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Division of Solid and Hazardous Materials
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Alexander B. Grannis
 Commissioner

October 3, 2008

Mr. William Kowalewski
 Project Manager
 USACE-Buffalo District
 1776 Niagara Street
 Buffalo, New York 14207

Post-it® Fax Note	7671	Date	10/6/08	# of pages	10
To	Bill Kowalewski	From	Kat Johnson		
Co./Dept.	USACE	Co.	NYSDEC		
Phone #		Phone #	(518) 402-8594		
Fax #	(716) 879-4494	Fax #	518-402-8646		

Dear Mr. Kowalewski:

Re: Lake Ontario Ordnance Works

The New York State Department of Environmental Conservation (Department) has reviewed the work plan for "Former Lake Ontario Ordnance Works Underground Tank Removal and Site Closure" received on September 29, 2008. The work plan provides investigation, removal and confirmatory soil sampling associated with the closure of underground storage tanks at the former Lake Ontario Ordnance Works.

Upon review, the Department has the following comments:

Page 2-4, Section 2.7.3.2, Last paragraph: Information on the geology and soil conditions in the vicinity of the Southern Generator Building of the former NIKE base should be available to the USACE in the field notes associated with the uncompleted Underground Utilities Investigation. *OK?? So??*

Page 4-2, Section 4.4: Due to site security requirements, if the Porter Center Road gate is used, a guard will be required. *Gate will be locked per CWM.*

Page 4-3, Section 4.5: At a minimum, radiological monitoring on the CWM property should be consistent with the procedures in the attached "Generic Small Project Soil Excavation and Monitoring Plan".

I think we are more conservative and go above and beyond.
Attachment I, Page 2-6, Section 2.7/Figure 2-4: The "pond" located near the area of interest for the geophysical survey is actually the containment for former Tanks 64 & 65 (and area of interest for the FUSRAP program). *Agreed, no need to*

Attachment I, Page 3-3, Section 3.2: Will the locations of the proposed test pit be surveyed and documented?

Sure, there will be map

William Kowalewski

Page 2

Attachment I, Page 3-5, Section 3.5.1: Please provide a Figure showing the proposed staging area for exhumed materials.

OK - ECL

Attachment I, Page 3-8, Section 3.8.1: Excavations should be backfilled with native material instead of gravel.

Call Kent.

The Department expects to provide oversight of field activities associated with this work plan. Please notify the Department at least 10 business days prior to the start of field activities.

If you have any questions on this issue, please contact me at (518) 402-8594.

Sincerely,

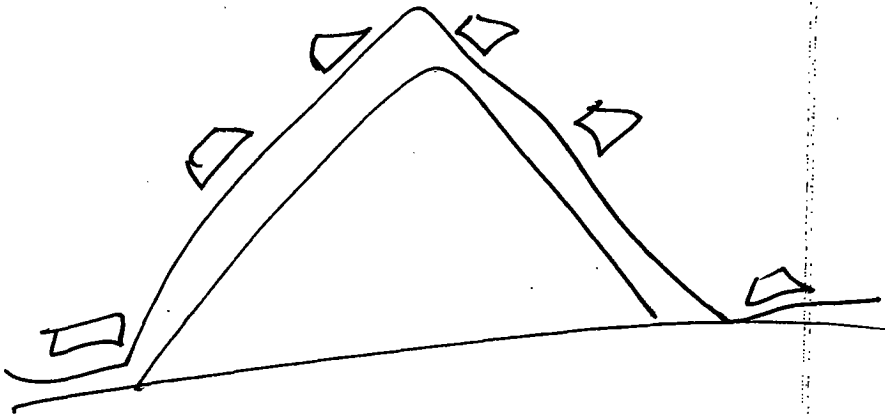


Kent D. Johnson
Senior Engineering Geologist

*Gr
Property of
Spoils pile
North of
red roof House
West of 1 & 2
South M Street*

cc: J. Reidy, USEPA Region II

ecc: J. Strickland, R-9
S. Calandra, R-9





**GENERIC SMALL PROJECT SOIL
EXCAVATION MONITORING AND
MANAGEMENT PLAN**

**CWM CHEMICAL SERVICES, LLC.
MODEL CITY FACILITY**

**September 2005
(Revised December 2005)**

Prepared By: **CWM Chemical Services, LLC.
1550 Balmer Road
Model City New York, 14107**

With Assistance From: **URS Corporation
77 Goodell Street
Buffalo, New York, 14203**

CWM Chemical Services, LLC
Generic Small Project Soil Excavation Monitoring and Management Plan

September 2005
(Revised December 2005)

I. Introduction

Prior to being operated as a Treatment, Storage and Disposal Facility (TSDF), the property currently owned by CWM Chemical Services, LLC (CWM), was utilized by the U.S. Government from the early 1940s to the mid 1960s as part of the Lake Ontario Ordnance Works (LOOW). Some of these U.S. Government activities resulted in the contamination of certain areas of the Model City Facility with chemical and radioactive wastes. On April 27, 1972, the New York State Department of Health (NYSDOH) issued an order relating to approximately 614 acres of former LOOW property, which imposed certain restrictions on the use of said property. On June 21, 1974, NYSDOH issued a supplemental order to amend the 1972 order.

As a result of extensive corrective remedial actions taken at the CWM property since the 1972 Order, on May 7, 1992, the Department of Energy (DOE) certified that the majority of the CWM property was "in compliance with applicable (radiological) decontamination criteria and standards" and provided "assurance that future use of the property will result in no radiological exposure above DOE criteria and standards established to protect members of the general public or site occupants". Decontamination was certified for all properties owned by CWM, with the exception of three properties designated as E, E' and G. These properties were excluded from the decontamination certification because an area within each property could not be properly assessed due to inaccessibility and the DOE could not confirm that contamination did not exist in these areas. The three inaccessible areas were (1) soil beneath Lagoon 6 and the berm surrounding that lagoon on Property E, (2) soil beneath a roadway and PCB storage tanks on Property E', and (3) soil beneath the liquid treatment pond on the western edge of Property G.

Based on the May 7, 1992, DOE letter, on December 23, 2003, CWM requested that the NYSDOH execute an order to rescind and vacate the 1972 and 1974 Orders for all CWM property, except properties E, E' and G. After reviewing all historical documentation and data related to the areas covered by the Orders, both in the NYSDOH files and provided by CWM, the NYSDOH determined a potential for residual radiological contamination still exists and that monitoring is necessary prior to and during any excavation activities. In order to address this concern, the NYSDEC included permit condition J.3.a. in Module II (Corrective Action) of CWM's Sitewide Permit.

As required by condition J.3.a of Module II (Corrective Action) of CWM's Sitewide 6 NYCRR Part 373 Permit, a revised Generic Small Project Soil Excavation Monitoring and Management Plan is being submitted. This plan was not written for any specific project, but, rather, will be followed for all minor excavations and soil disturbance projects in any location at the CWM facility whose area affects 1,000 square meters (10,764 square feet) or less of existing soils and involves the removal of less than 150 m³ (196 cubic yards) or less of soil. Projects, which are anticipated to disturb an area greater than this will require the submission and approval of a project-specific monitoring plan.

The purpose of this program is to confirm that there is no radiological contamination in areas to be excavated for site maintenance or small project activities. Prior to initiating a small project excavation, both New York State Department of Conservation (NYSDEC) and NYSDOH will be notified.

II. Radiation Survey

In most cases, it is expected that the surface survey in the area of the intended excavation will have been performed or will be performed as part of the Sitewide Gamma Radiation Walkover Survey by a qualified consultant (see Site Radiological Survey Plan for details and Appendix I for example resumes of survey personnel). Survey personnel will use a 2-inch x 2-inch Sodium Iodide (NaI) gamma scintillation detector with a scaler/ratemeter, or equivalent. The approximate detection sensitivities will be 2120 pCi/g for Th-230, 2.8 pCi/g for Ra-226 and 39 pCi/g for U-238, following the guidance of NUREG-1507 (U.S. Nuclear Regulatory Commission, 1998) using nominal literature values for background, response and site conditions for Ludlum detectors. Refinements to these detection sensitivity estimates will be made, as necessary, based on actual instrument response and background data gathered during site survey activities (see Site Radiological Survey Plan for calculated values of detector efficiencies). The walkover survey will use gamma ray detectors, coupled to count rate meters, sub-meter global positioning systems (GPS) and data loggers to automatically record the radiation levels and their locations. The electronic record of the survey results will be downloaded and transferred to a computer for processing and entry into a geographical information system for analysis.

In the case of an urgent project (eg. a water line break), the surface area of the intended excavation will be scanned by a manual walkover by a qualified contractor using a 2-inch x 2-inch Sodium Iodide (NaI) gamma scintillation detector with a scaler/ratemeter. The analyst will walk at a speed of approximately 2 feet per second while passing the detector within 6 inches of the ground surface in a serpentine fashion. Audible output of the instrument will be monitored. At locations of increased activity, the reading on the meter will be reviewed and the value recorded. Documentation will include a sketch of the area to be excavated and GPS data to document its location as well as reference to site landmarks. Alternately, survey data may be used to document the location.

All instrumentation will have current calibration (within the past 12 months or more frequently if recommended by the manufacturer). Daily field performance checks (i.e. background and source check) will be conducted in accordance with individual instrument use procedures. These performance checks will be performed prior to daily field activities and at any time the instrument response appears questionable. Only data obtained using instruments that satisfy the performance requirements will be accepted for use in the evaluation.

An initial investigation level of 16,000 counts per minute (cpm) will be employed. A media specific investigation level may be used after development of such values as part of the Sitewide Radiation Survey. The investigation level of 16,000 cpm is consistent with other radiation surveys performed in WNY as well as being approximately one and one-half times the general site background of 10,000 cpm. If an area above the investigation level is identified during the surface survey, the characterization, sampling and analysis developed as part of the Sitewide Radiological Investigation Soil Sampling Plan (URS, October 2005) will be followed. As long as the surface survey does not identify any areas above the investigation level, the small project excavation may proceed. If the excavation will be deeper than six inches (6"), the newly exposed soil will be surveyed after approximately each 6" of soil is removed. In addition, the

excavated soil staged in stockpile or stored in container(s) will be scanned with the survey meter to verify that the material is below the investigation level. The walls and floor of the completed excavation will also be scanned to ensure that no material above the investigation level has been exposed

If a reading greater than the investigation level is detected, the approximate area of increased activity will be delineated and the requirements of the attached Health & Safety Plan (HASP) will be followed (see Appendix 2). If a reading exceeds 110,000 cpm, all work will cease. Before the assigned health physicist leaves the project area, a one minute static count will be taken with the detector located no more than 2 inches above the ground surface. The data will be forwarded to the NYSDEC and NYSDOH for review and consultation. If the readings are less than 110,000 cpm and it appears that there is a localized spot of activity (<1 square foot), the soil may be excavated and placed in a container. Prior to excavation, specified Personal Protective Equipment (PPE) will be donned. Efforts will be made to minimize dusting and release during excavation (eg. soil may be wetted prior to removal). After soil exceeding the investigation value is removed, the exposed surface will be surveyed to ensure that the potentially impacted soil has been completely removed. Impacted soil will be sampled and the samples sent off-site for isotopic uranium, thorium, radium, as well as gamma spectroscopy, testing. CWM will coordinate split sampling as requested by the NYSDEC and NYSDOH. All results will be reviewed with both the NYSDEC and NYSDOH. If it is determined that the soil is a radioactive waste, it will be stored for transfer to an appropriate facility by the U.S. Army Corps of Engineers (USACE) or be disposed of by CWM in accordance with all applicable laws and regulations, no later than two years after it has been excavated. CWM will also consult with the New York State Department of Labor as to whether or not CWM's radioactive materials license must be modified to authorize storage of the soil while arrangements are made for disposal. If the area appears to be >1 square foot, the project will be suspended and the agencies consulted. If the excavation is suspended, prevention of air dispersion and run-on/run-off control will be priorities while the finding is discussed with the agencies. The excavation area may be covered with a tarp, or backfilled with soil while options are evaluated. Access to the area will be restricted until a decision is reached.

III. Potential Chemical Contamination

Similar to the radiation scanning, a Foxboro TVA-1000 air monitor with a flame ionization detector (FID) will be used to screen the soil for the presence of volatile organic contamination. The instrument will be calibrated prior to use. The exposed soil will be screened by personnel from CWM's laboratory or environmental department. Depending on the configuration and equipment used to perform the excavation, the method of screening the soil will vary. If the soil is removed in layers, each newly exposed soil layer may be screened for the presence of volatile organics, or if a deeper excavation is required, the soil may be screened in the excavator bucket as it is removed. Several different soil screening methods may be utilized in order to effectively screen the material in the safest and economical means as necessary. In addition, the excavated soil staged in a stockpile or stored in container(s) will be scanned with the FID to determine if any volatile organics appear to be present in the soil. If a reading above 10 ppm is obtained, the soil will be considered to be potentially chemically contaminated. In addition, if odor or discoloration is noted or a colored sheen is present on water present in the excavation, chemical

CWM Chemical Services, LLC
Generic Small Project Soil Excavation, Monitoring and Management Plan

September 2005.
(Revised December 2005)

contamination will be suspected. In these areas, CWM's Contamination Control Program (HS-1144) and Personal Protective Equipment (HS-1161) procedures will be followed. Potentially contaminated soil will be containerized rather than stockpiled to prevent dispersion or run-off of contaminants.

Based on the information obtained during the FID screening and the historical contamination data for the area of the excavation that was compiled during the facility's RCRA Facility Investigation (RFI), the soil will be assigned one of the following four categories for management. If sampling and analysis is specified, representative sample(s) will be collected by CWM laboratory or environmental personnel in accordance with SDP 2004 (Appendix 3, ref. Section 7.8.4) and tested by CWM's ELAP/NELAP certified laboratory.

1. **Historic data and screening procedures do not indicate the presence of chemical contamination.**
 - a. Soil may be used for backfill, placed in a soils stockpile for future use on-site or placed in the landfill as a non-hazardous waste.
2. **Historic data indicates the potential presence of chemical contamination in the excavated soil, but no chemical contamination is detected by the screening procedures.**
 - a. Soil may be used to backfill the excavation; or
 - b. If the soil is being considered for placement in a soil stockpile or disposal in the landfill, a representative sample will be collected and tested for PCBs and VOCs.
 - i. If the PCBs are >1 ppm, the soil will not be placed in a stockpile.
 - ii. If the PCBs are >50 ppm, the soil will be managed as a hazardous waste.
 - iii. If any volatile organics are detected, the historical activities for the area will be considered to determine if any listed waste codes apply. The constituent concentration(s) will be evaluated to determine if any are high enough that the soil could qualify as characteristic. If the soil qualifies as a hazardous waste, the constituent concentrations will be reviewed against the UTS to determine if the soil meets the LDR standards or the alternate soil standards. If the soil meets either of these standards, then it will be landfilled as a hazardous waste after the completion of the appropriate paperwork (LDR form).
 - iv. If the soil is determined to be non-hazardous, it may be disposed of in the landfill, or if it contains <5 ppm VOCs, it may be placed in a soil stockpile for future use; or
 - c. An economic based conservative assumption may be made and the soil managed as a RCRA/TSCA waste for incineration disposal in lieu of completing PCB and VOC testing.
3. **Historic data does not indicate the potential presence of chemical contamination in the excavated soil, but chemical contamination is detected by the screening procedures. Follow 2.b. or 2.c. above. If chemical contamination is found in an area not previously identified in the RFI, the conditions in Module II (Corrective Action Requirements) of the facility's Sitewide Permit will be followed (eg. Newly Discovered SWMUs).**

*CWM Chemical Services, LLC
Generic Small Project Soil Excavation Monitoring and Management Plan*

*September 2005
(Revised December 2005)*

4. **Historic data and screening procedures indicate the presence of chemical contamination in the excavated soil. Follow 2.b or 2.c above.**

IV. Reporting

The data from the surveys will be compiled and added to a brief description of the project. A copy of these small project reports will be included with the environmental monthly monitoring reports, which are submitted in accordance with CWM's Sitewide 6NYCRR Part 373 Permit. An example report is included in Appendix 4.



CWM Chemical Services, LLC.

Generic Small Project Soil Excavation Monitoring and Management Report

Prepared By: _____

Date of Report: _____

Description of Excavation Location: _____

GPS Northing: _____

Purpose of Excavation: _____

GPS Eastern: _____

Elevation: _____ msl

1. Radiological Survey Scan

Rad Scan Performed By: _____

Date of Rad Survey: _____

Rad Instrument Used: _____

Date of Calibration: _____

Documentation of QC checks performed before and after survey (describe):

Description of Rad Survey performed:

Rad Scan Survey Results:

Time	Scan Survey Data	Units	Scan Location (Layer, Lift, Bottom)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Note: Attach sketches, maps or drawings of scan and sample locations as necessary to document exact location of excavation activities.



If soil or other media samples are collected, complete the following:

Sample ID#	Sample Location			1 Minute Static Count within 1 inch of Sample Location		Estimated Sample Volume (Include Units)
	Northing	Easting	Elevation (msl)	Before	After	

Note: Attach analytical analysis of samples to this report when results are obtained.

2. Chemical Contamination Screening

FID Scan Performed By: _____ Date of FID Survey: _____

FID Instrument Used: _____ Date of Calibration: _____

Level of PPE Required: _____ Visible Evidence of Chemical Contamination: **Yes** **No**
(Circle One)

Description of FID Survey performed: _____

Time	VOA Screening Data	Units	Scan Location (Layer, Lift, Bottom)

Comments: _____

Attach chain of custody and any analytical results of soil samples collected.