

**SECTION 7A COMPLIANCE ANALYSIS (DUE CARE PLAN)
TEGRANT DIVERSIFIED BRANDS, INC. PROPERTY
123 NORTH CHIPMAN STREET
OWOSSO, MICHIGAN
RC PROJECT NO. E-028413**

**APRIL, 2003
UPDATED 2011**

ORIGINALLY PREPARED FOR:

**TUSCARORA INCORPORATED
800 FIFTH AVENUE
NEW BRIGHTON, PENNSYLVANIA 15066**

PREPARED BY:

**RC ENGINEERING, INC., A WILCOX COMPANY
5859 SHERMAN ROAD
SAGINAW, MICHIGAN 48604**

RC PROJECT NO. E-028413

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1.0 INTRODUCTION

Under contractual agreement with Tuscarora Incorporated (Tuscarora), RC Engineering, Inc., A Wilcox Company (RC/Wilcox) prepared this Section 7a Compliance Analysis (Section 7aCA - a.k.a. Due Care Plan) for the Tuscarora property located at 123 North Chipman Street in Owosso, Michigan in April of 2003. This Due Care Plan is intended to provide a summary of the environmental conditions that exist at the site and guidelines for working in and around the impacted area prior to, during and after site development. It has been updated to reflect a Company name change to Tegrant Diversified Brands, Inc.

This Due Care Plan was prepared to meet the standards presented in the March 11, 1999, Michigan Department of Environmental Quality (MDEQ), Instructions for Preparing and Disclosing Baseline Environmental Assessments and Section 7a Compliance Analyses to the Department of Environmental Quality and for Requesting Optional Determinations pursuant to 1994 P.A. 451, Part 201, as amended, for a Section 7aCA to address concerns identified in the Baseline Environmental Site Assessment (BEA) for the subject site. It is noted a Category N Baseline Environmental Assessment (BEA) dated February 20, 2003 was completed for the subject site. The BEA was submitted to the Michigan Department of Environmental Quality (MDEQ) for Disclosure. It is intended that this Due Care Plan will be used in conjunction with the BEA.

NREPA, Part 201, Section 7a states a person who owns or operates property that he/she has knowledge is a facility must do all the following, unless they are covered by the provisions of NREPA, Part 201, Section 7a (4) of (5).

- 1) Undertake measures to prevent exacerbation of existing contamination.
- 2) Exercise due care by undertaking response activities necessary to mitigate unacceptable exposure to hazardous substances, and allow for the intended use of the property in a manner that protects the public health and safety.
- 3) Take reasonable precautions against the reasonable foreseeable acts or omissions of a third party and the consequences that could result from those acts or omissions.

2.0 DETAILED CHARACTERISTICS OF PROPERTY USE

The subject property is located at 123 North Chipman Street in Owosso, Michigan and consists of approximately 22 acres of property occupied by an approximately 170,000 square foot industrial building. The building is located in the central portion of the property. The remaining portions consist predominantly of lawn or field, with some areas covered by scrub/shrub vegetation. For a depiction of the subject site, please refer to the Scaled Diagram in Attachment A.

The subject site was historically occupied by a lumberyard (north portion) and municipal recreational area with ball diamonds and a swimming pool (south portion). In approximately 1955/56, the lumberyard and recreational areas were removed and a commercial/light industrial building was constructed. The building was owned and occupied by Mitchell Corporation (automobile parts manufacturing) until approximately 1972, at which time Mitchell corporation vacated the building and leased it to Dow Chemical Company. Dow reportedly occupied the site until approximately 1977. After Dow's lease expired, the building was leased to and occupied by American Aerosol until approximately 1988. Mitchell Corporation again reportedly occupied the site until approximately 1998 and resumed making products for the automotive industry. In approximately 1998, Mitchell Corporation again vacated the building and leased it to other businesses. From approximately 1998 to December 2002, the building was leased by light industrial businesses involved in making parts for the automobile industry. Tuscarora purchased the subject site on December 23, 2003, with the intentions of moving its Chesaning, MI manufacturing operations to this site in 2004.

Tuscarora is a light industrial business that makes packaging materials for various products, particularly the appliance industry. Most of the packaging products consist of molded expanded polystyrene and molded polyethylene copolymer. The typical process to make the packaging includes passing raw material (polystyrene or polyethylene beads of varying sizes) through the process equipment to expand the beads into whatever form is desired. Raw materials are expanded by contact with steam or steam in conjunction with negative pressure. During the expanding process, pentane and some other volatile gasses are released. These gasses are discharged from the building through an exhaust system. Steam is generated using electrically powered boiler units. The process results in some water discharge into the municipal sanitary system and into the air as steam through exhaust vents. However, much of the water is recycled internally through condensation and collection. Water discharged into the sanitary system will not be considered hazardous and will meet applicable regulatory guidelines. Air and water discharges will be permitted by the appropriate authorities.

The subject site is currently provided with municipal storm and sanitary service, municipal potable water service, electrical service, gas service and telephone service. Surface water runoff from the subject site is directed into the municipal stormwater system via sheet flow into catch basins. Stormwater runoff from the roof of the existing building is collected in a roof drain system that discharges into stormwater drains within the building and subsequently out of the building via stormwater drains. The specific condition of existing stormwater and sanitary sewer drain systems is not known. Stormwater runoff from the site is eventually discharged in the Shiawassee River. Discharges into the sanitary system are conveyed off-site to the municipal waste water treatment system. The approximate location of prominent utilities are depicted on the Scaled Diagram in Attachment A. The approximate location of stormwater and sanitary sewer lines within the building are depicted on the Underground Plan also included in Attachment A. It is noted the Underground Plan was prepared by H.E. Beyster and Associates, Inc. of Detroit, Michigan in 1955 when the building was constructed.

At this time, there is no planned demolition of existing structures. It is anticipated some improvements will be made to existing floor drain systems and portions of existing floor surfaces. It is anticipated there will be some excavation associated with these improvements. This 7aCA has been compiled to assist in mitigating existing and potential environmental risks associated with the known type of contamination.

3.0 HAZARDOUS SUBSTANCE INFORMATION

Review of the Phase II Environmental Site Assessment (ESA) in the Category N BEA indicated the presence of contaminant substances on the subject site at concentrations exceeding NREPA, Part 201 Generic Residential Cleanup Criteria (GRCC). Information regarding contaminant/hazardous substances (i.e. levels and extent of known contamination, fate and transport, etc.) was presented in Section 4.0 of the BEA.

It is noted that for purposes of determining facility status of the subject site and preparing the BEA, contaminant concentrations were compared to NREPA, Part 201 Residential Cleanup Criteria. However, for purposes of this Due Care Plan, RC has compared known contaminant concentrations to Part 201 Generic Cleanup Criteria and Screening Levels for Industrial sites, effective December 21, 2002. This comparison is most appropriate for the intended use of the subject site by Tuscarora/Tegant. The contaminants of concern in relation to Industrial criteria are summarized on the Analytical Data Summary Tables in Attachment B.

The following table summarizes the potential soil exposure pathways applicable to the subject site.

SOIL EXPOSURE PATHWAY	CRITERIA EXCEEDED?	PATHWAY PRESENT?	PATHWAY OF CONCERN?
Drinking Water Protection	Yes	No	No
Groundwater/Surface Water Interface (GSI)	Yes	Yes	Yes
Groundwater Contact Protection	Yes	Yes	Yes
Soil Volatilization to Indoor Air Inhalation	Yes	Yes	Yes
Ambient Air Infinite Source Volatile Soil Inhalation (VSI)	No	No	No
Ambient Air Finite VSI for 5 Meter Source Thickness	No	Yes	No
Ambient Air Finite VSI for 2 Meter Source Thickness	No	Yes	No
Particulate Soil Inhalation	No	Yes	No
Direct Contact	Yes	Yes	Yes
Direct Contact	Yes	Yes	Yes
Soil Saturation Concentration Screening Levels	No	Yes	No

The drinking water pathway is not of concern since drinking water is/will be provided exclusively by the municipal system.

The GSI pathway is present as a result of stormwater drain systems passing through areas of known contamination. This pathway will be mitigated by checking the integrity of under-floor stormwater drainage lines from each interior down spout, and rerouting drainage overhead from any downspouts whose underground piping exhibits a significant potential for leakage.

The groundwater contact protection pathway is present since groundwater is present on the subject site in and near areas of known contamination. This pathway will be mitigated by preventing the placement of soil impacted by contaminant substances exceeding groundwater contact protection criteria into any excavation in which groundwater may come into contact with the impacted soil. Following the procedures outlined in Section 4.0 will appropriately address the groundwater contact protection exposure pathway.

The soil volatilization to indoor air inhalation criteria is present as a result of contaminant substances exceeding the volatilization to indoor air inhalation criteria in both soil and groundwater below a portion of the existing building. This pathway has been evaluated by air sampling from within those portions of the building under which soil and groundwater has been impacted above the volatilization to indoor air criteria. Results of that sampling indicated none of the contaminant substances exceeding volatilization to indoor air criteria were present in the building above NIOSH exposure limits for workers using an area for 10 hours a day during a 40-hour work week. This pathway has therefore been appropriately mitigated by the existing surface covering, which prevents volatilization into the indoor spaces. Mitigation will be maintained by following the procedures outlined in Section 4.3.

The ambient air and particulate soil inhalation pathways are not complete or of concern since the source is finite and/or no contaminants have not been identified in concentrations exceeding ambient air or particulate soil inhalation criteria.

The direct contact pathway is present since excavation may take place in areas of known contamination. This pathway will be mitigated by covering areas of soil exceeding direct contact criteria with soil that does not exceed this criteria, pavement or other clean, physical barrier and/or limiting access to those areas. Following the procedures outlined in Section 4.0 will appropriately address the direct contact exposure pathway.

No soil saturation concentration screening levels have been exceeded; therefore, no mitigation measures are required to address any potential exposure pathways.

The following table summarizes the potential groundwater exposure pathways applicable to the subject site.

GROUNDWATER PATHWAY	EXPOSURE	CRITERIA EXCEEDED?	PATHWAY PRESENT?	PATHWAY OF CONCERN?
Residential & Commercial I Drinking Water		Yes	No	No
Industrial & Commercial II, III & IV Drinking Water		Yes	No	No
Groundwater/Surface Water Interface		Yes	Yes	Yes
Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation		Yes	Yes	Yes
Industrial & Commercial II, III & IV Groundwater Volatilization to Indoor Air Inhalation		Yes	Yes	Yes
Groundwater Contact		Yes	Yes	Yes
Water Solubility		No	Yes	No
Flammability and Explosivity Screening Level		No	Yes	No
Acute Inhalation Screening Level		No	Yes	No

The drinking water pathways are not complete or of concern since drinking water is/will be provided exclusively by the municipal system.

The GSI pathway is present as a result of stormwater drain systems passing through areas of known contamination. This pathway will be mitigated by checking the integrity of under-floor stormwater drainage lines from each interior down spout, and rerouting drainage overhead from any downspouts whose underground piping exhibits a significant potential for leakage.

The volatilization to indoor air inhalation criteria is present as a result of contaminant substances exceeding the volatilization to indoor air inhalation criteria in both soil and groundwater below a portion of the existing building. This pathway has been evaluated by air sampling from within those portions of the building under which soil and groundwater has been impacted above the volatilization to indoor air criteria. Results of that sampling indicated none of the contaminant substances exceeding volatilization to indoor air criteria were present in the building above NIOSH exposure limits for workers using an area for 10 hours a day during a 40-hour work week. This pathway has therefore been appropriately mitigated by the existing surface covering, which prevents volatilization into the indoor spaces. Mitigation will be maintained by following the procedures outlined in Section 4.3.

The groundwater contact pathway is present since excavation may take place in areas of known contamination. This pathway will be mitigated by covering areas of groundwater exceeding direct contact criteria with soil that does not exceed groundwater contact protection criteria, pavement or other clean, physical barrier and/or limiting access to those areas. Following the procedures outlined in Section 4.0 will appropriately address the direct contact exposure pathway.

Neither the water solubility, the flammability and explosivity, nor the acute inhalation screening levels have been exceeded. Therefore, these pathways are not of concern.

4.0 PLAN FOR RESPONSE ACTIVITIES

The procedures outlined in the following sections are intended to serve as guidelines to mitigate potential exposure to known contaminants and fulfill the owner's due care responsibilities. They are opinions offered by RC/Wilcox based on our understanding of existing site conditions and NREPA, Part 201, Section 7a. Implementing all or some of these procedures will assist the owner in satisfying their due

care responsibilities. Note for purposes of the following sections, “construction” means improvements to existing site features or installation/construction of new site features.

4.1 PRE-CONSTRUCTION RESPONSE ACTIVITIES

1. Tuscarora/Tegant should provide a copy of the BEA and Due Care Plan to municipal organizations, professional firms, government units and contractors involved with on-site work, particularly if work will take place in or near areas of known contamination.
2. Contractors involved with on-site construction activities should modify the construction process, if needed, to minimize exposure to contaminants and prevent exacerbation.
3. The owner should implement a ban on the installation of potable water wells. This ban should be in the form of an instrument that will be transferred from owner to owner, in perpetuity or to the point at which groundwater on the subject site no longer exhibits contaminants above applicable drinking water criteria.

4.2 CONSTRUCTION RESPONSE ACTIVITIES

1. Verify that on-site workers working in areas of known contamination possess 40 Hour, HAZWOPER OSHA training.
2. Verify that all contractors working in the zone of impact maintain on-site copies of plans, monitoring records, health and safety plan, daily logs and personnel certification.
3. Verify that a site-specific health and safety plan has been developed and issued to appropriate on-site workers prior to the commencement of construction. The health and safety plan should address all operation, maintenance and monitoring procedures to be undertaken during earthwork activities on or near the zone of impact.
4. Verify that appropriate personal protective equipment (PPE), as specified in the health and safety plan, is utilized when construction activities occur in the zone of impact. Contractors will provide health and safety monitoring, as specified in the health and safety plan, during construction activities and verify that appropriate PPE is utilized when necessary.
5. Implement an equipment-cleaning method to assure that impacted soils do not leave the impacted area on equipment (dozer blades, tires, tracks, etc.).
6. Implement a ban for refueling and servicing of equipment requiring hazardous substances on impacted portions of the subject site.
7. Implement a method for minimizing transfer of impacted soils with unimpacted soils; assure that impacted soils are covered to prevent exacerbation and mitigate exposure pathways; and return impacted soils to the same location that they were removed from, if necessary. If impacted soils are to be removed from the subject site, soils must be appropriately characterized to identify the proper disposal method.
8. Implement a method to prevent surface water from collecting on any stockpiled soils that originate from the zone of impact. Stockpiled, impacted soils should be placed on and covered by plastic sheeting (or otherwise containerized) to prevent exacerbation of the contamination.
9. Implement a ban on construction dewatering in the zone of impact unless the proposed discharge has been adequately characterized and permitted for disposal.
10. Implement an emergency spill response plan to handle potential spills of petroleum, hydraulic oil and/or other hazardous substances identified during site preparation and construction activities, including potential releases from leaking construction equipment.

11. Implement a fill soil import/export ban until proposed materials have been adequately characterized.
12. Isolate the zone of impact with fencing or similar materials. Appropriate warning signs visible from all directions should be posted on the fencing. Contractors should indicate verbally and visually to onsite workers that construction activities occurring in the zone of impact should be monitored and comply with the components of this Due Care Plan. Driving of vehicles and/or machinery through exposed soils in the zone of impact provides a means to exacerbate the contamination throughout the site and should be minimized.
13. Ensure that all proposed utility lines passing through the zone of impact will be constructed of impervious materials, resistant to degradation from the contaminants identified on the site and sealed at their joints with similar materials. Utility trenches typically are backfilled with sand. Sand is a porous material that provides a effective groundwater pathway for contamination to migrate. If utility trenches pass through the zone of impact, the following "plugging" procedure should be implemented to mitigate potential contaminant exacerbation. Plugging involves backfilling the utility trench throughout the impacted area with a material, such as compacted clay, that will eliminate the potential for contamination to migrate via groundwater.
14. If excavation results in exposed and/or stockpiled soil, contractors will limit the amount of time impacted soils are exposed to the elements to minimize the possibility of surface water runoff and/or infiltration.
15. Verify that final structures, pavements, clean fill materials and/or landscaping adequately cover the impacted portions of the subject site and remove applicable exposure pathways.
16. At this time, there are no UST's known to be present on the subject site. If a UST is encountered during construction activities, the owner of the UST will be determined, it will be registered (if appropriate), promptly emptied, removed from the ground and disposed of properly within six months. The Michigan Department of Environmental Quality (MDEQ) will be notified of the UST removal.
17. No abandoned containers were observed on the site during the site activities performed thus far except for two hydraulic hoist cylinders located in a truck bay near the south portion of the existing building. These cylinders should be promptly removed, characterized and properly disposed. If possible, no soil or groundwater should be removed from the excavation. If this is required, soil and/or groundwater removed from the excavation should be properly characterized prior to relocation or disposal. The excavation should be filled with clean soil and the floor surface replaced with concrete. Should any other abandoned containers be discovered at a later date, these containers should be removed and disposed of prior to commencement of construction activities. Materials present inside the abandoned containers must be adequately characterized prior to disposal.
18. Verify that soil known to be impacted above GSI protection criteria is not placed along stormwater utility lines and is appropriately covered to prevent contact with surface water. This procedure may not apply to soil that is already located along the existing stormwater lines.
19. If construction takes place in areas where contaminants have been identified above volatilization to indoor air inhalation criteria, special precautions shall be taken to provide air monitoring during the construction activities. If monitoring indicates the presence of contaminants in the air, appropriate respiratory and fire/explosion protection shall be required. It may be necessary to provide additional air venting during activities in these areas. If possible, no soil or groundwater should be removed from excavation in these areas. If this is required, soil and/or groundwater removed from the excavation should be properly characterized prior to relocation or disposal. The excavation should be filled with clean soil and the floor surface replaced with concrete at least as thick as the original floor.

4.3 POST CONSTRUCTION ACTIVITIES

Tuscarora/Tegant should implement an operation, maintenance and monitoring plan that will establish guidelines for informing employees, contractors and utility workers that may perform work in the impacted areas of the existing site conditions and potential for contamination. The monitoring plan should include maintaining written documentation of the inspections. A checklist may accompany the plan by which the inspector may evaluate the impacted area. The impacted areas should be inspected on periodically (e.g. biannually) to evaluate if cracks or openings in the surface covering or pavement may pose an environmental concern of the subject site.

If flooring or surface coverings are disturbed in areas where contaminants are known to exist at concentrations above volatilization to indoor air inhalation criteria, air monitoring should be performed in applicable portions of the building during such disturbance activities, to evaluate whether any of the contaminants are present above NIOSH exposure limits for workers using the area. If elevated concentrations are noted, it may be necessary to replace or improve existing floor surfaces to prevent volatilization to indoor air. It would be prudent to install monitoring wells in the vicinity of the area known to be impacted above volatilization to indoor air inhalation criteria. If Tuscarora/Tegant opts to install these wells, they should be sampled periodically (e.g. annually) to evaluate changes in groundwater conditions (i.e. contaminant concentrations and extent). The air monitoring plan might be changed in response to information obtained from monitor well sampling.

All applicable documents regarding the environmental condition of the subject site should be maintained in a readily accessible location on site and during construction with copies provided to workers as needed to complete their tasks. If emergency repair of structures in impacted areas is required (such as stormwater and sewer lines, water main, etc.), contractors should be directed to review pertinent site documentation prior to completing the repairs.

5.0 EVALUATION AND DEMONSTRATION OF COMPLIANCE WITH SECTION 7a OBLIGATIONS

Under NREPA, Part 201, Section 20107a, the owner/operator of a facility has the following obligations with respect to hazardous substances at the facility:

1. Undertake activities necessary to prevent exacerbation of existing contamination.

Based on the proposed use of the subject site and the details within this document, particularly the response activities described in Section 4.0, the proposed use of the subject site should not cause exacerbation of the existing contamination. The owner or operator should work with the party responsible for the known contamination and allow access to perform future work, if necessary. Given the variety of closure and in-situ remediation options available to the potentially responsible party, the proposed use should not significantly increase response costs (remediation or acts to protect public health).

2. Undertake necessary response activities to mitigate unacceptable exposure to hazardous substances and allow for the intended use of the facility in a manner that protects public safety.

Exposure pathways have been addressed by information included in this document. Exposure to contaminants will be appropriately mitigated by following the procedures outlined in Section 4.0. Upon completion, the site will be covered with "clean" surfaces (i.e. pavements, soil and other landscape features) and there will be no water producing wells. There will be no pertinent exposure pathways to the identified contamination after the project has been completed. There are no significant fire or explosion hazards at the subject. Documentation of the environmental conditions on the subject site (described in the BEA and Due Care Plan) should be provided to any third parties that will be working in or near areas of known contamination or subsequent purchasers of the subject site.

3. Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party that would exacerbate contamination or result in unacceptable exposure to hazardous substances.

The owner or operator of the subject site should inform all workers and/or contractors that may be exposed to contaminated soil or groundwater that contamination is present on the subject site and provide them with pertinent information (see Section 4.0). Documentation of the environmental conditions on the subject site (described in the BEA and Due Care Plan) should be provided to any third parties that will be working in or near areas of known contamination or subsequent purchasers of the subject site. Areas of known impact should be covered with pavement, clean soil or gravel or access to those areas should be restricted, thus creating a barrier to eliminate the exposure pathways of concern.

Areas of known contamination should be covered with clean soil and/or gravel or access to those areas should be restricted, thus creating a barrier to eliminate exposure pathways of concern. The Due Care Plan for response activities described above provides adequate detail to demonstrate how “due care” and “reasonable precaution” obligations can be met.

6.0 CONCLUSION

In determining the “facility” status of the subject site, the analytical results were compared to NREPA, Part 201 GRCC. The subject site will be used for industrial purposes. This Due Care Plan was prepared using information from the BEA and comparing analytical results to NREPA, Part 201 Industrial Criteria. Since there will be no potable water wells, impacted portions of the site will be covered with clean soil, pavement and/or buildings, there will be no unacceptable exposure pathways to the identified contamination. If additional construction activities are proposed in the future or new information is obtained regarding the environmental condition of the subject site, the owner or operator should re-evaluate the information contained in this Due Care Plan and make any necessary revisions or notifications.

7.0 REFERENCES

The information utilized by RC/Wilcox to complete this report is included in the Category S BEA for the subject site dated February 20, 2003. The BEA report should be reviewed by all parties involved with work in areas of known contamination.

8.0 ATTACHMENTS

Attachment A: Site Location Diagram
Scaled Diagram
Boring Diagram

Attachment B: Analytical Data Summary Tables (Industrial/Non-Residential Criteria)

9.0 GENERAL COMMENTS

This report has been prepared for use by Tuscarora/Tegant and their authorized representatives. Use, reliance and distribution by any third party is prohibited without the written consent of Tuscarora/Tegant and RC/Wilcox. This Due Care Plan was conducted in general accordance with accepted procedures in the field of environmental engineering and the MDEQ's Instructions for Preparing and Disclosing Baseline Environmental Assessments, March 11, 1999 and Michigan Public Act 451, Part 201, as amended. No other warranties, implied or expressed are made. It is understood we do not assume responsibility for reporting to any federal, state or local authority any conditions disclosed by this or any future phase of work. It should also be understood by the client that if the intended use of the subject site is altered, then portions or the entirety of this report may also have to be altered.

REPORT PREPARED BY:

**Brian J. Huebner, C.H.M.M.
Project Professional**

REPORT REVIEWED BY:

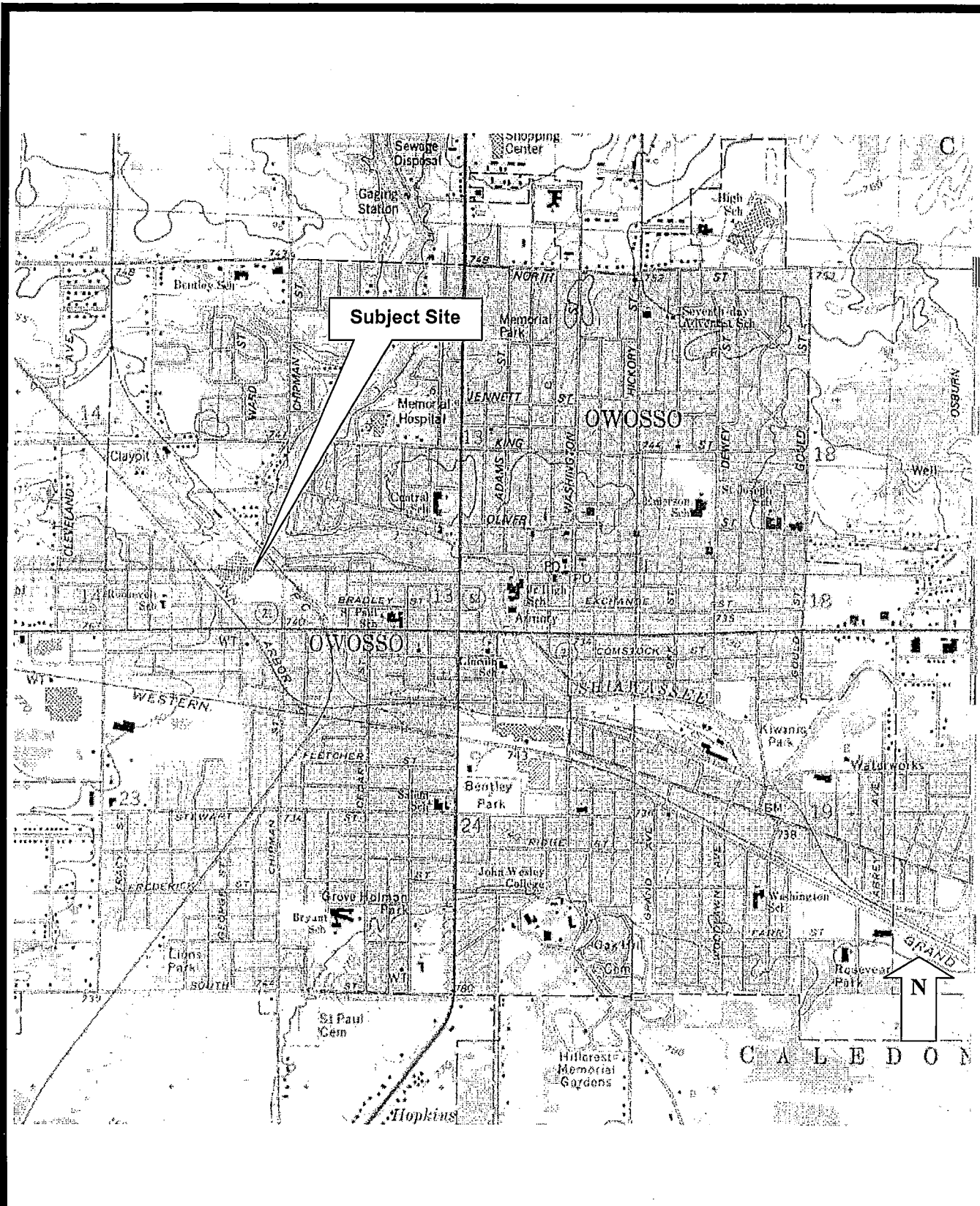
**Douglas E. Drouare, C.P.G.
Environmental Team Leader**

ATTACHMENT A

SITE LOCATION DIAGRAM

SCALED DIAGRAM

BORING DIAGRAM



Phone: (989) 752-6500; Fax: (989) 752-6600
 Website: <http://www.rcinc.net>

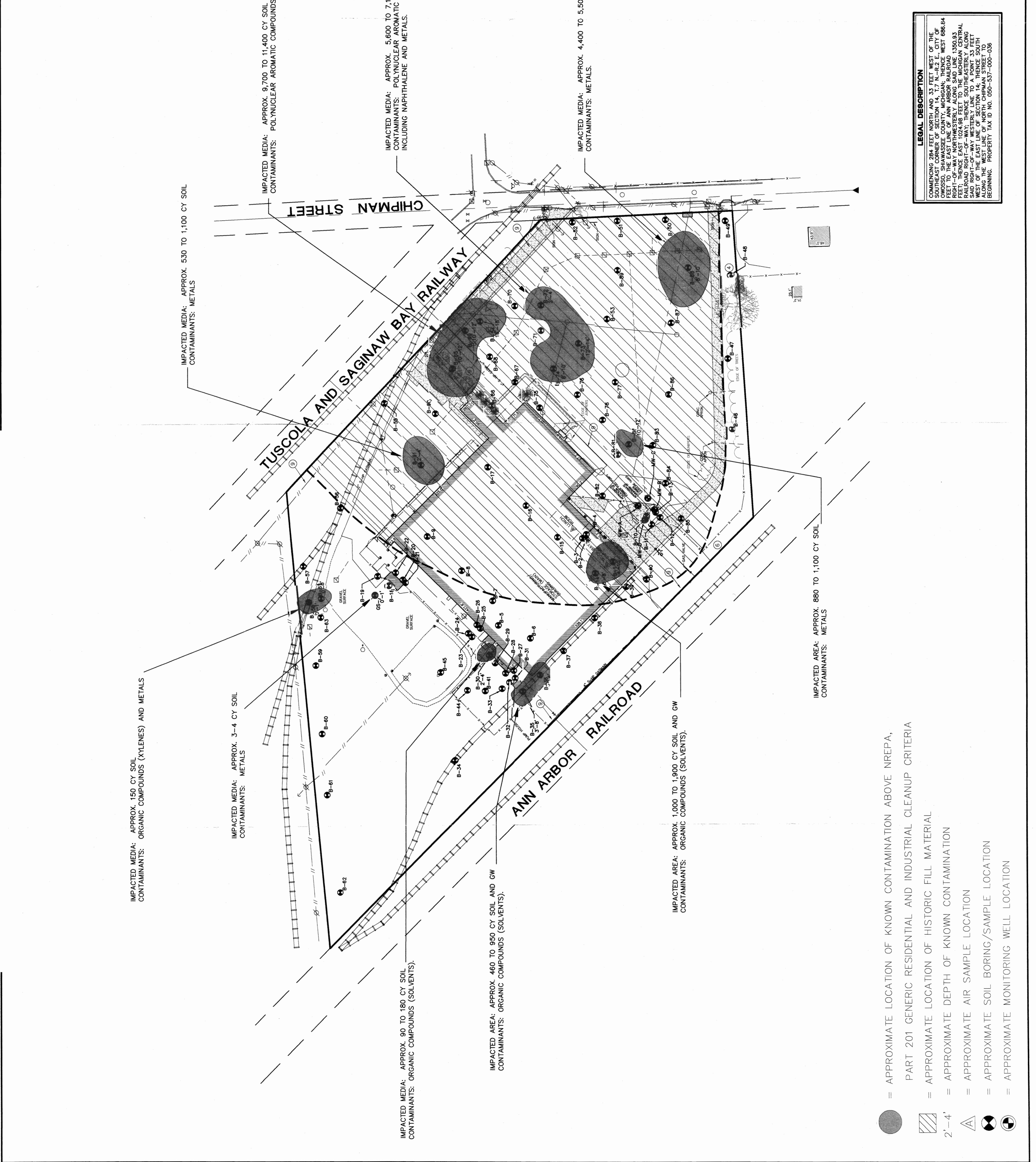
SITE LOCATION DIAGRAM
 (USGS Topographic Map)
 123 North Chipman Street
 Owosso, Michigan
 RC PROJECT NO. E-028413

DRAWN BY: CCC
DATE: 11/06/02
APPROVED BY: DED
DATE: 11/06/02
UPDATED BY: BJH
DATE: 1/23/03

<p>RC ENGINEERING, INC. CIVIL & MECHANICAL & ELECTRICAL & STRUCTURAL & GEOTECHNICAL ENVIRONMENTAL, TRAFFIC & TRANSPORTATION & PLANNING SURVEYING & CONSTRUCTION SERVICES COMPUTER CONSULTING 5859 SHERMAN ROAD • SAGINAW, MICHIGAN 48604 PHONE (989) 752-6500 • FAX (989) 752-6500 TOLL FREE (888) 752-6500 WWW.RCEI.COM</p>	<p>BEA E-028413</p>
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FILE: BEA DIAGRAM	PROJECT START: FEB 12, 2002
PROJECT MGR: BJH	DESIGNED BY: ENR
DRAWN BY: ENR	CHECKED BY: N/A
SCALE: 1" = 100'	SHEET: 1 OF 1

800 FIFTH STREET
 NEW BRIGHTON, PA



IMPACTED MEDIA: APPROX. 150 CY SOIL
 CONTAMINANTS: ORGANIC COMPOUNDS (XYLENES) AND METALS

IMPACTED MEDIA: APPROX. 3-4 CY SOIL
 CONTAMINANTS: METALS

IMPACTED MEDIA: APPROX. 90 TO 180 CY SOIL
 CONTAMINANTS: ORGANIC COMPOUNDS (SOLVENTS)

IMPACTED AREA: APPROX. 460 TO 950 CY SOIL AND GW
 CONTAMINANTS: ORGANIC COMPOUNDS (SOLVENTS)

IMPACTED AREA: APPROX. 1,000 TO 1,900 CY SOIL AND GW
 CONTAMINANTS: ORGANIC COMPOUNDS (SOLVENTS)

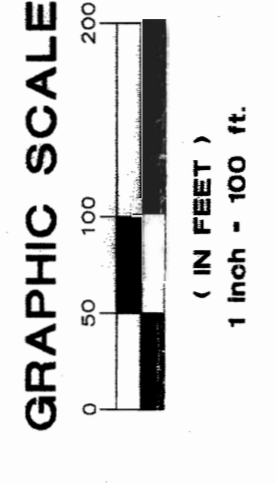
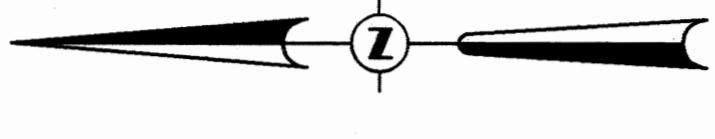
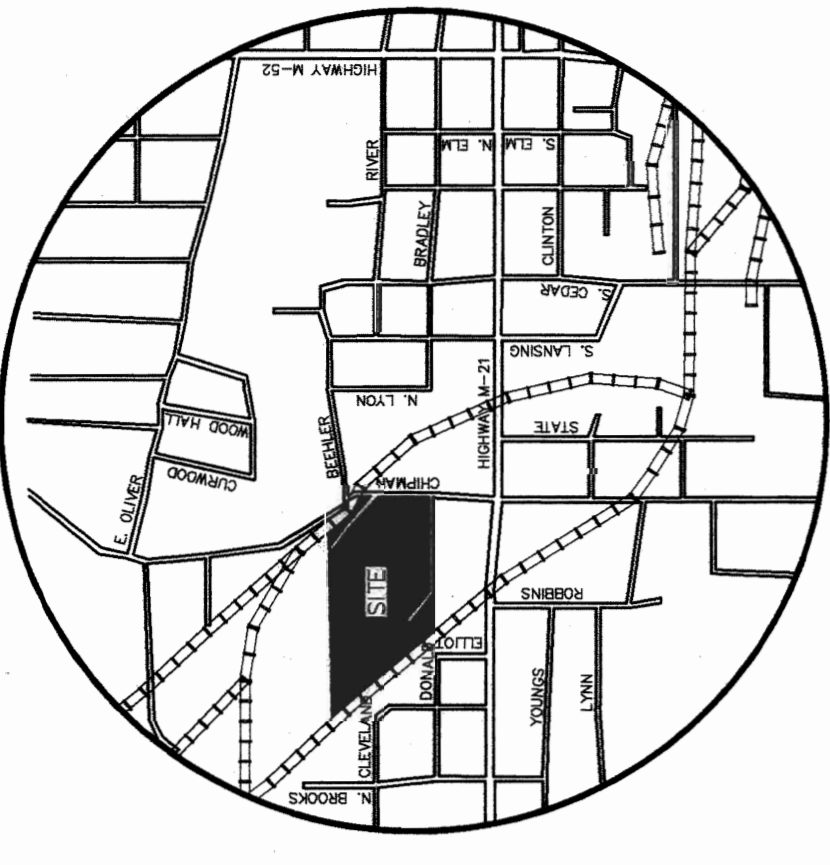
IMPACTED AREA: APPROX. 880 TO 1,100 CY SOIL
 CONTAMINANTS: METALS

IMPACTED MEDIA: APPROX. 530 TO 1,100 CY SOIL
 CONTAMINANTS: METALS

IMPACTED MEDIA: APPROX. 9,700 TO 11,400 CY SOIL
 CONTAMINANTS: POLYNUCLEAR AROMATIC COMPOUNDS AND METALS.

IMPACTED MEDIA: APPROX. 5,600 TO 7,100 CY SOIL
 CONTAMINANTS: POLYNUCLEAR AROMATIC COMPOUNDS
 INCLUDING NAPHTHALENE AND METALS.

IMPACTED MEDIA: APPROX. 4,400 TO 5,500 CY SOIL
 CONTAMINANTS: METALS.



LEGEND	
▲	MONUMENT / SECTION CORNER
○	EXISTING IRON SET PROPERTY IRON
○	EXISTING CATCHBASIN
○	EXISTING MANHOLE / CATCHBASIN
○	EXISTING HYDRANT
○	EXISTING VALVE
○	EXISTING SANITARY SEWER
○	EXISTING STORM SEWER
○	EXISTING WATERMAIN
○	EXISTING GAS LINE
○	UNDERGROUND ELECTRIC LINE
○	UNDERGROUND GAS LINE
○	UNDERGROUND TELEPHONE LINE
○	UNDERGROUND CABLE T.V. LINE
○	OVERHEAD ELECTRICAL WIRES
○	EXISTING MAILBOX / NEWSPAPER BOX
○	EXISTING SIGN
○	EXISTING DECIDUOUS TREES
○	EXISTING CONIFEROUS TREES
○	EXISTING UTILITY POWER POLE
○	EXISTING LIGHT POLE
○	EXISTING COT ANCHOR
○	MONITORING WELL

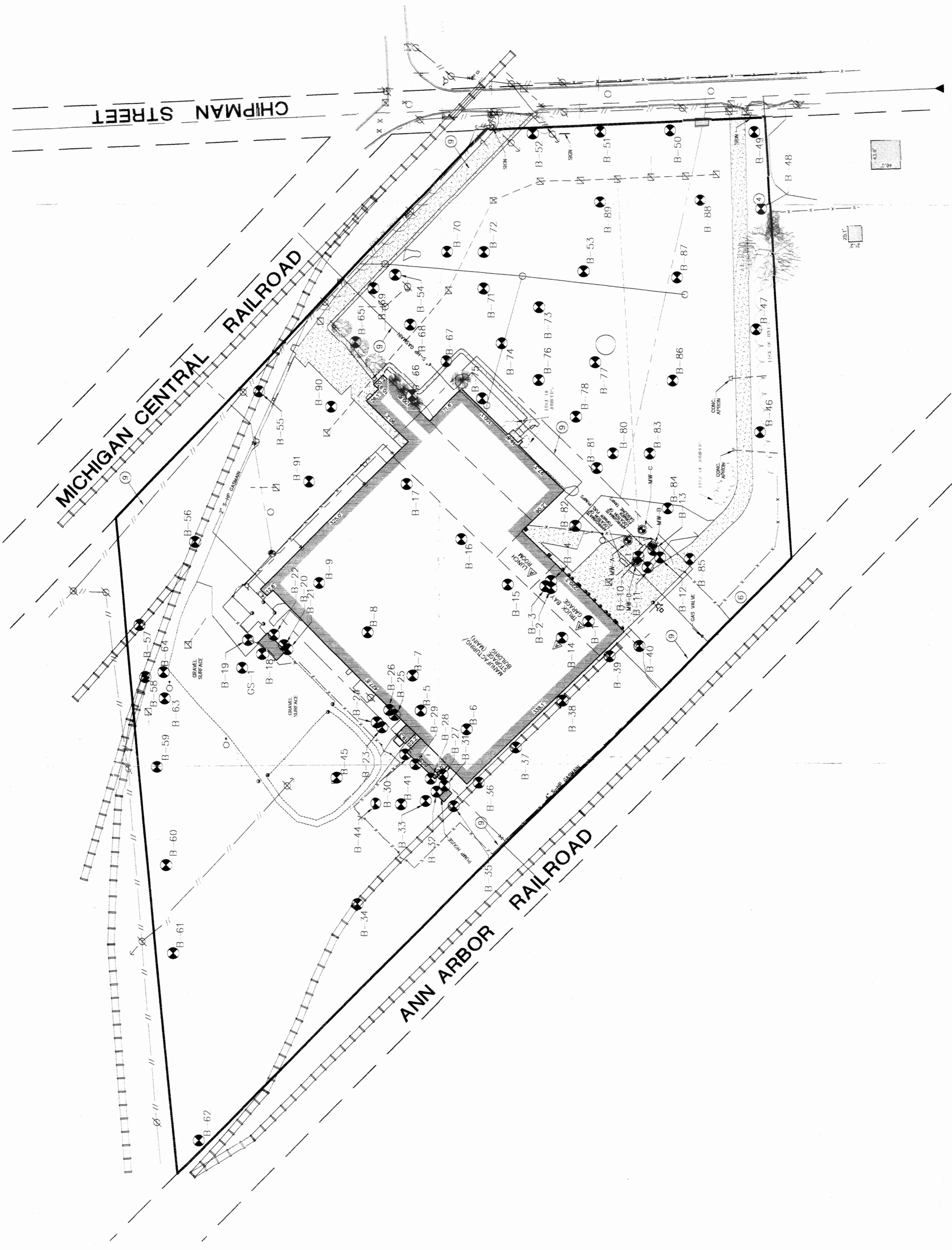
UTILITY CONTACT	
TELEPHONE SERVICES	ZONING
VERIZON	CITY HALL
WEST EXCHANGE	301 W. MAIN STREET
1-800-463-4000	OWOSSO, MI 48867
	(989) 752-4555
WATER/SEWER	GAS
CITY HALL	CONSUMERS ENERGY
301 W. MAIN STREET	2400 WESS RD.
OWOSSO, MI 48867	SAGINAW, MI 48602
(989) 752-4555	(989) 791-5335

ZONING INFORMATION	
ZONED - I-2	GENERAL INDUSTRIAL
REAR - 60'	
FRONT - 60'	
SIDE - 30'	

LEGAL DESCRIPTION
 COMMENCING 284 FEET NORTH AND 33 FEET WEST OF THE SOUTHWEST CORNER OF SECTION 16, T12N, R2E, CITY OF OWOSSO, MI, TO THE EAST LINE OF ANN ARBOR RAILROAD RIGHT-OF-WAY NORTHWESTERLY ALONG SAID LINE 1300.03 FEET TO THE EAST LINE OF ANN ARBOR RAILROAD RAILROAD RIGHT-OF-WAY; THENCE SOUTHEASTERLY ALONG SAID RIGHT-OF-WAY WESTERLY LINE TO A POINT 33 FEET SOUTH OF THE WEST LINE OF NORTH CHIPMAN STREET TO BEGINNING. PROPERTY TAX ID NO. 050-537-000-036

- = APPROXIMATE LOCATION OF KNOWN CONTAMINATION ABOVE NREPA,
- = PART 201 GENERIC RESIDENTIAL AND INDUSTRIAL CLEANUP CRITERIA
- = APPROXIMATE LOCATION OF HISTORIC FILL MATERIAL
- = APPROXIMATE DEPTH OF KNOWN CONTAMINATION
- = APPROXIMATE AIR SAMPLE LOCATION
- = APPROXIMATE SOIL BORING/SAMPLE LOCATION
- = APPROXIMATE MONITORING WELL LOCATION

△ = APPROXIMATE AIR SAMPLE LOCATION
 ⊗ = APPROXIMATE SOIL BORING/SAMPLE LOCATION
 ⊕ = APPROXIMATE MONITORING WELL LOCATION



UTILITY NOTE
 THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE SIZE, LOCATION, DEPTH, PRESSURE, OR CONTENTS OF ANY UTILITIES ENCOUNTERED DURING EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OF COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREON SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND/OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND.

UTILITY CONTACT
TELEPHONE SERVICES
 VERIZON
 WEST EXCHANGE
 OWOSSO, MI 48867
 1-800-483-4000
 (989) 752-0535

ZONING
 CITY HALL
 301 W. MAIN STREET
 OWOSSO, MI 48867
 (989) 752-0535

GAS
 CONSUMERS ENERGY
 10000 W. HAWTHORNE
 SAGINAW, MI 48602
 ATTN: D. RICHARDS
 (989) 791-5326

WATER/SEWER
 CITY HALL
 301 W. MAIN STREET
 OWOSSO, MI 48867
 ATTN: GARY BURK
 (989) 752-0555

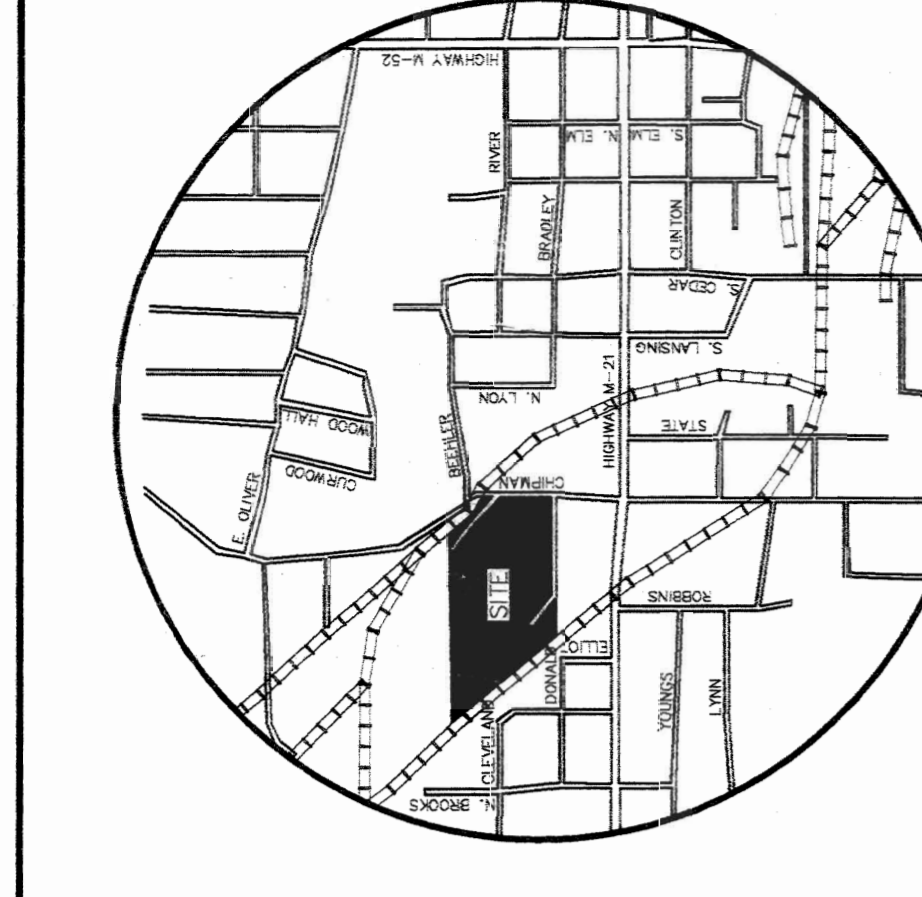
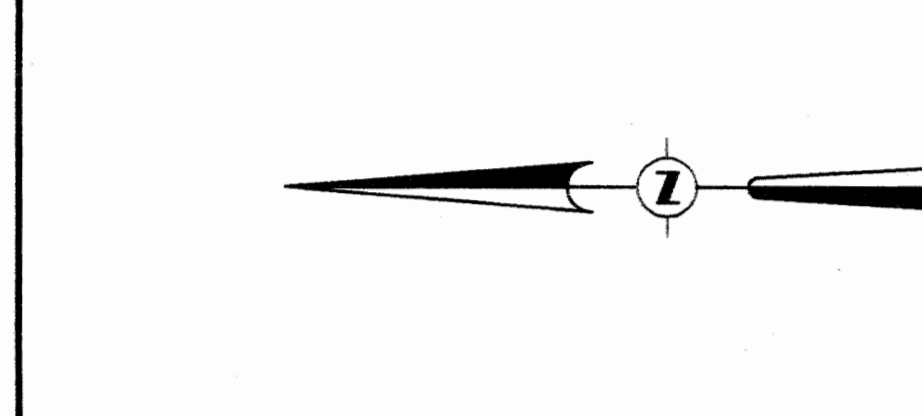
BENCHMARKS
 B.M. #1 - NORTH BOLT ON HYDRANT AT S.E. CORNER OF PROPERTY; U.S.G.S. ELEV. 741.16
 B.M. #2 - ARROW ON DOME OF HYDRANT AT S.E. CORNER OF BEEHLER AND CHIPMAN; U.S.G.S. ELEV. 739.02
 B.M. #3 - ARROW ON DOME OF HYDRANT ON EAST EDGE OF PARKING LOT ON EAST SIDE OF BUILDING; U.S.G.S. ELEV. 743.96

SCHEDULE B-2 (EASEMENTS)
 ① RIGHTS OF WAY FOR INGRESS AND EGRESS RECORDED IN LIBER 912 ON PAGE 217. (AS SHOWN)
 ② EASEMENT FOR GAS PIPELINE TO CONSUMERS POWER COMPANY RECORDED IN LIBER 573 ON PAGE 204. (AS SHOWN)
 ③ RIGHT OF WAY TO CONSUMERS POWER COMPANY AS RECORDED IN LIBER 290 ON PAGE 498 (AS SHOWN), IN LIBER 289 ON PAGE 533 (DOES NOT AFFECT) AND IN LIBER 524 ON PAGE 1022. (AS SHOWN)

LEGAL DESCRIPTION
 COMMENCING 284 FEET NORTH AND 33 FEET WEST OF THE SOUTHEAST CORNER OF SECTION 14, T.7 N.-R.2 E., CITY OF OWOSSO, SHAWASSEE COUNTY, MICHIGAN, THENCE WEST 686.84 FEET TO THE POINT OF BEGINNING, THENCE S 89° 58' 00" E 1024.98 FEET TO THE MICHIGAN CENTRAL RAILROAD RIGHT-OF-WAY, THENCE SOUTHWESTERLY ALONG SAID RIGHT-OF-WAY TO THE POINT OF BEGINNING, THENCE S 89° 58' 00" E 1024.98 FEET TO THE MICHIGAN CENTRAL RAILROAD RIGHT-OF-WAY, THENCE SOUTHWESTERLY ALONG SAID RIGHT-OF-WAY TO THE POINT OF BEGINNING, THENCE S 89° 58' 00" E 1024.98 FEET TO THE MICHIGAN CENTRAL RAILROAD RIGHT-OF-WAY, THENCE SOUTHWESTERLY ALONG SAID RIGHT-OF-WAY TO THE POINT OF BEGINNING.

ZONING INFORMATION
 ZONED - I-2 'GENERAL INDUSTRIAL'
 SETBACKS:
 FRONT - 60'
 REAR - (SEE CITY ORDINANCES)
 SIDE - 30'

FLOOD PLAN INFORMATION
 CITY OF OWOSSO
 SHAWASSEE COUNTY, MICHIGAN
 MAP NUMBER: 2605960002 A
 EFFECTIVE DATE: MARCH 1, 1982
 FLOOD ZONE: C
 AREAS OF MINIMAL FLOODING



ATTACHMENT B

**ANALYTICAL DATA SUMMARY TABLES
(INDUSTRIAL/NON-RESIDENTIAL
CRITERIA)**

**SOIL ANALYTICAL DATA SUMMARY TABLE A
ORGANIC AND POLYNUCLEAR AROMATIC COMPOUNDS (Page 1 of 2)**

Phase II ESA
123 North Chipman Street
Owosso, Michigan
RC Project No. E-028413

Substance	Part 201 Generic Residential Cleanup Criteria for Soil													
	Sample Number (Date Collected)	B-1;3-BS (1/17/02)	B-14;4-BS (1/18/02)	B-30;2-BS (1/18/02)	B-36;3-BS (12/11/02)	B-54;9-BS (12/16/02)	B-58;1-AS (12/18/02)	Statewide Default Background	Drinking Water Protection	GSI Protection ID	Groundwater Contact Protection	Volatilization to Indoor Air Inhalation	Direct Contact	Soil Saturation Concentration Screening Levels
Anthracene		ND	ND	ND	ND	50,000	740	NA	41,000	ID	41,000	1.0E+9	2.3E+8	NA
Benzo(a)anthracene		ND	ND	ND	ND	700,000	1,770	NLL	NLL	NLL	NLL	NLV	20,000	NA
Benzo(a)pyrene		ND	ND	ND	ND	800,000	1,980	NLL	NLL	NLL	NLL	NLV	2,000	NA
Benzo(b)fluoranthene		ND	ND	ND	ND	700,000	2,330	NLL	NLL	NLL	NLL	NLV	20,000	NA
Benzo(k)fluoranthene		ND	ND	ND	ND	700,000	2,210	NLL	NLL	NLL	NLL	NLV	200,000	NA
cis 1,2-Dichloroethene		35,000	120	ND	ND	ND	NA	NA	1,400	ID	640,000	23,000	640,000	640,000
Fluoranthene		ND	ND	ND	ND	1,600,000	4,740	NA	730,000	5,500	730,000	1.0E+9	4.6E+7	NA
Methylene chloride		ND	ND	ND	300	ND	NA	NA	100	19,000	2.3E+6	45,000	1.3E+6	2.3E+6
Naphthalene		ND	ND	ND	ND	78,000	340	NA	35,000	870	2.1E+6	250,000	1.6E+7	NA
Phenanthrene		ND	ND	ND	ND	1,700,000	1,450	NA	56,000	2,300	1.1E+6	1.8E+6	1.6E+6	NA
Pyrene		ND	ND	ND	ND	1,700,000	3,590	NA	480,000	ID	480,000	1.0E+9	2.9E+7	NA
Tetrachloroethene		238,000	270	930	ND	ND	NA	NA	100	900	88,000	11,000	88,000	88,000
Trichloroethene		10,000	90	ND	130	ND	NA	NA	100	4,000	500,000	7,100	500,000	500,000
Xylenes		30,000	ND	ND	110	ND	1,010	NA	5,600	700	150,000	150,000	150,000	150,000

Note: Table reflects a summary of contaminants detected at concentrations exceeding applicable NREPA, Part 201 Generic Residential Cleanup Criteria. Some samples may have been impacted by contaminants below NREPA, Part 201 Generic Residential Cleanup Criteria. For details, please review the complete analytical laboratory reports.

All values are given in parts per billion (ppb)
 ND = Not detected above analytical method detection limits
 NA = Not applicable
 ID = Inadequate data to develop criterion
 NLL = Not likely to leach
 NLV = Not likely to volatilize

Bold entries indicate a value exceeding one or more of the listed cleanup criteria.
 Shading indicates a criteria which has been exceeded.

**SOIL ANALYTICAL DATA SUMMARY TABLE A
ORGANIC AND POLYNUCLEAR AROMATIC COMPOUNDS (Page 2 of 2)**

Phase II ESA
123 North Chipman Street
Owosso, Michigan
RC Project No. E-028413

Substance	Sample Number (Date Collected)		Part 201 Generic Residential Cleanup Criteria for Soil									
	B-65;6-BS (1/14/03)	B-74;5-BS (1/15/03)	Statewide Default Background	Drinking Water Protection	GSI Protection	Groundwater Contact Protection	Volatilization to Indoor Air Inhalation	Direct Contact	Soil Saturation Concentration Screening Levels			
Acenaphthene	ND	110,000	NA	300,000	4,400	970,000	1.9E+8	4.1E+7	NA			
Acenaphthylene	ND	130,000	NA	5,900	ID	440,000	1.6E+6	1.6E+6	NA			
Anthracene	380	380,000	NA	41,000	ID	41,000	1.0E+9	2.3E+8	NA			
Benzo(a)anthracene	3,180	580,000	NA	NLL	NLL	NLL	NLV	20,000	NA			
Benzo(a)pyrene	2,670	620,000	NA	NLL	NLL	NLL	NLV	2,000	NA			
Benzo(b)fluoranthene	3,260	420,000	NA	NLL	NLL	NLL	NLV	20,000	NA			
Benzo(k)fluoranthene	3,160	500,000	NA	NLL	NLL	NLL	NLV	200,000	NA			
Benzo(ghi)perylene	1,940	340,000	NA	NLL	NLL	NLL	NLV	290,000	NA			
Chrysene	3,180	540,000	NA	NLL	NLL	NLL	NLV	200,000	NA			
Dibenzo(ah)anthracene	610	70,000	NA	NLL	NLL	NLL	NLV	2,000	NA			
Fluoranthene	7,690	1,820,000	NA	730,000	5,500	730,000	1.0E+9	4.6E+7	NA			
Fluorene	ND	210,000	NA	390,000	5,300	890,000	5.8E+8	2.7E+7	NA			
Indeno(1,2,3-cd)pyrene	2,020	320,000	NA	NLL	NLL	NLL	NLV	20,000	NA			
Naphthalene	ND	220,000	NA	35,000	870	2.1E+6	250,000	1.6E+7	NA			
Phenanthrene	1,680	1,990,000	NA	56,000	2,300	1.1E+6	1.8E+6	1.6E+6	NA			
Pyrene	4,820	1,320,000	NA	480,000	ID	480,000	1.0E+9	2.9E+7	NA			
Xylenes	ND	800	NA	5,600	700	150,000	150,000	150,000	150,000			

Note: Table reflects a summary of contaminants detected at concentrations exceeding applicable NREPA, Part 201 Generic Residential Cleanup Criteria. Some samples may have been impacted by contaminants below NREPA, Part 201 Generic Residential Cleanup Criteria. For details, please review the complete analytical laboratory reports.

All values are given in parts per billion (ppb)
 ND = Not detected above analytical method detection limits
 NA = Not applicable
 ID = Inadequate data to develop criterion
 NLL = Not likely to leach
 NLV = Not likely to volatilize

Bold entries indicate a value exceeding one or more of the listed cleanup criteria.
 Shading indicates a criteria which has been exceeded.

**SOIL ANALYTICAL DATA SUMMARY TABLE B
INORGANICS (Page 1 of 2)**

Phase II ESA
123 North Chipman Street
Owosso, Michigan
RC Project No. E-028413

Substance	Sample Number (Date Collected)						Part 201 Generic Residential Cleanup Criteria for Soil					
	GS-1 (12/16/02)	B-54;9-BS 12/16/02	B-58;1-AS (12/18/02)	B-64;1-BS (1/13/03)	B-65;6-BS (1/14/03)	B-69;6-BS (1/14/03)	Statewide Default Background	Drinking Water Protection	GSI Protection	Groundwater Contact Protection	Direct Contact	
Arsenic	15,800	46,300	29,700	2,170	16,600	2,660	5,800	23,000	70,000	2.0E+6	7,600	
Barium	57,000	102,000	46,500	65,500	185,000	52,100	75,000	1.3E+6	{G}	1.0E+9	3.7E+7	
Cadmium	460	9,890	865	710	2,500	160	1,200	6,000	{G}	2.3E+8	550,000	
Chromium	21,900	52,100	5,840	22,400	8,140	2,940	18,000	30,000	3,300	1.4E+8	2.5E+6	
Copper	28,400	155,000	38,100	15,700	25,200	79,800	32,000	5.8E+6	{G}	1.0E+9	2.0E+7	
Lead	16,800	203,000	41,300	58,100	305,000	73,300	21,000	700,000	{G,M}	ID	400,000	
Mercury	ND	290	ND	850	ND	ND	130	1,700	100 {M}	47,000	160,000	
Selenium	840	620	790	ND	570	ND	410	4,000	400	7.8E+7	2.6E+6	
Zinc	141,000	3,910,000	52,000	63,500	897	27,100	47,000	2.4E+6	{G}	1.0E+9	1.7E+8	

Note: Table reflects a summary of contaminants detected at concentrations exceeding applicable NREPA, Part 201 Generic Residential Cleanup Criteria. Some samples may have been impacted by contaminants below NREPA, Part 201 Generic Residential Cleanup Criteria. For details, please review the complete analytical laboratory reports.

All values are given in parts per billion (ppb)
 ND = Not detected above analytical method detection limits
 NA = Not applicable
 ID = Inadequate data to develop criterion
 {G} = GSI value is pH or water hardness dependent
 {M} = Criterion defaults to the analytical method detection limit

Bold entries indicate a value exceeding one or more of the listed cleanup criteria.
 Shading indicates a criteria which has been exceeded.

**SOIL ANALYTICAL DATA SUMMARY TABLE B
INORGANICS (Page 2 of 2)**

Phase II ESA
123 North Chipman Street
Owosso, Michigan
RC Project No. E-028413

Substance	Sample Number (Date Collected)								Part 201 Generic Residential Cleanup Criteria for Soil				
	B-72;2-BS (1/15/03)	B-73;7-BS (1/15/03)	B-74;5-BS (1/15/03)	B-80;6-BS (1/15/03)	B-88;5-BS (1/16/03)	B-91;2-BS (1/16/03)	Statewide Default Background	Drinking Water Protection	GSI Protection	Groundwater Contact Protection	Direct Contact		
Arsenic	1,960	1,770	1,670	7,810	9,210	6,830	5,800	23,000	70,000	2.0E+6	7,600		
Barium	51,100	74,900	46,800	39,600	62,400	52,600	75,000	1.3E+6	{G}	1.0E+9	3.7E+7		
Cadmium	100	200	310	130	300	130	1,200	6,000	{G}	2.3E+8	550,000		
Chromium	3,500	6,940	4,260	3,920	4,790	3,580	18,000	30,000	3,300	1.4E+8	2.5E+6		
Copper	7,440	12,800	17,200	10,000	16,900	3,810	32,000	5.8E+6	{G}	1.0E+9	2.0E+7		
Lead	5,010	25,800	110,000	7,880	45,200	7,470	21,000	700,000	{G;M}	ID	400,000		
Mercury	ND	ND	100	ND	100	ND	130	1,700	100;{M}	47,000	160,000		
Selenium	690	ND	ND	ND	ND	ND	410	4,000	400	7.8E+7	2.6E+6		
Zinc	12,400	45,500	61,800	18,500	49,100	5,750	47,000	2.4E+6	{G}	1.0E+9	1.7E+8		

Note: Table reflects a summary of contaminants detected at concentrations exceeding applicable NREPA, Part 201 Generic Residential Cleanup Criteria. Some samples may have been impacted by contaminants below NREPA, Part 201 Generic Residential Cleanup Criteria. For details, please review the complete analytical laboratory reports.

All values are given in parts per billion (ppb)
 NID = Not detected above analytical method detection limits
 NA = Not applicable

ID = Inadequate data to develop criterion
 {G} = GSI value is pH or water hardness dependent
 {M} = Criterion defaults to the analytical method detection limit

Bold entries indicate a value exceeding one or more of the listed cleanup criteria.
Shading indicates a criteria which has been exceeded.

GROUNDWATER ANALYTICAL DATA SUMMARY TABLE

Phase II ESA
123 North Chipman Street
Owosso, Michigan
RC Project No. E-028413

Substance	Sample Number (Date Collected)	Part 201 Generic Residential Cleanup Criteria (GRCC) for Groundwater								
		B-1;1-WS (11/7/02)	B-35;1-WS (12/11/02)	Drinking Water	GSI	Groundwater Volatilization to Indoor Inhalation Air	Groundwater Contact	Water Solubility	Flammability and Explosivity Screening Level	Acute Inhalation Screening Level
cis 1,2-Dichloroethene	2,400	4	ND	70	ID	96,000	200,000	3.5E+6	270,000	ID
Ethylbenzene	900	ND	ND	74	18	170,000	170,000	169,000	22,000	170,000
Tetrachloroethene	42,700	ND	ND	5	45	25,000	12,000	200,000	ID	200,000
Trichloroethene	1,100	ND	ND	5	200	15,000	37,000	1.10E+6	ID	1.1E+6
Vinyl Chloride	1,000	10	ND	2	15	110	570	2.6E+6	17,000	ID
Xylenes	4,500	ND	ND	280	35	190,000	190,000	186,000	35,000	190,000

Note: Table reflects a summary of contaminants detected at concentrations exceeding applicable NREPA, Part 201 Generic Residential Cleanup Criteria. Some samples may have been impacted by contaminants below NREPA, Part 201 Generic Residential Cleanup Criteria. For details, please review the complete analytical laboratory reports.

All values are given in parts per billion (ppb)
ND = Not detected above analytical method detection limits
ID = Inadequate data to develop criterion

Bold entries indicate a value exceeding one or more of the listed cleanup criteria.
Shading indicates a criteria which has been exceeded.



Attachment 1
TABLE 3. SOIL: NONRESIDENTIAL
PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS;
PART 213 TIER 1 RISK-BASED SCREENING LEVELS (RBSLs)
DOCUMENT RELEASE DATE: MARCH 25, 2011

All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to one microgram per kilogram (ug/kg). Criteria with six or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. The lowest generic soil criterion for a given hazardous substance is presented in a bold box. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (R 299.5707). In these cases, two numbers are present in the cell. The first number is the criterion (i.e., TDL), and the second number is the risk-based value. Criteria were originally promulgated December 21, 2002 within the Administrative Rules for Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. This table reflects revisions to the criteria pursuant to the December 2010 Part 201 amendments and new criteria consistent with the provisions of R299.5706a. The effective dates of the criteria and screening levels in this table vary. Please contact the Remediation Division Toxicology Unit for additional information.

Guidesheet Number —>		#10	Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact	
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	#11	#12	#13	#14	#22	#23	#24	#25	#26	#27	#28
			Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Acenaphthene	83329	NA	3.0E+5	8.8E+5	8,700	9.7E+5	3.5E+8	9.7E+7	9.7E+7	9.7E+7	6.2E+9	1.3E+8	NA
Acenaphthylene	208968	NA	5,900	17,000	ID	4.4E+5	3.0E+6	2.7E+6	2.7E+6	2.7E+6	1.0E+9	5.2E+6	NA
Acetaldehyde (I)	75070	NA	19,000	54,000	2,600	1.1E+8 (C)	4.0E+5	2.1E+5	2.1E+5	2.9E+5	2.6E+8	9.5E+7	1.1E+8
Acetate	71501	NA	ID	ID	(G)	ID	ID	ID	ID	ID	ID	ID	ID
Acetic acid	64197	NA	84,000	2.4E+5	(G)	6.5E+8 (C)	NLV	NLV	NLV	NLV	7.4E+9	4.2E+8	6.5E+8
Acetone (I)	67641	NA	15,000	42,000	34,000	1.1E+8 (C)	1.1E+8 (C)	1.6E+8	1.6E+8	2.0E+8	1.7E+11	7.3E+7	1.1E+8
Acetonitrile	75058	NA	2,800	8,000	NA	2.2E+7 (C)	8.8E+6	1.9E+6	1.9E+6	2.2E+6	1.8E+9	1.4E+7	2.2E+7
Acetophenone	98862	NA	30,000	88,000	ID	1.1E+6 (C)	1.1E+6 (C)	5.2E+7	5.2E+7	5.2E+7	1.4E+10	1.1E+6 (C)	1.1E+6
Acrolein (I)	107028	NA	2,400	6,600	NA	2.3E+7 (C)	760	370	370	630	5.9E+5	1.2E+7	2.3E+7
Acrylamide	79061	NA	10	10	200 (X)	2.6E+5	NLV	NLV	NLV	NLV	3.0E+6	8,700	NA
Acrylic acid	79107	NA	78,000	2.2E+5	NA	1.1E+8 (C)	5.5E+6	2.2E+5	2.7E+5	2.7E+5	2.9E+7	1.1E+8 (C,DD)	1.1E+8
Acrylonitrile (I)	107131	NA	100 (M); 52	220	100 (M); 40	2.8E+5	35,000	17,000	17,000	31,000	5.8E+7	74,000	8.3E+6
Alachlor	15972608	NA	52	52	290 (X)	44,000	NLV	NLV	NLV	NLV	ID	3.9E+5	NA
Aldicarb	116063	NA	60	60	NA	2.4E+6	NLV	NLV	NLV	NLV	ID	7.3E+5	NA
Aldicarb sulfone	1646884	NA	200 (M); 40	200 (M); 40	NA	4.2E+7	NLV	NLV	NLV	NLV	ID	8.0E+5	NA
Aldicarb sulfoxide	1646873	NA	200(M); 80	200 (M); 80	NA	5.4E+7	NLV	NLV	NLV	NLV	ID	9.5E+5	NA
Aldrin	309002	NA	NLL	NLL	NLL	NLL	7.1E+6	2.0E+5	2.0E+5	2.0E+5	8.0E+5	4,300	NA
Aluminum (B)	7429905	6.9E+6	1,000	1,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	3.7E+8 (DD)	NA
Ammonia	7664417	NA	ID	ID	(CC)	ID	ID	ID	ID	ID	2.9E+9	ID	1.0E+7
t-Amyl methyl ether (TAME)	994058	NA	3,900	3,900	NA	4.4E+5 (C)	1.1E+5	4.0E+5	7.8E+5	1.8E+6	1.8E+9	4.4E+5 (C)	4.4E+5
Aniline	62533	NA	1,100	4,400	330 (M); 80	2.8E+6	NLV	NLV	NLV	NLV	2.9E+7	1.5E+6	4.5E+6



Attachment 1
TABLE 3. SOIL: NONRESIDENTIAL
PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS;
PART 213 TIER 1 RISK-BASED SCREENING LEVELS (RBSLs)
DOCUMENT RELEASE DATE: MARCH 25, 2011

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Anthracene	120127	NA	41,000	41,000	ID	41,000	1.0E+9 (D)	1.6E+9	1.6E+9	1.6E+9	2.9E+10	7.3E+8	NA
Antimony	7440360	NA	4,300	4,300	94,000 (X)	4.9E+7	NLV	NLV	NLV	NLV	5.9E+6	6.7E+5	NA
Arsenic	7440382	5,800	4,600	4,600	4,600	2.0E+6	NLV	NLV	NLV	NLV	9.1E+5	37,000	NA
Asbestos (BB)	1332214	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.0E+7 (M); 85,000	ID	NA
Atrazine	1912249	NA	60	60	150	1.1E+5	NLV	NLV	NLV	NLV	ID	3.3E+5 (DD)	NA
Azobenzene	103333	NA	4,200	17,000	ID	3.0E+5	3.2E+7	2.1E+6	2.1E+6	2.1E+6	1.3E+8	6.6E+5	NA
Barium (B)	7440393	75,000	1.3E+6	1.3E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.5E+8	1.3E+8	NA
Benzene (I)	71432	NA	100	100	4,000 (X)	2.2E+5	8,400	45,000	99,000	2.3E+5	4.7E+8	4.0E+5 (C)	4.0E+5
Benzidine	92875	NA	1,000 (M); 6.0	1,000 (M); 6.0	1,000 (M); 6.0	1,000 (M); 140	NLV	NLV	NLV	NLV	59,000	1,000 (M); 110	NA
Benzo(a)anthracene (Q)	56553	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	80,000	NA
Benzo(b)fluoranthene (Q)	205992	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	80,000	NA
Benzo(k)fluoranthene (Q)	207089	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	8.0E+5	NA
Benzo(g,h,i)perylene	191242	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	3.5E+8	7.0E+6	NA
Benzo(a)pyrene (Q)	50328	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.9E+6	8,000	NA
Benzoic acid	65850	NA	6.4E+5	1.8E+6	NA	7.0E+7	NLV	NLV	NLV	NLV	ID	1.0E+9 (D)	NA
Benzyl alcohol	100516	NA	2.0E+5	5.8E+5	NA	5.8E+6 (C)	NLV	NLV	NLV	NLV	1.5E+11	5.8E+6 (C)	5.8E+6
Benzyl chloride	100447	NA	150	640	NA	72,000	33,000	48,000	48,000	52,000	7.8E+7	2.2E+5	2.3E+5
Beryllium	7440417	NA	51,000	51,000	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	5.9E+5	1.6E+6	NA
bis(2-Chloroethoxy)ethane	112265	NA	ID	ID	ID	ID	NLV	NLV	NLV	NLV	ID	ID	2.7E+6
bis(2-Chloroethyl)ether (I)	111444	NA	100	170	100 (M); 20	1.1E+5	44,000	13,000	13,000	13,000	1.2E+7	58,000	2.2E+6



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bis(2-Ethylhexyl)phthalate	117817	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	8.9E+8	1.0E+7 (C)	1.0E+7
Boron (B)	7440428	NA	10,000	10,000	1.0E+5 (X)	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	3.5E+8 (DD)	NA
Bromate	15541454	NA	200	200	800 (X)	96,000	NLV	NLV	NLV	NLV	ID	91,000	NA
Bromobenzene (I)	108861	NA	550	1,500	NA	3.6E+5	5.8E+5	5.4E+5	5.4E+5	5.4E+5	2.4E+8	7.6E+5 (C)	7.6E+5
Bromodichloromethane	75274	NA	1,600 (W)	1,600 (W)	ID	2.8E+5	6,400	31,000	31,000	57,000	1.1E+8	4.9E+5	1.5E+6
Bromoform	75252	NA	1,600 (W)	1,600 (W)	ID	8.7E+5 (C)	7.7E+5	3.1E+6	3.1E+6	3.1E+6	3.6E+9	8.7E+5 (C)	8.7E+5
Bromomethane	74839	NA	200	580	700	1.4E+6	1,600	13,000	57,000	1.4E+5	1.5E+8	1.0E+6	2.2E+6
n-Butanol (I)	71363	NA	19,000	54,000	NA	8.7E+6 (C)	NLV	NLV	NLV	NLV	1.0E+10	8.7E+6 (C)	8.7E+6
2-Butanone (MEK) (I)	78933	NA	2.6E+5	7.6E+5	44,000	2.7E+7 (C)	2.7E+7 (C)	3.5E+7	3.5E+7	3.6E+7	2.9E+10	2.7E+7 (C,DD)	2.7E+7
n-Butyl acetate	123864	NA	11,000	32,000	NA	1.1E+6 (C)	1.1E+6 (C)	1.4E+8	3.1E+8	3.5E+8	2.1E+11	1.1E+6 (C)	1.1E+6
t-Butyl alcohol	75650	NA	78,000	2.2E+5	NA	1.1E+8 (C)	1.1E+8 (C)	1.2E+8	2.4E+8	2.4E+8	5.6E+10	1.1E+8 (C)	1.1E+8
Butyl benzyl phthalate	85687	NA	3.1E+5 (C)	3.1E+5 (C)	1.2E+5 (X)	3.1E+5 (C)	NLV	NLV	NLV	NLV	2.1E+10	3.1E+5 (C)	3.1E+5
n-Butylbenzene	104518	NA	1,600	4,600	ID	1.2E+5	ID	ID	ID	ID	8.8E+8	8.0E+6	1.0E+7
sec-Butylbenzene	135988	NA	1,600	4,600	ID	88,000	ID	ID	ID	ID	1.8E+8	8.0E+6	1.0E+7
t-Butylbenzene (I)	98066	NA	1,600	4,600	ID	1.8E+5	ID	ID	ID	ID	2.9E+8	8.0E+6	1.0E+7
Cadmium (B)	7440439	1,200	6,000	6,000	(G,X)	2.3E+8	NLV	NLV	NLV	NLV	2.2E+6	2.1E+6	NA
Camphene (I)	79925	NA	ID	ID	NA	ID	6,700	1.8E+5	9.1E+5	2.2E+6	2.4E+9	ID	NA
Caprolactam	105602	NA	1.2E+5	3.4E+5	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	2.9E+8	3.1E+8 (DD)	NA
Carbaryl	63252	NA	14,000	40,000	NA	2.6E+6	ID	ID	ID	ID	ID	7.0E+7	NA
Carbazole	86748	NA	9,400	39,000	1,100	8.2E+5	NLV	NLV	NLV	NLV	7.8E+7	2.4E+6	NA
Carbofuran	1563662	NA	800	800	NA	6.8E+6	NLV	NLV	NLV	NLV	ID	3.6E+6	NA



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Carbon disulfide (I,R)	75150	NA	16,000	46,000	ID	2.8E+5 (C)	1.4E+5	1.6E+6	8.0E+6	1.9E+7	2.1E+10	2.8E+5 (C,DD)	2.8E+5
Carbon tetrachloride	56235	NA	100	100	900 (X)	92,000	990	12,000	34,000	79,000	1.7E+8	3.9E+5 (C)	3.9E+5
Chlordane (J)	57749	NA	NLL	NLL	NLL	NLL	5.9E+7	4.2E+6	4.2E+6	4.2E+6	2.1E+7	1.5E+5	NA
Chloride	16887006	NA	5.0E+6	5.0E+6	(X)	ID	NLV	NLV	NLV	NLV	ID	5.0E+5 (F)	NA
Chlorobenzene (I)	108907	NA	2,000	2,000	500	2.6E+5 (C)	2.2E+5	9.2E+5	1.1E+6	2.1E+6	2.1E+9	2.6E+5 (C)	2.6E+5
p-Chlorobenzene sulfonic acid	98668	NA	1.5E+5	4.2E+5	ID	NA	ID	ID	ID	ID	ID	7.3E+8	ID
1-Chloro-1,1-difluoroethane	75683	NA	3.0E+5	8.8E+5	NA	9.6E+5 (C)	9.6E+5 (C)	9.4E+7	5.7E+8	1.4E+9	1.5E+12	9.6E+5 (C)	9.6E+5
Chloroethane	75003	NA	8,600	34,000	22,000 (X)	9.5E+5 (C)	9.5E+5 (C)	3.6E+7	1.2E+8	2.8E+8	2.9E+11	9.5E+5 (C)	9.5E+5
2-Chloroethyl vinyl ether	110758	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	1.9E+6
Chloroform	67663	NA	1,600 (W)	1,600 (W)	7,000	1.5E+6 (C)	38,000	1.5E+5	3.4E+5	7.9E+5	1.6E+9	1.5E+6 (C)	1.5E+6
Chloromethane (I)	74873	NA	5,200	22,000	ID	1.1E+6 (C)	10,000	1.2E+5	1.0E+6	2.5E+6	2.6E+9	1.1E+6 (C)	1.1E+6
4-Chloro-3-methylphenol	59507	NA	5,800	16,000	280	3.0E+6	NLV	NLV	NLV	NLV	ID	1.5E+7	NA
beta-Chloronaphthalene	91587	NA	6.2E+5	1.8E+6	NA	2.3E+6	ID	ID	ID	ID	ID	1.8E+8	NA
2-Chlorophenol	95578	NA	900	2,600	360	1.9E+6	8.0E+5	1.1E+6	1.1E+6	1.1E+6	5.3E+8	4.5E+6	1.9E+7
o-Chlorotoluene (I)	95498	NA	3,300	9,300	ID	5.0E+5 (C)	5.0E+5 (C)	1.5E+6	3.1E+6	6.4E+6	2.1E+9	5.0E+5 (C)	5.0E+5
Chlorpyrifos	2921882	NA	17,000	48,000	1,500	8.4E+5	240	5,500	23,000	56,000	5.9E+7	3.4E+7	NA
Chromium (III) (B,H)	16065831	18,000 (total)	1.0E+9 (D)	1.0E+9 (D)	(G,X)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.5E+8	1.0E+9 (D)	NA
Chromium (VI)	18540299	NA	30,000	30,000	3,300	1.4E+8	NLV	NLV	NLV	NLV	2.4E+5	9.2E+6	NA
Chrysene (Q)	218019	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	8.0E+6	NA
Cobalt	7440484	6,800	800	2,000	2,000	4.8E+7	NLV	NLV	NLV	NLV	5.9E+6	9.0E+6	NA
Copper (B)	7440508	32,000	5.8E+6	5.8E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	5.9E+7	7.3E+7	NA



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Cyanazine	21725462	NA	200	200	1,100 (X)	56,000	NLV	NLV	NLV	NLV	ID	66,000	NA
Cyanide (P,R)	57125	390 (total)	4,000	4,000	100	2.5E+5	NLV	NLV	NLV	NLV	2.5E+5	2.5E+5	NA
Cyclohexanone	108941	NA	5.2E+6	1.5E+7	NA	2.2E+8 (C)	32,000	1.3E+6	1.1E+7	2.7E+7	2.9E+10	2.2E+8 (C)	2.2E+8
Dacthal	1861321	NA	50,000	1.4E+5	NA	3.4E+5	NLV	NLV	NLV	NLV	ID	7.3E+6	NA
Dalapon	75990	NA	4,000	4,000	NA	5.9E+7 (C)	NLV	NLV	NLV	NLV	ID	5.9E+7 (C)	5.9E+7
4-4'-DDD	72548	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	5.6E+7	4.0E+5	NA
4-4'-DDE	72559	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	4.0E+7	1.9E+5	NA
4-4'-DDT	50293	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	4.0E+7	2.8E+5	NA
Decabromodiphenyl ether	1163195	NA	1.4E+5	1.4E+5	NA	1.4E+5	1.0E+9 (D)	1.0E+8	1.0E+8	1.0E+8	1.0E+9	1.1E+7	NA
Di-n-butyl phthalate	84742	NA	7.6E+5 (C)	7.6E+5 (C)	11,000	7.6E+5 (C)	NLV	NLV	NLV	NLV	1.5E+9	7.6E+5 (C)	7.6E+5
Di(2-ethylhexyl) adipate	103231	NA	9.6E+5 (C)	9.6E+5 (C)	ID	9.6E+5 (C)	NLV	NLV	NLV	NLV	1.2E+10	9.6E+5 (C,DD)	9.6E+5
Di-n-octyl phthalate	117840	NA	1.0E+8	1.4E+8 (C)	ID	1.4E+8 (C)	NLV	NLV	NLV	NLV	1.4E+10	2.0E+7	1.4E+8
Diacetone alcohol (I)	123422	NA	ID	ID	NA	ID	NLV	NLV	NLV	NLV	7.1E+10	ID	1.1E+8
Diazinon	333415	NA	95	280	72	95,000	NLV	NLV	NLV	NLV	ID	70,000 (DD)	3.1E+5
Dibenzo(a,h)anthracene (Q)	53703	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	8,000	NA
Dibenzofuran	132649	NA	ID	ID	1,700	ID	3.6E+6	1.6E+5	1.6E+5	1.6E+5	2.9E+6	ID	NA
Dibromochloromethane	124481	NA	1,600 (W)	1,600 (W)	ID	3.6E+5	21,000	80,000	80,000	98,000	1.6E+8	5.0E+5	6.1E+5
Dibromochloropropane	96128	NA	10 (M); 4.0	10 (M); 4.0	ID	1,200 (C)	1,200 (C)	15,000	15,000	15,000	5.9E+6	1,200 (C)	1,200
Dibromomethane	74953	NA	1,600	4,600	NA	2.0E+6 (C)	ID	ID	ID	ID	ID	2.0E+6 (C)	2.0E+6
Dicamba	1918009	NA	4,400	13,000	NA	1.2E+7	NLV	NLV	NLV	NLV	ID	1.7E+7	NA
1,2-Dichlorobenzene	95501	NA	14,000	14,000	280	2.1E+5 (C)	2.1E+5 (C)	4.6E+7	4.6E+7	5.5E+7	4.4E+10	2.1E+5 (C)	2.1E+5



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Guidesheet Number —>		Groundwater Protection					Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#22	#23	#24	#25	#26	#27	#28
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
1,3-Dichlorobenzene	541731	NA	170	480	680	51,000	48,000	94,000	94,000	1.1E+5	8.8E+7	1.7E+5 (C)	1.7E+5
1,4-Dichlorobenzene	106467	NA	1,700	1,700	360	1.4E+5	1.0E+5	2.6E+5	2.6E+5	3.4E+5	5.7E+8	1.9E+6	NA
3,3'-Dichlorobenzidine	91941	NA	2,000 (M); 28	2,000 (M); 110	2,000 (M); 7.4	4,600	NLV	NLV	NLV	NLV	8.2E+6	30,000	NA
Dichlorodifluoromethane	75718	NA	95,000	2.7E+5	ID	1.0E+6 (C)	1.7E+6	6.3E+7	5.5E+8	1.4E+9	1.5E+12	1.0E+6 (C)	1.0E+6
1,1-Dichloroethane	75343	NA	18,000	50,000	15,000	8.9E+5 (C)	4.3E+5	2.5E+6	6.0E+6	1.4E+7	1.5E+10	8.9E+5 (C)	8.9E+5
1,2-Dichloroethane (I)	107062	NA	100	100	7,200 (X)	3.8E+5	11,000	21,000	33,000	74,000	1.5E+8	4.2E+5	1.2E+6
1,1-Dichloroethylene (I)	75354	NA	140	140	2,600	2.2E+5	330	3,700	15,000	37,000	7.8E+7	5.7E+5 (C)	5.7E+5
cis-1,2-Dichloroethylene	156592	NA	1,400	1,400	12,000	6.4E+5 (C)	41,000	2.1E+5	4.3E+5	1.0E+6	1.0E+9	6.4E+5 (C)	6.4E+5
trans-1,2-Dichloroethylene	156605	NA	2,000	2,000	30,000 (X)	1.4E+6 (C)	43,000	3.3E+5	8.4E+5	2.0E+6	2.1E+9	1.4E+6 (C)	1.4E+6
2,6-Dichloro-4-nitroaniline	99309	NA	44,000	1.3E+5	NA	1.4E+5	NLV	NLV	NLV	NLV	ID	2.2E+8	NA
2,4-Dichlorophenol	120832	NA	1,500	4,200	330 (M); 220	9.6E+5	NLV	NLV	NLV	NLV	2.3E+9	1.8E+6 (C,DD)	1.8E+6
2,4-Dichlorophenoxyacetic acid	94757	NA	1,400	1,400	4,400	2.4E+6	NLV	NLV	NLV	NLV	2.9E+9	8.6E+6	NA
1,2-Dichloropropane (I)	78875	NA	100	100	4,600 (X)	3.2E+5	7,400	30,000	51,000	1.2E+5	1.2E+8	5.5E+5 (C)	5.5E+5
1,3-Dichloropropene	542756	NA	170	700	180 (X)	1.1E+5	5,400	60,000	2.0E+5	4.7E+5	5.9E+8	2.4E+5	6.2E+5
Dichlorovos	62737	NA	50 (M); 32	130	NA	1.2E+5	NLV	NLV	NLV	NLV	1.5E+7	47,000	2.2E+6
Dicyclohexyl phthalate	84617	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	NA
Dieldrin	60571	NA	NLL	NLL	NLL	NLL	7.2E+5	64,000	64,000	64,000	8.5E+5	4,700	NA
Diethyl ether	60297	NA	200	200	ID	7.4E+6 (C)	7.4E+6 (C)	1.0E+8	1.6E+8	3.5E+8	3.5E+11	7.4E+6 (C)	7.4E+6
Diethyl phthalate	84662	NA	1.1E+5	3.2E+5	2,200	7.4E+5 (C)	NLV	NLV	NLV	NLV	1.5E+9	7.4E+5 (C)	7.4E+5
Diethylene glycol monobutyl ether	112345	NA	1,800	5,000	NA	8.0E+7	NLV	NLV	NLV	NLV	5.9E+8	8.7E+6	1.1E+8
Diisopropyl ether	108203	NA	600	1,300 (C)	ID	1,300 (C)	1,300 (C)	3.2E+6	4.8E+6	1.0E+7	1.1E+10	1,300 (C)	1,300



Attachment 1
TABLE 3. SOIL: NONRESIDENTIAL
PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS;
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Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Diisopropylamine (I)	108189	NA	110	320	NA	4.2E+5	6.7E+6 (C)	7.4E+6	7.4E+6	7.7E+6	5.9E+9	5.6E+5	6.7E+6
Dimethyl phthalate	131113	NA	7.9E+5 (C)	7.9E+5 (C)	NA	7.9E+5 (C)	NLV	NLV	NLV	NLV	1.5E+9	7.9E+5 (C)	7.9E+5
N,N-Dimethylacetamide	127195	NA	3,600	10,000	82,000 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	ID	1.8E+7	1.1E+8
N,N-Dimethylaniline	121697	NA	320	920	NA	4.0E+5	8.0E+5 (C)	5.2E+5	5.2E+5	5.2E+5	3.3E+8	8.0E+5 (C)	8.0E+5
Dimethylformamide (I)	68122	NA	14,000	40,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	8.8E+8	7.0E+7	1.1E+8
2,4-Dimethylphenol	105679	NA	7,400	20,000	7,600	1.0E+7	NLV	NLV	NLV	NLV	2.1E+9	3.6E+7	NA
2,6-Dimethylphenol	576261	NA	330 (M); 88	330 (M); 260	NA	1.3E+5	NLV	NLV	NLV	NLV	5.9E+7	4.4E+5	NA
3,4-Dimethylphenol	95658	NA	330 (M); 200	580	NA	3.6E+5	NLV	NLV	NLV	NLV	1.0E+8	1.0E+6	NA
Dimethylsulfoxide	67685	NA	4.4E+6	1.3E+7	3.8E+6	1.8E+7 (C)	NLV	NLV	NLV	NLV	5.9E+8	1.8E+7 (C)	1.8E+7
2,4-Dinitrotoluene	121142	NA	430	640	NA	1.7E+5	NLV	NLV	NLV	NLV	2.0E+7	2.2E+5	NA
Dinoseb	88857	NA	300	300	200 (M); 43	1.4E+5 (C)	NLV	NLV	NLV	NLV	1.2E+8	1.4E+5 (C,DD)	1.4E+5
1,4-Dioxane (I)	123911	NA	1,700	7,000	56,000 (X)	3.4E+7	NLV	NLV	NLV	NLV	7.1E+8	2.4E+6	9.7E+7
Diquat	85007	NA	400	400	NA	1.4E+7	NLV	NLV	NLV	NLV	ID	1.6E+6	NA
Diuron	330541	NA	620	1,800	NA	7.4E+5	NLV	NLV	NLV	NLV	2.1E+8	3.1E+6	NA
Endosulfan (J)	115297	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	4.4E+6	NA
Endothall	145733	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.0E+9	1.2E+7	NA
Endrin	72208	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	1.9E+5	NA
Epichlorohydrin (I)	106898	NA	100	100	NA	2.2E+5	1.2E+5	37,000	37,000	37,000	2.9E+7	41,000	7.3E+6
Ethanol (I)	64175	NA	3.8E+7	7.6E+7	ID	1.1E+8 (C)	NLV	NLV	NLV	NLV	5.6E+11	1.1E+8 (C,DD)	1.1E+8
Ethyl acetate (I)	141786	NA	1.3E+5	3.8E+5	NA	7.5E+6 (C)	7.5E+6 (C)	5.9E+7	5.9E+7	1.0E+8	9.4E+10	7.5E+6 (C)	7.5E+6
Ethyl-tert-butyl ether (ETBE)	637923	NA	980	980	ID	ID	6.5E+5 (C)	2.3E+6	4.6E+6	1.1E+7	1.1E+10	ID	6.5E+5



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Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#28
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Ethylbenzene (I)	100414	NA	1,500	1,500	360	1.4E+5 (C)	1.4E+5 (C)	2.4E+6	3.1E+6	6.5E+6	1.3E+10	1.4E+5 (C)	1.4E+5
Ethylene dibromide	106934	NA	20 (M); 1.0	20 (M); 1.0	110 (X)	500	3,600	5,800	5,800	9,800	1.8E+7	430	8.9E+5
Ethylene glycol	107211	NA	3.0E+5	8.4E+5	3.8E+6 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	2.9E+10	1.1E+8 (C)	1.1E+8
Ethylene glycol monobutyl ether	111762	NA	74,000	2.0E+5	NA	4.1E+7 (C)	1.4E+6	2.1E+7	1.5E+8	3.6E+8	3.8E+11	4.1E+7 (C)	4.1E+7
Fluoranthene	206440	NA	7.3E+5	7.3E+5	5,500	7.3E+5	1.0E+9 (D)	8.9E+8	8.8E+8	8.8E+8	4.1E+9	1.3E+8	NA
Fluorene	86737	NA	3.9E+5	8.9E+5	5,300	8.9E+5	1.0E+9 (D)	1.5E+8	1.5E+8	1.5E+8	4.1E+9	8.7E+7	NA
Fluorine (soluble fluoride) (B)	7782414	NA	40,000	40,000	ID	2.4E+8	NLV	NLV	NLV	NLV	ID	6.7E+7 (DD)	NA
Formaldehyde	50000	NA	26,000	76,000	2,400	6.0E+7 (C)	65,000	43,000	69,000	1.5E+5	3.0E+8	6.0E+7 (C)	6.0E+7
Formic acid (I,U)	64186	NA	2.0E+5	5.8E+5	ID	1.1E+8 (C)	2.8E+6	2.6E+5	1.6E+5	1.6E+5	5.9E+7	1.1E+8 (C)	1.1E+8
1-Formylpiperidine	2591868	NA	1,600	4,600	NA	ID	ID	ID	ID	ID	ID	8.0E+6	1.0E+7
Gentian violet	548629	NA	300	1,300	NA	2.0E+7	NLV	NLV	NLV	NLV	ID	4.4E+5	NA
Glyphosate	1071836	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	5.7E+7 (DD)	NA
Heptachlor	76448	NA	NLL	NLL	NLL	NLL	1.9E+6	2.1E+5	2.1E+5	2.1E+5	3.0E+6	23,000	NA
Heptachlor epoxide	1024573	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.5E+6	9,500	NA
n-Heptane	142825	NA	2.4E+5 (C)	2.4E+5 (C)	NA	2.4E+5 (C)	2.4E+5 (C)	2.5E+7	4.5E+7	1.0E+8	1.0E+11	2.4E+5 (C)	2.4E+5
Hexabromobenzene	87821	NA	5,400	5,400	ID	5,400	ID	ID	ID	ID	ID	3.1E+6	NA
Hexachlorobenzene (C-66)	118741	NA	1,800	1,800	350	8,200	2.2E+5	56,000	56,000	56,000	8.5E+6	37,000	NA
Hexachlorobutadiene (C-46)	87683	NA	26,000	72,000	91	3.5E+5 (C)	3.5E+5 (C)	4.6E+5	4.6E+5	4.6E+5	1.8E+8	3.5E+5 (C)	3.5E+5
alpha-Hexachlorocyclohexane	319846	NA	18	71	ID	2,500	1.6E+5	41,000	86,000	86,000	2.1E+6	12,000	NA
beta-Hexachlorocyclohexane	319857	NA	37	150	ID	5,100	NLV	NLV	NLV	NLV	7.4E+6	25,000	NA
Hexachlorocyclopentadiene (C-56)	77474	NA	3.2E+5	3.2E+5	ID	7.2E+5 (C)	56,000	60,000	60,000	60,000	5.9E+6	7.2E+5 (C)	7.2E+5



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Hexachloroethane	67721	NA	430	1,200	1,800 (X)	1.1E+5	79,000	6.6E+5	1.4E+6	1.4E+6	1.0E+8	7.3E+5	NA
n-Hexane	110543	NA	44,000 (C)	44,000 (C)	NA	44,000 (C)	44,000 (C)	3.5E+6	3.5E+6	6.4E+6	5.9E+9	44,000 (C)	44,000
2-Hexanone	591786	NA	20,000	58,000	ID	2.5E+6 (C)	1.8E+6	1.3E+6	1.3E+6	1.5E+6	1.2E+9	2.5E+6 (C)	2.5E+6
Indeno(1,2,3-cd)pyrene (Q)	193395	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	80,000	NA
Iron (B)	7439896	1.2E+7	6,000	6,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	5.8E+8	NA
Isobutyl alcohol (I)	78831	NA	46,000	1.3E+5	NA	8.9E+6 (C)	8.9E+6 (C)	9.5E+7	9.5E+7	9.5E+7	4.4E+10	8.9E+6 (C)	8.9E+6
Isophorone	78591	NA	15,000	62,000	26,000 (X)	2.4E+6 (C)	NLV	NLV	NLV	NLV	8.2E+9	2.4E+6 (C)	2.4E+6
Isopropyl alcohol (I)	67630	NA	9,400	26,000	1.1E+6 (X)	1.1E+8 (C)	NLV	NLV	NLV	NLV	6.5E+9	4.7E+7	1.1E+8
Isopropyl benzene	98828	NA	91,000	2.6E+5	3,200	3.9E+5 (C)	3.9E+5 (C)	2.0E+6	2.0E+6	3.0E+6	2.6E+9	3.9E+5 (C)	3.9E+5
Lead (B)	7439921	21,000	7.0E+5	7.0E+5	(G,X)	ID	NLV	NLV	NLV	NLV	4.4E+7	9.0E+5 (DD)	NA
Lindane	58899	NA	20 (M); 7.0	20 (M); 7.0	20 (M); 1.1	7,100	ID	ID	ID	ID	ID	42,000	NA
Lithium (B)	7439932	9,800	3,400	7,000	8,800	1.1E+8	NLV	NLV	NLV	NLV	ID	3.1E+7 (DD)	NA
Magnesium (B)	7439954	NA	8.0E+6	2.2E+7	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	2.9E+9	1.0E+9 (D)	NA
Manganese (B)	7439965	4.4E+5	1,000	1,000	(G,X)	1.8E+8	NLV	NLV	NLV	NLV	1.5E+6	9.0E+7	NA
Mercury (Total) (B,Z)	Varies	130	1,700	1,700	50 (M); 1.2	47,000	89,000	62,000	62,000	62,000	8.8E+6	5.8E+5	NA
Methane	74828	NA	ID	ID	NA	ID	8.4E+6 ug/m3 (GG)	ID	ID	ID	ID	ID	ID
Methanol	67561	NA	74,000	2.0E+5	3.1E+6 (C)	3.1E+6 (C)	3.1E+6 (C)	3.7E+7	4.6E+7	9.7E+7	9.6E+10	3.1E+6 (C)	3.1E+6
Methoxychlor	72435	NA	16,000	16,000	NA	18,000	ID	ID	ID	ID	ID	5.6E+6	NA
2-Methoxyethanol (I)	109864	NA	150	420	NA	1.7E+7	NLV	NLV	NLV	NLV	5.9E+8	7.3E+5	1.1E+8
2-Methyl-4-chlorophenoxyacetic acid	94746	NA	390	1,100	NA	4.9E+5	NLV	NLV	NLV	NLV	ID	7.3E+5	NA
2-Methyl-4,6-dinitrophenol	534521	NA	830 (M); 400	830 (M); 400	NA	1.9E+5	NLV	NLV	NLV	NLV	ID	2.6E+5	NA



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TABLE 3. SOIL: NONRESIDENTIAL
PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS;
PART 213 TIER 1 RISK-BASED SCREENING LEVELS (RBSLs)
DOCUMENT RELEASE DATE: MARCH 25, 2011

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Guidesheet Number —>		#10	Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact	
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#28
			Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
N-Methyl-morpholine (I)	109024	NA	400	1,100	NA	3.0E+7	NLV	NLV	NLV	NLV	ID	2.0E+6	1.1E+8
Methyl parathion	298000	NA	46	130	NA	76,000	NLV	NLV	NLV	NLV	ID	1.8E+5	NA
4-Methyl-2-pentanone (MIBK) (I)	108101	NA	36,000	1.0E+5	ID	2.7E+6 (C)	2.7E+6 (C)	5.3E+7	5.3E+7	7.0E+7	6.0E+10	2.7E+6 (C)	2.7E+6
Methyl-tert-butyl ether (MTBE)	1634044	NA	800	800	1.4E+5 (X)	5.9E+6 (C)	5.9E+6 (C)	3.0E+7	4.1E+7	8.9E+7	8.8E+10	5.9E+6 (C)	5.9E+6
Methylcyclopentane (I)	96377	NA	ID	ID	NA	ID	1.7E+5	2.8E+6	8.3E+6	2.0E+7	2.1E+10	ID	3.5E+5
4,4'-Methylene-bis-2-chloroaniline (MBOCA)	101144	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	1.1E+8	32,000	NA
Methylene chloride	75092	NA	100	100	30,000 (X)	2.3E+6 (C)	2.4E+5	7.0E+5	1.7E+6	4.0E+6	8.3E+9	2.3E+6 (C)	2.3E+6
2-Methylnaphthalene	91576	NA	57,000	1.7E+5	4,200	5.5E+6	4.9E+6	1.8E+6	1.8E+6	1.8E+6	2.9E+8	2.6E+7	NA
Methylphenols (J)	1319773	NA	7,400	20,000	1,000 (M); 600	1.6E+7	NLV	NLV	NLV	NLV	2.9E+9	3.6E+7	NA
Metolachlor	51218452	NA	4,800	20,000	300	4.4E+5 (C)	NLV	NLV	NLV	NLV	ID	4.4E+5 (C,DD)	4.4E+5
Metribuzin	21087649	NA	3,600	10,000	NA	2.4E+7	ID	ID	ID	ID	ID	2.8E+7	NA
Mirex	2385855	NA	NLL	NLL	NLL	NLL	ID	ID	ID	ID	ID	40,000	NA
Molybdenum (B)	7439987	NA	1,500	4,200	64,000 (X)	1.9E+7	NLV	NLV	NLV	NLV	ID	9.6E+6	NA
Naphthalene	91203	NA	35,000	1.0E+5	730	2.1E+6	4.7E+5	3.5E+5	3.5E+5	3.5E+5	8.8E+7	5.2E+7	NA
Nickel (B)	7440020	20,000	1.0E+5	1.0E+5	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	1.6E+7	1.5E+8	NA
Nitrate (B,N)	14797558	NA	2.0E+5 (N)	2.0E+5 (N)	ID	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	ID	NA
Nitrite (B,N)	14797650	NA	20,000 (N)	20,000 (N)	NA	3.8E+8	NLV	NLV	NLV	NLV	ID	ID	NA
Nitrobenzene (I)	98953	NA	330 (M); 68	330 (M); 190	3,600 (X)	2.2E+5	1.7E+5	64,000	64,000	64,000	2.1E+7	3.4E+5	4.9E+5
2-Nitrophenol	88755	NA	400	1,200	ID	1.6E+6	NLV	NLV	NLV	NLV	ID	2.0E+6	NA
n-Nitroso-di-n-propylamine	621647	NA	330 (M); 100	330 (M); 100	NA	7,200	NLV	NLV	NLV	NLV	2.0E+6	5,400	1.5E+6
N-Nitrosodiphenylamine	86306	NA	5,400	22,000	NA	7.0E+5	NLV	NLV	NLV	NLV	2.8E+9	7.8E+6	NA



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Guidesheet Number —>		#10	Groundwater Protection				Indoor Air	Ambient Air (Y)				Direct Contact	
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#28
			Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Oxamyl	23135220	NA	4,000	4,000	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	2.8E+7	NA
Oxo-hexyl acetate	88230357	NA	1,500	4,200	NA	ID	ID	ID	ID	ID	2.4E+9	7.3E+6	1.0E+7
Pendimethalin	40487421	NA	1.1E+6	1.1E+6	NA	1.1E+6	NLV	NLV	NLV	NLV	ID	1.3E+8	NA
Pentachlorobenzene	608935	NA	29,000	81,000	9,500	1.9E+5 (C)	ID	ID	ID	ID	ID	1.9E+5 (C)	1.9E+5
Pentachloronitrobenzene	82688	NA	37,000	37,000	NA	37,000	2.2E+5	2.8E+5	2.8E+5	2.8E+5	1.5E+8	5.5E+6	NA
Pentachlorophenol	87865	NA	22	22	(G,X)	4,300	NLV	NLV	NLV	NLV	1.3E+8	3.2E+5	NA
Pentane	109660	NA	ID	ID	NA	ID	1.8E+5	4.4E+7	3.4E+8	6.0E+8	5.3E+11	ID	2.4E+5
2-Pentene (I)	109682	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	2.2E+5
Phenanthrene	85018	NA	56,000	1.6E+5	2,100	1.1E+6	5.1E+6	1.9E+5	1.9E+5	1.9E+5	2.9E+6	5.2E+6	NA
Phenol	108952	NA	88,000	2.6E+5	9,000	1.2E+7 (C)	NLV	NLV	NLV	NLV	1.8E+10	1.2E+7 (C,DD)	1.2E+7
Phosphorus (Total)	7723140	NA	1.3E+6	4.8E+6	(EE)	ID	NLV	NLV	NLV	NLV	2.9E+7	1.0E+9 (D)	NA
Phthalic acid	88993	NA	2.8E+5	8.0E+5	NA	1.7E+6 (C)	NLV	NLV	NLV	NLV	ID	1.7E+6 (C)	1.7E+6
Phthalic anhydride	85449	NA	3.0E+5	8.8E+5	NA	1.1E+6 (C)	NLV	NLV	NLV	NLV	ID	1.1E+6 (C)	1.1E+6
Picloram	1918021	NA	10,000	10,000	920	8.6E+6	NLV	NLV	NLV	NLV	ID	5.1E+7	NA
Piperidine	110894	NA	64	180	NA	6.8E+5	NLV	NLV	NLV	NLV	4.1E+9	3.2E+5	1.2E+8
Polybrominated biphenyls (J)	67774327	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	ID	4,800	NA
Polychlorinated biphenyls (PCBs) (J,T)	1336363	NA	NLL	NLL	NLL	NLL	1.6E+7	8.1E+5	2.8E+7	2.8E+7	6.5E+6	(T)	NA
Prometon	1610180	NA	4,900	14,000	NA	5.5E+6	NLV	NLV	NLV	NLV	ID	1.6E+7	NA
Propachlor	1918167	NA	1,900	5,400	NA	8.8E+6	NLV	NLV	NLV	NLV	ID	9.5E+6	NA
Propazine	139402	NA	4,000	11,000	NA	1.7E+5	NLV	NLV	NLV	NLV	ID	2.0E+7	NA
Propionic acid	79094	NA	2.4E+5	7.0E+5	ID	1.1E+8 (C)	NLV	NLV	NLV	NLV	8.8E+9	1.1E+8 (C)	1.1E+8



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		Groundwater Protection					Indoor Air	Ambient Air (Y)				Direct Contact	
Guidesheet Number —>		#10	#11	#21	#12	#13	#22	#23	#24	#25	#26	#27	#28
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
Propyl alcohol (I)	71238	NA	28,000	80,000	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	2.1E+10	7.4E+7 (DD)	1.1E+8
n-Propylbenzene (I)	103651	NA	1,600	4,600	ID	3.0E+5	ID	ID	ID	ID	5.9E+8	8.0E+6	1.0E+7
Propylene glycol	57556	NA	3.0E+6	8.4E+6	5.8E+6	1.1E+8 (C)	NLV	NLV	NLV	NLV	1.8E+11	1.1E+8 (C)	1.1E+8
Pyrene	129000	NA	4.8E+5	4.8E+5	ID	4.8E+5	1.0E+9 (D)	7.8E+8	7.8E+8	7.8E+8	2.9E+9	8.4E+7	NA
Pyridine (I)	110861	NA	400	420	NA	37,000 (C)	2,000	9,800	40,000	97,000	1.0E+8	37,000 (C)	37,000
Selenium (B)	7782492	410	4,000	4,000	400	7.8E+7	NLV	NLV	NLV	NLV	5.9E+7	9.6E+6	NA
Silver (B)	7440224	1,000	4,500	13,000	100 (M); 27	2.0E+8	NLV	NLV	NLV	NLV	2.9E+6	9.0E+6	NA
Silvex (2,4,5-TP)	93721	NA	3,600	3,600	2,200	3.1E+6	NLV	NLV	NLV	NLV	ID	5.5E+6	NA
Simazine	122349	NA	80	80	340	90,000	NLV	NLV	NLV	NLV	ID	3.8E+6	NA
Sodium	17341252	NA	2.5E+6	7.0E+6	NA	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	1.0E+9 (D)	NA
Sodium azide	26628228	NA	1,800	5,000	1,000	ID	ID	ID	ID	ID	ID	8.7E+6	NA
Strontium (B)	7440246	NA	92,000	2.6E+5	4.2E+5	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	1.0E+9 (D)	NA
Styrene	100425	NA	2,700	2,700	2,100 (X)	2.7E+5	5.2E+5 (C)	3.3E+6	3.3E+6	4.2E+6	6.9E+9	5.2E+5 (C)	5.2E+5
Sulfate	14808798	NA	5.0E+6	5.0E+6	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Tebuthiuron	34014181	NA	10,000	30,000	NA	5.0E+7	NLV	NLV	NLV	NLV	ID	2.7E+7 (DD)	NA
2,3,7,8-Tetrabromodibenzo-p-dioxin (O)	50585416	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	(O)	(O)	NA
1,2,4,5-Tetrachlorobenzene	95943	NA	1.5E+6	1.5E+6	3,400 (X)	1.5E+6	1.1E+6	2.7E+5	2.7E+5	2.7E+5	2.9E+7	2.5E+8	NA
2,3,7,8-Tetrachlorodibenzo-p-dioxin (O)	1746016	NA	NLL	NLL	NLL	NLL	NLV	NLV	NLV	NLV	89 (O)	0.99 (O)	NA
1,1,1,2-Tetrachloroethane	630206	NA	1,500	6,400	ID	4.4E+5 (C)	33,000	1.2E+5	2.1E+5	3.3E+5	5.3E+8	4.4E+5 (C)	4.4E+5
1,1,2,2-Tetrachloroethane	79345	NA	170	700	1,600 (X)	94,000	23,000	34,000	34,000	34,000	6.8E+7	2.4E+5	8.7E+5
Tetrachloroethylene	127184	NA	100	100	1,200 (X)	88,000 (C)	60,000	6.0E+5	1.4E+6	3.3E+6	6.8E+9	88,000 (C)	88,000



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Tetrahydrofuran	109999	NA	1,900	5,400	2.2E+5 (X)	3.2E+7	2.4E+6	1.5E+7	6.7E+7	1.6E+8	1.7E+11	9.5E+6	1.2E+8
Tetranitromethane	509148	NA	ID	ID	NA	ID	600	500 (M); 180	ID	ID	2.6E+5	ID	ID
Thallium (B)	7440280	NA	2,300	2,300	4,200 (X)	1.5E+7	NLV	NLV	NLV	NLV	5.9E+6	1.3E+5	NA
Toluene (I)	108883	NA	16,000	16,000	5,400	2.5E+5 (C)	2.5E+5 (C)	3.3E+6	3.6E+7	3.6E+7	1.2E+10	2.5E+5 (C)	2.5E+5
p-Toluidine	106490	NA	660 (M); 300	1,200	NA	4.8E+5	NLV	NLV	NLV	NLV	1.3E+8	4.3E+5	1.2E+6
Toxaphene	8001352	NA	24,000	24,000	8,200	3.6E+5	NLV	NLV	NLV	NLV	1.2E+7	85,000	NA
Triallate	2303175	NA	95,000	2.5E+5 (C)	NA	2.5E+5 (C)	ID	ID	ID	ID	ID	2.5E+5 (C)	2.5E+5
Tributylamine	102829	NA	7,800	23,000	ID	1.8E+6	1.1E+6	7.2E+5	7.2E+5	7.2E+5	2.1E+8	2.6E+6	3.7E+6
1,2,4-Trichlorobenzene	120821	NA	4,200	4,200	5,900 (X)	1.1E+6 (C)	1.1E+6 (C)	3.4E+7	3.4E+7	3.4E+7	1.1E+10	1.1E+6 (C,DD)	1.1E+6
1,1,1-Trichloroethane	71556	NA	4,000	4,000	1,800	4.6E+5 (C)	4.6E+5	4.5E+6	1.5E+7	3.1E+7	2.9E+10	4.6E+5 (C)	4.6E+5
1,1,2-Trichloroethane	79005	NA	100	100	6,600 (X)	4.2E+5	24,000	57,000	57,000	1.2E+5	2.5E+8	8.4E+5	9.2E+5
Trichloroethylene	79016	NA	100	100	4,000 (X)	4.4E+5	37,000	2.6E+5	4.4E+5	1.1E+6	2.3E+9	5.0E+5 (C,DD)	5.0E+5
Trichlorofluoromethane	75694	NA	52,000	1.5E+5	NA	5.6E+5 (C)	5.6E+5 (C)	1.1E+8	1.4E+11	1.4E+11	1.7E+12	5.6E+5 (C)	5.6E+5
2,4,5-Trichlorophenol	95954	NA	39,000	1.1E+5	NA	9.1E+6	NLV	NLV	NLV	NLV	1.0E+10	7.3E+7	NA
2,4,6-Trichlorophenol	88062	NA	2,400	9,400	330 (M); 100	2.0E+5	NLV	NLV	NLV	NLV	1.3E+9	3.3E+6	NA
1,2,3-Trichloropropane	96184	NA	840	2,400	NA	8.3E+5 (C)	7,500	11,000	11,000	12,000	8.8E+6	8.3E+5 (C)	8.3E+5
1,1,2-Trichloro-1,2,2-trifluoroethane	76131	NA	5.5E+5 (C)	5.5E+5 (C)	1,700	5.5E+5 (C)	5.5E+5 (C)	2.1E+8	8.9E+8	2.1E+9	2.3E+12	5.5E+5 (C)	5.5E+5
Triethanolamine	102716	NA	74,000	2.0E+5	NA	1.1E+8 (C)	NLV	NLV	NLV	NLV	1.5E+9	1.1E+8 (C)	1.1E+8
Triethylene glycol	112276	NA	1.1E+5 (C)	1.1E+5 (C)	NA	1.1E+5 (C)	NLV	NLV	NLV	NLV	ID	1.1E+5 (C,DD)	1.1E+5
3-Trifluoromethyl-4-nitrophenol	88302	NA	1.1E+5	3.1E+5	NA	1.2E+8	NLV	NLV	NLV	NLV	ID	2.4E+8 (DD)	NA
Trifluralin	1582098	NA	1.9E+5	5.7E+5	NA	1.2E+7	ID	ID	ID	ID	ID	5.7E+6	NA



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PART 213 TIER 1 RISK-BASED SCREENING LEVELS (RBSLs)
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All criteria, unless otherwise noted, are expressed in units of parts per billion (ppb). One ppb is equivalent to one microgram per kilogram (ug/kg). Criteria with six or more digits are expressed in scientific notation. For example, 200,000 is presented as 2.0E+5. The lowest generic soil criterion for a given hazardous substance is presented in a bold box. A footnote is designated by a letter in parentheses and is explained in the footnote pages that follow the criteria tables. When the risk-based criterion is less than the target detection limit (TDL), the TDL is listed as the criterion (R 299.5707). In these cases, two numbers are present in the cell. The first number is the criterion (i.e., TDL), and the second number is the risk-based value. Criteria were originally promulgated December 21, 2002 within the Administrative Rules for Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. This table reflects revisions to the criteria pursuant to the December 2010 Part 201 amendments and new criteria consistent with the provisions of R299.5706a. The effective dates of the criteria and screening levels in this table vary. Please contact the Remediation Division Toxicology Unit for additional information.

Guidesheet Number —>		Groundwater Protection					Indoor Air	Ambient Air (Y)				Direct Contact	
		#10	#11	#12	#13	#14	#22	#23	#24	#25	#26	#27	#28
Hazardous Substance	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria & RBSLs	Non-Residential Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
2,2,4-Trimethyl pentane	540841	NA	ID	ID	NA	ID	19,000 (C)	6.3E+6	4.0E+7	9.6E+7	1.0E+11	ID	19,000
2,4,4-Trimethyl-2-pentene (I)	107404	NA	ID	ID	NA	ID	ID	ID	ID	ID	ID	ID	56,000
1,2,4-Trimethylbenzene (I)	95636	NA	2,100	2,100	570	1.1E+5 (C)	1.1E+5 (C)	2.5E+7	6.0E+8	6.0E+8	3.6E+10	1.1E+5 (C)	1.1E+5
1,3,5-Trimethylbenzene (I)	108678	NA	1,800	1,800	1,100	94,000 (C)	94,000 (C)	1.9E+7	4.6E+8	4.6E+8	3.6E+10	94,000 (C)	94,000
Triphenyl phosphate	115866	NA	1.1E+5 (C)	1.1E+5 (C)	NA	1.1E+5 (C)	NLV	NLV	NLV	NLV	ID	1.1E+5 (C)	1.1E+5
tris(2,3-Dibromopropyl)phosphate	126727	NA	930	930	ID	27,000 (C)	27,000 (C)	60,000	60,000	60,000	7.4E+6	20,000	27,000
Urea	57136	NA	ID	ID	NA	ID	NLV	NLV	NLV	NLV	ID	ID	NA
Vanadium	7440622	NA	72,000	9.9E+5	1.9E+5	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	5.5E+6 (DD)	NA
Vinyl acetate (I)	108054	NA	13,000	36,000	NA	2.4E+6 (C)	1.5E+6	2.0E+6	2.7E+6	5.9E+6	5.9E+9	2.4E+6 (C,DD)	2.4E+6
Vinyl chloride	75014	NA	40	40	260 (X)	20,000	2,800	29,000	1.7E+5	4.2E+5	8.9E+8	34,000	4.9E+5
White phosphorus (R)	12185103	NA	2.2	6.0	NA	58,000	NLV	NLV	NLV	NLV	ID	17,000 (DD)	NA
Xylenes (I)	1330207	NA	5,600	5,600	820	1.5E+5 (C)	1.5E+5 (C)	5.4E+7	6.5E+7	1.3E+8	1.3E+11	1.5E+5 (C)	1.5E+5
Zinc (B)	7440666	47,000	2.4E+6	5.0E+6	(G)	1.0E+9 (D)	NLV	NLV	NLV	NLV	ID	6.3E+8	NA