
**SITE HEALTH AND SAFETY PLAN
FOR GROUNDWATER MONITORING
SANITARY TRANSFER AND LANDFILL
DELAFIELD, WISCONSIN**

Project Number 2096

1135 Legion Drive
Elm Grove, Wisconsin 53122

**K. SINGH & ASSOCIATES
INCORPORATED**

Engineers and Environmental Management Consultants

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Milwaukee, WI

SITE HEALTH AND SAFETY PLAN
FOR GROUNDWATER MONITORING
SANITARY TRANSFER AND LANDFILL
DELAFIELD, WISCONSIN

PREPARED FOR

THE WISCONSIN DEPARTMENT OF
NATURAL RESOURCES
P.O. BOX 7921
MADISON, WISCONSIN 53707

PREPARED BY

K. SINGH & ASSOCIATES, INC.
1135 LEGION DRIVE
ELM GROVE, WI 53122

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SECTION I. INTRODUCTION

1.1 GENERAL

Protecting the health and safety of the investigative team, as well as the general public, is a major concern during field investigations. This is particularly important in cases where workers may be exposed to known and unknown chemicals, heat, stress, physical stress, biological agents, equipment related injuries, fire and explosion. Many of these hazards are encountered in any type of field study, but exposure to chemical hazards, including toxicity, are major concerns for the investigative team that need to be addressed.

This plan is prepared to address site safety concerns for engineering services performed by K. Singh & Associates at the Sanitary Transfer and Landfill, Delafield, Wisconsin. The Safety Plan will be followed by all personnel from K. Singh & Associates. Sub-contractors may have to prepare their own health and safety plan or be in compliance with the plan prepared for the site by the engineer.

1.2 PROJECT DESCRIPTION

The Sanitary Transfer and Landfill is located in Sections 22 and 27, Township 7 North, Range 18 East, in the City of Delafield, Waukesha County (Figure 1). The landfill was reportedly closed over 10 years ago, and is under postclosure monitoring and maintenance program.

It appears that there is an off-site migration of contaminants in the groundwater. Numerous private and on-site wells are monitored. In addition, leachate from the landfill is pumped daily by a private contractor. On average, 6,000 gallons of leachate is removed daily from the site. The landfill also has numerous methane gas monitoring wells, which are also monitored periodically.

1.3 PURPOSE AND SCOPE

The safety plan is intended for safety precautions proposed to be taken during the monitoring and maintenance activities for this project. The activities include :

- 1) Leachate hauling, and system inspection.
- 2) Water elevations of on-site monitoring wells, leachate manhole wet well, and sampling of off-site private residential wells.
- 3) Sampling and monitoring of wells, gas probes, and vents; both on, and off of the site.
- 4) Installation of a 10,000 gallon leachate holding tank .
- 5) Engineering survey of the site to aid in determining the elevation of monitoring wells.

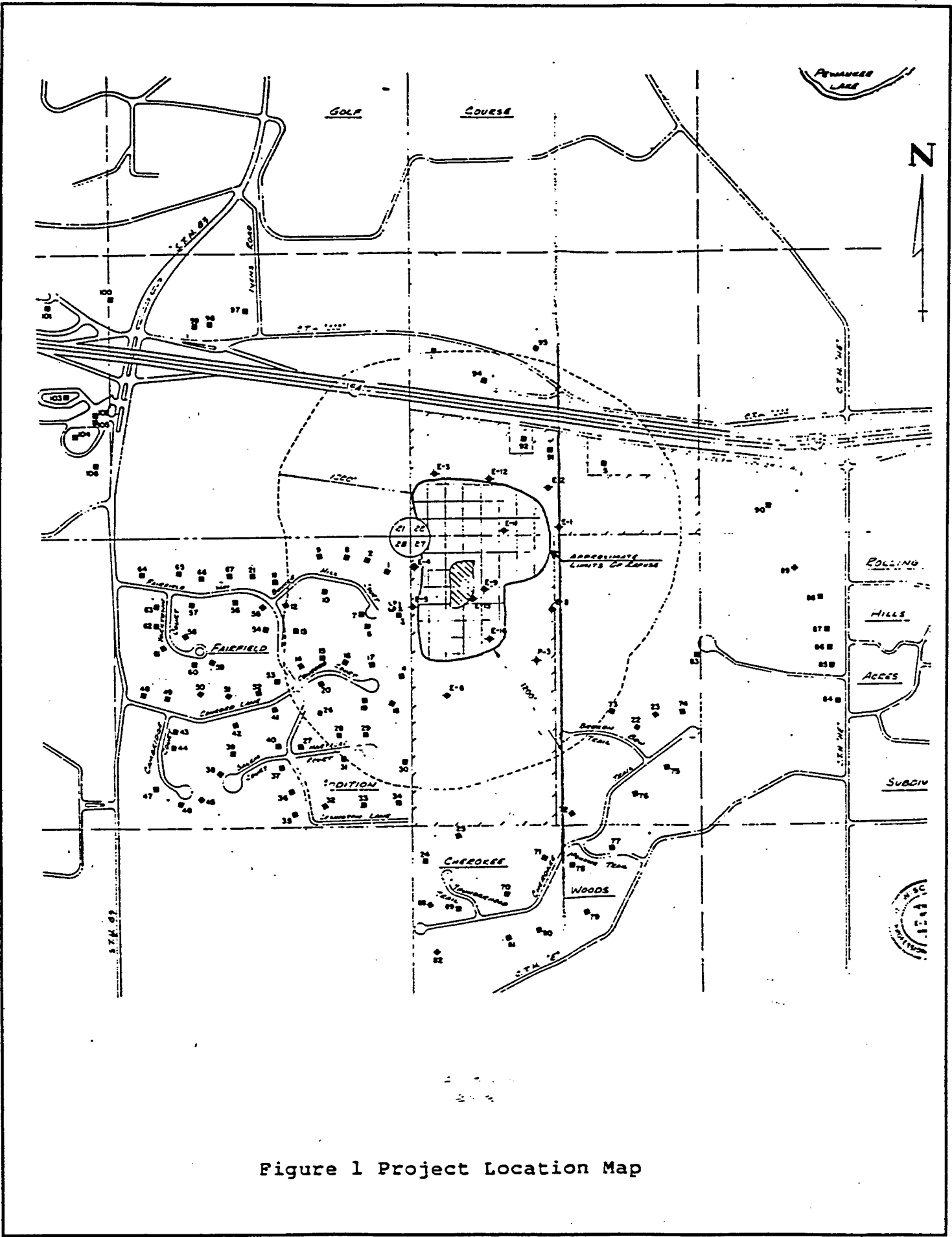


Figure 1 Project Location Map

1.4 REPORT ORGANIZATION

This report is organized into three Sections. Section I includes a project description and purpose and scope of the project. Section II includes pertinent information about the site and level of protection required, in view of data gathered for the specific project. Section III includes a description of the measures proposed to be taken in an emergency.

SECTION II. SITE SPECIFIC SAFETY CONSIDERATIONS

2.1 GENERAL

The employees who will be involved in the environmental remediation will be trained in the following procedures:

- 1) Proper material handling;
- 2) Proper methods for the use, storage and disposal of decontamination fluids;
- 3) Preventive maintenance of supporting equipment;
- 3) Requirements and use of respirators; and
- 4) Appropriate response to personal contamination or emergency conditions.

All involved members of our remediation team will be instructed in the use of methods for keeping safe areas free from contamination and the administration of proper first aid. Employees will be educated in reacting to emergency fire, explosion, and other site-specific hazards. To promote quick response without confusion in the case of emergencies, employees will be informed as to how to report any emergencies.

This section includes pertinent site specific information relative to the hazard evaluation mechanism for upgrading protection levels and the basis for making informed decisions consistent with the new Hazardous Waste Operations and Emergency Response Interim Rule (29 CFR 1910.120) prior to the initiation of the site work.

2.2 SITE CHARACTERISTICS

The site is a sanitary transfer and landfill facility. Our staff, including the sub-contractors, will not be required to enter a confined space in order to perform the specified tasks.

The topography of the site indicates that the center of the landfill is at an elevation of about 1070 feet MSL. The elevation around the perimeter of the landfill varies from 1010 to 1050 feet MSL.

This indicates that surface water will flow in all directions from the center of the site. Groundwater at the site flows in mainly in Northeast, Southwest, and Southeasterly directions.

To the Southeast and Southwest of the site are private residential areas, which contain many monitoring wells. Located to the North is Interstate 94, and to the Northwest across I-94 are more residences, and monitoring wells. There are several homes located on the Southwest perimeter of the landfill site.

2.3 SITE SPECIFIC SAFETY PLAN

This Safety Plan addresses our approach to managing site hazards, air monitoring systems, site control, site work procedures, personal protective equipment, decontamination and site emergency procedures. Dr. Pratap Singh is assigned to be the Site Safety Coordinator for the project. He will report to Ms. Kamala Singh, President of the firm.

At sanitary landfill sites, the hazards are associated with concentrations of methane, and leachate, in the soil, and groundwater. Particulate emission in the air may also be a concern. An HNU Meter will be used to monitor quality of air at the project site. Because the investigation will not be conducted in a confined space, special protection may not be required.

However, Level D protection will be required for the staff actively involved in the implementation of the field work. In addition, an explosiometer and oxygen level indicator are included during the site investigation phase.

Level D protection is primarily a work uniform. Level D personal protective equipment includes:

1. Coveralls
2. Safety boots / shoes, chemical resistant steel toe and shank
3. Safety glasses or chemical splash goggles
4. Hard hat
5. Gloves

Optional:

1. Escape mask
2. Face shield

The field investigation team will be required to take protection at Level D. High levels of protection may be required if data gathered during field investigation indicate high concentrations of toxins.

SECTION III. EMERGENCY RESPONSE

3.1 GENERAL

Immediate action must be taken by the first person to recognize the event. Do not endanger your own life. First aid equipment is located on site in the K. Singh & Associates' vehicle.

3.2 EMERGENCY TELEPHONE NUMBERS

Immediate Emergencies:

Fire:	367-2600	Ambulance:	367-2600
Local Police:	367-2600	State Police:	1-800-321-4400
Medical Emergencies:	367-2600		

Nearest Hospital: - Waukesha Memorial

Hospital Telephone: 544-2011

Directions to Hospital: Take I-94 East to HWY 164 get off on 164 turn right. At the 3rd set of stop & go lights turn right on Madison. Go up a steep hill and take left on 3rd, 4th, or 5th street. They will take you to the hospital. (Follow the blue signs)

When transporting an injured person to a hospital, bring this site safety plan to assist medical personnel with diagnosis and treatment. Four different routes of exposure and their respective first aid/poison management procedures are outlined below:

3.2.1 Ingestion:

DO NOT INDUCE VOMITING. Transport person to nearest hospital immediately.

3.2.2 Inhalation/Confined Space:

DO NOT ENTER A CONFINED SPACE TO RESCUE SOMEONE WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED AND A STAND-BY-PERSON IS PRESENT.

3.2.3 Inhalation/Other:

MOVE THE PERSON FROM THE CONTAMINATED ENVIRONMENT. Initiate CPR if necessary. Call or have someone call for medical assistance. If necessary, transport the victim to the nearest hospital as soon as possible.

3.2.4 Skin Contact/Liquid Chemical:

IMMEDIATELY FLUSH SKIN WITH A LARGE AMOUNT OF WATER. Remove any contaminated clothing and reflush skin. If the chemical was a non-caustic chemical, such as gasoline, use soap, if available. If the chemical was a powder, first brush it off with a clean cloth, then rinse with a large amount of water. Transport person to a medical facility if necessary.

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3.2.5 Eyes:

HOLD EYELIDS OPEN AND FLUSH THE EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER. If possible, have the person remove his/her contact lenses (if worn). Never permit the eyes to be rubbed. Transport person to a medical facility as soon as possible. Fifteen minutes of rinsing is recommended with a suitable source of water; i.e., 5 gallon jug of water, portable eye washes, or permanently installed eye washes.

Notify (1) the Site Safety Officer, (2) the Project Manager and (3) the Health and Safety Manager about the situation immediately after emergency procedures are implemented.

Poison Control Center: 1-266-2222

Environmental Emergency:

Regional EPA Office: 312-353-2000

National Response Center: 1-800-424-8802

U.S. EPA (24-hour hotline): 1-800-424-9346

State Regulatory Agency: Wisconsin DNR

Number: (414) 263-8500

Client: WDNR

Client Contact Person: Marie Stewart

Number: (608) 267-2465

3.3 HAZARDOUS SITUATIONS

Personnel encountering a hazardous situation shall instruct others on site to **EVACUATE THE VICINITY IMMEDIATELY** and call the (1) Site Safety Officer, (2) the Project Manager, and (3) the Health and Safety Manager for instructions.

The site must not be re-entered by K. Singh & Associates employees until back-up help, monitoring equipment, and personal protective equipment is on hand.

3.4 USUAL PROCEDURES FOR INJURIES

1. Telephone for ambulance / medical assistance if necessary. Whenever possible, notify the receiving hospital of the nature of the physical injury or chemical overexposure. If no phone is available, transport the person to the nearest hospital.
2. Send / take this Site Safety Plan (SSP) to medical facility with the injured person.
3. If the injury is minor, administer first aid.
4. Notify the Site Safety Officer, Project Manager, and the Health and Safety Manager of all accidents, incidents and near miss situations.