracy Review Checklist

(Version 2 Software)

The following document is used to review Tier 1 Reports and conversions to Tier 1 Reports. The following questions are to be answered based on the information presented in the Tier 1 Report, SCR, and LUST file. Responses may fall into the following categories:

Y- YES. Information meets qualifications as intended or presents the correct information.

N- NO.

NA- Not Applicable. Response / information is not required.

Unk- Unknown. Information is insufficient to draw conclusions

1- Information is inadequate

2- Information is inaccurate

3- Information is not provided

LUST/Reg. No.: _____ Site Name/Location: _____

Date Tier 1 Report Received: _____ Date Tier 1 Review Completed: _____

Reviewer: _____ Results: Accepted Rejected

Comment Letter Date: _____ Tier 1 Classification: NFA Tier 2

Current Site Conditions (check applicable items, check contaminant source(s))

Active USTs Inactive USTs Removed USTs

Gasoline/Diesel Waste Oil Other

Are commingled plumes present? Y N

If yes, enter LUST number(s): _____

Is free product present? Y N Type: _____

Date Discovered: _____ Date of first FPRR: _____ Date of last FPRR: _____

Dominant Lithology (check)

Clay Silt/Clay Silt/Sand Sand Sand/Gravel Gravel

Bedrock-Granular Bedrock-Nongranular

Minimum depth to groundwater: _____ Minimum depth to bedrock _____

Monitoring well #'s with SWL below unconsolidated/bedrock interface: _____

SUMMARY

File contains sufficient information to complete Tier 1 review? Y N

Comments/Summary/Action Items Needed (list):

Summary of draft letters to be sent:

Maximum Soil and Groundwater Concentrations

Acceptable Unacceptable (see below)

IF TEH analysis is required for this site, has it been conducted?

Y N NA 1 2 3

For SCR conversions, if TEH in soil exceeds the Tier 1 levels, has TEH in groundwater been analyzed?

Y N NA 1 2 3

Have the source samples/locations been adequately identified?

Y N 1 2 3

If not, identify the correct soil and groundwater maximums below:

Soil Maximums						
Chemicals	Date of Sample	Well/Boring #	Concentration (mg/kg)	Default used?	Source of information (closure, site check, etc.)	Date of Report
Group 1	B					
	T					
	E					
	TPH					
Group 2	TEH					

Groundwater Maximums						
Chemicals	Date of Sample	Well/Boring #	Concentration (mg/kg)	Default used?	Source of information (closure, site check, etc.)	Date of Report
Group 1	B					
	T					
	E					
	X					
	TPH					
Group 2	TEH-d					
	TEH-wo					

Hydraulic Conductivity

Acceptable Unacceptable (see below)

Have data and calculations used to determine K been provided?

Y N NA 1 2 3

Based on the data and calculations provided and soil types present, is reported K value representative of site conditions?

Y N NA 1 2 3

Explain why K value was recalculated: _____

Hydraulic Conductivity Data					
Reported K			Recalculated K (m/d)	Total Dissolved Solids	
Test Date	MW#	K (m/d)		MW#	TDS (mg/L)

Default Assumptions for K:

- 0.45 m/d at sites where reported K was not representative and cannot be recalculated.
- 5 m/d at exempt granular bedrock where K too high to measure.
- Reported or recalculated K at exempt granular bedrock where K >0.44 m/d.

- 0.44 m/d at exempt granular bedrock where reported or recalculated K was <0.44 m/d.
Default Assumption for TDS when not measured: <2500 mg/L.

Receptor Identification

Acceptable Unacceptable (see below)

Well Survey

- Was a well survey conducted within 1,000' of contaminant source? Y N Unk 1 2 3
- Was a property owner/pedestrian survey conducted to locate wells within 300' of contaminant sources? Y N Unk 1 2 3
- Are drinking water wells present? Y N Unk 1 2 3
- Are non-drinking water wells present? Y N Unk 1 2 3
- Explain Deficiencies: _____

Vapor to Enclosed Space Receptors

- Explosive vapors have been reported in the past? Y N
- Spill Information: _____ Spill #: _____
- Date: _____ Product Spilled: _____ DNR Notified: Y N
- Was an explosive vapor survey of the nearest subsurface enclosed spaces in all directions and in places with a history of vapor problems conducted? Y N Unk 1 2 3
- An explosive vapor survey has been conducted using proper equipment? Y N Unk 1 2 3
- Explosive vapors are present? Y N Unk 1 2 3
- Was a confined space survey conducted to a distance of 200' from the contaminant sources? Y N Unk 1 2 3
- Basements are present within 200' of the sources? Y N Unk 1 2 3
- Sanitary sewers are present within 200' of the sources? Y N Unk 1 2 3
- Explain Deficiencies: _____

- Was soil gas sampling conducted to clear soil vapor pathway? Y N Unk 1 2 3
- If SCR conversion, was soil gas sampling conducted to
- clear the groundwater vapor pathway? Y N Unk 1 2 3
 - clear the soil leaching groundwater vapor pathway? Y N Unk 1 2 3
- List Deficiencies: _____

Plastic Water Line Receptors

- Is groundwater less than 20' beneath the surface? Y N 1 2 3
- If yes, was a plastic water line receptor survey conducted to a distance of 200' from the sources? Y N Unk 1 2 3
- Are there any plastic water line mains within 200'? Y N Unk 1 2 3
- Are there any plastic water service lines within 200'? Y N Unk 1 2 3
- Explain Deficiencies: _____

Surface Water Body Receptors

- Was a surface water body receptor survey conducted to a distance of 200' from the contaminant sources? Y N Unk 1 2 3
- Is there a surface water body within 200 feet of the source? Y N NA 1 2 3

Was a petroleum sheen observed on the surface water body?

Y N NA 1 2 3

Has the designation of surface water body been provided?

Y N NA 1 2 3

Explain Deficiencies: _____

I. TIER 1 REPORT - BODY

Title Page

Y N NA 1 2 3

List Deficiencies: _____

Site Data Summary (pg. 2)

Y N NA 1 2 3

List Deficiencies: _____

Pathway Evaluation Summary (pg. 3)

Y N NA 1 2 3

List Deficiencies: _____

Tier 1 Report Checklist (pg. 4)

Y N NA 1 2 3

List Deficiencies: _____

Site History (pg. 5)

Y N NA 1 2 3

List Deficiencies: _____

Current Site Conditions (pg. 6)

Y N NA 1 2 3

List Deficiencies: _____

Sampling Results (pg. 7-10)

1. Field Screening

Y N NA 1 2 3

2. Soil Analytical Data

Y N NA 1 2 3

3. Groundwater Analytical Data

Y N NA 1 2 3

4. Soil Gas Analytical Data

Y N NA 1 2 3

5. Groundwater Elevations

Y N NA 1 2 3

6. Hydraulic Conductivity

Y N NA 1 2 3

List Deficiencies: _____

Receptor Survey (pg. 11-12)

1. Groundwater Well Survey

Y N NA 1 2 3

2. Enclosed Space / Conduit Survey

Y N NA 1 2 3

3. Surface Water Survey

Y N NA 1 2 3

List Deficiencies: _____

II. APPENDICES

Topographic Map Y N NA 1 2 3

Site Plan Map Y N NA 1 2 3

Site Vicinity Map Y N NA 1 2 3

Field Screening Map Y N NA 1 2 3

Soil Contamination Maps Y N NA 1 2 3

Groundwater Contamination Plume Maps Y N NA 1 2 3

Groundwater Flow Direction Map Y N NA 1 2 3

Well Survey Map Y N NA 1 2 3

Enclosed Space and Conduit Map Y N NA 1 2 3

Surface Water Map Y N NA 1 2 3

Tank and Line Tightness Test Results Y N NA 1 2 3

Laboratory Data Sheets Y N NA 1 2 3

Soil Boring Logs Y N NA 1 2 3

Hydraulic Conductivity Measurements Y N NA 1 2 3

Well Logs Y N NA 1 2 3

Pathway Evaluation Worksheet (required if software not used) Y N NA 1 2 3

List Deficiencies: _____

III. CORRECTIVE ACTIONS

Declaration of Restrictive Covenants / Institutional Controls

Form is dated? Y N NA 1 2 3

Description of restrictions is provided? Y N NA 1 2 3

Name of declarant is entered? Y N NA 1 2 3

Authorizing agent affixed signature? Y N NA 1 2 3

Form is notarized? Y N NA 1 2 3

Legal description of property provided? Y N NA 1 2 3

Does institutional control prohibit/restrict use to appropriate distance from source? Y N NA 1 2 3

Ordinance accepted? Y N NA 1 2 3

Abandoned Water Well Plugging Records

DNR Form 542-1226 complete? Y N NA 1 2 3

Water Supply (DNR) / Designated County Agent Notification

DNR Form 542-1530 complete? Y N NA 1 2 3

Have site maps showing contamination been provided? Y N NA 1 2 3

Utility Company Notification

DNR Form 542-1531 complete? Y N NA 1 2 3

Have site maps showing contamination been provided? Y N NA 1 2 3

Report of Plastic Water Line Removal and/or Relocation

Report of the replacement/relocation provided as an Appendix to the Tier 1 Report? Y N NA 1 2 3

Documentation of Utility Company approval for replacement /relocation Y N NA 1 2 3

provided?

If plastic water lines were replaced, are construction details (new pipe material, backfill material, burial depth) provided?

Y N NA 1 2 3

Have relocated plastic water lines been moved at least 200 feet from contaminant sources?

Y N NA 1 2 3

Documentation that relocation area is free of contamination has been provided?

Y N NA 1 2 3

Construction details (backfill material, burial depth) of relocated plastic water lines are provided?

Y N NA 1 2 3

Scaled site diagram which shows pertinent site features, soil and groundwater contamination, former and current location of plastic water lines, location of new non-plastic water lines provided?

Y N NA 1 2 3

Report of Overexcavation Activities

Report of the excavation provided as an Appendix to the Tier 1 report?

Y N NA 1 2 3

Field screening conducted prior to over excavation to estimate extent of soil contamination?

Y N NA 1 2 3

Was adequate field screening performed during the OE activities to identify maximum concentrations? (One soil sample for field screening every 100 square feet of the base and the each sidewall)

Y N NA 1 2 3

Was adequate confirmation soil sampling performed during the OE activities? (One soil sample for laboratory analysis every 400 square feet of the base and 400 square feet of each sidewall)

Y N NA 1 2 3

Is excavation less than 400 square feet of exposed surface?

Y N NA 1 2 3

If the excavation is less than 400 square feet of exposed surface, was a minimum of one soil sample from each sidewall and one soil sample from the base collected and analyzed by a laboratory?

Y N NA 1 2 3

Results of visual observations and field screening presented?

Y N NA 1 2 3

Copies of the analytical data for the soil samples provided?

Y N NA 1 2 3

A scaled site diagram with the following illustrated:

Area of the original contamination

Y N NA 1 2 3

Dimensions and limits of the overexcavation

Y N NA 1 2 3

Field screening sample locations

Y N NA 1 2 3

Location of soil samples submitted for laboratory analysis

Y N NA 1 2 3

Groundwater sampling borehole and well locations

Y N NA 1 2 3

Pertinent site features (buildings, roads, utilities, etc.)

Y N NA 1 2 3

Groundwater flow direction

Y N NA 1 2 3

Soil samples shipped to the lab within 72 hours of collection?

Y N NA 1 2 3

Iowa certified laboratory used?

Y N NA 1 2 3

Was the appropriate OA-1 and or OA-2 analysis conducted?

Y N NA 1 2 3

Documentation provided that soil was properly disposed in accordance with 567-chapters 100, 101, 102, 120, and 121?

Y N NA 1 2 3

Land application form documentation provided?

Y N NA 1 2 3