

APPENDIX B
DCRBCA REPORT FORMS

Risk-Based Corrective Action For Petroleum Releases At Underground Storage Tank Sites

(DCRBCA TIER 1 REPORT FORMS)

FACILITY NAME:	
WARD NAME:	
LUST CASE NO.:	
FACILITY ID NO.:	
SUBMITTAL DATE:	
PREPARED BY:	
REVIEWED BY:	

DCRBCA REPORT

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TIER 1 FORMS

Form No.	Description	Check box if included
1.	Executive Summary	<input type="checkbox"/>
2.	Facility Information	<input type="checkbox"/>
3.	Site Classification Scenarios	<input type="checkbox"/>
4.	Site Description	<input type="checkbox"/>
5.	Land Use	<input type="checkbox"/>
6.	Chronology of Events	<input type="checkbox"/>
7.	Underground Storage Tank Type	<input type="checkbox"/>
8.	Release Characterization	<input type="checkbox"/>
9.	Free Product	<input type="checkbox"/>
10.	Site Stratigraphy and Hydrogeology	<input type="checkbox"/>
11.	Groundwater and Surface Water Use	<input type="checkbox"/>
12.	Analytical Data Summary for Surficial Soil	<input type="checkbox"/>
13.	Analytical Data Summary for Subsurface Soil	<input type="checkbox"/>
14.	Analytical Data Summary for Groundwater	<input type="checkbox"/>
15.	Natural Attenuation Parameters	<input type="checkbox"/>
16.	Site Conceptual Exposure Scenario	
	On-site Receptors	
	On-site Resident (Child and Adult)	<input type="checkbox"/>
	On-site Commercial Worker	<input type="checkbox"/>
	On-site Construction Worker	<input type="checkbox"/>
	Off-site Receptors	
	Off-site Resident (Child and Adult)	<input type="checkbox"/>
	Off-site Commercial Worker	<input type="checkbox"/>
	Off-site Construction Worker	<input type="checkbox"/>
17.	Comparison of Tier 1 RBSLs with Representative Site Concentrations	<input type="checkbox"/>
	On-site Receptors	<input type="checkbox"/>
	On-site Resident Child	<input type="checkbox"/>
	On-site Resident Adult	<input type="checkbox"/>
	On-site Commercial Worker	<input type="checkbox"/>
	On-site Construction Worker	<input type="checkbox"/>
	Off-site Receptors	<input type="checkbox"/>
	Off-site Resident Child	<input type="checkbox"/>
	Off-site Resident Adult	<input type="checkbox"/>
	Off-site Commercial Worker	<input type="checkbox"/>
	Off-site Construction Worker	<input type="checkbox"/>

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TIER 1 FORMS (Continued)

Form No.	Description	Check box if included
18.	Tier 1 Groundwater Resource Protection Target Concentrations	<input type="checkbox"/>
19.	Tier 1 Stream Protection Target Concentrations	<input type="checkbox"/>
20.	Tier 1 Applicable Target Levels for Various Media	<input type="checkbox"/>
21.	Tier 1 Conclusions and Recommendations	<input type="checkbox"/>
22.	References and Protocols	<input type="checkbox"/>

TIER 2A FORMS

23.	Tier 2A Fate and Transport Parameters	<input type="checkbox"/>
24.	Justification for Changing Tier 2A Fate and Transport Parameters	<input type="checkbox"/>
25.	Tier 2A Exposure Factors	<input type="checkbox"/>
26.	Justification for Changing Tier 2A Exposure Factors	<input type="checkbox"/>
27.	Comparison of Tier 2A SSTLs with Representative Site Concentrations	
	On-site Receptors	
	On-site Resident Child	<input type="checkbox"/>
	On-site Resident Adult	<input type="checkbox"/>
	On-site Commercial Worker	<input type="checkbox"/>
	On-site Construction Worker	<input type="checkbox"/>
	Off-site Receptors	
	Off-site Resident Child	<input type="checkbox"/>
	Off-site Resident Adult	<input type="checkbox"/>
	Off-site Commercial Worker	<input type="checkbox"/>
	Off-site Construction Worker	<input type="checkbox"/>
28.	Tier 2A Groundwater Resource Protection Target Concentrations	<input type="checkbox"/>
29.	Tier 2A Stream Protection Target Concentrations	<input type="checkbox"/>
30.	Tier 2A Applicable Target Levels for Various Media	<input type="checkbox"/>
31.	Tier 2A Conclusions and Recommendations	<input type="checkbox"/>

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All maps submitted to the Division must include a bar scale, legend, north arrow, location of all known soil boring and monitoring wells, and date of map, where appropriate.

ATTACHMENTS

Attachment No.	Description	Check box if included
1.	Topographic Map	<input type="checkbox"/>
2.	Site Map with Utility Locations	<input type="checkbox"/>
3.	Land Use Map (Radius of 500 feet)	<input type="checkbox"/>
4.	Area Map: with detailed land use in the vicinity of the site (at least 500 feet in the downgradient direction and one property deep on all other sides including across the street)	<input type="checkbox"/>
5.	Site Map with UST Location(s)	<input type="checkbox"/>
6.	Representative Soil Boring Logs: with monitoring well screen interval, size, and depth (also indicate sample depths, field screening results, and initial water level)	<input type="checkbox"/>
7.	Representative Soil Boring Logs: cross-section showing the stratigraphy of the site	<input type="checkbox"/>
8.	Area Geologic Map	<input type="checkbox"/>
9.	Area Map with Well Locations: within one-half mile radius of the site (the wells on the map must be labeled). Maps must also indicate the location of streams, lakes, etc., within a 500 foot radius of the site.	<input type="checkbox"/>
10.	Groundwater Gradient Map: contoured map with the predominant flow direction from the most recent sampling event (add multiple maps if the flow direction fluctuates)	<input type="checkbox"/>
11.	Soil and Groundwater Concentration Maps: for benzene, MTBE, total BTEX, and Total PAHs from the most recent sampling event	<input type="checkbox"/>
12.	Soil and Groundwater Contour Maps: for benzene, MTBE, total BTEX, and Total PAHs from the most recent sampling event	<input type="checkbox"/>
13.	Time vs. Concentration Trend Maps: for benzene, MTBE, and total BTEX if four or more sampling events have occurred per well	<input type="checkbox"/>
14.	Map Identifying Point(s) of Exposure: for both current and future conditions	<input type="checkbox"/>
15.	Historical Groundwater Analytical and Gauging Data	<input type="checkbox"/>
16.	Representative Concentrations	<input type="checkbox"/>

OTHER ATTACHMENTS:

LUST CASE NO.:

FACILITY ID NO.:

SUBMITTAL DATE:

PREPARED BY:

EXECUTIVE SUMMARY

Facility name:

Facility address:

Status of facility:

Active

Inactive

Ground surface condition:

Estimated volume of product released:

Is native soil impacted?

On-site

Off-site

Is groundwater impacted?

On-site

Off-site

Has the source of release been identified?

Has free product ever been detected?

YES

NO

Was free product removed?

YES

NO

Was free product detected in the most recent sampling event?

YES

NO

Has surface water been impacted by the release?

YES

NO

Shallowest depth to groundwater:

Average depth to groundwater:

Has a drinking water supply well been impacted by this release?

YES

NO

UNKNOWN

RECOMMENDATIONS

TIER 1

- No further action under Tier 1
- Compliance Monitoring
- Remediate to Tier 1 RBSLs to achieve no further action
- Perform interim remedial action and then re-evaluate
- Perform Tier 2A Evaluation

TIER 2A

- No further action under Tier 2A
- Compliance Monitoring
- Remediate to Tier 2A SSTLs to achieve no further action
- Perform interim remedial action and then re-evaluate
- Perform Tier 2B Evaluation

ADDITIONAL NOTES

Recommended attachments: None.

LUST CASE NO.:

FACILITY ID NO.:

SUBMITTAL DATE:

PREPARED BY:

FACILITY INFORMATION

Facility name:

Facility address:

Facility phone number:

Tank owner:

Tank owner's address:

Tank owner's phone number:

Property owner:

Property owner's address:

Property owner's phone number:

REPORT PREPARED BY

I certify that the DCRBCA evaluation as stated in this report was prepared under my supervision. I am experienced in the concepts and procedures of risk assessment and risk management as they relate to the DCRBCA evaluation.

DCRBCA Evaluator

Date

Printed Name

Company Name and Telephone Number

ADDITIONAL NOTES

Recommended attachments: Topographic map

LUST CASE NO.:

FACILITY ID NO.:

SUBMITTAL DATE:

PREPARED BY:

SITE CLASSIFICATION SCENARIOS

Site Classification Scenario	YES	NO	Recommended Initial Response Actions
Classification 1: Immediate threat to human health, safety, or sensitive environmental receptors.			Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:
1.1 Vapor accumulation in structures: Explosive levels or concentrations of vapors that could cause acute health effects are present in a residence or other building	<input type="checkbox"/>	<input type="checkbox"/>	Evacuate occupants and begin abatement measures (e.g., subsurface ventilation, building pressurization).
1.2 Vapor accumulation in utility lines: Explosive levels of vapors are present in subsurface utility systems, but no other buildings or residences are impacted	<input type="checkbox"/>	<input type="checkbox"/>	Evacuate immediate vicinity, begin abatement measures (e.g., ventilation).
1.3 Free product release: Free product is present in significant quantities at ground surface, on surface water bodies, in utilities, or in surface water runoff.	<input type="checkbox"/>	<input type="checkbox"/>	Prevent further free product migration by appropriate containment measures, institute free-product recovery, restrict area access.
1.4 Public water supply impact: An active public water supply well, public water supply line, public surface water intake, or private drinking water well is impacted or immediately threatened.	<input type="checkbox"/>	<input type="checkbox"/>	Notify users, provide alternate water supply, hydraulically control contaminated water, and treat water at point-of-use.
1.5 High ambient vapor concentrations: Ambient vapor/particulate concentrations exceed concentrations of concern from an acute exposure or safety viewpoint.	<input type="checkbox"/>	<input type="checkbox"/>	Install a vapor barrier (e.g., capping, foam), remove the source, or restrict access to affected area.
1.6 Ecological impact: A sensitive habitat or resource (e.g., economically important species, threatened and endangered species, sport fish) is impacted and affected.	<input type="checkbox"/>	<input type="checkbox"/>	Minimize extent of impact by containment measures, and implement habitat management to minimize exposures.
Indicate Site Classification:			

ADDITIONAL NOTES

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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SITE CLASSIFICATION SCENARIOS

Site Classification Scenario	YES	NO	Recommended Initial Response Actions
<p>Classification 2: Short-term threat, (0-2 years), to human health, safety, or sensitive environmental receptors.</p>			<p>Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:</p>
<p>2.1 Potential vapor accumulation in structures: There is a potential for explosive vapor levels or concentrations of vapors that could cause acute health effects to accumulate in residence or other buildings.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Assess the potential for vapor migration (through monitoring/modeling) and remove source, if necessary, or install a vapor migration barrier.</p>
<p>2.2 Contaminated soil in proximity to receptors: Shallow contaminated soils are exposed and open to public access, and dwellings, parks, playgrounds, day-care centers, schools, or similar use facilities are within 500 feet (152 meters) of those soils.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Remove soils, cover area, or restrict access.</p>
<p>2.3 Non-potable water supply well impacted: A non-potable water supply well is impacted or immediately threatened.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Notify owner/user. Evaluate need for point-of-use water treatment, hydraulic control, or alternate water supply.</p>
<p>2.4 Potential impact to water supply well producing from impacted interval: Groundwater is impacted, and a public or domestic water supply well producing from the impacted aquifer is located within 2 years projected groundwater travel time from the down gradient edge of the dissolved plume.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Institute monitoring. Evaluate if monitored natural attenuation is sufficient or if hydraulic control is needed. MTBE contamination needs to be considered.</p>
<p>2.5 Potential impact to water supply well not producing from impacted interval: Groundwater is impacted, and a public or domestic water supply well producing from a different interval is within the known area of contamination.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Monitor groundwater well quality and evaluate if control is necessary to prevent vertical migration to the supply well.</p>
<p>2.6 Plume discharge to surface water or other sensitive habitat: Impacted surface water, storm water, or groundwater discharges within 500 feet (152 meters) of a sensitive habitat, or surface water body used for human drinking water or contact recreation.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Begin containment measures. Restrict access to areas near discharge. Evaluate magnitude and impact of the discharge.</p>

Indicate Site Classification:

ADDITIONAL NOTES

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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SITE CLASSIFICATION SCENARIOS

Site Classification Scenario	YES	NO	Recommended Initial Response Actions
<p>Classification 3: Long-term threat, (>2 years), to human health, safety, or sensitive environmental receptors.</p>			<p>Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:</p>
<p>3.1 Potential leachate migration: Soil is impacted, and depth from impacted soil to the first potable aquifer is less than 50 feet (15 meters).</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Monitor groundwater and determine the potential for future migration of chemical(s) of concern to the groundwater.</p>
<p>3.2 Potential impact to potable water well producing from impacted interval: Groundwater is impacted, and potable water supply wells producing from the impacted interval are located more than 2 years projected groundwater travel time from the dissolved plume.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Monitor the dissolved plume and evaluate the potential for monitored natural attenuation and the need for hydraulic control.</p>
<p>3.3 Potential impact to non-potable water well producing from impacted interval: Groundwater is impacted, and non-potable water supply wells producing from the impacted interval are located more than 2 years projected groundwater travel time from the downgradient edge of the dissolved plume.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Identify water usage of well, assess the effect of potential impact, monitor the dissolved plume, and evaluate whether monitored natural attenuation or hydraulic control are appropriate control measures.</p>
<p>3.4 Potential impact to water well not producing from impacted interval: Groundwater is impacted, and water supply wells that do not produce from the impacted interval are located within the extent of chemical(s) of concern.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Monitor the dissolved plume, notify the user, determine the potential for vertical migration, and determine if any impact is likely.</p>
<p>3.5 Potential surface water or ecological impact: Impacted surface water, storm water, or groundwater discharges within 1500 feet (457 meters) of a sensitive habitat, or surface water body used for human drinking water or contact recreation.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Investigate current impact on sensitive habitat or surface water body, restrict access to area of discharge, if necessary, and evaluate the need for containment/control measures.</p>
<p>3.6 Contaminated soils exposed: Shallow contaminated soils are exposed and open to public access, and dwellings, parks, playgrounds, day-care centers, schools, or similar use facilities are more than 500 feet (152 meters) away from those soils.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Restrict access to impacted soils.</p>
<p>Indicate Site Classification:</p>			

ADDITIONAL NOTES

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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SITE CLASSIFICATION SCENARIOS

Site Classification Scenario	YES	NO	Recommended Initial Response Actions
<p>Classification 4: No demonstrable long-term threat human health, safety, or sensitive environmental receptors.</p>			<p>Notify appropriate local and other authorities, property owners, and potentially affected parties, and evaluate the need to:</p>
<p>4.1 Impact to non-potable aquifer: Non-potable aquifer with no existing local use impacted.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Monitor groundwater and evaluate effect of monitored natural attenuation on dissolved plume migration.</p>
<p>4.2 Low potential for leachate from soils to groundwater: Soil is impacted and the impacted soil is located greater than 50 feet (15 meters) above the nearest groundwater.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Monitor groundwater and evaluate effect of monitored natural attenuation on leachate migration.</p>
<p>4.3 Low potential for water supply well impact: Groundwater is impacted and wells are located down-gradient outside the known extent of chemical(s) of concern, and they produce from a non-impacted interval.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Monitor groundwater and evaluate effect of monitored natural attenuation on dissolved plume migration.</p>
<p>Indicate Site Classification:</p>			

ADDITIONAL NOTES

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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SITE DESCRIPTION

Site Status:

- Operating as a gasoline station
- Not operating, with tanks in place _____
- Temporarily out of service from _____ to _____
- Permanently out of service. Tanks permanently closed in _____ Currently site used as _____

Ground Surface Condition:

- Unpaved
- Paved % area paved _____ Materials _____
- Any visible cracks in the pavement? YES NO

Subsurface Utilities:

In the space provided for additional notes, please indicate the location and distance to the nearest utility access point (manhole).
 Have the utilities been screened for vapor levels? YES NO If YES, attach documentation of vapor monitoring results.
 In the space provided for additional notes, please indicate the location of the nearest sump and dewatering well.

Indicate which of the following utilities currently act as conduits or are potentially liable to become conduits under the columns entitled "Impacted by release," and "Potentially Impacted by Release," respectively.

	Depth [feet]	Type of material	Flow direction	Impacted by release	Potentially impacted by release
<input type="checkbox"/> Sanitary sewer	_____	_____	_____	_____	_____
<input type="checkbox"/> Covered storm sewer	_____	_____	_____	_____	_____
<input type="checkbox"/> Open ditch	_____	_____	_____	_____	_____
<input type="checkbox"/> Water line	_____	_____	_____	_____	_____
<input type="checkbox"/> Gas line	_____	_____	_____	_____	_____
<input type="checkbox"/> Electric line	_____	_____	_____	_____	_____
<input type="checkbox"/> Telephone line	_____	_____	_____	_____	_____

Current Status of Excavated Soil:

If any USTs or ASTs were over-excavated, discuss the status of the excavated soil.

	Date	Quantity	Location
<input type="checkbox"/> Stockpiled On-site	_____	_____	_____
<input type="checkbox"/> Disposed Off-site	_____	_____	_____
<input type="checkbox"/> Used (as fill material, etc.) On-site	_____	_____	_____
<input type="checkbox"/> Used as Road Base	_____	_____	_____
<input type="checkbox"/> Land Farm	_____	_____	_____
<input type="checkbox"/> Stockpiled Off-site	_____	_____	_____

ADDITIONAL NOTES

Recommended attachments: Site map with locations of utilities and USTs.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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LAND USE

Current On-site Land Use		Future On-site Land Use	
	<u>Current</u>		<u>Future</u>
Residential	<input type="checkbox"/>	Residential	<input type="checkbox"/>
Commercial	<input type="checkbox"/>	Commercial	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Industrial	<input type="checkbox"/>
Other	<input type="checkbox"/>	Other	<input type="checkbox"/>

Comments: *Justify the choice for future land use.*

Immediate Off-site Land Use (within 1,000 feet - at a minimum, state whether residential, agricultural, commercial, or sensitive)

North:	
Northeast:	
Northwest:	
South:	
Southeast:	
Southwest:	
West:	
East:	

ADDITIONAL RECEPTOR SURVEY

List the distance and direction (downgradient, upgradient, or crossgradient) to these facilities (generally 1 mile radius is sufficient).

	Distance (feet)	Direction
Nearest residential site:		
Nearest commercial site:		
Nearest industrial site:		
If site vacant, nearest inhabited building:		
Nearest ecologically sensitive area:		
Nearest school, hospital, day care, retirement home, etc.:		

ADDITIONAL NOTES

Recommended attachments: Land use map (1,000 foot radius), Area map - with detailed land use in the vicinity of the site.

LUST CASE NO.:

FACILITY ID NO.:

SUBMITTAL DATE:

PREPARED BY:

CHRONOLOGY OF EVENTS

Date

Instructions: Describe site activities related to spill events, including location, type, and estimated volume of materials stored or released, tank pulls, time and duration of release, and affected media (e.g. soil, groundwater, etc.). Describe monitoring well installation, soil boring activities, and slug tests. Also discuss past corrective action efforts as appropriate. (Use additional sheets as necessary)

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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RELEASE CHARACTERIZATION

Release discovered during/by:

- | | |
|--|---|
| <input type="checkbox"/> UST Removal | <input type="checkbox"/> Closure in Place |
| <input type="checkbox"/> Failed System Tightness Test | <input type="checkbox"/> Environmental Assessment |
| <input type="checkbox"/> Inventory Control | <input type="checkbox"/> Citizen Complaint |
| <input type="checkbox"/> Facility Remodeling/Construction Activity | <input type="checkbox"/> Known Spill Incident |
| <input type="checkbox"/> Unknown | |
| <input type="checkbox"/> Other (specify) | |

SOURCE(S) OF RELEASE
<input type="checkbox"/> Spills/Overfills
<input type="checkbox"/> Piping
<input type="checkbox"/> Dispenser Islands
<input type="checkbox"/> Tanks
<input type="checkbox"/> Unknown
<input type="checkbox"/> Other (specify)

SUBSTANCE(S) RELEASED
<input type="checkbox"/> Gasoline
<input type="checkbox"/> Diesel
<input type="checkbox"/> Used Oil
<input type="checkbox"/> AV Gas
<input type="checkbox"/> Jet Fuel
<input type="checkbox"/> Hydraulic Fluid
<input type="checkbox"/> Kerosene
<input type="checkbox"/> Other (specify)

SUMMARY OF SPILL

Has the source of release been identified?	<input type="checkbox"/> YES <input type="checkbox"/> NO	_____
Has the release been abated?	<input type="checkbox"/> YES <input type="checkbox"/> NO	_____
Is native soil impacted?	<input type="checkbox"/> YES <input type="checkbox"/> NO	_____
Is groundwater impacted?	<input type="checkbox"/> YES <input type="checkbox"/> NO	_____
Is surface water impacted?	<input type="checkbox"/> YES <input type="checkbox"/> NO	_____

DETAILS OF KNOWN SPILLS (if any)

<u>Date Released</u>	<u>Location</u>	<u>Quantity/Type</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ADDITIONAL NOTES

LUST CASE NO.:

FACILITY ID NO.:

SUBMITTAL DATE:

PREPARED BY:

FREE PRODUCT

Has free product been found at the site? YES NO

(Note if NO, proceed to the next report form)

Date free product was released (if known):

Type of free product released:

Estimated quantity of free product released:

Number of monitoring wells currently at the site:

List the monitoring wells historically containing free product:

List the monitoring wells currently containing free product:

Specify the well ID maximum thickness:

Well ID: _____

_____ Feet;

Date: _____

RECOMMENDATIONS

Has free product removal been initiated? YES NO

If YES, specify method of removal (bailer, pump, etc.)?

If NO, cite reason:

Frequency of removal (weekly, monthly, etc.):

Total number of recovery events to date:

Total amount of purge-water recovered:

Total amount of free product recovered:

Date of latest free product report submittal:

ADDITIONAL NOTES

Recommended attachments: Free product thickness maps as appropriate.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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GROUNDWATER USE

Current	Future
YES NO IN USE NOT USED	YES NO
Potable domestic water use: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Potable domestic water use: <input type="checkbox"/> <input type="checkbox"/>
Non-potable water use: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Non-potable water use: <input type="checkbox"/> <input type="checkbox"/>
Public/Municipal supply: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Public/Municipal supply: <input type="checkbox"/> <input type="checkbox"/>
Industrial supply: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Industrial supply: <input type="checkbox"/> <input type="checkbox"/>
Agriculture: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Agriculture: <input type="checkbox"/> <input type="checkbox"/>
Other (explain in Notes): <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Other (explain in Notes): <input type="checkbox"/> <input type="checkbox"/>

NOTES (Justify choice for future use)

SURFACEWATER USE

Current	Future
YES NO IN USE NOT USED	YES NO
Potable domestic water use: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Potable domestic water use: <input type="checkbox"/> <input type="checkbox"/>
Non-potable water use: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Non-potable water use: <input type="checkbox"/> <input type="checkbox"/>
Public/Municipal supply: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Public/Municipal supply: <input type="checkbox"/> <input type="checkbox"/>
Industrial supply: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Industrial supply: <input type="checkbox"/> <input type="checkbox"/>
Agriculture: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Agriculture: <input type="checkbox"/> <input type="checkbox"/>
Other (explain in Notes): <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Other (explain in Notes): <input type="checkbox"/> <input type="checkbox"/>

NOTES (Justify choice for future use)

ECOLOGICAL RECEPTORS AND HABITATS

	YES	NO
1. Are there any ecological receptors or habitats present within a 1000 foot radius from the facility?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there a complete pathway at the site for an ecological impact beyond what is considered under the surface water impacts evaluation?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are there visible indications of stressed receptors or habitats on or near the site that may be a result of a chemical release?	<input type="checkbox"/>	<input type="checkbox"/>
Other (explain in Notes):	<input type="checkbox"/>	<input type="checkbox"/>

*If the answer to questions 2 & 3 is **YES**, contact the Division before proceeding any further.*

ADDITIONAL NOTES

Recommended attachments: Area map with well locations within a one-half mile radius of the site.

LUST CASE NO.:	FACILITY ID NO.:
SUBMITTAL DATE:	PREPARED BY:

ANALYTICAL DATA SUMMARY FOR SUBSURFACE SOIL

MW / SB No.	Sampling Date	Sample Depth (ft)													Arithmetic Average	Maximum	Ratio (Maximum/Arithmetic Average) *
-------------	---------------	-------------------	--	--	--	--	--	--	--	--	--	--	--	--	--------------------	---------	--------------------------------------

ORGANIC CHEMICALS

Benzene																		
Toluene																		
Ethylbenzene																		
Xylenes (mixed)																		
Methyl-tert-butyl-ether (MTBE)																		
Naphthalene																		

TPH

TPH-GRO																		
TPH-DRO																		
TPH-ORO																		
C5 - C6 (Aliphatics)																		
>C6 - C8 (Aliphatics)																		
>C8 - C10 (Aliphatics)																		
>C10 - C12 (Aliphatics)																		
>C12 - C16 (Aliphatics)																		
>C16 - C35 (Aliphatics)																		
>C8 - C10 (Aromatics)																		
>C10 - C12 (Aromatics)																		
>C12 - C16 (Aromatics)																		
>C16 - C21 (Aromatics)																		
>C21 - C35 (Aromatics)																		

NOTE:

Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.

Non-detects can be expressed as ND, BDL, etc. All concentrations in mg/kg.

* : If the ratio is high (for example >10) there may be a hot spot and additional investigation/evaluation is warranted. In such circumstances, contact the Division.

Recommended Attachments: Site map showing location(s) of sub-surface soil sample(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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ANALYTICAL DATA SUMMARY FOR SUBSURFACE SOIL

MW / SB No.	Sampling Date	Sample Depth (ft)	Arithmetic Average	Maximum	Ratio (Maximum/Arithmetic Average) *
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ORGANIC CHEMICALS

Benzene					
Toluene					
Ethylbenzene					
Xylenes (mixed)					
Methyl-tert-butyl-ether (MTBE)					
Naphthalene					

TPH

TPH-GRO					
TPH-DRO					
TPH-ORO					
C5 - C6 (Aliphatics)					
>C6 - C8 (Aliphatics)					
>C8 - C10 (Aliphatics)					
>C10 - C12 (Aliphatics)					
>C12 - C16 (Aliphatics)					
>C16 - C35 (Aliphatics)					
>C8 - C10 (Aromatics)					
>C10 - C12 (Aromatics)					
>C12 - C16 (Aromatics)					
>C16 - C21 (Aromatics)					
>C21 - C35 (Aromatics)					

NOTE:

Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.

Non-detects can be expressed as ND, BDL, etc. All concentrations in mg/kg.

* : If the ratio is high (for example >10) there may be a hot spot and additional investigation/evaluation is warranted. In such circumstances, contact the Division.

Recommended Attachments: Site map showing location(s) of sub-surface soil sample(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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ANALYTICAL DATA SUMMARY FOR SUBSURFACE SOIL

MW / SB No.													Arithmetic Average	Maximum	Ratio (Maximum/Arithmetic Average) *			
Sampling Date																		
Sample Depth (ft)																		

ORGANIC CHEMICALS

Benzene																		
Toluene																		
Ethylbenzene																		
Xylenes (mixed)																		
Methyl-tert-butyl-ether (MTBE)																		
Naphthalene																		

TPH

TPH-GRO																		
TPH-DRO																		
TPH-ORO																		
C5 - C6 (Aliphatics)																		
>C6 - C8 (Aliphatics)																		
>C8 - C10 (Aliphatics)																		
>C10 - C12 (Aliphatics)																		
>C12 - C16 (Aliphatics)																		
>C16 - C35 (Aliphatics)																		
>C8 - C10 (Aromatics)																		
>C10 - C12 (Aromatics)																		
>C12 - C16 (Aromatics)																		
>C16 - C21 (Aromatics)																		
>C21 - C35 (Aromatics)																		

NOTE:

Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.

Non-detects can be expressed as ND, BDL, etc. All concentrations in mg/kg.

* : If the ratio is high (for example >10) there may be a hot spot and additional investigation/evaluation is warranted. In such circumstances, contact the Division.

Recommended Attachments: Site map showing location(s) of sub-surface soil sample(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number																				
Screen Interval (feet below datum)																				
Water Level (feet below datum)																				
Installation Date																				
Number of Times Sampled																				
Benzene MCL = 0.005 mg/l	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
Toluene MCL = 1.0 mg/l	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
Ethylbenzene MCL = 0.7 mg/l	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
Xylenes MCL = 10 mg/l	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number																				
Screen Interval (feet below datum)																				
Water Level (feet below datum)																				
Installation Date																				
Number of Times Sampled																				
MTBE MCL = 0.02 mg/L	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
Naphthalene MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
C5-C6 Aliphatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
>C6-C8 Aliphatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number																				
Screen Interval (feet below datum)																				
Water Level (feet below datum)																				
Installation Date																				
Number of Times Sampled																				
MTBE MCL = 0.02 mg/L	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
Naphthalene MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
C5-C6 Aliphatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
>C6-C8 Aliphatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
SUBMITTAL DATE:	PREPARED BY:

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number														
Screen Interval (feet below datum)														
Water Level (feet below datum)														
Installation Date														
Number of Times Sampled														
>C8-C10 Aliphatics MCL = NA	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
>C10-C12 Aliphatics MCL = NA	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
>C12-C16 Aliphatics MCL = NA	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
>C16-C35 Aliphatics MCL = NA	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number																			
Screen Interval (feet below datum)																			
Water Level (feet below datum)																			
Installation Date																			
Number of Times Sampled																			
>C8-C10 Aliphatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		
>C10-C12 Aliphatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		
>C12-C16 Aliphatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		
>C16-C35 Aliphatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number																			
Screen Interval (feet below datum)																			
Water Level (feet below datum)																			
Installation Date																			
Number of Times Sampled																			
>C8-C10 Aromatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		
>C10-C12 Aromatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		
>C12-C16 Aromatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		
>C16-C21 Aromatics MCL = NA	No. of Detects																		
	Range (high - low)																		
	Maximum (mg/l)																		
	Mean (mg/l)																		
	Recent Trend																		

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.

For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number																				
Screen Interval (feet below datum)																				
Water Level (feet below datum)																				
Installation Date																				
Number of Times Sampled																				
>C8-C10 Aromatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
>C10-C12 Aromatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
>C12-C16 Aromatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
>C16-C21 Aromatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number														
Screen Interval (feet below datum)														
Water Level (feet below datum)														
Installation Date														
Number of Times Sampled														
>C21-C35 Aromatics MCL = NA	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													
	No. of Detects													
	Range (high - low)													
	Maximum (mg/l)													
	Mean (mg/l)													
	Recent Trend													

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

DCRBCA REPORT

FORM NO. 14

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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ANALYTICAL DATA SUMMARY FOR GROUNDWATER

Monitoring Well Number																				
Screen Interval (feet below datum)																				
Water Level (feet below datum)																				
Installation Date																				
Number of Times Sampled																				
>C21-C35 Aromatics MCL = NA	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			
	No. of Detects																			
	Range (high - low)																			
	Maximum (mg/l)																			
	Mean (mg/l)																			
	Recent Trend																			

NOTE: Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 For "Range", use historical data (i.e., all data), for "Maximum" and "Mean", use the past two (2) years of data.

Recommended Attachment: Historical GW data and site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
-----------------------	-------------------------

SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

NATURAL ATTENUATION PARAMETERS

MW / SB No.															
Sampling Date															
PARAMETERS															
Dissolved Oxygen															
Nitrate															
Sulfate															
Manganese															
Methane															
Ferrous Iron															
Carbon dioxide															
Oxidation Reduction Potential															
OTHER PARAMETERS															

NOTE:
 Provide any laboratory analytical datasheets not previously submitted to the Division.
 Add additional sheets if data for more than 3 sampling events and 5 monitoring wells are available.
 Non-detects can be expressed as ND, BDL, etc.

Recommended Attachment: Site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.:	FACILITY ID NO.:
-----------------------	-------------------------

SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

NATURAL ATTENUATION PARAMETERS

MW / SB No.															
Sampling Date															
PARAMETERS															
Dissolved Oxygen															
Nitrate															
Sulfate															
Manganese															
Methane															
Ferrous Iron															
Carbon dioxide															
Oxidation Reduction Potential															
OTHER PARAMETERS															

NOTE:
 Provide any laboratory analytical datasheets not previously submitted to the Division. Add additional sheets as needed.
 Add additional sheets if data for more than 3 sampling events and 5 monitoring wells are available.
 Non-detects can be expressed as ND, BDL, etc.

Recommended Attachment: Site map showing location(s) of monitoring well(s), and chemical concentration maps.

LUST CASE NO.: _____ **FACILITY ID NO.:** _____

SUBMITTAL DATE: _____ **PREPARED BY:** _____

SITE CONCEPTUAL EXPOSURE SCENARIO - ON-SITE RESIDENT (CHILD AND ADULT)

ROUTES OF EXPOSURE	CURRENT CONDITIONS		FUTURE CONDITIONS	
	C/ NC*	JUSTIFICATION	C/ NC*	JUSTIFICATION
SURFICIAL SOIL				
Outdoor inhalation of vapors and particulate matter, ingestion, and dermal contact				
SUBSURFACE SOIL				
Indoor inhalation of vapors				
GROUNDWATER				
Indoor inhalation of vapors				
Ingestion of groundwater from an on-site water supply well				

NOTE:
 * C : Complete Pathway, NC : Not Complete

Recommended Attachment: Map identifying all points of exposure (for both current and future conditions).

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

SITE CONCEPTUAL EXPOSURE SCENARIO - ON-SITE COMMERCIAL WORKER
--

ROUTES OF EXPOSURE	CURRENT CONDITIONS		FUTURE CONDITIONS	
	<i>C/ NC*</i>	JUSTIFICATION	<i>C/ NC*</i>	JUSTIFICATION
SURFICIAL SOIL				
Outdoor inhalation of vapors and particulate matter, ingestion, and dermal contact				
SUBSURFACE SOIL				
Indoor inhalation of vapors				
GROUNDWATER				
Indoor inhalation of vapors				
Ingestion of groundwater from an on-site water supply well				

NOTE:
 * C : Complete Pathway, NC : Not Complete

Recommended Attachment: Map identifying all points of exposure (for both current and future conditions).

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

SITE CONCEPTUAL EXPOSURE SCENARIO - ON-SITE CONSTRUCTION WORKER
--

ROUTES OF EXPOSURE	CURRENT CONDITIONS		FUTURE CONDITIONS	
	C/ NC*	JUSTIFICATION	C/ NC*	JUSTIFICATION
SOIL TO TYPICAL DEPTH OF CONSTRUCTION				
Outdoor inhalation of vapors and particulate matter, ingestion, and dermal contact				
GROUNDWATER				
Outdoor inhalation of vapors	<i>Not Applicable</i>			
Ingestion of groundwater from an on-site water supply well	<i>Not Applicable</i>			

NOTE:

* C : Complete Pathway, NC : Not Complete

Recommended Attachment: Map identifying all points of exposure (for both current and future conditions).

LUST CASE NO.:

FACILITY ID NO.:

SUBMITTAL DATE:

PREPARED BY:

SITE CONCEPTUAL EXPOSURE SCENARIO - OFF-SITE RESIDENT (CHILD AND ADULT)

ROUTES OF EXPOSURE	CURRENT CONDITIONS		FUTURE CONDITIONS	
	C/ NC*	JUSTIFICATION	C/ NC*	JUSTIFICATION
SURFICIAL SOIL				
Outdoor inhalation of vapors and particulate matter, ingestion, and dermal contact				
SUBSURFACE SOIL				
Indoor inhalation of vapors				
GROUNDWATER				
Indoor inhalation of vapors				
Ingestion of groundwater from an off-site water supply well				

NOTE:

* C : Complete Pathway, NC : Not Complete

Recommended Attachment: Map identifying all points of exposure (for both current and future conditions).

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

SITE CONCEPTUAL EXPOSURE SCENARIO - OFF-SITE COMMERCIAL WORKER

ROUTES OF EXPOSURE	CURRENT CONDITIONS		FUTURE CONDITIONS	
	<i>C/ NC*</i>	JUSTIFICATION	<i>C/ NC*</i>	JUSTIFICATION
SURFICIAL SOIL				
Outdoor inhalation of vapors and particulate matter, ingestion, and dermal contact				
SUBSURFACE SOIL				
Indoor inhalation of vapors				
GROUNDWATER				
Indoor inhalation of vapors				
Ingestion of groundwater from an off-site water supply well				

NOTE:

* C : Complete Pathway, NC : Not Complete

Recommended Attachment: Map identifying all points of exposure (for both current and future conditions).

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
------------------------	---------------------

SITE CONCEPTUAL EXPOSURE SCENARIO - OFF-SITE CONSTRUCTION WORKER

ROUTES OF EXPOSURE	CURRENT CONDITIONS		FUTURE CONDITIONS	
	C/ NC*	JUSTIFICATION	C/ NC*	JUSTIFICATION
SOIL TO TYPICAL DEPTH OF CONSTRUCTION				
Outdoor inhalation of vapors and particulate matter, ingestion, and dermal contact				
GROUNDWATER				
Outdoor inhalation of vapors	<i>Not Applicable</i>			
Ingestion of groundwater from an off-site water supply well	<i>Not Applicable</i>			

NOTE:

* C : Complete Pathway, NC : Not Complete

Recommended Attachment: Map identifying all points of exposure (for both current and future conditions).

LUST CASE NO.: FACILITY ID NO.:

SUBMITTAL DATE: PREPARED BY:

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - ON-SITE RESIDENT CHILD

CHEMICALS OF CONCERN	SURFICIAL SOIL			SUB-SURFACE SOIL			GROUNDWATER		
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact			Indoor inhalation of vapors			Indoor inhalation of vapors		
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/L]	RBSLs [mg/L]	E/NE
ORGANICS	For Rep. Conc., refer Attachment 16, Table xx								
Benzene									
Toluene									
Ethylbenzene									
Xylenes (mixed)									
Methyl-tert-butyl-ether (MTBE)									
Naphthalene									
TPH									
TPH-GRO									
TPH-DRO									
TPH-ORO									
C5 - C6 (Aliphatics)									
>C6 - C8 (Aliphatics)									
>C8 - C10 (Aliphatics)									
>C10 - C12 (Aliphatics)									
>C12 - C16 (Aliphatics)									
>C16 - C35 (Aliphatics)									
>C8 - C10 (Aromatics)									
>C10 - C12 (Aromatics)									
>C12 - C16 (Aromatics)									
>C16 - C21 (Aromatics)									
>C21 - C35 (Aromatics)									

NOTE:

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

-
-
-

Maximum
Arithmetic Average
Other

NA: Not Applicable

E: Representative on-site concentration exceeds Tier 1 RBSLs

NE: Representative on-site concentration does not exceed Tier 1 RBSLs

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.

#: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: _____ **FACILITY ID NO.:** _____

SUBMITTAL DATE: _____ **PREPARED BY:** _____

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - ON-SITE RESIDENT ADULT

CHEMICALS OF CONCERN	SURFICIAL SOIL			SUB-SURFACE SOIL			GROUNDWATER				
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact				Indoor inhalation of vapors				Indoor inhalation of vapors		
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/L]	RBSLs [mg/L]	E/NE		
ORGANICS											
Benzene											
Toluene											
Ethylbenzene											
Xylenes (mixed)											
Methyl-tert-butyl-ether (MTBE)											
Naphthalene											
TPH											
TPH-GRO											
TPH-DRO											
TPH-ORO											
C5 - C6 (Aliphatics)											
>C6 - C8 (Aliphatics)											
>C8 - C10 (Aliphatics)											
>C10 - C12 (Aliphatics)											
>C12 - C16 (Aliphatics)											
>C16 - C35 (Aliphatics)											
>C8 - C10 (Aromatics)											
>C10 - C12 (Aromatics)											
>C12 - C16 (Aromatics)											
>C16 - C21 (Aromatics)											
>C21 - C35 (Aromatics)											

NOTE:

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

- Maximum
- Arithmetic Average
- Other

- NA: Not Applicable
- E: Representative on-site concentration exceeds Tier 1 RBSLs
- NE: Representative on-site concentration does not exceed Tier 1 RBSLs

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.
#: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: _____ **FACILITY ID NO.:** _____

SUBMITTAL DATE: _____ **PREPARED BY:** _____

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - ON-SITE COMMERCIAL WORKER

CHEMICALS OF CONCERN	SURFICIAL SOIL			SUB-SURFACE SOIL			GROUNDWATER				
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact				Indoor inhalation of vapors				Indoor inhalation of vapors		
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/L]	RBSLs [mg/L]	E/NE		
ORGANICS											
Benzene											
Toluene											
Ethylbenzene											
Xylenes (mixed)											
Methyl-tert-butyl-ether (MTBE)											
Naphthalene											
TPH											
TPH-GRO											
TPH-DRO											
TPH-ORO											
C5 - C6 (Aliphatics)											
>C6 - C8 (Aliphatics)											
>C8 - C10 (Aliphatics)											
>C10 - C12 (Aliphatics)											
>C12 - C16 (Aliphatics)											
>C16 - C35 (Aliphatics)											
>C8 - C10 (Aromatics)											
>C10 - C12 (Aromatics)											
>C12 - C16 (Aromatics)											
>C16 - C21 (Aromatics)											
>C21 - C35 (Aromatics)											

NOTE:

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

- Maximum
- Arithmetic Average
- Other

NA: Not Applicable
 E: Representative on-site concentration exceeds Tier 1 RBSLs
 NE: Representative on-site concentration does not exceed Tier 1 RBSLs

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.
 #: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: **FACILITY ID NO.:**

SUBMITTAL DATE: **PREPARED BY:**

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - ON-SITE CONSTRUCTION WORKER

CHEMICALS OF CONCERN	SOIL TO TYPICAL DEPTH OF CONST.		
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact		
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE
ORGANICS			
Benzene			
Toluene			
Ethylbenzene			
Xylenes (mixed)			
Methyl-tert-butyl-ether (MTBE)			
Naphthalene			
TPH			
TPH-GRO			
TPH-DRO			
TPH-ORO			
C5 - C6 (Aliphatics)			
>C6 - C8 (Aliphatics)			
>C8 - C10 (Aliphatics)			
>C10 - C12 (Aliphatics)			
>C12 - C16 (Aliphatics)			
>C16 - C35 (Aliphatics)			
>C8 - C10 (Aromatics)			
>C10 - C12 (Aromatics)			
>C12 - C16 (Aromatics)			
>C16 - C21 (Aromatics)			
>C21 - C35 (Aromatics)			

NOTE:

NA: Not Applicable

E: Representative on-site concentration exceeds Tier 1 RBSLs

NE: Representative on-site concentration does not exceed Tier 1 RBSLs

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

- Maximum
- Arithmetic Average
- Other

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.

#: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: _____ **FACILITY ID NO.:** _____

SUBMITTAL DATE: _____ **PREPARED BY:** _____

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - OFF-SITE RESIDENT CHILD

CHEMICALS OF CONCERN	SURFICIAL SOIL			SUB-SURFACE SOIL			GROUNDWATER		
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact			Indoor inhalation of vapors			Indoor inhalation of vapors		
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/L]	RBSLs [mg/L]	E/NE
ORGANICS									
Benzene									
Toluene									
Ethylbenzene									
Xylenes (mixed)									
Methyl-tert-butyl-ether (MTBE)									
Naphthalene									
TPH									
TPH-GRO									
TPH-DRO									
TPH-ORO									
C5 - C6 (Aliphatics)									
>C6 - C8 (Aliphatics)									
>C8 - C10 (Aliphatics)									
>C10 - C12 (Aliphatics)									
>C12 - C16 (Aliphatics)									
>C16 - C35 (Aliphatics)									
>C8 - C10 (Aromatics)									
>C10 - C12 (Aromatics)									
>C12 - C16 (Aromatics)									
>C16 - C21 (Aromatics)									
>C21 - C35 (Aromatics)									

NOTE:

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

- Maximum
- Arithmetic Average
- Other

NA: Not Applicable

E: Representative on-site concentration exceeds Tier 1 RBSLs

NE: Representative on-site concentration does not exceed Tier 1 RBSLs

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.

#: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: FACILITY ID NO.:

SUBMITTAL DATE: PREPARED BY:

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - OFF-SITE RESIDENT ADULT

CHEMICALS OF CONCERN	SURFICIAL SOIL			SUB-SURFACE SOIL			GROUNDWATER		
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact			Indoor inhalation of vapors			Indoor inhalation of vapors		
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/L]	RBSLs [mg/L]	E/NE
ORGANICS									
Benzene									
Toluene									
Ethylbenzene									
Xylenes (mixed)									
Methyl-tert-butyl-ether (MTBE)									
Naphthalene									
TPH									
TPH-GRO									
TPH-DRO									
TPH-ORO									
C5 - C6 (Aliphatics)									
>C6 - C8 (Aliphatics)									
>C8 - C10 (Aliphatics)									
>C10 - C12 (Aliphatics)									
>C12 - C16 (Aliphatics)									
>C16 - C35 (Aliphatics)									
>C8 - C10 (Aromatics)									
>C10 - C12 (Aromatics)									
>C12 - C16 (Aromatics)									
>C16 - C21 (Aromatics)									
>C21 - C35 (Aromatics)									

NOTE:

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

- Maximum
- Arithmetic Average
- Other

NA: Not Applicable
 E: Representative on-site concentration exceeds Tier 1 RBSLs
 NE: Representative on-site concentration does not exceed Tier 1 RBSLs

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.
 #: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: _____ **FACILITY ID NO.:** _____

SUBMITTAL DATE: _____ **PREPARED BY:** _____

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - OFF-SITE COMMERCIAL WORKER

CHEMICALS OF CONCERN	SURFICIAL SOIL			SUB-SURFACE SOIL			GROUNDWATER			
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact				Indoor inhalation of vapors				Indoor inhalation of vapors	
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE	Rep. Conc. [mg/L]	RBSLs [mg/L]	E/NE	
ORGANICS										
Benzene										
Toluene										
Ethylbenzene										
Xylenes (mixed)										
Methyl-tert-butyl-ether (MTBE)										
Naphthalene										
TPH										
TPH-GRO										
TPH-DRO										
TPH-ORO										
C5 - C6 (Aliphatics)										
>C6 - C8 (Aliphatics)										
>C8 - C10 (Aliphatics)										
>C10 - C12 (Aliphatics)										
>C12 - C16 (Aliphatics)										
>C16 - C35 (Aliphatics)										
>C8 - C10 (Aromatics)										
>C10 - C12 (Aromatics)										
>C12 - C16 (Aromatics)										
>C16 - C21 (Aromatics)										
>C21 - C35 (Aromatics)										

NOTE:

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

- Maximum
- Arithmetic Average
- Other

- NA: Not Applicable
- E: Representative on-site concentration exceeds Tier 1 RBSLs
- NE: Representative on-site concentration does not exceed Tier 1 RBSLs

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.
#: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: **FACILITY ID NO.:**

SUBMITTAL DATE: **PREPARED BY:**

COMPARISON OF TIER 1 RBSLs WITH REPRESENTATIVE CONCENTRATIONS - OFF-SITE CONSTRUCTION WORKER

CHEMICALS OF CONCERN	SOIL TO TYPICAL DEPTH OF CONST.		
	Ingestion, outdoor inhalation of vapors and particulate matter, and dermal contact		
	Rep. Conc. [mg/kg]	RBSLs [mg/kg]	E/NE
ORGANICS			
Benzene			
Toluene			
Ethylbenzene			
Xylenes (mixed)			
Methyl-tert-butyl-ether (MTBE)			
Naphthalene			
TPH			
TPH-GRO			
TPH-DRO			
TPH-ORO			
C5 - C6 (Aliphatics)			
>C6 - C8 (Aliphatics)			
>C8 - C10 (Aliphatics)			
>C10 - C12 (Aliphatics)			
>C12 - C16 (Aliphatics)			
>C16 - C35 (Aliphatics)			
>C8 - C10 (Aromatics)			
>C10 - C12 (Aromatics)			
>C12 - C16 (Aromatics)			
>C16 - C21 (Aromatics)			
>C21 - C35 (Aromatics)			

NOTE:

NA: Not Applicable

E: Representative on-site concentration exceeds Tier 1 RBSLs

NE: Representative on-site concentration does not exceed Tier 1 RBSLs

Enter the representative concentration (Rep. Conc.) and indicate (Select One):

- Maximum
- Arithmetic Average
- Other

*: Calculated RBSLs exceeded saturated soil concentration and hence saturated soil concentrations are listed as RBSLs.

#: Calculated RBSLs exceeded pure component water solubility and hence water solubilities are listed as RBSLs.

Recommended Attachment: Representative concentrations.

LUST CASE NO.: FACILITY ID NO.:

SUBMITTAL DATE: PREPARED BY:

TIER 1 GROUNDWATER RESOURCE PROTECTION TARGET CONCENTRATIONS

Distance from source to the point of exposure (POE):															
CHEMICALS OF CONCERN	COMPARISON FOR SOURCE SOIL			COMPARISON FOR SOURCE GROUNDWATER			COMPARISON FOR COMPLIANCE WELLS								
	Soil Source Rep. Conc. ¹ [mg/kg]	Allowable Soil Conc. ² [mg/kg]	E/ NE	GW Source Rep. Conc. ³ [mg/L]	Allowable GW Conc. at the Source ⁴ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE
COMPLIANCE WELL NO.															
DISTANCE FROM SOURCE															
RECENT TREND															
ORGANICS															
Benzene															
Toluene															
Ethylbenzene															
Xylenes (mixed)															
Methyl-tert-butyl-ether (MTBE)															
Naphthalene															
TPH															
TPH-GRO															
TPH-DRO															
TPH-ORO															
C5 - C6 (Aliphatics)															
>C6 - C8 (Aliphatics)															
>C8 - C10 (Aliphatics)															
>C10 - C12 (Aliphatics)															
>C12 - C16 (Aliphatics)															
>C16 - C35 (Aliphatics)															
>C8 - C10 (Aromatics)															
>C10 - C12 (Aromatics)															
>C12 - C16 (Aromatics)															
>C16 - C21 (Aromatics)															
>C21 - C35 (Aromatics)															

NOTE: Use the DCRBCApgm.xls Computational Software to calculate the (i) soil source conc., (ii) GW source conc., and (iii) the compliance well conc.

- 1: The soil source representative concentrations have to be calculated and entered here.
- 2: Allowable soil concentrations at the source protective of groundwater at the POE.
- 3: The groundwater source representative concentrations have to be calculated and entered here.
- 4: Allowable groundwater concentrations at the source protective of groundwater at the POE.
- 5: Represents the representative concentrations in the compliance well
- 6: Represents the allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

For representative concentrations, refer Attachment 16:

E: Representative on-site concentration exceeds calculated compliance well concentration. NE: Representative on-site concentration does not exceed calculated compliance well concentration.

Recommended Attachment: (i) A map showing the location(s) of the soil source(s), location of POE, and location(s) of POC. (ii) Representative Concentrations.

LUST CASE NO.: FACILITY ID NO.:

SUBMITTAL DATE: PREPARED BY:

TIER 1 GROUNDWATER RESOURCE PROTECTION TARGET CONCENTRATIONS

Distance from source to the point of exposure (POE):

CHEMICALS OF CONCERN	COMPARISON FOR COMPLIANCE WELLS															
	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	
COMPLIANCE WELL NO.																
DISTANCE FROM SOURCE																
RECENT TREND																

ORGANICS

Benzene																
Toluene																
Ethylbenzene																
Xylenes (mixed)																
Methyl-tert-butyl-ether (MTBE)																
Naphthalene																

TPH

TPH-GRO																
TPH-DRO																
TPH-ORO																
C5 - C6 (Aliphatics)																
>C6 - C8 (Aliphatics)																
>C8 - C10 (Aliphatics)																
>C10 - C12 (Aliphatics)																
>C12 - C16 (Aliphatics)																
>C16 - C35 (Aliphatics)																
>C8 - C10 (Aromatics)																
>C10 - C12 (Aromatics)																
>C12 - C16 (Aromatics)																
>C16 - C21 (Aromatics)																
>C21 - C35 (Aromatics)																

NOTE: Use the DCRBCApgm.xls Computational Software to calculate the (i) soil source conc., (ii) GW source conc., and (iii) the compliance well conc.

5: Represents the representative concentrations in the compliance well

6: Represents the allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

For representative concentrations, refer Attachment 16:

E: Representative on-site concentration exceeds calculated compliance well concentration.

NE: Representative on-site concentration does not exceed calculated compliance well concentration.

Recommended Attachment: (i) A map showing the location(s) of the soil source(s), location of POE, and location(s) of POC. (ii) Representative Concentrations.

LUST CASE NO.: FACILITY ID NO.:

SUBMITTAL DATE: PREPARED BY:

TIER 1 STREAM PROTECTION TARGET CONCENTRATIONS

Distance from source to the stream:

CHEMICALS OF CONCERN	COMPARISON FOR SOURCE SOIL			COMPARISON FOR SOURCE GROUNDWATER			COMPARISON FOR COMPLIANCE WELL AT THE STREAM BANK			COMPARISON FOR COMPLIANCE WELLS BETWEEN THE SOURCE AND THE STREAM BANK					
	Soil Source Rep. Conc. ¹ [mg/kg]	Allowable Soil Conc. ² [mg/kg]	E/ NE	GW Source Rep. Conc. ³ [mg/L]	Allowable GW Conc. at the Source ⁴ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE	CW Rep. Conc. ⁵ [mg/L]	Allowable GW Conc. at a POC ⁶ [mg/L]	E/ NE

COMPLIANCE WELL NO.

DISTANCE FROM SOURCE

RECENT TREND

ORGANICS

Benzene															
Toluene															
Ethylbenzene															
Xylenes (mixed)															
Methyl-tert-butyl-ether (MTBE)															
Naphthalene															

TPH

TPH-GRO															
TPH-DRO															
TPH-ORO															
C5 - C6 (Aliphatics)															
>C6 - C8 (Aliphatics)															
>C8 - C10 (Aliphatics)															
>C10 - C12 (Aliphatics)															
>C12 - C16 (Aliphatics)															
>C16 - C35 (Aliphatics)															
>C8 - C10 (Aromatics)															
>C10 - C12 (Aromatics)															
>C12 - C16 (Aromatics)															
>C16 - C21 (Aromatics)															
>C21 - C35 (Aromatics)															

NOTE: Use the DCRBCApgm.xls Computational Software to calculate the (i) soil source conc., (ii) GW source conc., and (iii) the compliance well conc. Page 1 of

- 1: The soil source representative concentrations have to be calculated and entered here.
- 2: Allowable soil concentrations at the source protective of groundwater at the POE.
- 3: The groundwater source representative concentrations have to be calculated and entered here.
- 4: Allowable groundwater concentrations at the source protective of groundwater at the POE.
- 5: Represents the representative concentrations in the compliance well
- 6: Represents the allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

For representative concentrations, refer Attachment 16:

E: Representative on-site concentration exceeds allowable concentration. NE: Representative on-site concentration does not exceed allowable concentration.

Recommended Attachment: (i) A map showing the location(s) of the soil source(s), location of stream, and location(s) of POC. (ii) Representative Concentrations.

LUST CASE NO.: FACILITY ID NO.:

SUBMITTAL DATE: PREPARED BY:

TIER 1 STREAM PROTECTION TARGET CONCENTRATIONS

Distance from source to the stream:

COMPARISON FOR COMPLIANCE WELLS BETWEEN THE SOURCE AND THE STREAM BANK

CHEMICALS OF CONCERN	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/NE	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/NE	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/NE	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/NE	CW Rep. Conc. ⁵	Allowable GW Conc. at a POC ⁶	E/NE
	[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]		[mg/L]	[mg/L]	
COMPLIANCE WELL NO.															
DISTANCE FROM SOURCE															
RECENT TREND															

ORGANICS

Benzene															
Toluene															
Ethylbenzene															
Xylenes (mixed)															
Methyl-tert-butyl-ether (MTBE)															
Naphthalene															

TPH

TPH-GRO															
TPH-DRO															
TPH-ORO															
C5 - C6 (Aliphatics)															
>C6 - C8 (Aliphatics)															
>C8 - C10 (Aliphatics)															
>C10 - C12 (Aliphatics)															
>C12 - C16 (Aliphatics)															
>C16 - C35 (Aliphatics)															
>C8 - C10 (Aromatics)															
>C10 - C12 (Aromatics)															
>C12 - C16 (Aromatics)															
>C16 - C21 (Aromatics)															
>C21 - C35 (Aromatics)															

NOTE: Use the DCRBCApgm.xls Computational Software to calculate the (i) soil source conc., (ii) GW source conc., and (iii) the compliance well conc.

5: Represents the representative concentrations in the compliance well

6: Represents the allowable groundwater concentrations at a point of compliance (POC) protective of a POE.

For representative concentrations, refer Attachment 16:

E: Representative on-site concentration exceeds allowable concentration.

NE: Representative on-site concentration does not exceed allowable concentration.

Recommended Attachment: (i) A map showing the location(s) of the soil source(s), location of stream, and location(s) of POC. (ii) Representative Concentrations.

LUST CASE NO.:	FACILITY ID NO.:
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SUBMITTAL DATE:	PREPARED BY:
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TIER 1 APPLICABLE TARGET LEVELS FOR VARIOUS MEDIA
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NOTE: The RBSLs listed for each route of exposure are the minimum RBSL for all the receptors for that particular route of exposure. The applicable target levels are the minimum RBSLs of all the routes of exposures within each media.

CHEMICALS OF CONCERN	SURFICIAL SOIL	SUBSURFACE SOIL	GROUNDWATER	Soil Concentrations Protective of Groundwater	Soil Concentrations Protective of Stream
	Ingestion, outdoor Inhalation of vapors and particulates, and dermal contact [mg/kg]	Indoor Inhalation [mg/kg]	Indoor Inhalation [mg/L]	[mg/kg]	[mg/kg]
ORGANICS					
Benzene					
Toluene					
Ethylbenzene					
Xylenes (mixed)					
Methyl-tert-butyl-ether (MTBE)					
Naphthalene					
TPH					
TPH-GRO					
TPH-DRO					
TPH-ORO					
C5 - C6 (Aliphatics)					
>C6 - C8 (Aliphatics)					
>C8 - C10 (Aliphatics)					
>C10 - C12 (Aliphatics)					
>C12 - C16 (Aliphatics)					
>C16 - C35 (Aliphatics)					
>C8 - C10 (Aromatics)					
>C10 - C12 (Aromatics)					
>C12 - C16 (Aromatics)					
>C16 - C21 (Aromatics)					
>C21 - C35 (Aromatics)					

NOTE:
N/A: Not Applicable

