CON 12-15
Doc # 6806

Fax. 515.252.0206

A Member of The IT Group

April 12, 1999

COPY

Mr. Lambert Nnadi
Iowa Department of Natural Resources
Wallace State Office Building
Des Moines, Iowa 50319

Re: Work Plan for the Performance of a Limited Site Investigation, Herschel-Adams Indianola, Iowa Site

Dear Mr. Nnadi,

On behalf of the Alamo Group, IT Corporation submits this work plan for your review and submittal of comments. This work plan has been compiled in response to your letter dated December 9, 1998, requesting the performance of additional investigation activities at the Herschel-Adams facility located at 1301 North 14th Street in Indianola, Iowa. This work plan has been submitted to allow for your review and comment before the performance of field investigation activities.

1.0 Background

IT Corporation conducted a limited site investigation at the Herschel-Adams facility in August of 1998 related to a former chrome plating operation. The chrome plating area was operated from 1974 to 1981 within a free standing wood framed building north of the warehouse area, west of the factory. The initial investigation was related to the possible discharge of water from the chrome plating rinse waters through a pipe leading to a surface discharge point north of the wood frame building.

A summary of the investigation was submitted to the Iowa Department of Natural Resources (IDNR) in a report dated August 10, 1998. The investigation included the collection of 10 soil samples and 2 groundwater samples for laboratory analysis. The results of the investigation indicated the presence of one soil sample with total chromium at a concentration of 2,290 ppm, and one groundwater sample at 146 ppb total chromium and 115 ppb hexavalent chromium. In addition to the site investigation, a sensitive receptor survey report was compiled for the site and submitted to the IDNR on August 24, 1998.

2.0 Work Scope

The work scope for the limited site investigation has been defined based on the letter received by Alamo Group from the IDNR dated December 9, 1998. The work scope proposed by this work

Exhibit C-1

6806

plan includes the following;

- Compilation of a detailed site history, including past and current use of the former wood frame, chrome plating building;
- Installation of three temporary groundwater monitoring wells. The wells will be used in the collection of groundwater samples and will allow for the measurement of depth to water to determine a relative groundwater flow direction;
- Collection of soil samples at the surface (0 to 5 feet depth) to document the total chromium concentrations in soils;
- Collection of soil samples at the groundwater interface for geotechnical analysis to estimate hydraulic conductivity of the water bearing media.

The sections that follow detail the sample collection, field screening, and laboratory analytical methods.

2.1 Health and Safety Plan Compilation

A site specific health and safety plan (HASP) was developed as part of the initial investigation at the site to comply with OSHA 29 CFR 1910.120 requirements. The HASP will be updated to include information relevant to the current scope of work. The HASP includes information on site specific conditions, the expected work scope, job safety analysis compiled for common work activities, material safety data sheets, and an emergency plan. All IT Corporation personnel and subcontractors will review and conduct work activities in accordance with the requirements of the HASP.

2.2 Soil Sample Collection

Soil samples will be collected using a hollow stem drilling rig. Samples will be collected using a continuous split-barrel sampler from each 5 foot interval. A total of 3 soil boring locations will be drilled on site, with each soil boring completed as a temporary monitoring well. **Figure 1** presents the site layout and the proposed locations of the site monitoring wells. Each soil boring will be drilled to a total depth of 15 feet below grade. Soil samples (one from each boring location) will be collected for laboratory analysis from the uppermost interval. The soil samples will be collected for laboratory analysis for total and hexavalent chrome.

In addition, soil samples will be collected for geotechnical analysis from soils at the groundwater interface. The soil samples will be analyzed to determine the hydraulic conductivity of the soil sample. The sample analysis will be used to determine if the groundwater present at the project site would be defined in the State of Iowa as a protected groundwater source (PGS) (water bearing media exhibiting a hydraulic conductivity greater than 0.44 meters per day).

Each drilling location will be logged by a IT Corporation geologist. Logs of the stratigraphy encountered during the investigation will be included in the report of the investigation results.

2.2.1 Soil Cuttings

The soil cuttings generated from the drilling activities will be containerized in 55 gallon steel 17-H DOT approved drums. The soil drums will be labeled and placed in a location designated by Alamo Group for future characterization and disposal by Alamo Group. The results of the soil analytical sampling will be used in the characterization of the waste materials.

2.3 Monitoring Well Construction

Each of the three soil boring locations will be completed as a temporary monitoring well. The monitoring wells will be constructed using 2-inch diameter schedule 40 PVC riser and screen. All wells are to be completed above grade, constructed using 10 feet of 0.010-inch slotted PVC well screen, and 8 feet of riser (allowing for 3 feet of the riser for above grade completion). Each well will be provided with a locking cap for security.

2.4 Groundwater Sample Collection

Following installation of the groundwater monitoring wells, each well will be developed to remove fine sediments associated with the drilling activities. Groundwater sampling will be performed a minimum of 24 hours after well installation. Groundwater samples will be collected following removal of approximately three static well volumes of water from each well. The groundwater samples will be collected using disposable bailers to eliminate the potential for cross contamination between sampled wells. The groundwater samples will be collected in laboratory approved containers, labeled, and submitted for laboratory analysis.

All non-disposable purging apparatus will be thoroughly field decontaminated between wells using an alconox solution and rinsing with distilled water. The water generated from the site sampling and decontamination will be containerized in 55-gallon steel ring top drums, labeled, and placed in a location designated by Alamo Group for disposal by Alamo Group.

2.5 Laboratory Analysis

The contaminants of concern related to the water discharge is total chromium and hexavalent chromium. A total of three soil samples will be submitted for laboratory analysis by EPA Method 6010 (ICP) for total chromium, and EPA Method SM-3500 (colorimetric) for hexavalent chromium. In addition, three groundwater samples will be submitted for laboratory analysis by the same methods.

2.6 Hydrogeological Data Collection

An elevation survey referencing the top of casing elevations of all temporary monitoring wells will be performed. Static liquid levels in wells will be measured with an electronic interface probe,

providing for the documentation of the depth to and slope of the groundwater surface in the vicinity of the wells.

2.7 Report

Following the completion of the limited site investigation field activities and receipt of the laboratory analytical reports, a brief summary report will be compiled. The report will contain a description of the activities performed, soil profile and well construction logs, analytical results, and a site plan detailing drilling locations relative to site features. The site maps will be compiled on a scaled base map. The laboratory data will be compiled and compared to state wide standards established under the Iowa Land Recycling and Environmental Remediation Standards Act (Iowa Administrative Code Chapter 137).

The report will include a conclusions and recommendations section to address proposed future action at the site.

3.0 Schedule

Following the approval by IDNR of this or a revised work plan the field work will be initiated. The proposed schedule is summarized as follows;

- Installation of site monitoring wells to include collection of soil and groundwater samples (within 45 days of IDNR approval); and
- Compilation of the summary report for submittal to the IDNR within 75 days of work plan approval.

If you should have any questions or if I can provide any additional information, please give me a call at 515-252-0234.

Sincerely,
IT CORPORATION

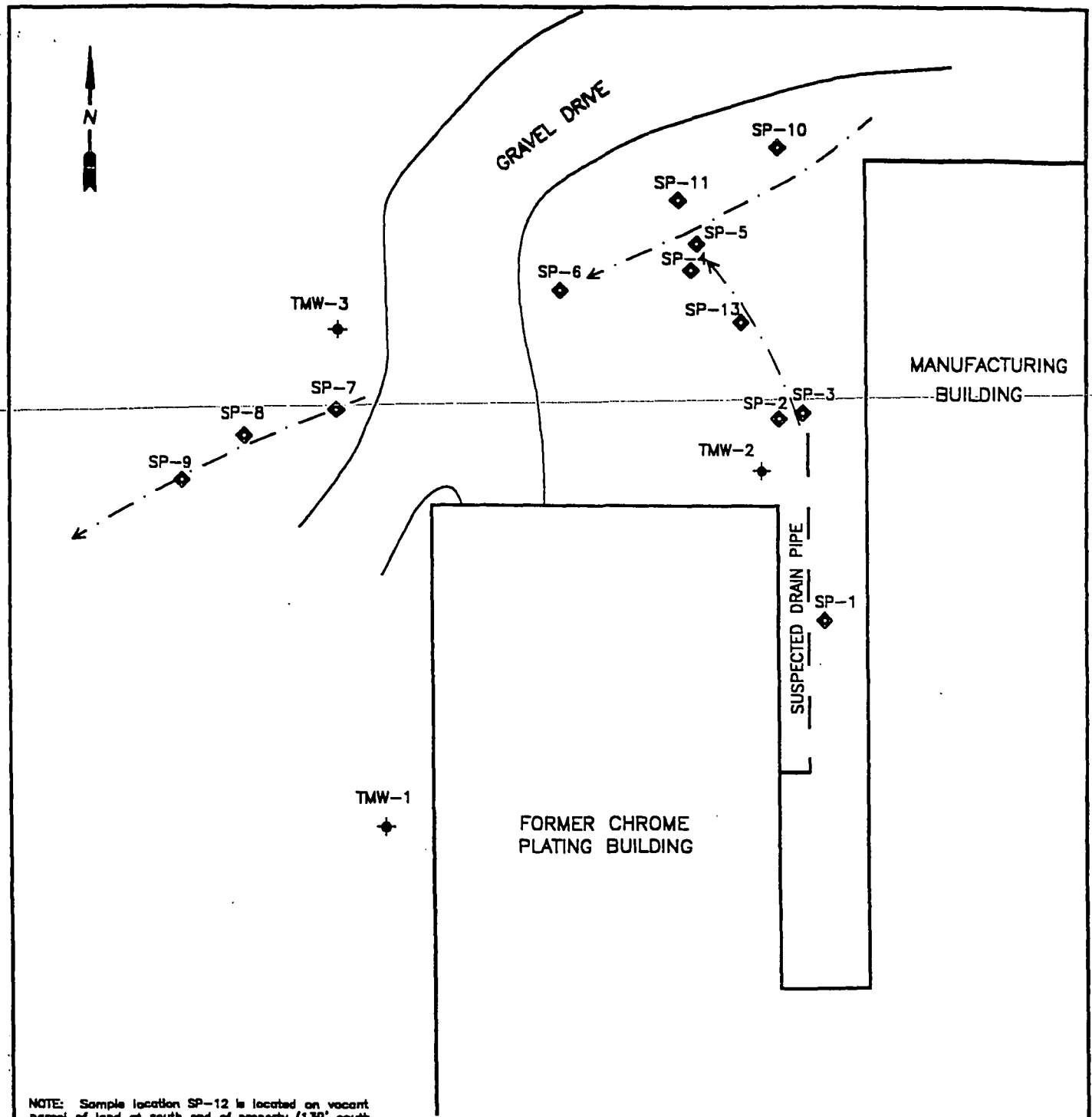
Mark Seaman
Senior Project Manager

QA/QC Review

David Wonder
Project Hydrogeologist

cc: Robert H. George (Alamo Group)

S:\PROJECTS\ALAMOG~1\WORKPLAN.WPD



NOTE: Sample location SP-12 is located on vacant parcel of land at south end of property (130' south of gravel drive to shipping & receiving and 128' west of west edge of N. 14th Street).

LEGEND

- ◆ = GEOPROBE SAMPLING POINT (1998)
- ✦ = TEMPORARY MONITORING WELL (Proposed)
- ← · — · — = SURFACE DRAINAGE DIRECTION
- —— UE —— UNDERGROUND ELECTRIC LINE

0 FEET 40

SCALE

IT Corporation
A Member of The IT Group
2733 86TH STREET
URBANDALE, IA 50322
(515) 252-0234

REV. NO.:	DRAWING DATE:	ACAD FILE: BASEMAP

PROPOSED DRILLING LOCATIONS

CLIENT: THE ALAMO GROUP			PM:
LOCATION: HERSCHEL-ADAMS FACILITY INDIANOLA, IOWA			PE/RG:
SUBMITTED:	DETAILED: DW	PROJECT NO.: 778574	FIGURE: 1