

Contaminated Media Management Plan

Senz Automotive Service
Yamhill, Oregon

for

Oregon Department of Environmental Quality

January 17, 2011



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Senz Automotive Service
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File No. 2787-039-01

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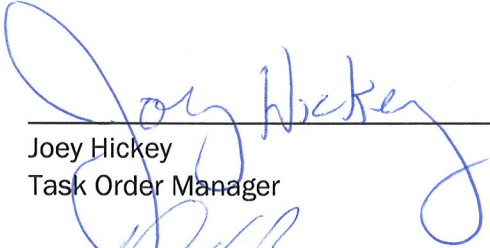
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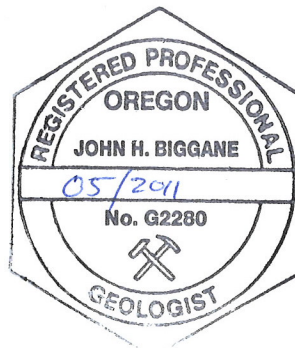
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1.0 INTRODUCTION

This Contaminated Media Management Plan (CMMP) has been prepared for the Oregon Department of Environmental Quality (DEQ) for the Senz Automotive Service facility (former Senz station) and surrounding properties (off-site; collectively, the “site”) in Yamhill, Oregon. The location of the site relative to surrounding physical features is shown in Figure 1. The general layout of the site is presented in Figure 2. GeoEngineers completed the services described herein under Oregon Department of Environmental Quality (DEQ) Task Order No. 58-08-16.

This plan is intended to minimize risks to worker health and the environment due to contaminants, and outlines procedures for the handling and disposal of petroleum contaminated soil (PCS) and groundwater that may be encountered during future earthwork-related construction activities. It is our understanding that the DEQ will provide the site owner and property owners within the locality of the facility (LOF) a copy of this CMMP for use at the site during future earthwork-related activities (such as utility work) that may encounter contaminated soil or groundwater. An electronic copy of the CMMP will also be placed on the DEQ project web page.

The LOF is defined in DEQ rules as – “any point where a human or an ecological receptor contacts, or is reasonably likely to come into contact with, facility-related hazardous substances.” (See Oregon Administrative Rules [OAR] 340-122-0115 and related). For the purposes of this CMMP, any ground disturbing work within the LOF as shown on Figure 2 should be considered a location where contaminated groundwater or soil could be encountered, but the boundary of the LOF is only an estimate based on the information available at the time this CMMP was developed (December 2010) and does not account for other possible sources of contamination.

GeoEngineers prepared this CMMP in accordance with generally accepted professional practices related to the nature and extent of contamination at the time of the preparation of this CMMP. This CMMP must be modified as necessary to reflect the specific project and conditions expected to be encountered. Future parties conducting work within the LOF must retain an environmental professional to modify, interpret and implement the requirements of this CMMP.

2.0 BACKGROUND

The former Senz station consists of an approximately 30,800 square foot parcel at 210 South Maple Street, in Yamhill, Oregon. Contamination released from the former Senz station has impacted properties to the west and south and some portions of First Street and Maple Street.

The former Senz station included a service station building, a gasoline dispenser island, a diesel dispenser island, propane aboveground storage tank (AST) and dispenser, and a gasoline/diesel AST. These facilities were removed during December 2009 during the Interim Removal Action Measure (IRAM) (GeoEngineers, 2010).

The former Senz station property is currently vacant and gravel-covered. The surface of the former Senz station slopes gently downward to the west and southwest.

The former Senz station property is bounded by First Street on the north and Maple Street (Oregon Highway 47) on the east. A restaurant is located adjacent and south, a fire station is located to the southwest, and a mostly vacant lot (which includes a fire department storage building) is located adjacent and west of the former Senz station property. Residential properties are located further west and south of the former Senz station and other commercial properties are located further to the north, east, and south.

Numerous environmental assessments and investigations have been completed that have documented the presence of petroleum-related contamination in the soil and groundwater beneath the site. A more complete summary of previous work at the site can be found in GeoEngineers' Site Investigation Report, dated April 8, 2010, and GeoEngineers IRAM report, dated April 12, 2010. This information is available for review at the DEQ office in Salem, Oregon in the Western Region Environmental Cleanup Leaking Underground Storage Tanks (LUST) cleanup files, under the site number, LUST #36-88-4062 (Senz Automotive Service) and LUST #36-06-2111 Yamhill Station.

3.0 SOIL AND GROUNDWATER CONDITIONS

Soil within the LOF consists of brown silt with some clay between the surface and approximately 15 feet below ground surface (bgs). The brown silt and clay is underlain by greenish-gray clay and very stiff silt, which extends to at least 34 feet bgs. The depth to shallow groundwater beneath the site generally ranges between approximately 1 and 12 feet bgs. The inferred direction of shallow groundwater flow is to the southwest, which is generally parallel to the topographic gradient.

4.0 CONTAMINANT INFORMATION

Gasoline, diesel and oil-range hydrocarbons and their associated constituents are generally present in soil between the surface and approximately 14 feet bgs. The highest concentrations of gasoline-range hydrocarbons and volatile organic compounds (VOCs) are present in soil at the southwest portion of the former Senz station and near the alignment of the former clay drain pipe that is located north of the fire station parking lot. Gasoline-range hydrocarbons and VOCs are also present in shallow groundwater at the site. The approximate extent of PCS and groundwater contamination at the site is presented in Figure 2.

The LOF is defined as the area that is currently impacted or is reasonably likely to be impacted in the future by contaminants released at the site.

The LOF consists of soil between approximately 1 and 14 feet bgs, and shallow groundwater. The LOF includes the former Senz Automotive Service station property (tax lot 2900), small areas in the First Street and Maple Street rights-of-way; most of the Yamhill Fire Department properties (including tax lots 2800 [west of the former gas station]; a portion of tax lot 2801 [west of tax lot 2800] & 3500); the Pythian Hall property (tax lot 3400); a portion of the

restaurant (tax lots 3000 & 3100 [south of the former gas station], a portion of residential properties (tax lots 3600, 3700 [South of the Fire Station and across 2nd Street]), and possibly, a small part of tax lots 3200 and 3300. Figure 2 shows the locations of the tax lot and the estimated lateral extent of the LOF. DEQ recommends that personnel that may encounter contaminated soil and/or groundwater review this CMMP to familiarize themselves with the guidance provided herein prior to beginning activities that require disturbance or management of potentially contaminated soil and/or groundwater. All soil/groundwater determined to be potentially contaminated during construction shall be handled and characterized as described in this CMMP.

Soil and groundwater that is contaminated at any concentration and removed from the subsurface during construction must be handled in accordance with State of Oregon regulations. Additional information regarding recognition and management of contaminated soil and groundwater is presented in Section 6.0.

5.0 WORKER SAFETY

Each involved entity is responsible for the safety of their respective workers. This includes implementation of any training requirements, safety plans, monitoring, certifications and any other action or requirement that may be required or prudent prior to beginning site activities. This CMMP or other notification must be provided to employees who will be working on-site. Prior to any ground disturbing activities, a utility locate should be performed to identify potential utilities in proposed work areas.

Each involved party will make preliminary assessments of potentially contaminated media as it relates to worker safety. Occupational health guidelines for chemical hazards (i.e., Occupational Safety And Health Administration [OSHA] and National Institute for Occupational Safety and Health [NIOSH] can be used to evaluate site conditions. The evaluation should consider exposure limits (i.e., time weighted average [TWA], short term exposure limit [STEL], permissible exposure limit [PEL]), exposure symptoms, and personal protection equipment. Specific recommendations should be provided to protect worker safety.

All entities are responsible for notifying and updating their employees of potential site hazards that may be encountered during the project. A health and safety plan (HASP) will be required to perform excavation and/or dewatering within contaminated areas of the site. Each involved entity will prepare and be solely responsible for implementation of a site-specific HASP in accordance with requirements of the Oregon Occupational Safety and Health Administration (OR-OSHA).

6.0 HANDLING AND DISPOSITION PLAN FOR CONTAMINATED SOIL AND GROUNDWATER

This section provides guidance for the following: 1) identification; 2) characterization; 3) handling; and 4) disposal of contaminated soil and groundwater that may be encountered during earthwork-related construction activities at the site.

All parties involved shall be solely responsible for all matters related to the identification of contaminated soil and groundwater encountered during the earthwork-related construction. Earthwork contractors must provide a contaminant awareness training program for their on-site workers. As part of the contractor's contaminant awareness training program, workers will be advised on basic methods and techniques in detecting hazardous soil and/or groundwater during earthwork construction activities. Contaminant awareness training should include discussion of the nature and extent of contamination, the hazards posed by contamination and risk mitigation measures.

The contractor shall monitor soil, groundwater and waste materials by instructing workers in observing and reporting questionable materials, oily or chemical odors, and oily sheen or color on soil and water. If unexpected hazardous or contaminated materials are encountered, the contractor shall:

1. Stop all work in that area.
2. Notify the property owner immediately.
3. Ensure no contaminated material is removed from the site.
4. Remove the work force from the immediate area of the contaminated area.
5. Secure the area from access by the public until such time as all parties involved have verified that site work can be completed in accordance with the Site Specific HASP and this CMMP (modified as necessary to reflect the specific project and conditions expected to be encountered).

6.1 Identification of Potentially Contaminated Soil and/or Groundwater

1. All parties involved will review this plan to familiarize themselves with the presumed location of contamination, prior to beginning the earthwork-related construction activities.
2. If site personnel observe soil and/or groundwater that exhibits one or more of the following field screening characteristics, the soil and/or groundwater shall be identified as potentially contaminated and will be handled and characterized as described below. Note that the absence of these characteristics does not necessarily imply that soil or groundwater does not contain contaminants.
 - staining
 - chemical or petroleum odors
 - a sheen on groundwater and/or
 - a sheen from soil when placed in contact with water
3. In addition, field screening with a photoionization detector (PID), or similar field screening instrument can be used to assess whether volatile chemical compounds are present.

6.2 Handling of Contaminated Soil, Groundwater and Clean Overburden

1. Soil and groundwater that is contaminated requires special handling. Workers are required to be provided with contaminant awareness training.

2. To mitigate potential risks to workers, care should be taken to minimize worker exposure to soil and groundwater during all subsurface earthwork-related activities in contaminated areas (see the LOF as shown in Figure 2) in accordance with the project-specific HASP.
3. A project-specific HASP will be required to perform earthwork-related activities within contaminated areas. The HASP shall be prepared in accordance with the requirements identified in Section 5.0. The contractors shall develop and be solely responsible for implementation of their own site-specific health and safety plan for site workers in accordance with these and any other applicable requirements.
4. Potentially clean overburden should be segregated from contaminated soil. Care should be taken to avoid mixing clean and contaminated soil and thereby paying to send clean overburden soil to the permitted landfill for disposal.
5. Sampling and chemical analysis may be required by the receiving facility (landfill) to obtain their approval for disposal. Existing analytical data may be adequate, although landfill operators may require more recent data for profiling. As such, a representative sample of the contaminated soil typically will need to be obtained for chemical analysis.
6. Transportation of contaminated soil off the site requires specific manifesting, licensing, and insurance requirements. Under no circumstances will contaminated soil leave the site without acceptance by the off-site disposal facility or written authorization from regulatory authorities (local land use, DEQ, etc.) for other treatment and/or disposal. Contaminated soil must be loaded and transported using procedures to prevent its release or spread to other areas of the property or off-site locations. Loading of soil must be performed in a manner that maintains a condition of no visible dust in the work area. Prior to departure from the loading location, all loose soil must be brushed from the truck and returned to the stockpile. Loads leaving the property must be covered by a tarp or other appropriate containment.
7. PCS can be loaded directly into trucks for transport to a facility that is able to accept PCS. Alternatively, PCS can be stockpiled on-site in accordance with the instructions below.
8. Contaminated soil can be secured on-site by placing it either: 1) in a designated stockpile area that is lined and covered by durable plastic sheeting, and bermed to control run-on/runoff; or 2) in labeled roll-off containers, or other covered containers. Access to the secured soil must be restricted by fencing or other physical barriers to prevent unauthorized personnel from contacting the soil. Site workers must comply with Best Management Practices (BMP) for erosion and sediment control.
9. The extent of contaminated soil excavated shall be determined based on field screening, analytical testing and project requirements.

6.3 Analytical Protocols

Samples should be stored in a cooler below 4° Celcius until submitted to analytical laboratory certified by the Oregon and/or National Environmental Laboratory Accreditation Program (ORELAP and NELAP, respectively). Any facility receiving soil from the site (e.g., landfill) should be contacted as to their requirements for acceptance. Samples should be analyzed for suspected contaminants including total petroleum hydrocarbons (TPH) by Northwest Methods NWTPH-Gx and NWTPH-Dx. If volatile compounds are indicated by field screening, samples

should be analyzed for VOCs by Environmental Protection Agency (EPA) Methods 8021, 8260, or a comparable method. If petroleum-related contaminants are detected, additional follow-up analyses (e.g., metals, polynuclear aromatic hydrocarbons) may also be necessary.

Quality control and quality assurance protocols should be followed (see DEQ LUST Quality Assurance Program Plan revised September 9, 2010). Chain-of-custody documentation needs to be maintained. Analytical method reporting limits need to be less than regulatory screening criteria.

6.4 Erosion Control

Based on the nature of the future site work, the appropriate regulatory agency may require an erosion control plan or permit. The contractor must take appropriate steps to prevent the erosion of soil in and from contaminated areas including temporary stockpiles. Erosion control methods may include one or more of the following:

1) Installation of silt fence; 2) use of filter bags and/or fabric; 3) scheduling of activities to avoid rainy periods; and 4) other methods as necessary and appropriate.

6.5 Disposal Options for Soil

1. Transport of soil shall be conducted in accordance with local, state and federal regulations.
2. Trucks shall be loaded in a manner that prevents the spilling or tracking of contaminated soil. Loose material falling onto the exterior of the truck shall be removed before the truck leaves the loading area. On-site truck routes shall be established to minimize or prevent movement of trucks over contaminated areas. All trucks shall be covered before they leave the loading area. The contractor shall be responsible for ensuring that loaded truck weights are within acceptable limits.
3. Trucks shall be decontaminated prior to leaving contaminated areas. Decontamination will consist of sweeping loose soil with brooms and removing significant quantities of adhered soil using hand tools. Trucks that have driven over contaminated unpaved areas shall pass through a wheel wash before entering public rights-of-way.
4. Clean overburden soil can be reused on-site if suitable for construction, or taken off-site for disposal at a non-hazardous landfill facility.
5. Soil with detected contaminants will be transported off-site for permitted disposal at a Resource Conservation and Recovery Act (RCRA) Subtitle D municipal and/or non-hazardous waste landfill facility unless written authorization from regulatory authorities (local land use, DEQ, etc.) for other treatment and/or disposal has been obtained (see DEQ guidance [Petroleum-Contaminated Soils Handling Options](#)).

6.6 Handling Contaminated Groundwater

Similar to the handling of contaminated soil, groundwater encountered during excavation dewatering activities will need to be characterized as a non-hazardous waste. A representative water sample will need to be analyzed for petroleum constituents.

Treatment options for handling contaminated groundwater include: 1) containment in storage tanks and off-site disposal at a permitted facility for treatment or recycling; 2) containment in storage tanks with limited treatment (aeration, etc.); and/or 3) discharge of treated water into a nearby sanitary system only if authorized by the owner and regulatory agencies.

If applicable, the contractor may pursue an option with regulatory agencies to discharge construction generated wastewater to the storm sewer system. Once dewatering activities have commenced, the contractor shall perform daily inspection of the effluent to confirm the effectiveness of treatment and determine the water's cleanliness, in accordance with the permit.

6.7 Permits and Approvals

Involved parties will be responsible for obtaining permits for earthwork activities at the project site. For contaminated soil, approvals and permits will be required from off-site disposal facilities for disposal of contaminated soil. Existing data may be accepted by the landfill, although more recent data may be required for profiling. Sampling for profiling is discussed in this CMMP. Off-site disposal facilities should be contacted regarding their specific requirements.

7.0 LIMITATIONS

This CMMP has been prepared for the use of DEQ. No other party may rely on the product of our services unless GeoEngineers and DEQ agree in advance and in writing to such reliance. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this CMMP was prepared. No warranty or other conditions expressed or implied should be understood.

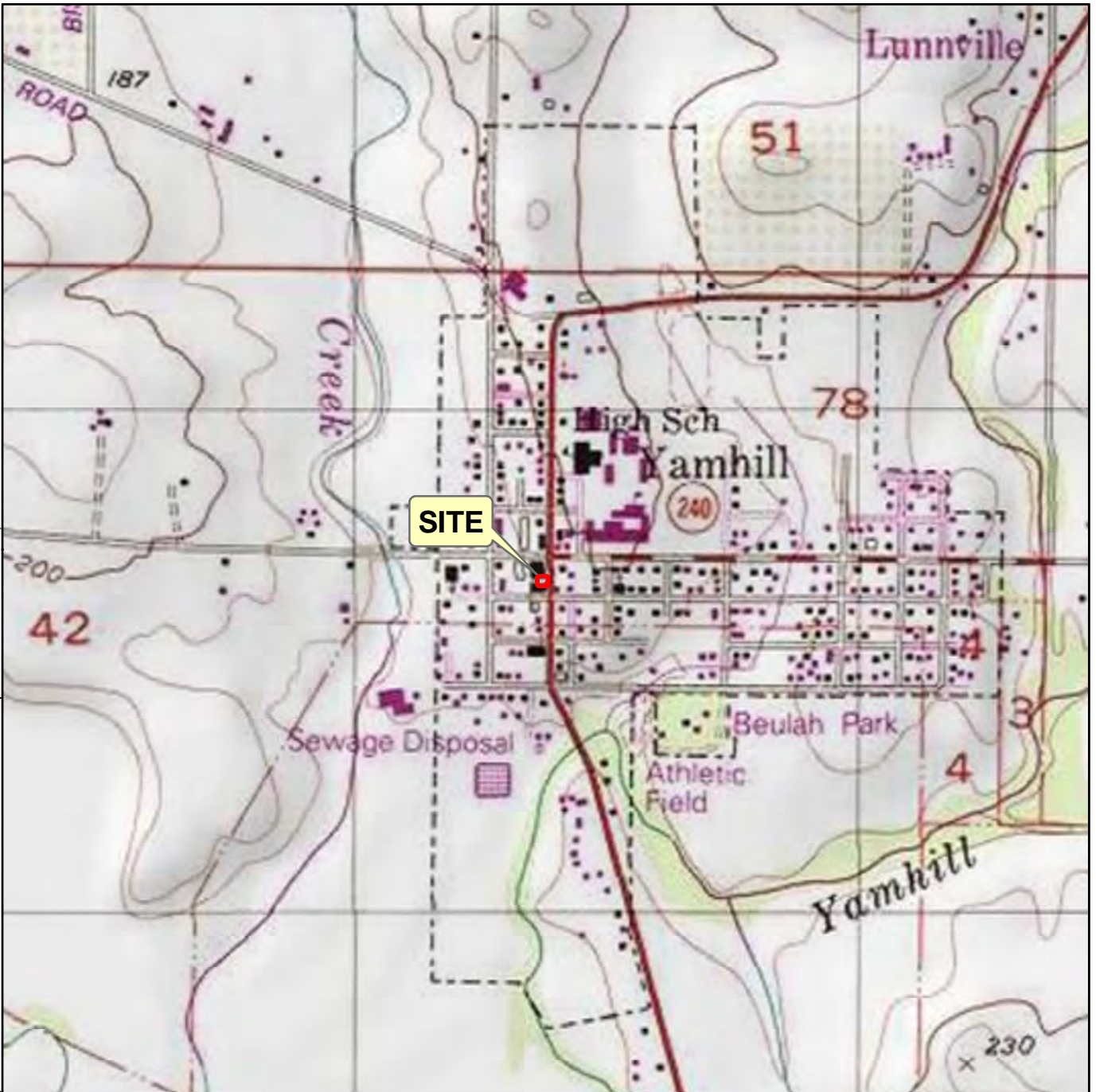
The nature of future development at the site was not known at the time of preparation of the CMMP. This CMMP must be modified as necessary to reflect the specific project and conditions expected to be encountered.

This CMMP was developed based on the investigation of conditions at the property. No study can wholly eliminate uncertainty regarding environmental conditions at a property. There is always a potential that areas of contamination exist that were not identified during the past studies. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Map Revised: October 15, 2010

Path: P:\2\2787039\01\GIS\278703901_Figure1.mxd

Office: PORT



Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
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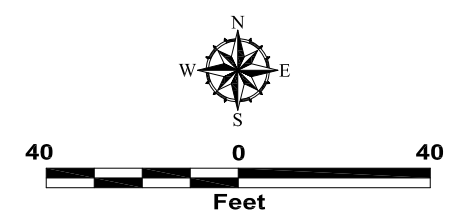
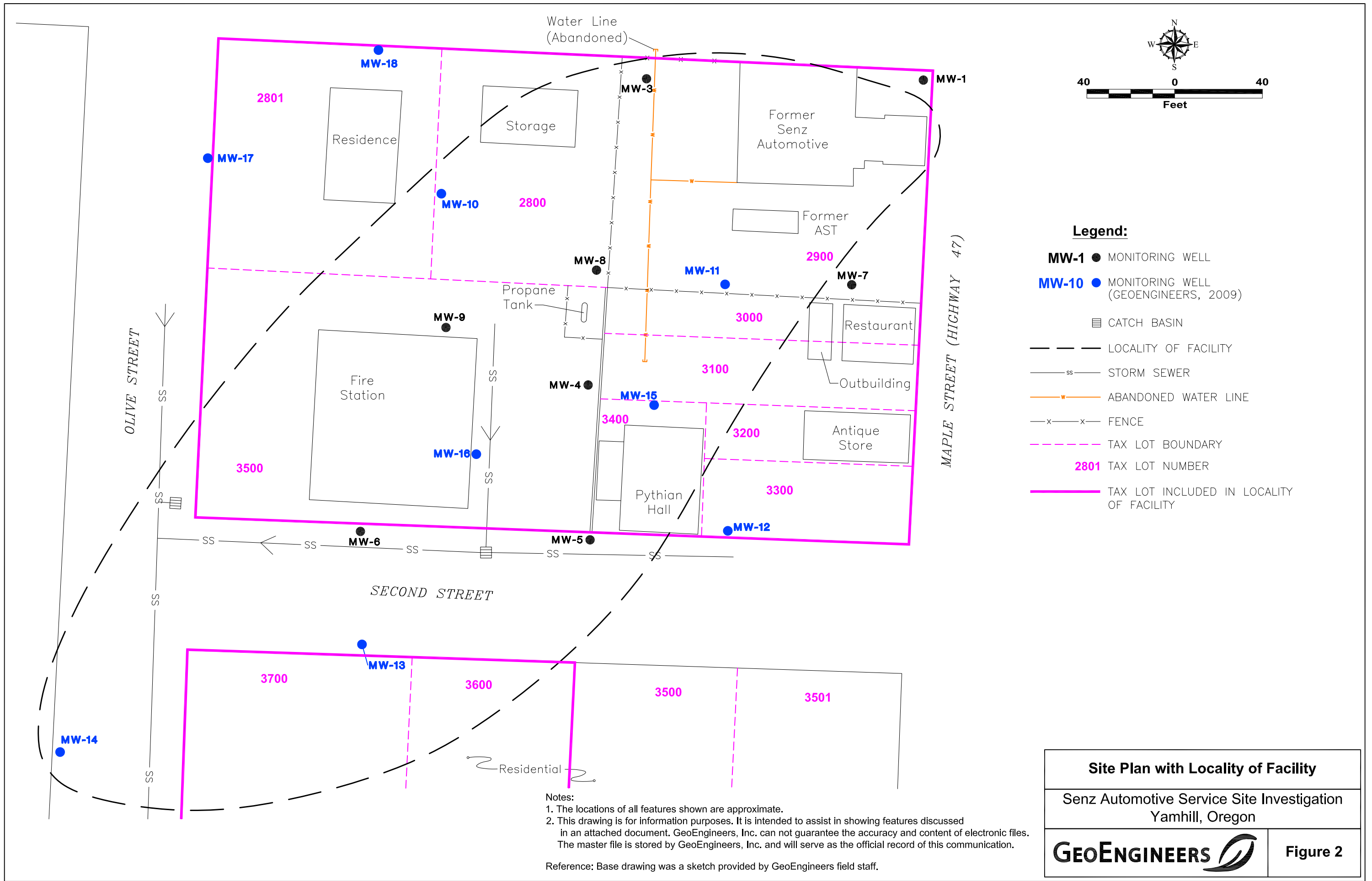
US Topographic Map from National Geographic Services
 (March 2008 - ArcWeb Extension)
 ESRI Data & Maps, Street Maps 2008
 Transverse Mercator, Zone 10 N North, North American Datum 1983
 North arrow oriented to grid north

Vicinity Map

Senz Automotive Service Site
 Yamhill, Oregon



Figure 1



- Legend:**
- MW-1 ● MONITORING WELL
 - MW-10 ● MONITORING WELL (GEOENGINEERS, 2009)
 - ▤ CATCH BASIN
 - - - LOCALITY OF FACILITY
 - ss- STORM SEWER
 - w— ABANDONED WATER LINE
 - x-x- FENCE
 - - - TAX LOT BOUNDARY
 - 2801 TAX LOT NUMBER
 - TAX LOT INCLUDED IN LOCALITY OF FACILITY

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Reference: Base drawing was a sketch provided by GeoEngineers field staff.

Site Plan with Locality of Facility	
Senz Automotive Service Site Investigation Yamhill, Oregon	
GEOENGINEERS	Figure 2