STANDBY CONTRACT WORK ASSIGNMENT FOR STATE SUPERFUND

Type of Contract: **Cost Plus Fixed Fee**

Site Name and Number: **Old Troy Municipal Incinerator**
DEC Site No. 442001, HS4041

NYSDEC Project Manager: Randy Hough, Bureau D, Section C

Phone: **(518) 402-9475**

A. Summary of Site History and Background Information

Work Assignment Objective

This work assignment has been prepared to complete a Site Characterization (SC) for the Old Troy Municipal Incinerator Site. The work will confirm the nature and define the extent of the contamination. It will also examine the risks associated with the contamination, and aid in evaluating the need to transition into a RI/FS for this site.

Site Description and History

The Old Troy Municipal Incinerator site is located in a moderately populated area in the Town of Brunswick, Rensselaer County, New York. The site is coincident with the former Troy municipal landfill property and is approximately 30 acres in size. This site was listed in the Registry based upon an EPA Preliminary Assessment conducted in October of 1980. The site was originally a Class 3. It was reclassified to a Class 2 in 1986, based upon a Phase II Investigation. In March of 1999, the DER, Bureau of Hazardous Site Control, conducted a review of the site records. The review resulted in a reclassification from 2 to 3, and added the site to the *Hazardous Substance Disposal Site Study* inventory. The site is currently owned by Mr. Vincent Ingenoso of Averill Park, NY.

The site is bound on the north by the steep face of the fill material, a wet area, and further on, a residential development surrounding the Lansingburgh Reservoir. Oakwood Avenue (Rt 40) is to the west, Farrell Road to the south and agricultural lands to the east. The majority of the site is wooded. The nearest residential dwelling is located approximately 300 feet from the site. The areas to the west and north of the site are served by municipal potable water. Those to the east of the site appear to be on private wells.

The site was used from 1947 to 1962 for the disposal of residues from the incinerator operation. The actual incinerator was located in the northwest section of the property, and reportedly operated inefficiently, in as much of the waste was only partially destroyed. There

are records that the incinerator processed 2,000 tons of waste from the General Electric Company's Silicone Products facility in Waterford, NY. These wastes included regular trash (98%) and a sludge containing heavy metals, organic chemicals and paint (2%). After the incinerator closed, the site was used until 1969 for municipal and industrial waste disposal. Indications are that an unknown quantity of aromatic hydrocarbons generated by Paris Cleaners were disposed at the site from 1966 to 1969 and that 1.5 tons of paint waste scrapings from Garden Way Manufacturing were disposed there every year from 1962 to 1969.

Potentially Responsible Parties

There are no PRPs which have been identified. Mr. Ingenoso, the current owner, obtained the property after it was added to the NYSDEC Registry.

Geology and Hydrogeology

The bedrock underlying the site is shale, which is thinly bedded and highly fractured in the upper few feet. Depths to bedrock outside of the fill area are generally between 4 and 12 feet, but bedrock reaches the surface in some places. Unconsolidated deposits of fine sand, with silt, clay and gravel overlies the bedrock. Prior to use as a landfill, it is thought that the site was a depression located between two parallel ridges of bedrock running north-south. Reportedly 40% of the site contains manmade fill and that the fill depths are in excess of 30 feet and up to 54 feet at one location. The fill is covered with the same deposits as above, and is thin and sparse on much of the site. Refuse material is protruding through the soil cover in many locations, and includes, metal fragments, rusted out drums, automobiles, auto type battery casings, demolition debris, glass, and other typical municipal solid waste. The filling has created steep faces in places on the site, particularly on the northwest, north and northeast sides.

The depth to, and direction of groundwater flow at the site is not clear from the available data. Two of the five existing monitoring wells have been dry during previous sampling events. Three distinct seep areas which have been identified on the site, they are located as follows: northern end, northwest side, and south end of the fill. Surface water emerges out of the fill material on the north side and flows north to the Lansingburg reservoir. The northwest seep flows south along the west side into a swampy area, which continues into a pond. The south seep emerges into surface water, which flows to the pond mentioned above. There is surface water entering the site from the west via culverts under Route 40. These join with the flow south along the west side of the site. The southern surface water flow exits off-site through a culvert under Farrell road. The pond area in the eastern section of the site receives flow from the fields to the east and small intermediate stream moving north along the east side. This water is essentially flowing into the site and fill area. There is no apparent exit for this surface water. Infiltration into the fill and evaporation may account for losses.

Previous Investigation Results

In 1973, Clough Associates conducted a Land Use Evaluation study for Gardenway Manufacturing. The subsurface investigation included 40 test pits, 6 hand augured holes, and 6 soil borings. The records of this study do not include a detailed location plan of this activity. The study provided observations and recommendations for potential development in terms of site preparation, building structures, and foundation requirements. No laboratory analytical testing of media was conducted.

In 1976 the DEC conducted a Hazardous Waste Survey (Congressional Survey) of industrial establishments. In July of 1979, GE provided the DEC with it's response to the survey in which the site was identified as a facility which received waste. At this time parts of the site were being utilized by the Capital District Community Gardens to grow vegetables. Release of the GE survey results prompted the City of Troy and the Troy Community Gardens group to request soil sampling at the site in August of 1980.This was conducted by the Rensselear County Health Department , DEC and EPA.

In October of 1980 EPA Region II conducted a "Potential Hazardous Waste Site Identification and Preliminary Assessment". This resulted in the site being added to the NYS Registry of Inactive Hazardous Waste Disposal Sites as a Class 3 site. In 1983 the DEC conducted a Phase I Preliminary Investigation of the site. Ecological Analysts, Inc., the DEC consultant on the project provided the final report in September of 1984. The Phase I basically recommended that a further Phase II investigation be conducted. The Phase II Investigation was conducted in 1985 by the DEC consultant, Recra Environmental, Inc., with the final report provided in 1986. The investigation included a geophysical survey, the installation of 5 monitoring wells, and sampling and analysis of various media. Based upon the results of the Phase II report the site was reclassified to a Class 2.

In July of 1987 the DEC Division of Solid and Hazardous Waste conducted field sampling of groundwater and surface water locations for the Bureau of Hazardous Site Control. Analysis of these samples was conducted by the NYSDOH.

In November of 1989 the property was conveyed from Garden Way Manufacturing to Mr. Vincent Ingenoso of Averill Park, NY.

In August of 1996 the DER conducted groundwater, surface water, sediment and soil sample collection at the site. Analysis was conducted for VOCs, SVOC, PEST/PCBs, and metals.

In March of 1999 the DER, Bureau of Hazardous Site Control, Site Control Section conducted a review of the site records. The review, resulted in a reclassification from Class 2 to3. The reason for the change was as follows: "The disposal of a consequential amount of hazardous waste as defined by 6NYCRR Parts 371 and 375 has been confirmed. Threats to the public

health and the environment relative to the confirmed hazardous waste disposal could not be demonstrated. The recognized impacts on the soil, surface water, sediment and groundwater at and near the site are attributable to the disposal of various hazardous substances at the site. Therefore, the site has been reclassified to a Class 3 standing in the *Registry* and has been added to the *Hazardous Substance Disposal Site Study* inventory".

Previous environmental sampling and analysis results of groundwater, surface water, sediment and surficial soil samples which were collected and analyzed at and around this site during field events in 1985, 1987, and 1996 are available. The analytical results indicate contamination levels which exceed certain of the applicable Standards, Criteria, and Guidance (SCGs). In particular, parts of the following standards have been exceeded: 6NYCRR Part 703 Water Quality Standards and/or the recommended soil cleanup objectives for protecting groundwater as per DEC TAGM 4046. Based upon the previous activities the primary contaminants of concern are metals. Volatiles, semi-volatiles, and pesticides have also been detected in various media above standards in each of the three rounds of sample collection sporadically. All groups of contaminants need to be evaluated.

Additional Data Requirements

The nature and extent of the contamination must be fully defined.

B. Scope of Work and Task/Subtask Description

Services of the standby consultant include the design and implementation of a phased site characterization (SC). The SC will define the nature and extent of contamination at, around, and downgradient of the site and assess the potential exposure to human health and the environment.

The approach to be used in completing the SC will be the same as documented in the RI portion of the Standby work contract entitled "Work Element II-Phased Remedial Investigation". The site specific tasks will incorporate prior site activities and the current classification of the site. Applicable guidance includes the Division of Environmental Remediation (DER) TAGM # HWR-89-4025, "Guidelines for RI/FS's"and others.

Below are the specific tasks that summarize the work necessary to complete the project, as well as site-specific considerations that should be addressed.

The principal elements of the SC will be as follows:

1.) Perform of an investigation which will clearly define the geology and hydrology at the site. The collection of necessary data to characterize the full extent of contamination on-site and off-site, including the vertical and areal extent of the groundwater, surface water, sediment and soil contamination. Identification and investigation of areas of

concern and contaminant sources including landfill generated leachate. Leachate characterization and quantification. Collection of data to determine the need for leachate source control technologies. Delineation of the waste mass, landfill footprint area, and the potential for waste consolidation. Identification of contaminant migration pathways.

2.) Determine the significance of the threat of contamination to human health and the environment.

The overall SC process should be streamlined to the maximum extent practicable to ensure the timely completion of the project. In general, the process will follow the "Draft DER-10 Technical Guidance for Site Investigation and Remediation" prepared by the NYSDEC, dated December 2002. This document is available on the internet at: http://www.dec.state.ny.us/website/der/guidance/der10dr.pdf

Work to be completed is broken down into the following tasks:

Task 1 - Work Plan Development

Task 2 - Site Characterization

A description of each task is as follows:

Task 1 - Work Plan Development (to be completed in 12 weeks or less)

Phase A: Scoping/Draft Work Plan

1.) The consultant will review all available background information and prepare a preliminary base map which shows the locations of past and present site facilities and prior environmental samples. Potential sources and areas of contamination will be identified. Spreadsheets and/or graphic representations will be provided to summarize existing data. These will be available for the scoping session referenced below. Two weeks will be allotted for the preliminary document development. A set of attachments from the prior investigations is included for background reference. These include:

Attachment 1: Inactive Hazardous Waste Disposal Report / Map
Attachment 2: Aerial Photo - Approximate Sampling Point Locations
Attachment 3: Previous Analytical Data

2.) This task will include a site visit by the NYSDEC project manager, standby consultant, and other critical personnel approximately 2 weeks after the work

assignment is issued.

3.) A scoping session will be held at the NYSDEC headquarters (625 Broadway, Albany) within four weeks of receipt of the work assignment by the consultant. The consultant will FAX an outline/summary of the anticipated Scope of Work and a preliminary cost estimate to the NYSDEC project manager at least five days prior to the scoping session.

4.) The Task 1, Phase A deliverable will be a Draft SC Work Plan due four weeks after the scoping session. It will include:

a.) A statement of the overall Scope of Work for the SC.

b.) A brief summary of the known environmental concerns.

c.) A preliminary Sampling Plan for the SC. The sampling plan will include a Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP) that are based on site-specific conditions and prior activities for the site. The scope of the field sampling plan should be focused to define the character and extent of contamination. Any portions of the work to be decided in the field will be clearly identified. The Quality Assurance Project Plan will include the parameters to be analyzed and the corresponding analytical methods.

d.) Detailed Level of Effort (LOE) and budget for Task 1, Phase B: Preparation of the Final SC Work Plan.

e.) A preliminary estimate of the LOE and budget for conducting the remaining tasks in this work assignment.

f.) A preliminary estimate of the work assignment progress schedule, including milestones and deliverables.

g.) Project Staffing Plan, identifying key management and technical staff members to be assigned to the work assignment, with resumes and a list of their areas of responsibility.

h.) Identification of work items to be subcontracted, including a Minority/Women-owned Business Enterprise (M/WBE) Utilization Plan.

i.) A draft Citizen Participation (CP) Plan.

j.) A draft Health and Safety Plan (HASP). The HASP will contain a section

on community health and safety, including methods by which the public will be notified in case of an emergency and corresponding monitoring information.

Phase B: Final Site-Specific SC Work Plan

1.) Within two weeks of receipt of NYSDEC comments on the draft, the consultant will submit the Final SC Work Plan. The Final SC Work Plan and budget must be deemed acceptable so that field work can begin within 120 days of the issuance of the Work Assignment. The Final Work Plan will include the following:

a.) A final Field Sampling Plan.

b.) A site-specific final Quality Assurance Project Plan (QAPP).

c.) A detailed final Work Assignment level of effort and budget.

d.) A final Progress Schedule for all tasks.

e.) A final Citizen Participation Plan.

f.) Site-specific Health and Safety Plan.

The Work Plan will indicate the analytical laboratory to be used for sample analysis. The collection of samples is essential for this site. As a rule, the 2000 NYSDEC Analytical Services Protocol (ASP) must be followed unless the consultant is otherwise directed by the NYSDEC Project Manager. Cases may occur where non-ASP methods will be appropriate to achieve lower detection limits for evaluation of standards. For baseline leachate indicator analysis, the methods outlined in 6 NYCRR Part 360-2 regulations will be utilized.

All quality assurance protocols, both ASP and non-ASP, must be provided in the Quality Assurance Project Plan (QAPP) and approved by the NYSDEC. Deviations from the protocols in the QAPP may be approved in advance by the NYSDEC. Consequently, it is imperative that the consultant's Quality Assurance Officer maintain close contact with both the NYSDEC and the analytical laboratory to correct any analytical problems that may arise during analysis.

To meet the desired project schedule, it may also be necessary to have the analytical laboratory and/or data validator provide quick turnaround times.
Data validation is mandatory, and it must be independent of the laboratory that performed the analysis. A third party data validation is preferred.

2.) If necessary, a meeting between the consultant and appropriate NYSDEC staff will be

held to review comments and details of the Draft Work Plan. A reasonable time will be allowed for revision and submittal of the Final SC Work Plan.

3.) Once the work plan is ready for approval, the requirements as outlined in the approved Citizen Participation (CP) Plan will be implemented.

4.) Once the NYSDEC approves the SC Work Plan, a Notice to initiate field work will be issued to the consultant for the SC to be performed (Task 2).

Task 2 - Site Characterization

Field investigations will be conducted to determine the nature and extent of the contamination at the site and to determine the extent to which these contaminants pose a threat to human health or the environment. New York State Standards, Criteria, and Guidelines and remediation goals will be identified and compared with existing on-site conditions to form a basis for transition to a RI/FS. The consultant will do the following subtasks to achieve these objectives:

A) Literature Search - The consultant shall review all available information concerning past activities and investigations of the site. Such information should include, at a minimum, the Department files, New York State Department of Health (NYSDOH) files, published and unpublished reports on local geology and hydrogeology, climatological data, local soil surveys, aerial photographs, and past reports.

B) Base Map Development - The preliminary base map developed during Task 1 will be completed.

C) Field Support - A staging area will be identified of sufficient size for a decontamination area and drum and equipment storage. The exact location will be determined in the field during the site visit. A cellular phone will be on the site at all times for communications and health and safety purposes.

D) Well Survey - An inventory of off-site private water supply wells within a half-mile radius will be conducted. The inventory will include location, depth, pumping rates, and quality data associated with each well identified.

E) Water Level Survey - To aid in determining groundwater flow conditions, water levels in existing and new wells will be measured and other field tests and calculations performed as appropriate. Analytical methods will be used to interpret the elevation data and to estimate the hydraulic characteristics of the of the soil and site. Sufficient information will be generated to later evaluate the effectiveness and feasibility of groundwater collection and capping alternatives.

F) Soil Gas Survey / Monitoring - A soil gas survey will be performed around and within the

landfill footprint. The survey will be conducted in accordance with the 6 NYCRR Part 360-2 Regulations. Gas monitoring will also be conducted during all field activities. The survey and monitoring will include explosive gases and organic vapors.

G) Groundwater Sampling and Analysis - Groundwater samples will be collected from all existing monitoring wells and all new monitoring wells and borings to be installed. Waste mass borings will be performed to characterize the leachate and to determine if the waste mass is sitting in groundwater. Approximately 6 new monitoring well and/or boring locations will be selected to determine the extent of the contamination. An estimate of 6 monitoring wells is used for budgeting purposes. Samples will be submitted for full TCL/TAL metals/cyanide and Part 360 Baseline Leachate Indicator analysis. A minimum of two rounds of sampling and analysis will be conducted. Any water used during the drilling or installation of the monitoring wells will also be sampled and analyzed. Drilling spoils will be handled as required.

H) Surface Water / Leachate and Sediment Sampling /Analysis - Samples will be taken at approximately 12 locations on and around the site to ascertain possible impacts to these media. Locations include previously sampled points, identified seeps, new areas, and background. Surface water samples will be submitted for full TCL/ TAL and Baseline Leachate Indicator analysis. Sediment samples for full TCL/TAL. A minimum of two rounds of sampling and analysis will be conducted.

I) Soil Sampling and Analysis - A sampling grid of 25 locations will be developed for the site. Locations will include points within and outside the landfill footprint. Background locations will be established. Surficial soil samples will be collected from 0-6 inches utilizing an accepted technique. These same holes will also be advanced to the top of the fill if possible, to characterize and determine the depth of the existing cover material. Samples will be submitted for TCL semi-volatile, pesticide/PCB and TAL metals/cyanide analysis.

J) Data Validation/Usability Report - A party that is independent of the laboratory which performed the analysis will validate all sampling results. A usability analysis will be conducted by the consultant's Quality Assurance Officer and a Data Validation/Usability Report will be submitted to the NYSDEC.

K) Health and Environmental Exposure Assessment - The need for a detailed Health and Environmental Exposure Assessment (HEEA) for the off-site contamination will be evaluated based on the SC. The detailed HEEA will be performed, if required, when the site transitions to a RI/FS. The HEEA is to address the potential exposure routes for

contaminants and identify the potentially affected on-site and off-site receptors.

L) Fish and Wildlife Resources Impact Analysis - The need for a FWRIA should be evaluated in accordance with the applicable guidance. If required, the Part 1, Resource Characterization should be performed. The Part 2, Ecological Impact Assessment will be performed, if required, when the site transitions to a RI/FS.

M) Standards, Criteria, and Guidance (SCGs) - SCGs for each contaminant detected in each medium will be identified and compared to site conditions.

N) Draft SC Report - A Draft SC Report will be prepared in accordance with the "Draft DER-10 Technical Guidance for Site Investigation and Remediation", dated 12/2002 (or the most recent edition) and will be submitted to the NYSDEC for review.

O) Meeting/Final SC Report - After the draft SC report is reviewed by the NYSDEC and the NYSDOH, a meeting will be held to determine whether additional SC activities are required or whether there is a need to transition to a RI / FS.

P) Public Participation - At the completion of the SC, the requirements of the Citizen Participation (CP) Plan will be implemented. The consultant will assist the NYSDEC and the NYSDOH with the preparation and the presentation of the SC data to meet the requirements of the plan.

C. Estimated Work Assignment Budget:

The cost estimates provided below contain contingencies for surveying/base map preparation. Costs for sample analysis are based on analysis of groundwater, leachate, surface water, sediment, soil and drinking water and associated QA/QC samples for TCL/TAL and/or Leachate Indicators as required. Upon review of existing data, the list of analytes for all or part of these samples may be reduced.

Major Tasks	Description	LOE Estimate (Hours)	Cost Estimate
Task 1	Develop Detailed Work Plan	100	$ 7,500
Task 2	Site Characterization	600	$ 54,000
Subtotal:			**$ 61,500**

Anticipated Subcontracts:

1.	Sample Analysis	$ 65,000
2.	Data Validation	$ 2,500
3.	Surveying and Base Map Preparation	$ 10,000
4.	Drilling / Boring / Monitoring Well Installation	$ 42,000

Subtotal:	**$119,500**
Miscellaneous:	
1. Travel Expenses	$ 3,000
2. Materials Costs	$ 5,000
Subtotal:	**$ 8,000**
TOTAL	**$189,000**

D. Period of Performance:

The work assignment shall be completed in approximately 12 months of the Notice to Proceed. The final approved project schedule will be included in the work plan.

E. Work Plan Development Cost Authorization:

A total of $7,500 is authorized for development of the work plan. A breakdown of this and other estimated project costs is appended to this Work Assignment as Table 1.

F. Project Schedule with Designated Milestones:

A project schedule is appended to this Work Assignment as Table 2.

Table 1
Old Troy Municipal Incinerator
Site (4-42-001)
SC Work Assignment
Estimated Budget and Level of Effort (LOE)

Activity	Labor Hours	Labor Costs	Travel Costs	Material & Equipment Costs	Sub-Contractor Costs	TOTAL COSTS
Task 1: Work Plan	100	$7,500	$200	$500		$8,200
Task 2 : SC	600	$54,000	$2800	$4500	$65,000 Analytical	$126,300
					$2,500 Data Validation	$2,500
					$42,000 Drill/Bore/MWs	$42,000
					$10,000 Survey	$10,000
TOTALS	700	**$61,500**	**$3,000**	**$5,000**	**$119,500**	**$189,000**

Table 2
Old Troy Municipal Incinerator
Site (4-42-001)
SC Work Assignment
Preliminary Project Schedule With Milestones

Issuance of a Work Assignment	03/15/05	
Acknowledge Receipt of WA	03/25/05	10 days after WA issuance
Site Visit	03/30/05	Approx. 2 weeks after WA issuance
Scoping Session	04/15/05	Approx. 30 days after WA issuance
Submit Draft SC Work Plan*	05/06/05	3 weeks after scoping session
NYSDEC Comments on Draft SC Work Plan	06/03/05	Approx. 4 weeks after receipt
Submit Final SC Work Plan	06/17/05	2 weeks after NYSDEC comments
Work Plan CP Requirements	06/30/05	Prior to Notice to Proceed
Issue Notice to Proceed (NTP)*	07/15/05	1 month after final SC WP submittal
Submit Draft Site Characterization Report*	12/31/05	Approx. 6 months after NTP
NYSDEC Comments on SC Report	01/30/06	Approx. 4 weeks after receipt of draft SC report
Submit Final SC Report*	02/13/06	2 weeks after NYSDEC comments
Approval of SC Report	02/20/06	1 week after receipt
SC Report CP Requirements	03/20/06	4 weeks after SC report approval

* - Project Milestone WA - Work Assignment NTP - Notice To Proceed

Attachment 3
Previous Analytical Data