PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT
INUVIK (MIKE ZUBKO) AIRPORT
INUVIK, NORTHWEST TERRITORIES

Prepared for:

TRANSPORT CANADA
Environmental Affairs, Prairie and Northern Region
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CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES

Franz Project No. 1256-0601
February 2007

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Executive Summary

Franz Environmental Inc. (FRANZ) was retained by Public Works and Government Services Canada (PWGSC) on behalf of Transport Canada (TC) to conduct a Phase II and III Environmental Site Assessment (ESA) at the Inuvik (Mike Zubko) Airport (Inuvik Airport), Inuvik, Northwest Territories.

The Inuvik airport was originally constructed in 1956-1958 using the method of crushed rock fill placed on top of permafrost. Since 1959 the apron has been expanded and taxiways and roads have been built to the aviation development area. Numerous Areas of Potential Environmental Concern (APECs) have been identified to date at Inuvik Airport. The extent of soil and groundwater impacts at APECs listed in the Request for Proposal (RFP) for this project has not been assessed and were to be the subject of the present investigation. Modifications to the work plan were developed with the approval of TC, based on information obtained during the site reconnaissance and field observations as the work progressed.

The investigation was conducted in September 2006 and involved the excavation of 64 test pits and the drilling of four boreholes completed as monitoring wells at five APECs, including two APECs added to the work plan based on field observations. Soil contamination was encountered in a number of areas at four of the APECs. Limited groundwater was encountered at all APECs investigated and consequently, no groundwater samples could be collected from the newly installed or pre-existing monitoring wells. Water samples were collected from one test pit and one vertical culvert encountered on site. No contaminated groundwater was identified.

The findings and recommendations have been summarized in the following table.

SUMMARY OF CONCLUSIONS RECOMMENDATIONS

APEC No.	Name	Area of Environmental Concern (AEC) ? Yes/No	Contaminants of Concern (COCs) in Soil	Estimated Volume of Contaminated Soil (m^3)	Contaminants of Concern (COCs) in Groundwater	NCS Score and Recommendations for Further Work
1	Former Maintenance Garage	Yes	F2, F3, F4	1050 to 1900	None identified (no groundwater)	• Further test pitting to delineate contamination in some areas and determine accurate soil volumes for remedial option evaluation. • Sampling of groundwater, if any present, in monitoring well.
2	Former Fire Fighting Training Area (FFTA)	Yes	Toluene, xylenes, F1, F2, F3, F4	1730 to 3920	None identified (no groundwater)	• FCSAP NCS Score: 60.3 – Class 2 – Action Likely Required • Further test pitting to delineate extents of contamination and determine accurate volumes for remedial option evaluation. • Sampling of groundwater, if any present, in monitoring wells.
3	Former Construction Camp Site	No	None identified (no sampling conducted)	0	None identified (no sampling conducted)	• No further work recommended.
4	Cleared Area, West Edge of Main Quarry	No	APEC location could not be identified	Not applicable	APEC location could not be identified	• No further work recommended.
5	Distance Measuring Equipment (DME) Building	No	Reported contamination could not be identified at either DME Building	0	APEC location could not be identified	• No further work recommended.
6	Main Quarry Landfill	No	APEC location could not be identified	Not applicable	APEC location could not be identified	• No further work recommended.
7	Main Quarry Asphalt Plant Site	No	APEC location could not be identified	Not applicable	APEC location could not be identified	• No further work recommended.

APEC No.	Name	Area of Environmental Concern (AEC) ? Yes/No	Contaminants of Concern (COCs) in Soil	Estimated Volume of Contaminated Soil (m^3)	Contaminants of Concern (COCs) in Groundwater	NCS Score and Recommendations for Further Work
8	Shell Lake, Lots 11-11 and 11-12	Yes	F1, F2, F3, F4, arsenic, lead, zinc	260	None identified; however hydrocarbon sheen observed and cadmium data is inconclusive.	• FCSAP NCS Score: 83.8 – Class 1 – Action Required • Further test pitting to delineate extents of contamination and determine accurate volumes for remedial option evaluation. • Removal of surface debris to allow further investigation for surficial staining. • Removal of the debris, including remains of burned house, to prevent the material from entering the Lake. • Sampling of groundwater, if any present in monitoring well. • Obtain groundwater sample from southeast corner of concrete pad to determine cadmium concentration.
9	Landfill Northwest of Main Quarry	No	None identified	0 (landfill volume: 500)	None identified (no groundwater)	• FCSAP NCS Score: 53.2 – Class 2 – Action Likely Required • An engineering review covering physical hazards, fencing, signage, capping, long-term monitoring, or risk assessment should be considered.
10	Landfill South of Land Treatment Units (LTUs)	Yes	Arsenic, lead, zinc	Not determined (landfill volume: 500 to 1000)	None identified (no groundwater)	• FCSAP NCS Score: 53.2 – Class 2 – Action Likely Required • Further investigation to assess metals contamination in native soils at foot of landfill. • Geotechnical investigation to assess possible tension cracks and determine stability of landfill face. • An engineering review covering physical hazards, fencing, signage, capping, long-term monitoring, or risk assessment should be considered.

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1.0 INTRODUCTION

Franz Environmental Inc. (FRANZ) was retained by Public Works and Government Services Canada (PWGSC) on behalf of Transport Canada (TC) to conduct a Phase II and III Environmental Site Assessment (ESA) at the Inuvik (Mike Zubko) Airport (Inuvik Airport), Inuvik, Northwest Territories. Under a 1995 Airport Transfer Agreement between Transport Canada (TC) and the Government of Northwest Territories (GNWT), TC is required to correct environmental regulatory deficiencies at the subject property. The Statement of Work for this ESA was presented in Public Works and Government Services Canada (PWGSC) Request for Proposal (RFP) / Solicitation E0213-06N003/A and this project was awarded to FRANZ under contract number E0213-06N003/001/PWZ. Modifications to the work plan were developed with the approval of Mr. Darryl Pederson, Transport Canada's project manager, based on information obtained during the site reconnaissance and field observations as the work progressed.

1.1 Background

The Inuvik Airport was originally constructed in 1956-1958 using the method of crushed rock fill placed on top of permafrost. Since 1959, the apron has been expanded and taxiways and roads have been built to the aviation development area. In the 1990s, the airport was transferred to GNWT and TC has been investigating and remediating Areas of Potential Environmental Concern (APECs) identified at the airport as part of the transfer process. Numerous APECs have been previously identified at Inuvik Airport and investigation and/or remediation has been completed at the majority of the APECs. The extent of soil and groundwater impacts at eight (8) APECs identified in the RFP had not been assessed and were the examined in the present phase of work.

1.2 Site Description

Inuvik is the largest community north of the Arctic Circle and is located 201 km north of the Arctic Circle, 97 km from the Beaufort Sea. Inuvik Airport serves as a regional hubbing point for delivery of services to smaller northwestern communities such as Tuktoyaktuk, Aklavik, Paulatuk, Fort McPherson, Arctic Red River, and Sachs Harbour. The location of Inuvik and the local setting of Inuvik Airport are shown in Figure 1-1. The airport terminal is located approximately 9 km southeast of Inuvik along the south side of the Dempster Highway. The airport includes an east-west oriented runway approximately 1950 m in length, with the aviation development area and airport facilities primarily located along the north side of the runway. The floatplane base is located on the north shore of Shell Lake (also known as Long Lake), approximately 4 km southeast of Inuvik and 5 km west of the airport terminal. Dolomite Lake (also known as Airport Lake) forms part of the southern boundary of the airport property and is located approximately 1000 m south of the terminal.

1.3 Objectives

The objectives of the investigation in this study, as identified in the RFP, are:

- Reduce uncertainty and indicate current potential liabilities;
- Complete assessments on all listed APECs for the site airport;
- With the information available determine the source, nature and extent (vertical and horizontal) of contamination or contamination plumes where further physical on site investigative work is required;
- Provide an estimate on the nature and extent of contaminants affecting the soil and groundwater at the site; and
- Provide a CCME site score for each APEC, where possible (except maintenance garage).

1.4 Previous Environmental Investigations

A series of environmental investigations have been completed at the site. In chronological order, they are:

- *Inuvik Airport Environmental Baseline Study – 1994*, M.M.Dillon Limited Consulting Engineers, Planners and Environmental Scientists, 94-2185, Volume I and II, February 1995;
- *Remedial Action Plan Follow-up, Inuvik Airport, Northwest Territories,* Public Works and Government Services Canada, March 1999; and,
- *Environmental Site Investigation, Inuvik Airport Maintenance Garage, Inuvik Airport, Inuvik, Northwest Territories*, Environmental Management Technologies (EMT), File No: E1001-007-04, January 2005.

1.5 Areas of Potential Environmental Concern

The RFP identified eight (8) known APECs at Inuvik Airport that required further investigation, as follows:

- Former maintenance garage location
- Former firefighting training area (FFTA)
- Former construction camp site
- Cleared area at west edge of main quarry
- Distance measuring equipment building (DME)
- Main quarry landfill
- Main quarry asphalt plant
- Shell Lake

Only two sites had any significant background information available: the FFTA and the former maintenance garage. None of the other sites had been investigated or studied in detail in the past.

The FFTA had identified contamination at the southeast corner, downgradient, of the mock-up location. Contamination exceeded both the Government of the Northwest Territories (GNWT) Site Remediation Guidelines (1998) and the Canadian Council of Ministers of the Environment (CCME) Canada Wide Standards (CWS) Soil Quality Guidelines (1997). The soil active layer at the FFTA was estimated to be between 2.4 to 3.7 metres. Continuous permafrost was encountered below this depth. Groundwater sampling had not been possible on the last two sampling attempts due to restricted flow.

For the old maintenance garage location, permafrost depth was thought to occur at approximately 2 metres. The footprint of the building was approximately 32 m x 24 m. A crawlspace existed between the slab floor and ground level. Sampling conducted in 2005 was to 0.3 metres depth in the crawlspace and around the AST sites. Exceedances were identified in the F2 to F4 fractions of the Canada Wide Standards (CWS).

Two additional APECs were identified by FRANZ during site reconnaissance/site walkthrough conducted in September 2006 in advance of the Phase II and III ESA with Mr. Darryl Pederson, Transport Canada's project manager. Two landfill areas were identified; one is located west of the main quarry and the second is located south of the Land Treatment Units (LTUs) and former FFTA.

A detailed list of the APECs assessed during this project, the potential contaminants of concern (PCOCs), and the associated analytical parameters are presented in Table A. Figure 1-2 presents the location of each APEC on the airport property. The APEC numbers were assigned by FRANZ for ease of reference.

TABLE A: Summary of APECs Investigated

APEC No.	Areas of Potential Environmental Concern	Potential Contaminants of Concern	Regulated Parameters
1	Former Maintenance Garage Location	Hydrocarbons, solvents, and waste oil. F2 to F4 contamination in soil has been previously identified.	F1-F4, BTEX, PAHs, VOC, metals
2	Former Fire Fighting Training Area (FFTA)	Hydrocarbons, F2 to F4 range contamination in soil has been previously identified.	F1-F4, BTEX, lead, PAHs, metals

APEC No.	Areas of Potential Environmental Concern	Potential Contaminants of Concern	Regulated Parameters
3	Former Construction Camp Site	Hydrocarbons from fuel historically used at site; other activities.	F1-F4, BTEX, PAHs, metals, PCBs
4	Cleared Area, West Edge of Main Quarry	Possible presence of buried prime oil drums; other buried wastes.	F1-F4, BTEX, PAHs, metals, PCBs
5	Distance Measuring Equipment (DME) Building	Surface soil staining (former emergency generator).	F1-F4, BTEX, lead, PAHs, metals
6	Main Quarry Landfill	Landfill operation 1962-1967. Possible presence of asbestos and other hazardous building materials.	F1-F4, BTEX, PAHs, VOCs, PCBs, total metals, leachable metals
7	Main Quarry Asphalt Plant Site	Former asphalt plant operations and related contaminants.	F1-F4, BTEX, lead, PAHs, metals
8	Shell Lake, Lots 11-11 and 11-12	Surficial debris is present. Hydrocarbons from fuel and vehicle maintenance.	F1-F4, BTEX, PAHs, metals, PCBs
9	Landfill Northwest of Main Quarry	Partially buried debris and vehicle observed at surface.	F1-F4, BTEX, PAHs, VOCs, PCBs, total metals, leachable metals
10	Landfill South of Land Treatment Unit (LTU)	Partially buried drums observed at surface	F1-F4, BTEX, PAHs, VOCs, PCBs, total metals, leachable metals

2.0 REGULATORY CONTEXT

Contaminated site remediation in the NWT is regulated by the GNWT's Environmental Guideline for Contaminated Site Remediation (EGCSR). The GNWT has adopted the CCME CWS for gross petroleum hydrocarbons in soil as remediation criteria (Appendix 3 of EGCSR). These criteria apply to a variety of generalised land uses, and vary with the depth of the soil being investigated and the grain size of that soil, as well as specific environmental and human receptors and pathways.

The GNWT has also adopted the CCME Canadian Environmental Quality Guidelines (CEQGs) for soil and these remediation criteria are included as Appendix 5 of the EGCSR. These soil criteria are for specific petroleum hydrocarbon compounds and a variety of other parameters have been established for broad land use categories.

Land use at airports is not specifically designated in the EGCSR; however, airports are generally considered as commercial land use as they are neither manufacturing or storage facilities (industrial land use) nor dwellings or institutions (residential land use). Some areas of the airport property may be used for industrial purposes; however, the commercial and industrial land use criteria in the EGCSR are identical in most cases, with the commercial land use criteria being more stringent when they differ. Consequently, the standards and guidelines for commercial land use, as discussed above, will be used herein for numerical comparison to the laboratory analytical results.

The EGCSR does not include groundwater or surface water criteria. However, CCME CEQGs are available for drinking water, surface water, and sediments and may be applied as assessment and remediation criteria. There are no CCME CEQGs specifically for groundwater discharging to aquatic environments and therefore, a ten times dilution factor on discharge of groundwater to surface water will be applied in comparing groundwater analytical data to the surface water CEQGs. This approach is in general agreement with that taken by British Columbia, Yukon, and Ontario, where numerical values (standards) for groundwater are directly available and have been established by multiplying the surface water numerical values by a factor of 10 in order to account for attenuation and dilution occurring within the groundwater system itself, and at the discharge point of groundwater to a surface water body.

The GNWT remediation criteria and CCME CEQGs are presented for comparison alongside the laboratory analytical results in Tables 1 through 6 (soil) and Tables 7 through 9 (groundwater) following the text.

3.0 FIELD METHODOLOGY

The Environmental Site Assessment was carried out at the Inuvik Airport in September of 2006. The field program consisted of site reconnaissance followed by excavating test-pits, advancing boreholes, and installing groundwater monitoring wells in boreholes. FRANZ personnel were responsible for the collection of soil and groundwater samples, water level measurements, monitoring wells installation and taking field observations. A photographic log of site features at each APEC and field program activities are presented as Appendix A. The field investigation procedures are described in the following sub-sections.

3.1 Utility Clearances

After the information review and prior to commencing the excavation, drilling, and well installation work, FRANZ personnel conducted a field reconnaissance visit. The purpose of this visit was to identify the location of underground and overhead utilities, obtain a first-hand impression of the physical site conditions and site access, confirm potential areas for site instrumentation (e.g. test pits, boreholes and monitoring wells), inspect for any signs of contamination (e.g. staining, stressed vegetation, etc.), and identify drainage patterns, etc.

Particular attention was placed on the location of buried services and piping. Buried services can act as preferential pathways for contaminant transport, especially in areas where the water table intercepts the utility and fill materials within the utility alignment. The fill materials are more permeable than surrounding native soils. Test pits and boreholes must also be placed to avoid damaging these underground services. Utility locates were performed using maps provided by GNWT personnel, knowledge of Inuvik airport personnel and contractors, surface observations, and geophysical sensing conducted by Western Leakage Services Ltd. of Coquitlam, BC.

3.2 Health and Safety Plan

Before commencing site activities, a site-specific health and safety plan (HASP) was developed by FRANZ. The HASP identified and provided mitigative action for potential physical and chemical hazards associated with the work. The HASP also listed emergency contact numbers and provided protocols to follow in the event of an emergency.

Daily health and safety tailgate meetings were conducted to educate on-site personnel on the apparent risks and appropriate mitigative actions as well as address any health and safety concerns of on-site staff. The site-specific health and safety plan has been retained on file at FRANZ.

3.3 Test-Pitting Program

The test-pitting program was carried out on September 14 to 22, 2006 using a rubber-tire backhoe provided by Northwind Industries Ltd. of Inuvik, Northwest Territories. The test pitting was conducted to investigate the shallow subsurface soil at APECs 1, 2, 8, 9 and 10. A total of 64 test pits were excavated. Soil stratigraphy was observed and classified prior to collecting representative soil samples. Buried anthropogenic materials were inspected and described. Locations of the test pits are shown on the individual site plans for the various APECs. Soil and subsurface descriptions were compiled in test pits logs and are presented in Appendix B.

3.4 Drilling and Monitoring Well Installation

The drilling at the various APECs at the airport was carried out on September 21 and 22, 2006 by Northwind Industries Ltd. using a solid-stem auger mounted on a loader. The boreholes were drilled to a maximum depth of 3.2 m below grade. Monitoring wells were installed by FRANZ staff in three of the four boreholes drilled. One borehole did not stay open and a monitoring well was installed in a test pit excavated at the same location as the collapsed borehole.

The monitoring wells were constructed using 55 mm (ID) Schedule 40, flush-threaded PVC pipe and screen with threaded and/or friction fit bottom caps. Well screens are constructed of either a 1.52 or 1.37 m length of 0.020 inch slotted PVC pipe. The screened portion was set in a clean sand pack to approximately 0.3 m above the screened portion. A 0.15 m thick bentonite seal comprised of granular bentonite chips was placed above the sand pack, and the remainder of the annular space was filled to ground surface with clean native material or cuttings. No external water was introduced into the ground while completing the monitoring wells. The monitoring wells were completed with flush-grade, locking, steel water-tight protectors that were cemented at surface.

The sand pack utilized for monitoring well construction was locally available and consisted of imported, uniform coarse sand that is being used by the airport for winter runway operations. A sample of this sand was analysed for total and leachable metals prior to use in the monitoring well installations and found to be acceptable. Concentrations of metals in the sand were less than the CEQG and leachable metals were not detectable or present at concentrations slightly above the laboratory method detection limits.

Locations of the boreholes and monitoring wells are shown on the individual site plans for the various APECs. Soil information and monitoring well completion details are compiled on borehole logs presented in Appendix B.

3.5 Soil Sampling

Soil samples were collected from each test pit directly from the sidewalls of the excavation for shallow samples (less than 1.0 m deep) and directly form the backhoe bucket for deeper samples. Representative soil samples were collected from each soil horizon identified in a test pit and placed into 120 mL laboratory-supplied glass jars. The soil sample jars were immediately placed in a cooler with ice and were delivered to Maxxam Analytics Inc. (Maxxam), the project laboratory, in Edmonton, AB. Each sample was labelled according to its location as follows: APEC#-TP06-TP#-Sample#. For example, the second sample taken from test pit 5 at APEC 1 in 2006 would be labelled 01-TP06-05-02.

Field screening of all collected soil samples was conducted by measuring soil vapour levels in the headspace of bagged soil samples, collected as duplicates of the jarred soil samples. Field screening was conducted using a consistent procedure as follows: a standard volume of soil was placed in ziploc® polyethylene bags; the bagged samples were allowed to equilibrate to ambient air temperatures for a consistent period of time. Some cold days, the bagged samples were warm up in the car for a time to equilibrate. After equilibration, a combustible gas indicator (CGI) probe was inserted into the ziploc® bags and the maximum concentrations of combustible vapours were recorded.

Field screening was also conducted by visual and olfactory observations. Soil odour, appearance, and colour were used to screen impacted soil from non-impacted soil. In some cases, soil that exhibited a strong petroleum hydrocarbon odour was also markedly discoloured or stained.

3.6 Groundwater Sampling

Prior to groundwater sampling, a round of groundwater level monitoring in new and old wells was conducted using a Solinst oil-water interface probe. Water levels, bottom of well, and presence or absence of liquid petroleum hydrocarbon (LPH) were measured with reference to the top of the well casing. A total of twelve wells in APECs 1, 2, 8, and at the LTU were monitored. In all cases, the wells were found to be dry or contained less than 15 cm of water, precluding any groundwater sampling efforts.

During the site reconnaissance, a vertical culvert was found between two buildings at the west side of APEC 1 next to an aboveground storage tank (AST) that appeared to contain heating oil. The culvert was approximately 1 m in diameter and contained standing water at approximately 2 m depth. As the purpose of the culvert and nature of the standing water was unknown, and due to the proximity of the heating oil AST, a sample of the water was collected for analysis. No purging or developing of the culvert was conducted prior to collecting a sample of the standing water. Water sampling was conducted using a peristaltic pump and dedicated 6 mm interior

diameter (ID) HDPE tubing. Water samples were collected in laboratory-supplied bottles and were stored in coolers with ice until delivered to Maxxam.

3.7 Surveying

Following the completion of the field investigation, Sub-Arctic Surveys Ltd. of Yellowknife, NWT surveyed the monitoring wells for horizontal positions and top of casing and grade elevations, and the test pits for horizontal position and grade elevation. The survey results have been incorporated into the logs, figures, and tables provided in this report. All monitoring well and test pit locations were surveyed using the NAD 83 datum.

3.8 Laboratory Analytical Program

Soil samples were selected for analysis based on visual and olfactory indications of impacts, stratigraphic and geological observations, and to provide information about vertical and areal distribution of PCOCs. Groundwater/water and selected representative soil samples were sent to the project laboratory for chemical analysis for various target compounds previously identified. A copy of the chain-of-custody form used for the sample submission is provided with the laboratory's certificates of analysis in Appendix C. Analysis for the following chemical parameters were performed on various samples.

Soil:

- A suite of metals (total and leachable);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Petroleum Hydrocarbon (PHC) fractions: F1 $_{(C6-C10)}$, F2 $_{(C10-16)}$, F3 $_{(C16-34)}$ and F4 $_{(C34-50)}$;
- A suite of volatile organic compounds (VOCs);
- A suite of polycyclic aromatic hydrocarbons (PAHs);
- Polychlorinated biphenyls (PCBs);

Water

- A suite of dissolved metals;
- Benzene, toluene, ethylbenzene, and xylenes (BTEX);
- F1 $_{(C6-C10)}$, F2 $_{(C10-16)}$, F3 $_{(C16-34)}$ and F4 $_{(C34-50)}$;
- A suite of volatile organic compounds (VOCs); and,
- A suite of polycyclic aromatic hydrocarbons (PAHs).

Two water samples were collected during this investigation and required non-standard sampling procedures. A groundwater sample collected from seepage water that accumulated in a test pit was collected directly into sampling bottles from pooled water within the test pit. Normal development and purging procedures could not be applied in this situation. A water sample was collected from a large-diameter vertical culvert using a peristaltic pump. The standing water

within the culvert was sampled without any prior development or pumping as it was not clear if the water represented groundwater or if any recharge could be expected. Volatile compounds may be lost in standing water or test pit seepage water; however, semi and non-volatile parameters would be unaffected. Water samples were not filtered, with the exception of samples for dissolved metals analysis.

The laboratory analytical program was based on the historical information provided, the requirements of the GNWT EGCSR and CCME Guidelines, as well as our professional experience.

All samples were shipped to Maxxam Analytics Inc. (Maxxam) in Edmonton, AB, and analysed in Maxxam's laboratories.

The laboratory analytical results for all soil and groundwater samples collected by FRANZ in 2006 at Inuvik Airport as part of this investigation are presented in Tables 1 through 6 (soil) and Tables 7 through 9 (groundwater) following the text.

3.9 Quality Assurance and Quality Control

FRANZ has a Quality Assurance/Quality Control (QA/QC) protocol, including appropriate techniques for soil sampling, groundwater sampling, sample storage, shipping and handling as well as collection of duplicates, field blanks and equipment blanks.

To minimize possible cross-contamination, disposable nitrile rubber gloves, replaced after each sample, were worn while collecting samples. The soil and groundwater samples were collected into the appropriate labelled glass jars or plastic bottles, which were supplied by the laboratory. The samples were placed into laboratory-supplied insulated coolers and kept cool with ice during transport to Maxxam.

Maxxam is a Canadian Association for Environmental Analytical Laboratories (CAEAL) certified laboratory with an internal QA/QC protocol. The laboratory QA/QC documentation is provided with the analytical report and it was reviewed by FRANZ as part of the QA/QC protocol.

Duplicate samples were also collected and analyzed to identify sample variability as well as to monitor sampling and laboratory analytical precision and accuracy. Analytical precision is evaluated by performing duplicate analyses on a single sample, whereby, the sampling precision is evaluated by collecting and analyzing field duplicate samples. Precision is evaluated by calculating the relative percent difference (RPD) for a sample and duplicate pair according to the following equation:

$$RPD = \{(X_1-X_2)/[(X_1+X_2)/2]\} *100$$

where: X_1 = concentration for sample 1 of duplicate pair, and

X_2 = concentration for sample 2 of duplicate pair.

RPD values were calculated for duplicate analyses are presented with the analytical data in the tables following the text. RPDs are not calculated where one or both of the duplicate results are less than five times the laboratory's method detection limit (MDL) as results at these low concentrations are generally quite variable.

3.9.1 Results of QA/QC Samples

Selected soil samples were collected in duplicate and submitted for blind duplicate analysis for PHC F1-F4, BTEX, PAHs, and total metals. RPD values for the petroleum hydrocarbon parameters were quite variable, ranging from 0% to 184% while values less than 30% for groundwater and 50% for soils are generally considered indicative of acceptable reproducibility. The elevated RPD values may be due to the nature of the matrix (crushed rock), and variations in hydrocarbon distribution within the soils. In all cases, the concentrations of each parameter in both samples were either above or below the applicable guideline.

The higher RPD values are generally associated with lower concentrations of the parameters while higher concentrations, on the order of the applicable guidelines, generally yielded lower RPD values, with the notable exception of toluene and ethylbenzene. In sample 02-TP06-07-02 and its duplicate 02-TP06-DUP7, the RPDs for toluene and ethylbenzene were greater than 100% and the values differed by approximately one order of magnitude. The benzene values also differed by a similar amount, but as one of the concentrations was less than the laboratory MDL, an RPD could not be calculated for benzene. Xylene concentrations illustrated excellent reproducibility between these samples, as did the PHC fractions. It is unclear why the reproducibility for this sample was so poor. Irrespective of the reproducibility, this sample exceeded the applicable CCME standards for several petroleum hydrocarbon parameters and the conclusions based thereon remain valid.

3.10 National Classification System and CCME Site Score

FRANZ completed the Federal Contaminated Sites Action Plan (FCSAP) version of the National Classification System (NCS) worksheet for selected APECs at the Inuvik airport. This FCSAP NCS worksheet was adapted by Health Canada from the Canadian Council of Ministers of the Environment (CCME) original NCS. The September 2005 electronic version of the FCSAP NCS worksheet was used. The detailed FCSAP NCS worksheet was completed for each APEC where exceedances of remediation guidelines were identified, except for APEC 1, former maintenance garage, as specified in the RFP. A FCSAP NCS worksheet was also completed for those APECs where landfills are located, regardless of whether exceedances were identified. The evaluation form provides the detailed rationale for each score for all categories. FRANZ understands that this is the first calculated FCSAP NCS or NCS score derived for these

APECs. A copy of all FCSAP NCS worksheets completed as part of the current program is included in Appendix D.

4.0 GEOLOGICAL AND HYDROGEOLOGICAL CONTEXT

Inuvik is located in the Arctic Continental Shelf geological province consisting of sedimentary rocks dating from the lower Cretaceous Period. A dome of older sedimentary rocks of Proterozoic age, part of the Cordilleran Orogen geological province, rises through the lower Cretaceous rocks in the vicinity of the Inuvik Airport. The boundary between these two rock types is reported to be located on the airport property between the floatplane base (lower Cretaceous sediments) and airport terminal (Proterozoic sediments). Bedrock geology was not examined in detail during the fieldwork; however, outcrops were noted near all APECs (except APEC 1 and APEC 8) and generally appeared to consist of brown to grey, fine-grained calcareous or argillaceous sediments.

Surficial soils consist of glacial till lying directly on the bedrock surface. In the vicinity of the airport terminal, the deposits are described as a thin and discontinuous till veneer that includes extensive areas of bedrock outcrop. Immediately north, including the area of the float plane base, the till is thicker and forms a continuous blanket. A peaty topsoil layer has developed on the till surface and permafrost is present several metres below the surface. To the east of Inuvik is the Mackenzie River delta where deposits consist of a thick accumulation of stratified silts.

Surface drainage in the airport area is directed towards Dolomite Lake (Airport Lake), located south of the terminal, and Shell Lake (Long Lake) located further west at the float plane base. Both of these lakes drain via short streams westward to the Mackenzie River, which flows north approximately 100 km to the Beaufort Sea (Arctic Ocean).

4.1 General Soil Stratigraphy

The observed stratigraphy consisted of fill material composed of crushed rock (shale or other fine-grained argillaceous or calcareous rock) of variable size and up to 3.4 m in thickness. In some test pits in landfill areas, debris/waste such as wood, drums and lids, rusted metal, and tires was observed in large quantities. Under the fill material, a peat layer up to a maximum of 0.3 m in thickness was present in most test pits. Below the peat layer, native soil was encountered and consisted of fine sand, clayey to sandy silt, or either silty clay.

Grey to purple, fractured shale bedrock was encountered at a depth ranging from 0.1 to 1.8 m below ground surface in seven test pits in the eastern portion of APEC 2, the FFTA. The same bedrock was encountered in one test pit at 1.8 m depth at APEC 10 at the western top slope of the landfill south of LTU.

4.2 General Hydrogeology

Limited groundwater was encountered during the investigation at all APECs. The crushed rock fill material present at most APECs was generally free-draining and did not allow groundwater to accumulate. In some cases, groundwater was encountered at the fill / peat boundary; however, the saturated thickness was negligible. Approximately 0.12 m of groundwater was present in 01-MW06-01, installed at APEC 1, the former maintenance garage; however, this was insufficient to develop and sample the well. The underlying native peat and glacial deposits were generally found to be frozen, indicating that the permafrost had advanced upwards since placement of the fill.

At locations where silt and sand soils were present, particularly APEC 8 at the Shell Lake, saturated soils were encountered at lake level and perched on fine-grained horizons; however the saturated thickness was generally negligible or seepage was minor. At test pit 08-TP06-03, several metres from Shell Lake, sufficient groundwater seeped from the sandy silt unit at surface for collection and analysis.

5.0 INVESTIGATION RESULTS

The investigation results for each APEC are described in this section. Photographs of field activities and general views are presented in Appendix A.

5.1 APEC 1 - Former Maintenance Garage Location

5.1.1 Observations and Work Plan

APEC 1 is located at the west end of the airport's main development area, just west of the Terminal, as shown in Figure 1-2. The old maintenance garage at APEC 1 was removed from the site in the summer of 2004. During operation of the maintenance garage, several holes had been drilled in the concrete slab floor allowing for drainage. In addition, two ASTs were operated on site, one on each side of the maintenance garage. In 2004, a sampling program was conducted by Environmental Management Technologies (EMT) and identified F2 to F4 PHC contamination in soil in the crawl space of the building and at both ASTs.

The original land surface in the vicinity of the maintenance garage had been altered by the installation of the crushed rock pad which extends east and southeast from this location; however, a swale appears to have led north and then northwest from the maintenance garage area and may represent a preferential pathway for groundwater and contaminant drainage.

During discussions with the airport manager, Ms. Karen King, it was determined that two fuel ASTs (9,000 L diesel fuel and 4,500 L gasoline) were historically located south of the former maintenance building, across the access road, near the south edge of the crushed rock pad. Some minor areas of surficial staining were observed in this area.

During the site reconnaissance, it was observed that there were small areas of surficial staining on the gravel surface along the east side of the sheds (W57 – cold storage and W56 – carpentry shop) west of the former maintenance garage. A 2,273 L heating oil AST was noted between the sheds and a vertical, galvanised steel culvert, approximately 1 m in diameter and containing water at approximately 2 m depth was present immediately west of the AST. No information regarding the culvert was available; however, it appeared that the water in the culvert may represent groundwater. Soil staining was also observed at the northeast corner of building W57. An 1136 L heating oil AST is located between W56 and T4 – electrical shop, to the south; no surficial staining was present at this location.

During the current program, 28 test pits were completed in the area of the former maintenance garage to investigate the areas of impacted soil identified by EMT as well as the additional suspect areas described above. A total of twelve test pits were advanced inside the footprint of the former building, four at the former 1,136 L heating oil AST north of the former building, six around the building footprint, five south of the former building in the gravel area where two

former fuel ASTs were formerly located, and one at the location of surficial staining between the sheds, east of the heating oil AST. No test pit was excavated at the area of surficial staining northeast of shed W57 due to presence of underground services beneath the staining. In addition to the test pit program, one borehole with a monitoring well installation was advanced inside the northwest corner of the former building footprint. A groundwater sample was collected from within a vertical steel culvert located in the ground between buildings W56 and W57.

Surficial material at APEC 1 was found to consist of crushed rock applied directly on the pre-existing surface, marked by a peaty unit. The underlying native materials were not encountered due to excavator refusal on permafrost. In some test pits, permafrost was encountered in the crushed rock unit before the peat was reached. Minor groundwater seepage and saturated horizons were observed in some test pits; however, no significant groundwater yields were encountered in any of the test pits in APEC 1.

Hydrocarbon odours were noted in soil samples collected from various test pits in the maintenance building footprint, surrounding area, and at the former fuel ASTs to the south. The highest soil headspace vapour concentration, 480 ppm, was from this latter area. Soil headspace vapour concentration in samples from the maintenance building footprint were generally in the range of 50 ppm though several samples from the peat unit produced concentrations over 100 ppm.

5.1.2 Soil Analytical Results

Selected soil samples were analyzed for total metals, BTEX, PHC F1 to F4, VOCs, and PAHs. Tables 1, 2, 3, and 4 summarize the soil analytical results obtained at APEC 1. Figure 5-1 summarises the results of the soil analytical data and the approximate extents of impacted areas.

The soil analytical results are in compliance with applicable GNWT standards and guidelines except for PHC F2 to F4 in some samples, as follows:

- North edge of former maintenance garage: Soil samples 01-TP06-04-01 (0.4-0.6 m) and 01-TP06-18-01 (0.3-0.5 m) had PHC F3 concentrations respectively of 2,830 and 2,330 μg/g exceeding the GNWT CL standard (coarse/surface soil) of 1700 μg/g. PHC chromatograms indicate a mixture of oil(s) and fuel range hydrocarbon products at 01-TP06-04 and other locations within the former maintenance garage footprint. The mixture of products varies from location to location, but is generally consistent vertically (i.e. similar at various depths from the same test pit). The product in soil at 01-TP06-28, outside the northwest corner of the former garage, appears to be solely a lubricating oil range product.

- Former fuel ASTs to south: At test pit 01-TP06-21, three samples were analyzed and all of them exceeded F2 standards of 760 μg/g for CL (coarse/surface soil) and 2,000 μg/g for CL (coarse/subsurface soil, below 1.5 m). The reported PHC F2 concentrations were; 3,930 μg/g for sample -02 (0.4-0.6 m), 3,810 μg/g for sample -03 (1.4-1.6 m), and 2,840 μg/g for sample -04 (2.1-2.4 m). Based on the PHC chromatogram, the hydrocarbon present in these samples is diesel fuel.
- Surficial staining near shed W57: At test pit 01-TP06-28, three samples from different depths were analyzed and PHC F2 to F4 were detected in all three samples. Sample -01 (0.1-0.3 m) exceeded the standards for F3 (8,440 μg/g) and F4 (6,680 μg/g), sample -02 (0.4-0.5 m) exceeded the standards for F2 (2,560 μg/g) and F3 (3,650 μg/g), and sample -03 (0.6-0.8 m) exceeded the standard for F3 (6,920 μg/g). The PHC chromatograms indicate that there are two distinct products present in these samples: diesel fuel and a lubricating oil range material.

5.1.3 Water Analytical Results

As noted previously, a sample of groundwater could not be collected from the monitoring well as there was not enough water to develop the well or collect a representative sample. A water sample was collected from the vertical galvanised steel culvert between sheds W56 and W57 and analyzed for total metals, BTEX, PHC F1, PHC F2-F4, VOCs, and PAHs. Tables 7, 8, 9, and 10 summarize the water analytical results obtained at APEC 1. These results were compared to the applicable CCME standards and all results were compliant except for a concentration of dissolved zinc measured at 2960 μg/L compared to CCME guideline of 30 μg/L (See Figure 5-2). Concentrations of petroleum hydrocarbon parameters and VOCs in the samples from the culvert were all less than the laboratory MDLs.

5.2 APEC 2 - Former Fire Fighting Training Area

5.2.1 Observations and Work Plan

APEC 2 comprises a levelled area approximately 60 m by 100 m located on an east-west ridge located southwest of the airport runway. The land falls away gently to the north towards the runway with some lower level benches along the north side of the levelled area. A gravel access road separates APEC 2 from another levelled area on the south side that is the location of a Land Treatment Unit (LTU) that is not presently in use. A second, neighbouring LTU has been decommissioned. APEC 10 is located along the southeast side on the LTUs, on the southern ridge face.

The site consists of a former mock-up area where fuel was periodically burned as part of firefighting training exercises. Contamination at the FFTA was previously identified at the

southeast corner of the levelled area in the vicinity of former ASTs. Groundwater sampling had not been possible in the last two attempts during previous investigations due to restricted flow.

During the site reconnaissance, it was observed that there were areas of surficial staining on the gravel surface in three areas: southeast corner where fuel ASTs were formerly located, south central area where mock-ups were formerly located; and the west central area where drum storage may have occurred in the past (as noted in the 1994 Environmental Baseline Study (EBS) report).

During the current program, 18 test pits were excavated to depths ranging from 0.4 to 3.6 m in the area of APEC 2 to investigate the areas of former hydrocarbon contamination and possible presence of buried drums of prime oil. Test pits were placed in a 20 m grid across APEC 2. In addition to the test pits program, two monitoring wells were installed at APEC 2 to assess the groundwater. The locations chosen were in shallow depressions near the former mock-ups were surface run-off would be expected to gather and possibly result in accumulation of contamination and groundwater.

Surficial material at APEC 2 was found to consist of crushed rock applied directly on the pre-existing surface, marked by a thin peaty horizon developed on native deposits of sand-gravel-silt-clay. In some locations, bedrock was encountered directly beneath the crushed rock. Test pits extended to a maximum depth of 3.6 m and commonly terminated when permafrost or bedrock was encountered. Minor groundwater seepage and saturated horizons were observed in some test pits; however, no significant groundwater yields were encountered in any of the test pits in APEC 2.

Hydrocarbon odours were noted in soil samples collected from test pits near the former location of the mock-ups and area to the north and northwest. Soil headspace vapour concentrations in samples from this area exceeded 100% LEL in several cases and were generally elevated throughout this area. Hydrocarbon odours were also noted in soil samples from test pits north of the former fuel ASTs in the southeast of APEC 2.

Liquid tar, now hardened, was noted on the surface on a lower bench of APEC 2 at the northwest corner. Tar was noted in the crushed rock fill to a depth of 1.0 m.

5.2.2 Soil Analytical Results

The soil samples were selectively analyzed for total metals, BTEX, PHC F1, PHC F2-F4, and PAHs. Tables 1, 2, and 4 summarize the soils analytical results obtained at APEC 2. Figure 5-3 highlights the results of the soil analytical data and the inferred extents of impacted areas. Various petroleum hydrocarbon concentrations in soil exceeded the applicable GNWT and CCME guidelines at 7 locations as follows:

- Location of former mock-ups, extending to surficial staining along west central area: Samples from four test pits (02-TP06-07, 02-TP06-08, 02-TP06-09, and 02-TP06-10) variously exceeded for PHC F1 through F4, toluene, and xylenes at depths ranging from near-surface to as great as 2.5 m below grade. Multiple samples were analysed from four of these test pits and illustrate that concentrations decrease with depth. The highest concentration encountered was 12,800 μg/g PHC F3. PHC chromatograms indicate the presence of diesel fuel and in some cases, lubricating oil range product as well. The PHC product mix at any test pit is generally consistent with depth, although the depth to which the PHC extends varies between locations.
- Southwest corner near surficial staining: A sample from one test pit, 02-TP06-03, exceeded the F3 guideline at a depth of 0.1-0.3 m (3,240 versus 1,700 μg/g). Based on the PHC chromatograms, diesel fuel and lubricating oil range material is present in this area, similar to the mock-ups area.
- Northeast corner near former fuel ASTs: Samples from two test pits (02-TP06-16 and 02-TP06-17) north of the former fuel ASTs where surficial staining was observed, exceeded PHC F3 and F4 guidelines in near-surface samples. No deeper samples were available as bedrock was found to be shallow in this area. The highest concentrations encountered were 28,500 μg/g PHC F3 and 8,660 μg/g PHC F4, versus guidelines of 1,700 and 3,300 μg/g, respectively. PHC chromatograms indicate the presence of a lubricating oil range product.

5.2.3 Groundwater Analytical Results

As noted previously, a sample of groundwater could not be collected from the monitoring well as there was not enough water to develop the well or collect a representative sample. Insufficient water for sampling was also present in the two pre-exisiting wells found at the southeast corner of APEC 2.

5.3 APEC 3 - Former Construction Camp Site

The location of the former construction camp site was identified by Hank Rogers, a maintenance employee at the airport. The camp was located on the north shore of Dolomite Lake shore, south of the FFTA, as shown in Figure 1-2. This area has a moderate slope, apparently expressing the bedrock topography, and numerous bedrock outcrops and the occasional south-facing cliff were observed during the site reconnaissance. Numerous raised gravel pads up to 0.5 m were observed throughout and appeared to represent the former location of buildings and other structures. These pads were located on natural and man-made benches on the slope above the lake, some of which have been colonised by shrubs and small trees. A small amount of demolition debris (lumber and drywall) was observed at one location but is likely not related to the activities of the camp or its subsequent demolition; the paucity of vegetation at this site and vehicular access implies a more recent deposit of the material. There was no evidence found of

surficial staining that might be associated with the former presence of the work camp buildings, ASTs, or other facilities.

Rusty metal objects, including empty drums, a possible boiler, and pipes were noted in the camp area, partially buried in a bench face, and on the lake shore; however none of these items appeared to represent probable sources of contamination. An electrical box and outlets and guy wire were also observed but do not appear to have any present use. The electrical and guy wires disappear underground into the face of a bench. There appears to be on-going activities (campsites) at several locations in APEC 3, based on the presence of rough shelters and fire pits, as shown in photographs in Appendix A.

Based on the findings of the site reconnaissance, no evidence of contamination was found and consequently no subsurface investigation was conducted.

5.4 APEC 4 - Cleared Area, west edge of Main Quarry

There are two bedrock quarries (Main Quarry and North Quarry) located along the west side of an access road in a relatively undeveloped portion of the airport between the airport terminal and floatplane base, as shown in Figure 2-1. The Statement of Work indicated that prime oil drums may have been buried in a clearing west of the Main Quarry. Inquiries were made with the airport manager to identify the location and obtain further details; however, Ms. King was unable to provide any information regarding this APEC.

Reconnaissance of the area revealed that the quarry is actively being worked for crushed rock / aggregate and continues to expand. Operations appear to be currently focussed in the southern, lower portion of the quarry. The margins of the quarry are generally vertical walls at this time with the ground surface beyond the margins being lightly forested with vegetation typical of the area. A deep, bedrock gully is present approximately 100 to 150 m west of the main Quarry. There appears to be only limited soil lying on bedrock in the Quarry area.

If the supposed clearing and buried drums had been encountered during expansion of the quarry, it seems likely that the drums would have been separated and either stored on site or taken off site for disposal. Underlying rock would have been excavated and processed. No such drums were observed along the western edge of the quarry or within the quarry itself.

Based on the findings of the site reconnaissance, no evidence of APEC 4 or contamination was found and consequently no subsurface investigation was conducted. A small landfill was noted outside the northwest corner of the Main Quarry on the upper slope of the gully near a communications shed. It is possible that this landfill represents the drum burial site reported as APEC 4; however as this is uncertain, it was assigned the identifier APEC 9 and will be discussed in detail in a subsequent section.

5.5 APEC 5 - Distance Measuring Equipment (DME) Building

Information presented in the Statement of Work indicated that a stained area southeast of the DME building represented an APEC. The staining apparently originated from an emergency generator that had been placed near the building. In interviewing the airport manager, it was determined that there are two DME buildings at the airport but Ms. King did not know which building the APEC referred to and consequently, both DME sites were examined. The old DME building is located approximately 300 m southeast of the east end of the runway on a gravel pad in a level, undeveloped area, as shown in Figure 2-1. A small, skid-mounted shed, electrical box, and antenna are located at the site. No generator or tank was present and no indications of surficial staining were observed and consequently, no subsurface investigation was conducted.

The new DME building is located approximately 2000 m west of the airport terminal in an undeveloped area between the terminal and floatplane base, as shown in Figure 2-1. The site is constructed on a gravel pad at the top of a knoll. There are two skid-mounted sheds located at the site with a large, circular, horizontal, antenna overhead. No generator or tank was present and no indications of surficial staining were observed and consequently, no subsurface investigation was conducted.

5.6 APEC 6 - Main Quarry, Landfill Operation 1962-67

According to the Statement of Work, the Main Quarry site has been used for several purposes, including a landfill from 1962 to 1967. Inquiries were made with the airport manager to identify the location of the landfill and to obtain further details; however, Ms. King was unable to provide any information regarding landfill activities at the Main Quarry. A reconnaissance of the Main Quarry was conducted for landfill (and other) operations. General features were previously described under APEC 4 and the quarry location is shown in Figure 2-1. As the quarry floor appeared to be bedrock, it seems unlikely that there is a landfill located within the quarry itself; however, a small landfill was found outside the northwest corner of the landfill and was assigned identifier APEC 9 as it was not clear if this was the APEC 4 or APEC 6 landfill area referred to in the Statement of Work, or another landfill area altogether.

Based on the findings of the site reconnaissance, no evidence of a landfill was found within the quarry and consequently no subsurface investigation was conducted.

5.7 APEC 7 - Main Quarry, Asphalt Operations

According to the Statement of Work, the Main Quarry was the site of asphalt operations related to work at the airport and Dempster Highway. Inquiries were made with the airport manager to identify the location and nature of the asphalt operations; however, Ms. King was unable to

provide any information regarding such operations at the Main Quarry. General features were previously described under APEC 4 and the quarry location is shown in Figure 2-1.

Examination of the quarry was made for typical asphalt operations and plant features such as asphaltic concrete on surface or in stockpiles, run-off retention ponds, and liquid asphalt spills. No indications of asphalt operations observed in the quarry area. Based on the findings of the site reconnaissance, no evidence of contamination related to asphalt operations was found and consequently no subsurface investigation was conducted.

5.8 APEC 8 - Shell Lake, Lots 11-11 and 11-12

5.8.1 Observations and Work Plan

The Statement of Work indicated that surficial debris was present on two lots at the Shell Lake floatplane base, as shown in Figure 2-1, but that no information on related contamination was available. In interviewing the airport manager, it was determined that a house was formerly located on one of the lots and that it had been destroyed by fire. The former tenants reportedly abandoned materials and debris on the property when they departed. The lots are located side-by-side on the north shore of Shell Lake near the centre of the partially developed floatplane base and service area. An access road forms the north boundary of the lots while additional lots are located east and west along the shore.

During the site reconnaissance, it was found that were a number of structures and facilities remaining on the lots as well as a large amount of debris, as shown in photographs in Appendix A. The majority of the facilities and debris are located on the western lot, 11-11, as shown in Figure 5-4. The lots step down to the waterfront from the access road in two benches. The lower bench is less than a metre above lake level. Overgrown grass is present amongst the gravel and cobbles common on the western lot around the structures and on the flat bench areas. Much of the eastern lot is thickly vegetated with bushes and small trees.

The driveway runs near the western property boundary to a float plane dock on the waterfront. A partially collapsed shed straddles the western property line near the waterfront and an AST was located on a stand with a soil containment berm beneath, between the shed and waterfront. A second dock is located on the waterfront of lot 11-12. The burnt house was located in the centre of lot 11-11, on the lower bench, and the fire debris remains in place, including an apparent heating oil AST along the south side. Two smaller ASTs are located on the edge of the upper bench, above the house. All of the ASTs appeared to be empty or contain minimal liquid and no staining was observed on the ground around the tanks. To the southeast of the burnt house, close to the waterfront, is a concrete slab presumed to be the former location of a shop or shed. A tool shed in poor condition is located east of the slab. A nearly complete floatplane is present on the waterfront. A site plan obtained from GNWT indicates that two

additional structures were once present in the northwest corner of lot 11-12 but there was no indication of these structures at the time of the site visit.

A wide variety of debris is scattered across the site and in the remaining structures, including empty steel drums, lumber, furniture, two satellite dishes, equipment, metal, fibreglass insulation, tarps, hosing, tires, vehicle parts, a pick-up truck, a van, a fish smoking cabinet, and a 20 L pail of undetermined liquid. Cans of paint were noted inside the partially collapsed shed.

Small areas of surficial staining were noted around the concrete slab, with the heaviest staining near the southeast corner. No staining was observed near the ASTs. The ground surface was not visible across much of the southeast portion of the west lot due to the extensive presence of debris.

In the current program, a total of seven test pits were excavated on the two lots and one grab surface sample was collected from inside the berm beneath the elevated AST at the southwest corner of lot 11-11. A monitoring well (08-MW06-01) was also installed downgradient of the two ASTs north of the burnt house, an area were visual contamination and odour was encountered during the test pit program.

The general geology at APEC 8 consists of 1 to 2 m of silty sand overlying clayey silt. These two units are separated by a thin peaty horizon. Granular fill was encountered at surface at some locations. Saturated soils were generally encountered at 1 to 2 m depth in the clayey silt unit and investigation was terminated just below the water table. There was only minor groundwater seepage from the test pit walls due to the fine-grained nature of the soils encountered. Permafrost was encountered in two test pits at 1.7 m depth, but may be depressed or absent near the lakeshore.

Hydrocarbon odour and/or staining were noted in test pits around the concrete slab and at the two ASTs north of the burnt house. Soil headspace vapour concentrations were all extremely low with the exception of a reading of 140 ppm from the surficial sample collected in a stained area at the southeast corner of the concrete slab. Hydrocarbon sheen was observed on seepage water table at this location. Note that the ground surface is barely above the lake level at this location and groundwater was encountered near the ground surface.

5.8.2 Soil Analytical Results

The soil samples were selectively analyzed for total metals, BTEX, PHC F1, PHC F2-F4, and PAHs. Tables 1, 2, and 4 summarize the soils analytical results obtained at APEC 8. Figure 5-4 highlights the results of the soil analytical data.

Various petroleum hydrocarbon and metals concentrations in soil exceeded the applicable GNWT and CCME guidelines at 2 locations as follows:

- Two ASTs north of burnt house: PHC F1 exceeded the guideline of 310 μg/g from 1.4-1.6 m (concentration of 901 μg/g) and PHC F2 exceeded the guideline of 760 μg/g at 0.1-0.3 m and 1.4-1.6 m with concentrations of 1080 μg/g and 5020 μg/g respectively. In the same test pit, at depth 1.7-1.8 m, hydrocarbons F2-F4 concentrations obtained from the collected frozen sample were detectable, though compliant. BTEX were detected in the sample from 1.4-1.6 m, though compliant. PHC chromatograms indicate the presence of diesel fuel in these samples.
- Southeast corner of concrete slab: PHC F3 (12,800 μg/g) and F4 (7,090 μg/g), arsenic (30 μg/g), lead (371 μg/g), and zinc (643 μg/g) exceeded the guidelines (1700, 3300, 12, 260, and 360 μg/g, respectively) at 0.1-0.3 m depth. The same parameters were analyzed at 0.6-0.8 m and only arsenic (23 μg/g) exceeded, though PHC F2-F4 were also detected. PHC chromatograms indicate the presence of a complex mixture of lubricating oil range products and possibly some fuel in this sample.

5.8.3 Groundwater Analytical Results

Monitoring well 08-MW06-01, installed at the location of the two ASTs north of the burnt house, was dry and therefore no groundwater sample could be collected from this monitoring well. However, during the test pit program, water was encountered in the test pit at the southeast corner of the concrete slab and a sample was collected for analysis of BTEX, PHC F1-F4, PAHs, and dissolved metals. All hydrocarbon parameter results obtained for this water sample were compliant with the applicable CCME guideline. The reported concentrations of iron and selenium, which were measured at 2470 and 2 μg/L, respectively, exceeded the CCME CEQGs of 300 and 1 μg/L, respectively. When a ten times dilution factor on discharge is taken into account, the concentrations are less than the resulting value.

The laboratory's method detection limit for cadmium was greater than the calculated CCME CEQG (0.2 μg/L versus 0.017 μg/L), and the concentration of cadmium in groundwater may therefore exceed the guideline, and may marginally exceed the ten times dilution factor value. A soil sample from this test pit contained an elevated concentration of cadmium, though less than the applicable soil standard.

PHC F2 and F3 were detected in the sample at concentrations barely above the laboratory MDL. There is no guideline for PHC in groundwater. Chemical analytical results are summarized in Tables 7, 8, and 10 and in Figure 5-5.

5.9 APEC 9 - Landfill Northwest of Main Quarry

5.9.1 Observations and Work Plan

During the reconnaissance of the Main Quarry, a small landfill was noted outside the northwest corner of the quarry, as shown in Figure 1-2, and has been designated APEC 9. The western edge of the upper, northern portion of the Main Quarry is the site of a small airport communications shed (mounted on sleepers) with underground utilities (wires) leading to it. An access road traverses the Quarry and runs along the west side of the Quarry to the shed, and then crosses a deep gully on a fill causeway. The access road terminates at the top of the bank on the opposite side of the gully. The APEC 9 landfill is located across the access road from the shed on the upper slope of the gully. Wastes noted on the surface included truck tires, pieces of metal and equipment, steel pails, a wooden crate, an empty steel drum, and a medium-duty truck (mostly buried). Small bushes have colonised the gravel/cobble surface of the landfill. The landfill is semi-circular in plan with dimensions of approximately 35 m by 20 m and a maximum height of approximately 2 m on the west bank face, and a calculated volume of approximately 500 m^3. The bottom of the gully and a small stream are approximately 15 to 20 m from the toe of the landfill and least 10 m below the elevation of the landfill. The stream flows approximately 275 m to Dolomite Lake. Two test pits were completed in APEC 9 to investigate for potentially buried debris.

Wastes encountered (crushed steel drums, metal parts, plastic pipe, fibreglass insulation) were similar to those observed on surface and mixed with sand, gravel, and cobbles. The waste extended to a depth of 1.6 m and native fine sands were encountered below the waste. No odours or indications of petroleum hydrocarbons were noted in the test pits. Soil vapour headspace concentrations were extremely low. Wet soil was encountered at 2.3 m depth and permafrost at 2.8 m depth. No groundwater seepage was observed in the test pits and it was judged that there was insufficient groundwater to warrant a monitoring well installation.

5.9.2 Soil Analytical Results

Selected soil samples were analyzed for total metals, PHC F1, PHC F2-F4, BTEX, VOCs, PAHs, PCBs, and leachable metals. Tables 1, 2, 3, 4, 5, and 6 summarize the soil analytical results obtained at APEC 9. Figure 5-6 summarises the soil chemical analytical results obtained at APEC 9.

No exceedances were identified in the soil analytical results; however, we note that the arsenic concentration of 12 μg/g detected in one sample at 1.3-1.5 m depth in the waste is equal to the GNWT commercial land use standard. Leachable metals concentrations were generally less than the method detection limits, with traces of barium detected in both samples analysed, and traces of zinc and boron in one sample.

5.10 APEC 10 - Landfill South of Land Treatment Units

This APEC was added to the work plan based on the observations during the site reconnaissance. APEC 10 is an area southeast of the LTUs, as shown in Figure 1-2, where numerous drums were observed on surface and partially buried during the site reconnaissance of the nearby FFTA – APEC 2. The local setting of the LTUs and FFTA were previously described under APEC 2. The foot of the landfill is located approximately 400 m north of Dolomite Lake. The drums are located on and at the base of a steep landfill slope, approximately 5 m high and vegetated with grass and small shrubs. Cracks were noted on the top of the landfill. Four test pits were excavated along the top of the landfill using the backhoe to a maximum depth of 2.9 m and five shallow test pits (0.5 m) were excavated by hand along the bottom of the slope as the backhoe could not access this area. The landfill appears to extend approximately 50 m along the bank. The volume of the landfill is estimated to be 500 to 1,000 m^3.

Wastes encountered included many crushed steel drums and lids with tar residues, tar, metal, wood, paper, and tires. The wastes were mixed with and partially covered with variable fine sands. Soil samples were collected to avoid the inclusion of visible tar. Depth of wastes in the upper test pits extended to the maximum depth of investigation (i.e. up to 2.9 m), though at one location, bedrock was encountered at 1.8 m depth with a thin native soil unit present above. The lower test pits encountered fine sand lying on a peaty soil unit. No petroleum hydrocarbons odours were noted in the test pits. Soil vapour headspace concentrations were 60 ppm or less in all samples except for a native peaty soil sample from the base of the slope which exhibited a reading of >100% LEL but no petroleum or chemical odour. Permafrost was not encountered, although refusal at 2.9 m depth in two test pits may have indicated frozen soils. No groundwater seepage was observed, although wet soil was noted in one test pit at 2.8 m depth. No monitoring wells were installed.

5.10.1 Soil Analytical Results

Soil samples were selectively analyzed for total metals, PHC F1, PHC F2-F4, BTEX, VOCs, PAHs, PCBs, and leachable metals. Tables 1, 2, 3, 4, 5, and 6 summarize the soil analytical results obtained at APEC 10. Figure 5-7 highlights the results of the soil analytical data.

All chemical results were compliant with the applicable standard for all parameters except for some metals in three samples.

- The arsenic concentration in one sample from test pit 10-TP06-03 at 1.3 to 1.5 m depth at the top of the bank exceeded the guideline (13 μg/g versus 12 μg/g). Lead and zinc concentrations for another sample in the same test pit also exceeded the guidelines (918 and 449 μg/g versus 260 and 360 μg/g, respectively). This sample was the deepest sample collected in the test pit at 2.4 to 2.6 m, within the waste.

- The arsenic concentration in the native peaty soil in one of the lower test pits also exceeded the guideline (19 μg/g versus 12 μg/g).

Leachable metals concentrations were generally less than the method detection limits, with traces of barium detected in all five samples analysed, and a trace of zinc detected in one of the samples.

6.0 DISCUSSION AND RECOMMENDATIONS

The following sections present a discussion of the findings and recommendations for each APEC. A summary of the contaminants identified at each APEC, volume of contamination, and recommendations for further work are presented in Table C at the end of this section.

6.1 APEC 1 – Former Maintenance Garage Location

The former maintenance garage and surrounding area has been designated as APEC 1. The former building's crawlspace remains as a hole within the asphalt area. Floor drains in the garage discharged directly to the crawlspace. A heating oil AST was formerly located immediately north and south of the garage. Two heating oil ASTs and (unrelated) patches of surficial staining were present on the gravel surface around sheds located approximately 15 m west of the former garage. A diesel fuel and gasoline AST were formerly located on a gravel area approximately 20 m south of the former garage.

APEC 1 is located at the western end of the airport terminal facilities with undeveloped land present to the north, east, and west. The general topography of the area drops to the west and groundwater would be expected to flow in that direction but may have a radially outwards component as the developed area has been constructed on crushed rock fill built up several metres above the original ground surface. Only limited groundwater was encountered during the investigation and precipitation infiltrating through the exposed soil (crushed rock) in the crawlspace likely drains away along the permafrost surface located at the native soil interface. Prior to demolition of the garage, infiltration at the garage location was likely very limited as the entire area was hard-surfaced. This would have reduced the potential for contaminants to be transported away from the garage footprint. Gravel areas exist to the north, west, and south of the garage. Of the 28 test pits excavated at APEC 1, four test pits in four areas had samples exceeding the applicable PHC standards.

A previous investigation in the garage footprint involved the collection of surface samples. The samples were composited and results for samples collected from the eastern two thirds of the crawlspace beneath the building were found to variously exceed the standards for F2, F3, and F4 PHC. FRANZ's 2006 samples were generally collected from greater depths, extending to permafrost, and indicated that exceedances of the standards are limited to the shallow soils (less than 0.5 m), although there has been some migration of fuel and oil range hydrocarbons to greater depths. PHC chromatograms for various depths in the same test pit revealed similar petroleum hydrocarbon products in each sample, but differing products and/or ratios at each test pit. This implies that there is downwards migration in the soil while lateral migration appears to be limited. PHC concentrations in soil samples from test pits located around the perimeter of the garage did not exceed the standards, further indicating that there has been little lateral migration of contaminants from the garage footprint. The south side of the footprint could not be

investigated as permission to excavate in the asphalted access road at this location was not granted by the airport manager.

An F3 PHC exceedance was detected in a sample collected from outside the northwest corner of the former garage footprint at a depth of 0.3-0.5 m and does not extend to the depth of the next sample at 1.3-1.5 m depth. The product present at this location appears to be lubricating oil. The elevation of the exceeding sample is above the elevation of the crawlspace floor and is therefore not related. Furthermore, exceedances in soil have not been identified in the western portion of the garage footprint. The test pit was excavated in an area surfaced with gravel. Surficial staining was observed approximately 20 m west (between sheds W56 and W57) and samples collected from a test pit at that location also contained lubricating oil and F2 to F4 exceedances. It is not clear if the contamination extends between these two locations or if they are separate areas of contamination. This second location is located next to a heating oil tank and heating oil was also evident in the PHC chromatograms at this location. Areal delineation of contamination in this area is not complete but is constrained by the limits of the development area and is likely limited to the gravel area between the former garage and existing sheds where surficial staining was observed. The vertical extent of contamination near the heating oil AST has not been determined, but is likely constrained by the permafrost layer at a depth of approximately 2.5 to 3.0 m.

A vertical, galvanised steel culvert is located west of the heating oil tank between sheds W56 and W57 and contained water at approximately 2 metres depth. The nature and purpose of the culvert could not be determined. A sample of the water standing in the culvert was collected and analysed for dissolved metals, VOCs, and petroleum hydrocarbon parameters. Despite the proximity to the heating oil AST and the exceeding soil samples, no VOCs or petroleum hydrocarbon parameters were detected in the sample. An elevated zinc concentration was detected and may derive from the zinc galvanising on the culvert itself from an extended period of contact. Based on the observations in test pits nearby (no groundwater observed), and the drop in elevation to the west of the sheds, it is unlikely that the water in the culvert is groundwater. It appears likely that culvert is sealed at the base and the standing water represents accumulated precipitation. Based on the available information, FRANZ concludes that the water observed in the culvert does not represent groundwater and that the elevated zinc concentration detected in the water is therefore non-significant.

A previous investigation indicated the presence of contaminated surficial soil at the location of the former heating oil ASTs immediately north and south of the former garage. FRANZ excavated two test pits at the location of the north AST and determined that contamination is relatively shallow and extends no deeper than 1.7 m bgs.

FRANZ was unable to conduct further investigation at the south AST as permission to excavate in the asphalted access road at this location was not granted by the airport manager.

FRANZ excavated five test pits at the location of the former gasoline and diesel fuel ASTs in the gravel pad area 20 m south of the former maintenance garage. Overland flow or migration along the permafrost surface would be expected to carry contaminants southward to the lower lying undeveloped lands less than 10 m south of the former ASTs' location. Test pitting locations were limited by the presence of buried electrical utilities. F2 exceedances identified as diesel fuel were reported in all three samples (spanning depths of 0.4 to 2.4 m) analysed from the test pit at the location of the former ASTs. Only traces of petroleum hydrocarbons were detected in samples from the four surrounding test pits. The area of contamination is delineated to the east, south, and southwest. The northern limit of contamination would likely be the edge of the asphalt.

Based on the available information, FRANZ estimates that the following volumes of contaminated soil are present at APEC 1:

TABLE B: Contaminated Soil Areas and Volumes at APEC 1

Location	Most Probable (m^3)	Likely Maximum (m^3)
Former maintenance garage footprint	400	500
Northwest of former maintenance garage	200	500
North former heating oil AST	25	50
South former heating oil AST	25	100
Former gasoline and diesel fuel ASTs	400	750
TOTALS	**1050**	**1900**

Further test pitting to delineate the extent of contamination and volume of soil in those areas where a high degree of uncertainty remains is recommended prior to evaluation of remediation options. Sampling of the monitoring well installed in the former maintenance garage is recommended if monitoring indicates that sufficient groundwater is present. No action is recommended for the elevated dissolved zinc concentration observed in the vertical culvert.

6.2 APEC 2 – Former Fire Fighting Training Area

The site consists of a former mock-up area where fuel was periodically burned as part of firefighting training exercises. The mock-ups were formerly located in the southwest to central

portion of the Site and ASTs were formerly located in the southeast portion of the Site. An investigation of the FFTA in 1994 involved the drilling of three boreholes, one of which, southeast of the mock-up area, was completed as a monitoring well. Elevated concentrations of petroleum hydrocarbons that exceeded the standard of the day but are not directly comparable to today's guidelines, were detected in a sample from 1.81 m depth. Groundwater samples could not be collected from the monitoring well during previous investigations.

APEC 2 comprises a levelled area approximately 60 m by 100 m located on an east-west ridge located southwest of the airport runway. The land falls away gently to the north towards the runway with some lower level benches along the north side of the levelled area. The lands surrounding the Site are generally undeveloped except for some access roads and runway approach lights. A gravel access road separates APEC 2 from another levelled area on the south side that is the location of a Land Treatment Unit (LTU) not presently in use.

The general topography of the Site area drops to the north and groundwater would be expected to flow in that direction, although there may be a southeasterly component directed toward a swale along the south side of the ridge. Minor groundwater seepage and saturated horizons were observed in some test pits; however, no significant groundwater yields were encountered in any of the test pits in APEC 2. Precipitation infiltrating through the exposed soil (crushed rock) of the levelled area likely drains away along the permafrost surface towards surrounding lands. In 2006, FRANZ excavated 18 test pits on a 20 m grid at APEC 2. The test pits extended to permafrost or bedrock and reached a maximum depth of 3.6 m. Bedrock was only encountered in the northeast portion of APEC 2. Two monitoring wells were also installed during the 2006 field program; however these wells and those installed during a previous investigation contained insufficient water for sampling.

Of the 18 test pits excavated at APEC 2, seven test pits in two areas had samples exceeding the applicable PHC standards. PHC F1 through F4, toluene, and xylene concentrations were reported exceeding the applicable soil standards in samples collected from four test pits in the central-southwest portion of APEC 2 where the mock-ups were formerly located. Contamination extended to a maximum depth of 2.5 m. PHC chromatograms indicate the presence of diesel fuel and in some cases, lubricating oil range product as well. The PHC product mix at any test pit is generally consistent with depth, indicating that migration in the subsurface is primarily downwards from the surface, rather than laterally. Contamination in this area is delineated by additional test pits in all directions except to the south, where the access is road is located.

A test pit immediately west of the mock-up area was excavated where surficial staining was noted. F3 contamination exceeding the standard was encountered to a depth of 0.3 m at this location. Based on the PHC chromatograms, diesel fuel and lubricating oil range material is

present in this area, similar to the mock-ups area. Contamination in this area is delineated by additional test pits, except for towards the limits of the pad on the west.

Staining was noted on the ground surface in the northeast portion of APEC 2, north of the former ASTs. Soil samples taken from two test pits in this area exceeded the PHC F3 and F4 standards. PHC chromatograms indicate the presence of a lubricating oil range product. Bedrock was encountered at a depth of 0.15 m. Staining did not appear to extend into the bedrock. Contamination in this area is delineated by additional test pits, except for towards the limits of the pad on the northeast.

Tar was noted on surface and extending to a depth of 1 m at a test pit in the northwest corner of APEC 2 on a lower bench. Concentrations of petroleum hydrocarbon parameters in a soil sample from 0.3 to 0.5 m depth, collected to avoid visible tar, did not exceed the standards.

The volume of contaminated soil at each area of APEC 2, based on the available information, is estimated as follows:

- Southwest and centre area: 1500 m^3 (most probable) to 3600 m^3 (likely maximum);
- Northeast area: 30 m^3 (most probable) to 120 m^3 (likely maximum); and
- Northwest bench: 200 m^3 (likely maximum).

Further investigation is recommended to accurately determine the volume of contaminated soil and delineate contamination to the south and west around the former mock-ups, and to the north and east in the area north of the former ASTs prior to evaluation of remediation options for APEC 2. Excavation of the contaminated soil is recommended to remediate APEC 2. Sampling of the monitoring wells installed at APEC 2 is recommended if monitoring indicates that sufficient groundwater is present.

A FCSAP NCS evaluation form was prepared for APEC 2 based on the information obtained during the investigation. The resulting score for APEC 2 was 60.3, which corresponds to “Class 2 – Action Likely Required”. A copy of the FCSAP NCS form is included in Appendix D.

6.3 APEC 3 – Former Construction Camp Site

The location of a former construction camp was identified on the north shore of Dolomite Lake, southwest of the main airport development area. During the field reconnaissance at APEC 3, crushed rock pads, likely the location of former structures, scattered demolition debris, and recently used campsites were noted; however, no visual indications of contamination were identified. As a result, no further investigation of APEC 2 was required.

6.4 APEC 4 – Cleared Area, West Edge of Main Quarry

The Statement of Work indicated that prime oil drums may have been buried in a clearing west of the Main Quarry. Inquiries were made with the airport manager to identify the location and obtain further details; however, no information was available. The quarry continues to operate and no evidence of drums or a clearing were observed along the western edge of the quarry or within the quarry itself during the site reconnaissance. As a result, no target for further investigation was identified.

A small landfill was noted outside the northwest corner of the Main Quarry on the upper slope of the gully near a communications shed. It is possible that this landfill represents the drum burial site reported as APEC 4; however as this is uncertain, it was assigned the identifier APEC 9 and discussed separately.

6.5 APEC 5 – Distance Measuring Equipment (DME) Building

Information presented in the Statement of Work indicated that a stained area southeast of the DME building represented an APEC. The staining apparently originated from an emergency generator that had been placed near the building. In interviewing the airport manager, it was determined that there are two DME buildings at the airport and both sites were examined for evidence of staining. No generator was present or surficial staining were observed at either location and consequently, no subsurface investigation was conducted.

6.6 APEC 6 – Main Quarry, Landfill operation 1962-67

According to the Statement of Work, the Main Quarry site has been used for several purposes, including a landfill from 1962 to 1967. Inquiries were made with the airport manager to identify the location of the landfill and to obtain further details; however, no information was available. A reconnaissance of the Main Quarry was conducted for landfill operations. The quarry continues to operate and no evidence of a landfill was observed within the quarry itself during the site reconnaissance. As a result, no target for further investigation was identified.

A small landfill was noted outside the northwest corner of the Main Quarry on the upper slope of the gully near a communications shed. It is possible that this landfill represents the landfill reported as APEC 6; however as this is uncertain, it was assigned the identifier APEC 9 and discussed separately.

6.7 APEC 7 – Main Quarry, Asphalt Plant Site

According to the Statement of Work, the Main Quarry was the site of asphalt operations related to work at the airport and Dempster Highway. Inquiries were made with the airport manager to identify the location and nature of the asphalt operations; however, no information was

available. A reconnaissance of the Main Quarry was conducted for evidence of asphalt plant operations; however, no such evidence was observed. As a result, no target for further investigation was identified.

6.8 APEC 8 – Shell Lake, Lots 11-11 and 11-12

APEC 8 is located on the north shore of Shell Lake in the airport's float plane area and consists of two lots where surficial debris is present. Several sheds, ASTs, and the remains of a burned house are located on the lots. The majority of the facilities and debris are located on the western lot. The lots step down in two benches to the waterfront from the access road that forms the northern boundary. The lower bench is less than a metre above lake level. Overgrown grass is present amongst the gravel and cobbles common on the western lot around the structures and on the flat bench areas. Much of the eastern lot is thickly vegetated with bushes and small trees.

A partially collapsed shed straddles the western property line near the waterfront and an AST was located on a stand with a soil containment berm beneath. The remains of the burned house are located in the centre of the west lot, on the lower bench. Two small ASTs are located on the edge of the upper bench, above the house. To the southeast of the burnt house, close to the waterfront, is a concrete slab presumed to be the former location of a shop or shed. A tool shed in poor condition is located east of the slab.

Small areas of surficial staining were noted around the concrete slab, with the heaviest staining near the southeast corner. No staining was observed near the ASTs. The groundwater surface was not visible across much of the southeast portion of the west lot due to the extensive presence of debris.

Seven test pits were excavated at APEC 8 and soil samples collected for each. A sample of seepage water was collected from the test at the southeast corner of the concrete slab. A monitoring well was installed downgradient of the two ASTs north of the burnt house, an area were visual contamination and odour was encountered during the test pit program; however, insufficient water accumulated in the well for sampling. A soil sample was collected from inside the berm beneath the AST in the southwest corner of the site.

The general geology at APEC 8 consists of 1 to 2 m of silty sand overlying clayey silt. These two units are separated by a thin peaty horizon. Granular fill was encountered at surface at some locations. Saturated soils were generally encountered at 1 to 2 m depth in the clayey silt unit and investigation was terminated just below the water table. There was only minor groundwater seepage from the test pit walls due to the fine-grained nature of the soils encountered. Permafrost was encountered in two test pits at 1.7 m depth, but may be depressed or absent near the lakeshore.

PHC F1 and F2 exceeded the applicable guidelines in soil samples collected from the vicinity of the ASTs north of the burnt house to a depth of 1.6 m, where permafrost was encountered. PHC chromatograms indicate the presence of diesel fuel in these samples. The extent of contamination in this area has not been delineated.

Based on information collected to date, it is not possible to estimate the volume of contaminated soil present. However, two areas of contamination have been identified: the first area is at the ASTs north of the burnt house and the second area is associated with the surficial staining around the concrete slab. Contamination at the ASTs extends to a depth of 1.6 m and is delineated downgradient by a test pit 15 m distant. A maximum volume of 250 m^3 is considered a reasonable estimate of soil contamination associated with the ASTs north of the burnt house.

At the southeast corner of concrete slab, PHC F3 and F4, arsenic, lead, and zinc exceeded the guidelines at 0.1-0.3 m depth. The same parameters were analyzed at 0.6-0.8 m depth and only arsenic exceeded. PHC chromatograms indicate the presence of a complex mixture of lubricating oil range products and possibly some fuel in this sample.

Contamination at the concrete slab is likely restricted to areas of surficial staining (<10 m^2) and limited in vertical extent by the proximity to the lake level and groundwater. A maximum volume of 5 m^3 is considered a reasonable estimate of soil contamination associated with the surficial staining.

Concentrations of petroleum hydrocarbon parameters in the sample collected from within the berm beneath the AST in the southwest corner of the site were less than the applicable guidelines, although a trace amount of weathered PHC was detected. Concentrations of petroleum hydrocarbon parameters in samples from other areas of APEC 8 were less than the applicable guidelines.

The concentration of all analysed parameters (expect cadmium) in groundwater from the test pit at the southwest corner of the concrete pad were less than ten times the CCME CEQGs, which takes into account a ten times dilution factor on discharge of groundwater to an aquatic environment. The laboratory's method detection limit for cadmium was greater than the calculated CCME CEQG (0.2 µg/L versus 0.017 µg/L) and therefore the concentration of cadmium in groundwater at this location may marginally exceed ten times the CEQG. As a soil sample from this test pit contained an elevated concentration of cadmium (though less than the applicable standard), a more accurate determination of the cadmium concentration in groundwater at this location is recommended.

Further investigation to delineate the extent of the contamination observed at the ASTs north of the burnt house is recommended to refine the volume of soil contamination prior to the determination of remedial options at APEC 8. Sampling of the monitoring well installed at this location is recommended if monitoring indicates that sufficient groundwater is present. Removal of the debris from the site is recommended to allow a proper examination of the ground surface across the site for additional areas of surficial staining and any remediation activities that are undertaken at APEC 8. Removal of the debris, including remains of a burnt house, is recommended to prevent the material from entering the Lake.

A FCSAP NCS evaluation form was prepared for APEC 8 based on the information obtained during the investigation. The resulting score for APEC 1 was 83.8, which corresponds to "Class 1 – Action Required". A copy of the FCSAP NCS form is included in Appendix D.

6.9 APEC 9 – Landfill West of Main Quarry

During site reconnaissance activities at the main quarry, a small landfill was encountered was noted outside the northwest corner of the Main Quarry on the upper slope of the gully near a communications shed. Wastes noted on the surface of the landfill included truck tires, pieces of metal and equipment, steel pails, a wooden crate, an empty steel drum, and a medium-duty truck (mostly buried). Small bushes have colonised the gravel/cobble surface of the landfill. The landfill is semi-circular in plan with dimensions of approximately 35 m by 20 m and a maximum height of approximately 2 m on the west bank face, and a calculated volume of approximately 500 m^3. The bottom of the gully and a small stream are approximately 15 to 20 m from the toe of the landfill and least 10 m below the elevation of the landfill. The stream flows approximately 275 m to Dolomite Lake. Groundwater flow would be expected to flow southeast towards the creek in the gully. Two test pits were excavated in the landfill to investigate for potentially buried debris.

Wastes encountered in the test pits were similar to those observed on surface and where mixed with sand, gravel, and cobbles. Wastes extended to 1.6 m depth in the test pits and native fine sands were encountered below the waste. Wet soil was encountered at 2.3 m depth and permafrost at 2.8 m depth. No groundwater seepage was observed in the test pits and it was judged that there was insufficient groundwater to warrant a monitoring well installation.

Selected soil samples were analyzed for total metals, petroleum hydrocarbon parameters, VOCs, PAHs, PCBs, and leachable metals. Concentrations did not exceed the applicable standards or guidelines and leachable metals concentrations were generally less than the method detection limits.

Based on the types of wastes observed at APEC 9 and the results of the soil analyses, no further environmental sampling is recommended. However, landfills are heterogeneous by

nature and contaminated material or buried wastes, other than those types already encountered, may be present within the landfill at locations not investigated. Further work in the form of an engineering review covering physical hazards, fencing, signage, capping, long-term monitoring, or risk assessment should be considered.

A FCSAP NCS evaluation form was prepared for APEC 9 based on the information obtained during the investigation. The resulting score for APEC 9 was 53.2, which corresponds to "Class 2 – Action Likely Required". A copy of the FCSAP NCS form is included in Appendix D.

6.10 APEC 10 – Landfill South of Land Treatment Units

This APEC was added to the work plan based on the observations during the site reconnaissance. APEC 10 is an area southeast of the LTUs where numerous drums were observed on surface and partially buried during the site reconnaissance of the nearby FFTA – APEC 2. APEC 10 is located on south slope of an east-west ridge located southwest of the airport runway. The land falls away to the south and groundwater would be expected to flow in that direction. The lands surrounding the Site are generally undeveloped except for some access roads. A large level area, formerly developed as an LTU, is located along the top of the ridge is located immediately north of APEC 10.

The foot of the landfill is located approximately 400 m north of Dolomite Lake. The drums are located on and at the base of a steep landfill slope, approximately 5 m high and vegetated with grass and small shrubs. Cracks were noted on the top of the landfill. Four test pits were excavated along the top of the landfill using the backhoe to a maximum depth of 2.9 m and five shallow test pits (0.5 m) were excavated by hand along the bottom of the slope as the backhoe could not access this area. The landfill appears to extend approximately 50 m along the bank. The volume of the landfill is estimated to be 500 to 1000 m^3.

Wastes encountered included many crushed steel drums and lids with tar residues, tar, metal, wood, paper, and tires. The wastes were mixed with and partially covered with variable fine sands. Soil samples were collected to avoid the inclusion of visible tar. Depth of wastes in the upper test pits extended to the maximum depth of investigation, though at one location, bedrock was encountered at 1.8 m depth with a thin native soil unit present above. The lower test pits encountered fine sand lying on a peaty soil unit. Permafrost was not encountered, although refusal at 2.9 m depth in two test pits may have indicated frozen soils. No groundwater seepage was observed, although wet soil was noted in one test pit at 2.8 m depth. No monitoring wells were installed.

Selected soil samples were analyzed for total metals, petroleum hydrocarbon parameters, VOCs, PAHs, PCBs, and leachable metals. Concentrations did not exceed the applicable standards or guidelines with the exception of two samples from the waste in which arsenic, lead,

and/or zinc exceeded. A sample of native peaty soil from the base of the landfill also exceeded the arsenic guideline. Leachable metals concentrations were generally less than the method detection limits.

Based on the surface and test pit observations, it appears that the type of the buried wastes at APEC 10 have been adequately determined. However, landfills are heterogeneous by nature and contaminated material or buried wastes, other than those types already encountered, may be present within the landfill at locations not investigated.

Further investigation of soil is recommended to assess metals contamination and elevated soil vapours in the native soils at the foot of the landfill and the relationship to the landfill wastes. A geotechnical assessment is recommended to examine what may be tension cracks in the upper surface of the landfill and determine if there is a risk of slope failure in the landfill. Further work in the form of an engineering review covering physical hazards, fencing, signage, capping, long-term monitoring, or risk assessment should be considered.

A FCSAP NCS evaluation form was prepared for APEC 10 based on the information obtained during the investigation. The resulting score for APEC 10 was 53.2, which corresponds to “Class 2 – Action Likely Required”. A copy of the FCSAP NCS form is included in Appendix D.

TABLE C: SUMMARY OF CONCLUSIONS RECOMMENDATIONS

APEC No.	Name	Area of Environmental Concern (AEC) ? Yes/No	Contaminants of Concern (COCs) in Soil	Estimated Volume of Contaminated Soil (m^3)	Contaminants of Concern (COCs) in Groundwater	NCS Score and Recommendations for Further Work
1	Former Maintenance Garage	Yes	F2, F3, F4	1050 to 1900	None identified (no groundwater)	• Further test pitting to delineate contamination in some areas and determine accurate soil volumes for remedial option evaluation. • Sampling of groundwater, if any present, in monitoring well.
2	Former Fire Fighting Training Area (FFTA)	Yes	Toluene, xylenes, F1, F2, F3, F4	1730 to 3920	None identified (no groundwater)	• FCSAP NCS Score: 60.3 – Class 2 – Action Likely Required • Further test pitting to delineate extents of contamination and determine accurate volumes for remedial option evaluation. • Sampling of groundwater, if any present, in monitoring wells.
3	Former Construction Camp Site	No	None identified (no sampling conducted)	0	None identified (no sampling conducted)	• No further work recommended.
4	Cleared Area, West Edge of Main Quarry	No	APEC location could not be identified	Not applicable	APEC location could not be identified	• No further work recommended.
5	Distance Measuring Equipment (DME) Building	No	Reported contamination could not be identified at either DME Building	0	APEC location could not be identified	• No further work recommended.
6	Main Quarry Landfill	No	APEC location could not be identified	Not applicable	APEC location could not be identified	• No further work recommended.
7	Main Quarry Asphalt Plant Site	No	APEC location could not be identified	Not applicable	APEC location could not be identified	• No further work recommended.

APEC No.	Name	Area of Environmental Concern (AEC) ? Yes/No	Contaminants of Concern (COCs) in Soil	Estimated Volume of Contaminated Soil (m^3)	Contaminants of Concern (COCs) in Groundwater	NCS Score and Recommendations for Further Work
8	Shell Lake, Lots 11-11 and 11-12	Yes	F1, F2, F3, F4, arsenic, lead, zinc	260	None identified; however hydrocarbon sheen observed and cadmium data is inconclusive.	• FCSAP NCS Score: 83.8 – Class 1 – Action Required • Further test pitting to delineate extents of contamination and determine accurate volumes for remedial option evaluation. • Removal of surface debris to allow further investigation for surficial staining. • Removal of the debris, including remains of burned house, to prevent the material from entering the Lake. • Sampling of groundwater, if any present in monitoring well. • Obtain groundwater sample from southeast corner of concrete pad to determine cadmium concentration.
9	Landfill Northwest of Main Quarry	No	None identified	0 (landfill volume: 500)	None identified (no groundwater)	• FCSAP NCS Score: 53.2 – Class 2 – Action Likely Required • An engineering review covering physical hazards, fencing, signage, capping, long-term monitoring, or risk assessment should be considered.
10	Landfill South of Land Treatment Units (LTUs)	Yes	Arsenic, lead, zinc	Not determined (landfill volume: 500 to 1000)	None identified (no groundwater)	• FCSAP NCS Score: 53.2 – Class 2 – Action Likely Required • Further investigation to assess metals contamination in native soils at foot of landfill. • Geotechnical investigation to assess possible tension cracks and determine stability of landfill face. • An engineering review covering physical hazards, fencing, signage, capping, long-term monitoring, or risk assessment should be considered.

7.0 LIMITATIONS

FRANZ prepared this report for PWGSC's and Transport Canada's exclusive use. The report's purpose is to provide PWGSC and Transport Canada with a documentation of the environmental work conducted on the subject site. The material in this report reflects FRANZ's judgment in light of the information available to FRANZ at the time of preparation.

The conclusions in this report are based on information collected from the investigation locations chosen for this study. The locations were selected based on the best information available to us at the time of this study. This does not preclude the possibility that different conditions may be present elsewhere on the property. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce this possibility to an acceptable level.

Third party information reviewed and used to formulate the preliminary remediation plan and conclusions contained in this report is assumed to be complete and correct. FRANZ used this information in good faith and will not accept any responsibility for deficiencies, misinterpretation, or incompleteness of the information contained in documents prepared by third parties.

Professional judgement was exercised in gathering and analysing the information obtained. Like all professional persons rendering advice, we cannot act as absolute insurers of the conclusions we reach; we commit ourselves to care and competence in reaching those conclusions. Our undertaking therefore, is to perform our work, within the limits prescribed by our client, with the usual thoroughness and competence of the profession. No other warranty or representation, expressed or implied, is included or intended in this report.

Any use of this report by a third party and any decision made based on the information contained in this report by the third party is the sole responsibility of the third party. FRANZ will not accept any responsibility for damages resulting from a decision or an action made by a third party based on the information contained in this report.

Sincerely,

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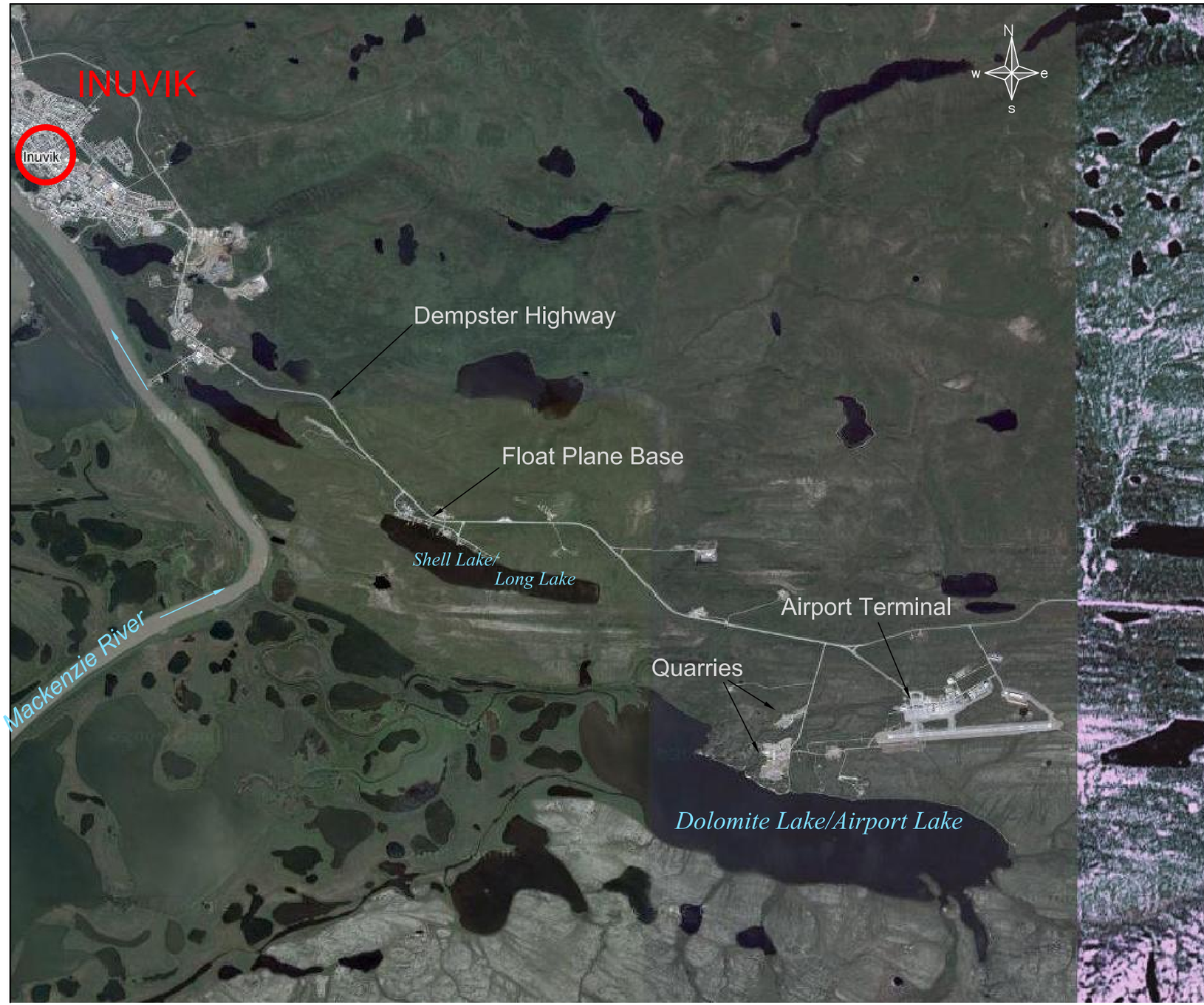
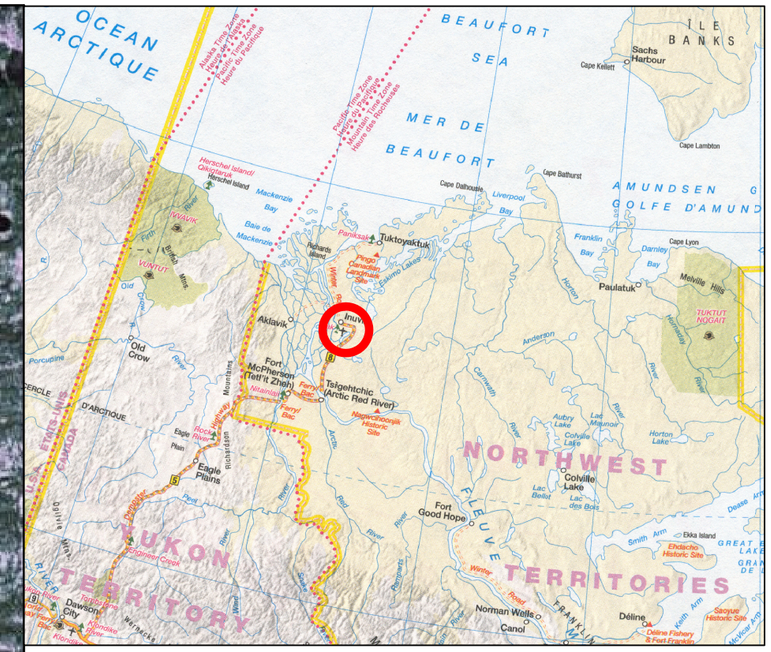
- *Remedial Action Plan Follow-up, Inuvik Airport, Northwest Territories,* Public Works and Government Services Canada, March 1999; and,
- *Environmental Site Investigation Inuvik Airport Maintenance Garage, Inuvik Airport, Inuvik, Northwest Territories*, Environmental Management Technologies (EMT), File No: E1001-007-04, January 2005.

FIGURES





SCALE APPROXIMATELY 1:7,600,000

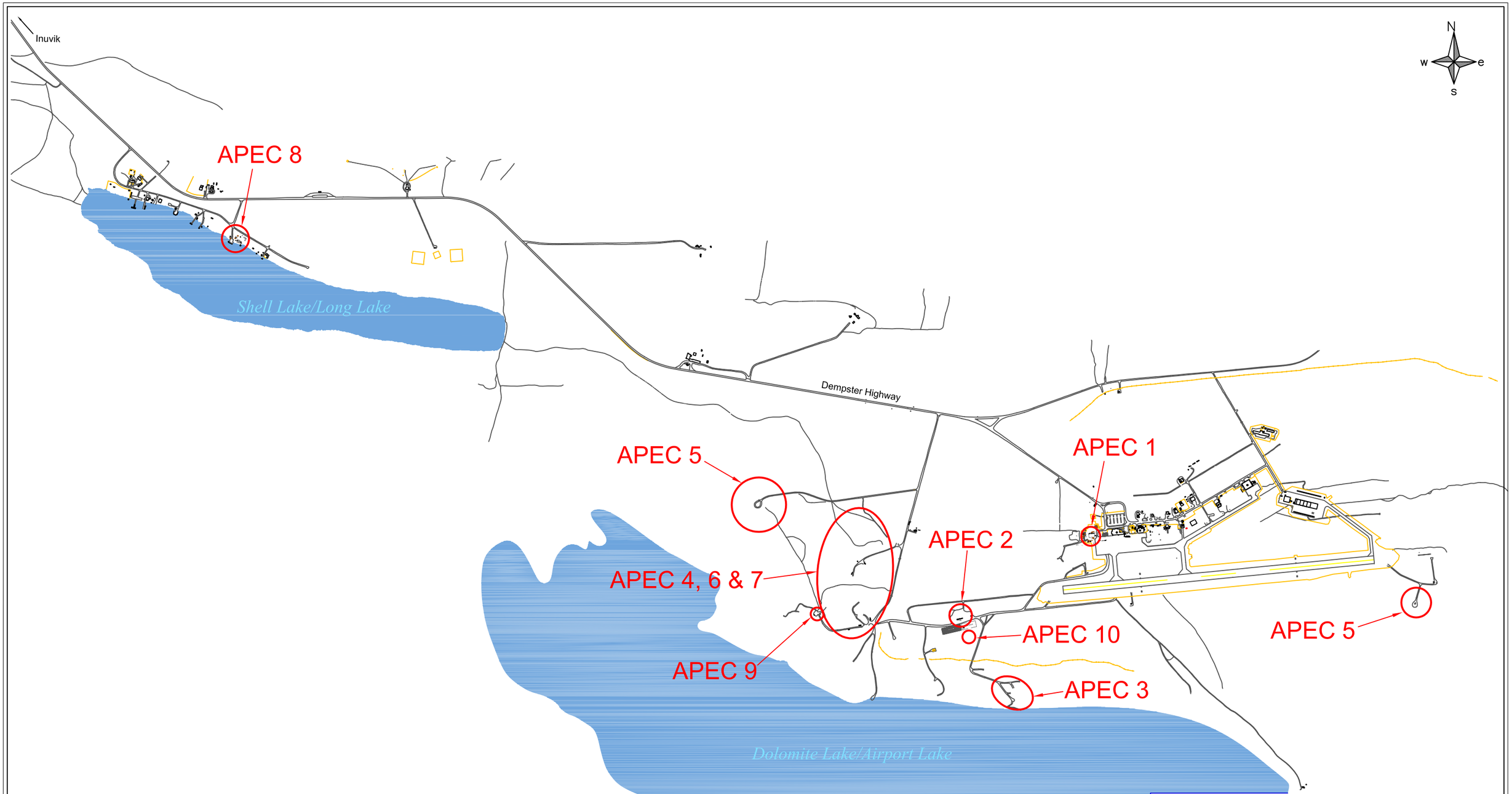
References:

Inset map (above): "*Road Atlas: Canada, U.S.A., Mexico*", MapArt Publishing Corp., 2005.

Satellite image (left): http://maps.google.ca/

Title: SITE LOCATION	
FRANZ ENVIRONMENTAL INC. ♦ CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES ♦	Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES
Date: DECEMBER 2006	Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA
SCALE 1:50,000 750 600 450 300 150 0 metres 750 1500	FIGURE 1-1

Z/projects/1256-0601 Inuvik Airport/Figures/SiteLocation-InuvikAirport.dwg (Figure 1-1)



Title:
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

FRANZ ENVIRONMENTAL INC.
♦ CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES ♦

Project:
PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

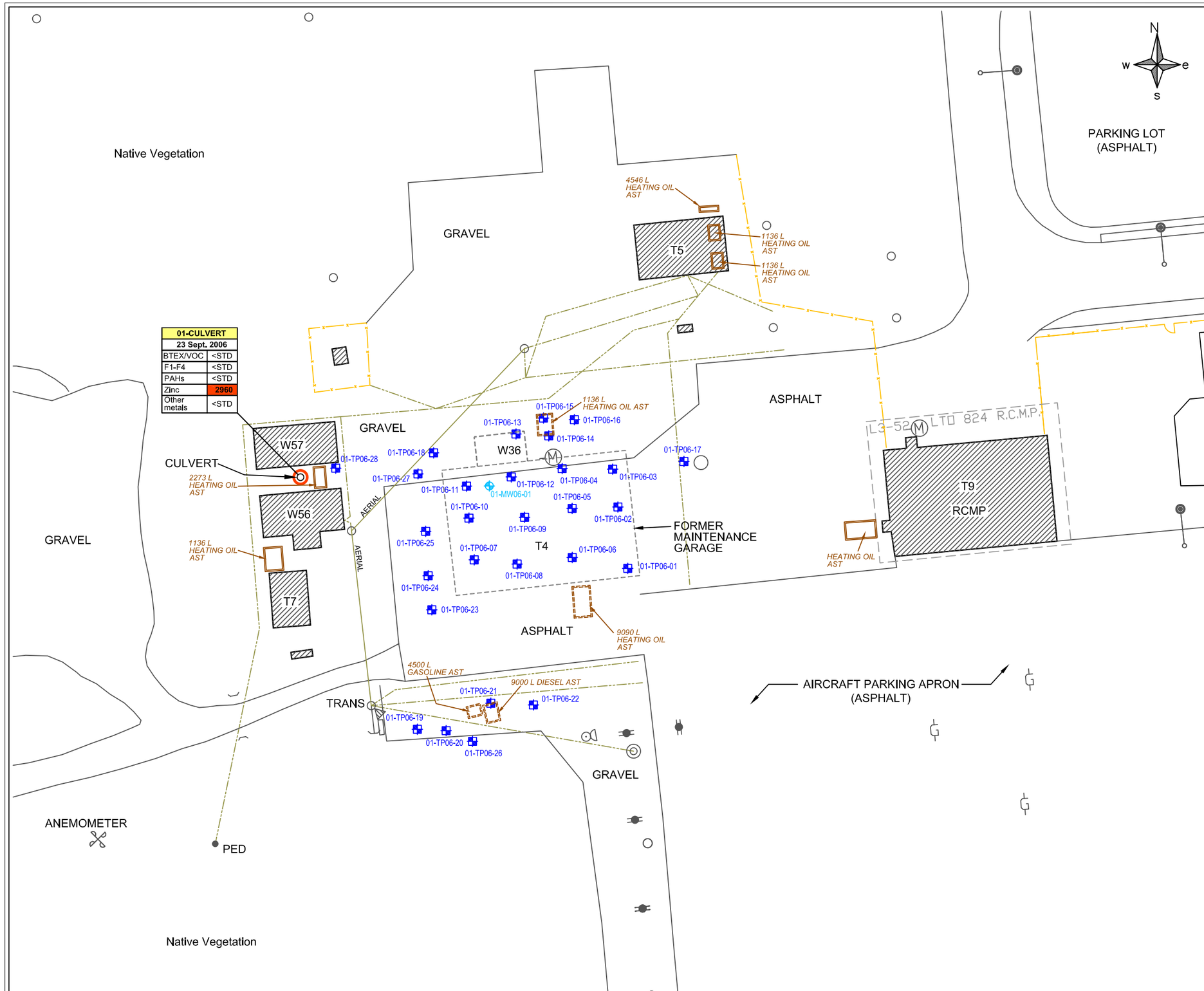
Date:
DECEMBER 2006

Client:
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:21,500
500 400 300 200 100 0 500
metres

FIGURE 1-2

Z/projects/1256-0601 Inuvik Airport/Figures/InuvikAirport-Site.dwg (Figure 1-2)



LEGEND:

- Monitoring Well
- Test Pit
- Former Building
- Existing Building
- Fence
- Underground Utility
- Aerial Utility
- Former Above Ground Storage Tank (AST)
- Existing Above Ground Storage Tank (AST)

01-TP06-04		Sample Location
-01 (0.4-0.6m)		Sample ID (Depth)
Parameters analyzed: F2,F4	<STD	Concentration less than standard
F3	2830	Concentration exceeds standard
Metals	<STD	

All concentrations shown in µg/L

NOTE: For comparison standards, please refer to tables and report

Sampling locations with all concentrations below standards

Sampling locations with one or more parameters at concentrations above standards

Title: APEC 1 - GROUNDWATER ANALYTICAL RESULTS

FRANZ ENVIRONMENTAL INC.
CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES

Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

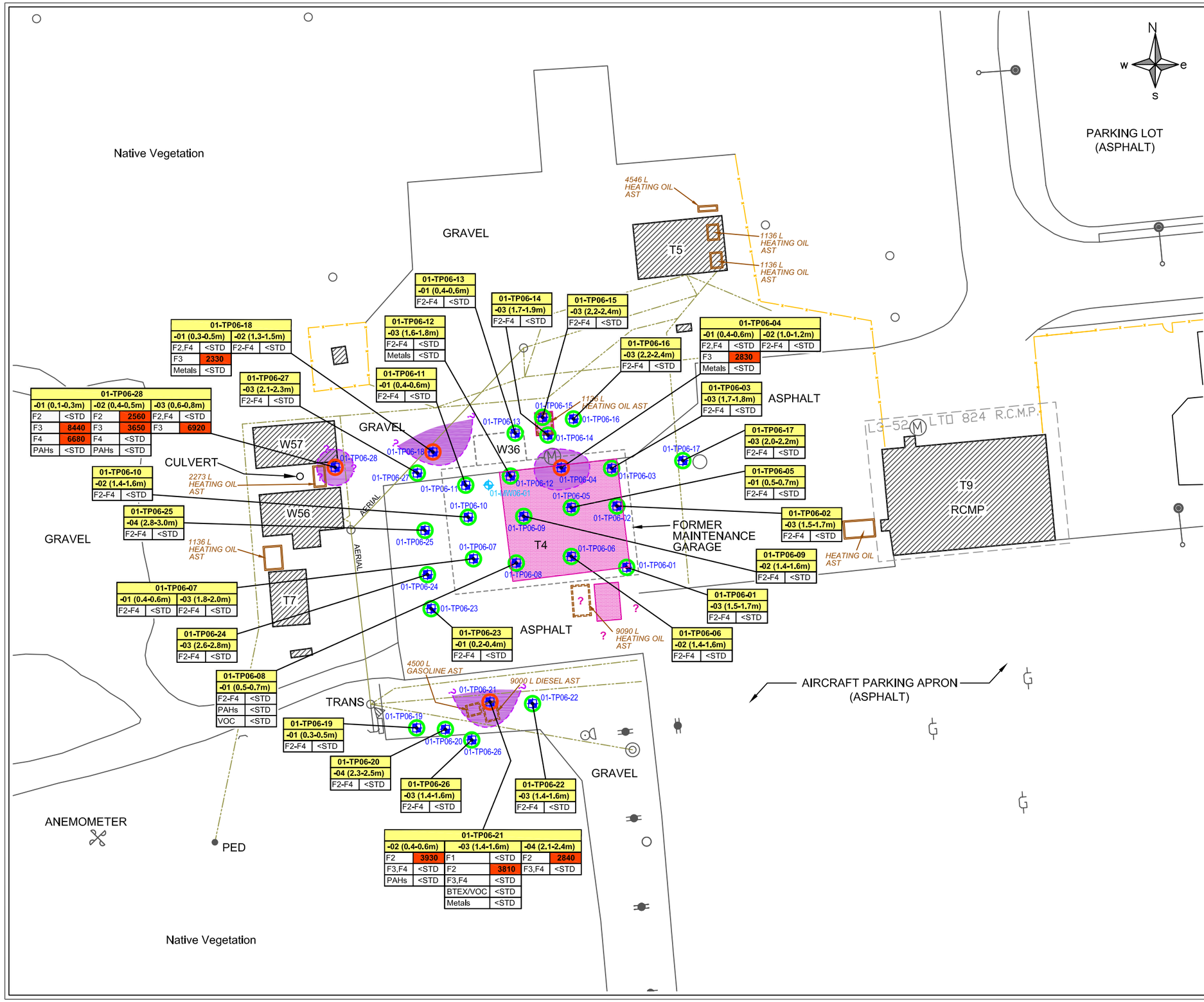
Date: DECEMBER 2006

Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:700
20 10 0 20
metres

FIGURE 5-1

Z/project/1256-0601 Inuvik Airport/figures/InuvikAriport-tkt.dwg (APEC1-GW)



LEGEND:

- Monitoring Well
- Test Pit
- Former Building
- Existing Building
- Fence
- Underground Utility
- Aerial Utility
- Former Above Ground Storage Tank (AST)
- Existing Above Ground Storage Tank (AST)

01-TP06-04		Sample Location
-01 (0.4-0.6m)		Sample ID (Depth)
F2,F4	<STD	Concentration less than applicable standard
F3	2830	Concentration exceeds applicable standard
Metals	<STD	

Parameters analyzed

All concentrations shown in µg/g

NOTE: For comparison standards, please refer to tables and report

- Sampling locations with all concentrations below standards
- Sampling locations with one or more parameters at concentrations above standards
- Inferred extents of soil exceedences
- Extent of near-surface soil exceedances identified by previous investigation

Title:

APEC 1 - SOIL ANALYTICAL RESULTS

FRANZ ENVIRONMENTAL INC.
CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES

Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

Date: DECEMBER 2006

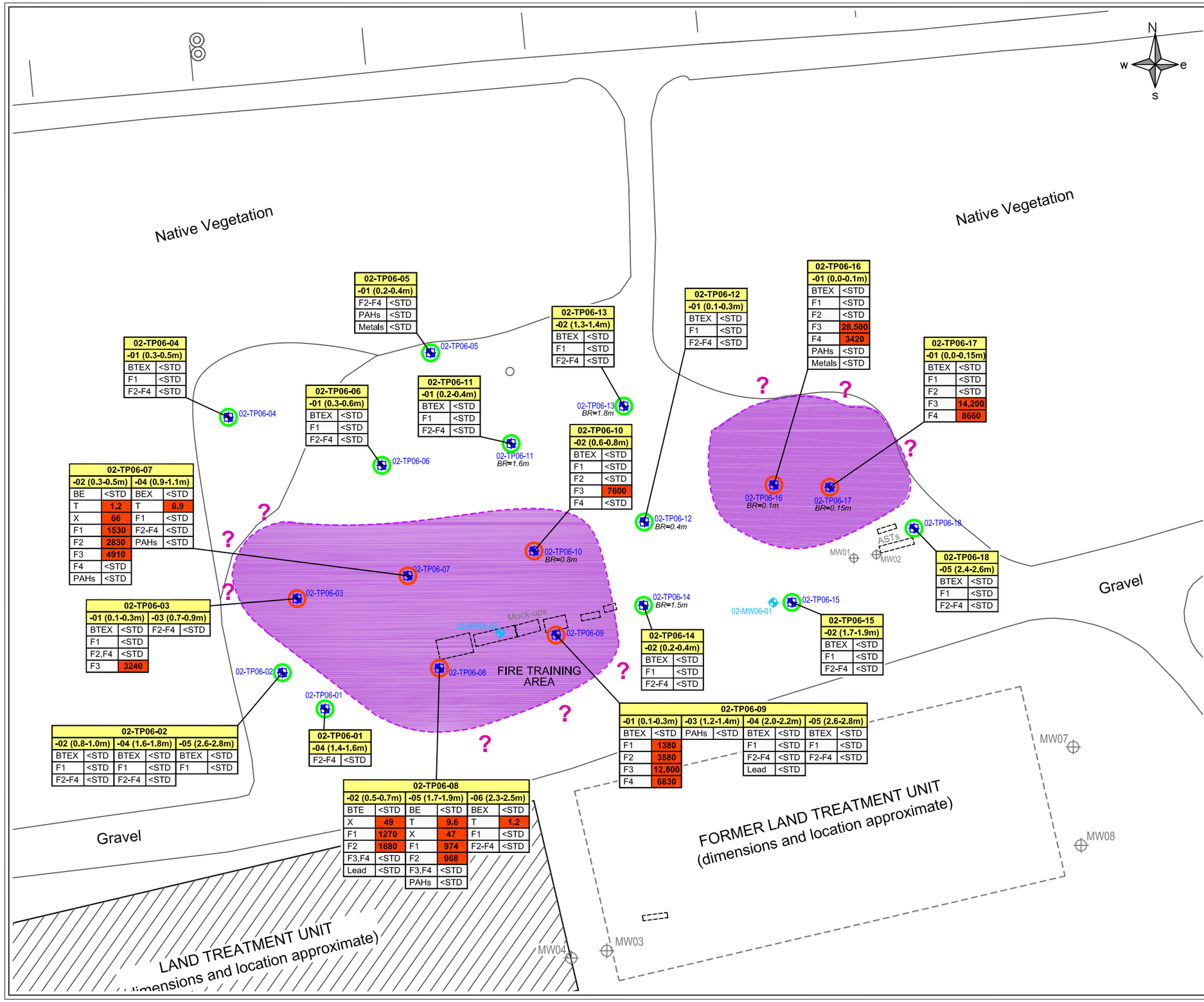
Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:700

20 10 0 20 metres

FIGURE 5-2

Z/project/1256-0601 Inuvik Airport/figures/InuvikAriport-tkt.dwg (APEC1-soil)



02-TP06-05	
-01 (0.2-0.4m)	
F2-F4	<STD
PAHs	<STD
Metals	<STD

02-TP06-04	
-01 (0.3-0.5m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-06	
-01 (0.3-0.6m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-11	
-01 (0.2-0.4m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-13	
-02 (1.3-1.4m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-12	
-01 (0.1-0.3m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-16	
-01 (0.0-0.1m)	
BTEX	<STD
F1	<STD
F2	<STD
F3	28,500
F4	3420
PAHs	<STD
Metals	<STD

02-TP06-17	
-01 (0.0-0.15m)	
BTEX	<STD
F1	<STD
F2	<STD
F3	14,200
F4	8660

02-TP06-10	
-02 (0.6-0.8m)	
BTEX	<STD
F1	<STD
F2	<STD
F3	7600
F4	<STD

02-TP06-07			
-02 (0.3-0.5m)		-04 (0.9-1.1m)	
BE	<STD	BEX	<STD
T	1.2	T	0.9
X	66	F1	<STD
F1	1530	F2-F4	<STD
F2	2830	PAHs	<STD
F3	4910		
F4	<STD		
PAHs	<STD		

02-TP06-03			
-01 (0.1-0.3m)		-03 (0.7-0.9m)	
BTEX	<STD	F2-F4	<STD
F1	<STD		
F2,F4	<STD		
F3	3240		

02-TP06-18	
-05 (2.4-2.6m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-15	
-02 (1.7-1.9m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-14	
-02 (0.2-0.4m)	
BTEX	<STD
F1	<STD
F2-F4	<STD

02-TP06-02					
-02 (0.8-1.0m)		-04 (1.6-1.8m)		-05 (2.6-2.8m)	
BTEX	<STD	BTEX	<STD	BTEX	<STD
F1	<STD	F1	<STD	F1	<STD
F2-F4	<STD	F2-F4	<STD		

02-TP06-01	
-04 (1.4-1.6m)	
F2-F4	<STD

02-TP06-09							
-01 (0.1-0.3m)		-03 (1.2-1.4m)		-04 (2.0-2.2m)		-05 (2.6-2.8m)	
BTEX	<STD	PAHs	<STD	BTEX	<STD	BTEX	<STD
F1	1380			F1	<STD	F1	<STD
F2	3580			F2-F4	<STD	F2-F4	<STD
F3	12,800			Lead	<STD		
F4	6830						

02-TP06-08					
-02 (0.5-0.7m)		-05 (1.7-1.9m)		-06 (2.3-2.5m)	
BTE	<STD	BE	<STD	BEX	<STD
X	49	T	9.6	T	1.2
F1	1270	X	47	F1	<STD
F2	1880	F1	974	F2-F4	<STD
F3,F4	<STD	F2	968		
Lead	<STD	F3,F4	<STD		
		PAHs	<STD		

LEGEND:

- Monitoring Well
- Test Pit
- Former Structure
- Existing Structure
- MW03 Pre-Existing Monitoring Well
- Fence
- Underground Utility
- Arleal Utility
- Former Above Ground Storage Tank (AST)
- Existing Above Ground Storage Tank (AST)

01-TP06-04		
-01 (0.4-0.6m)		Sample Location; Sample ID (Depth)
Parameters analyzed: F2,F4	<STD	Concentration less than applicable standard
F3	2830	Concentration exceeds applicable standard
Metals	<STD	

All concentrations shown in µg/g

NOTE: For applicable standards, please refer to tables and report

- Sampling locations with all concentrations below standards
- Sampling locations with one or more parameters at concentrations above standards
- Inferred extents of soil exceedences

Title: APEC 2 - SOIL ANALYTICAL RESULTS

FRANZ ENVIRONMENTAL INC.
CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES

Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

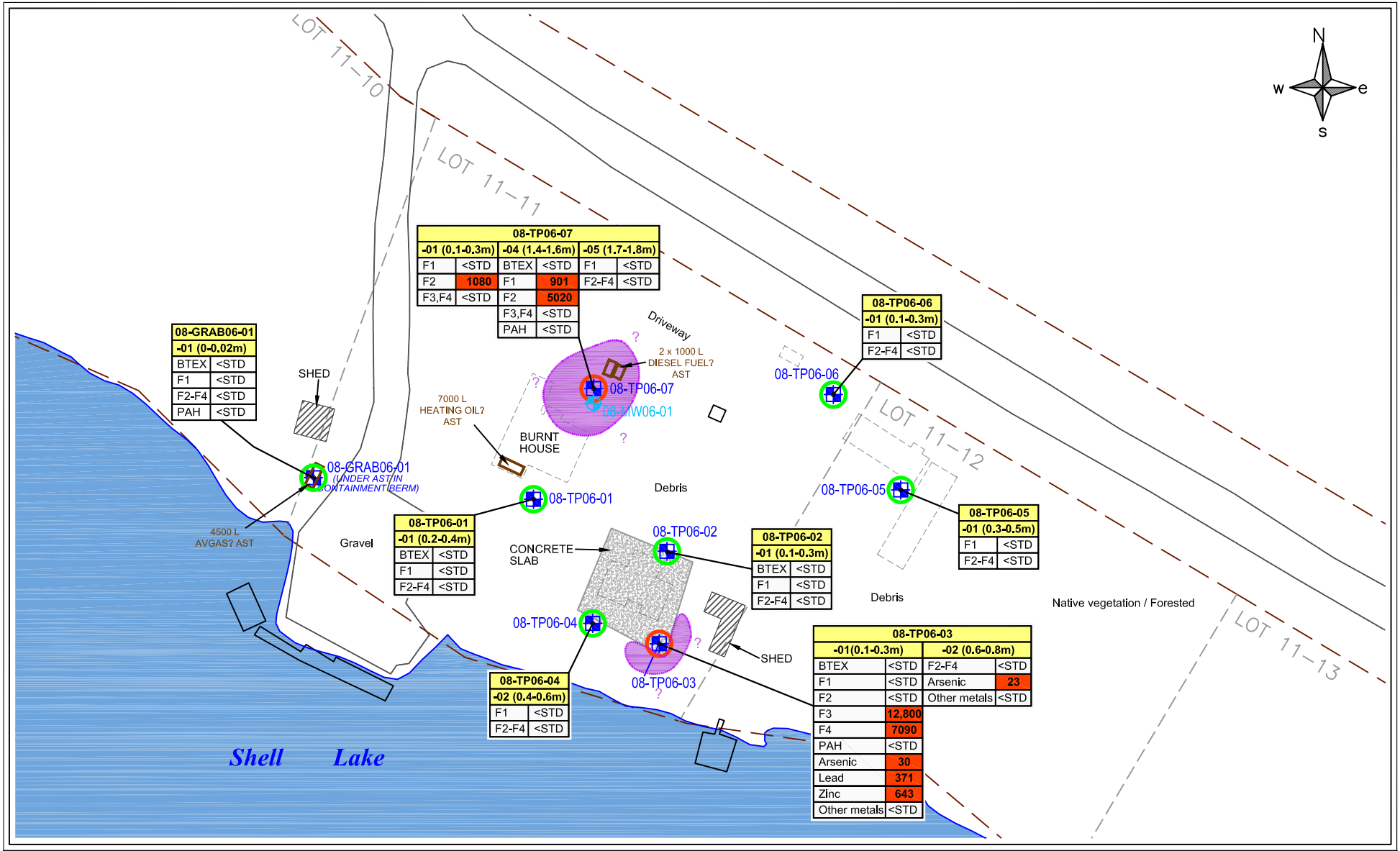
Date: DECEMBER 2006

Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:700
20 10 0 20
metres

FIGURE 5-3

Z/project/1256-0601 Inuvik Airport/figures/InuvikAriport-tkt.dwg (APEC2)



LEGEND:

- Monitoring Well
- Test Pit
- Former Building
- Existing Building
- Above Ground Storage Tank (existing)
- Sampling locations with one or more parameters at concentrations above standards
- Sampling locations with all concentrations below standards
- Inferred extents of soil exceedences

01-TP06-04		← Sample Location
-01 (0.4-0.6m)		← Sample ID (Depth)
Parameters analyzed: F2,F4	<STD	← Concentration less than applicable standard
F3	2830	← Concentration exceeds applicable standard
Metals	<STD	

All concentrations shown in µg/g

NOTE: For applicable standards, please refer to tables and report

Title: APEC 8 - SHELL LAKE SOIL ANALYTICAL RESULTS

FRANZ ENVIRONMENTAL INC.
♦ CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES ♦

Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

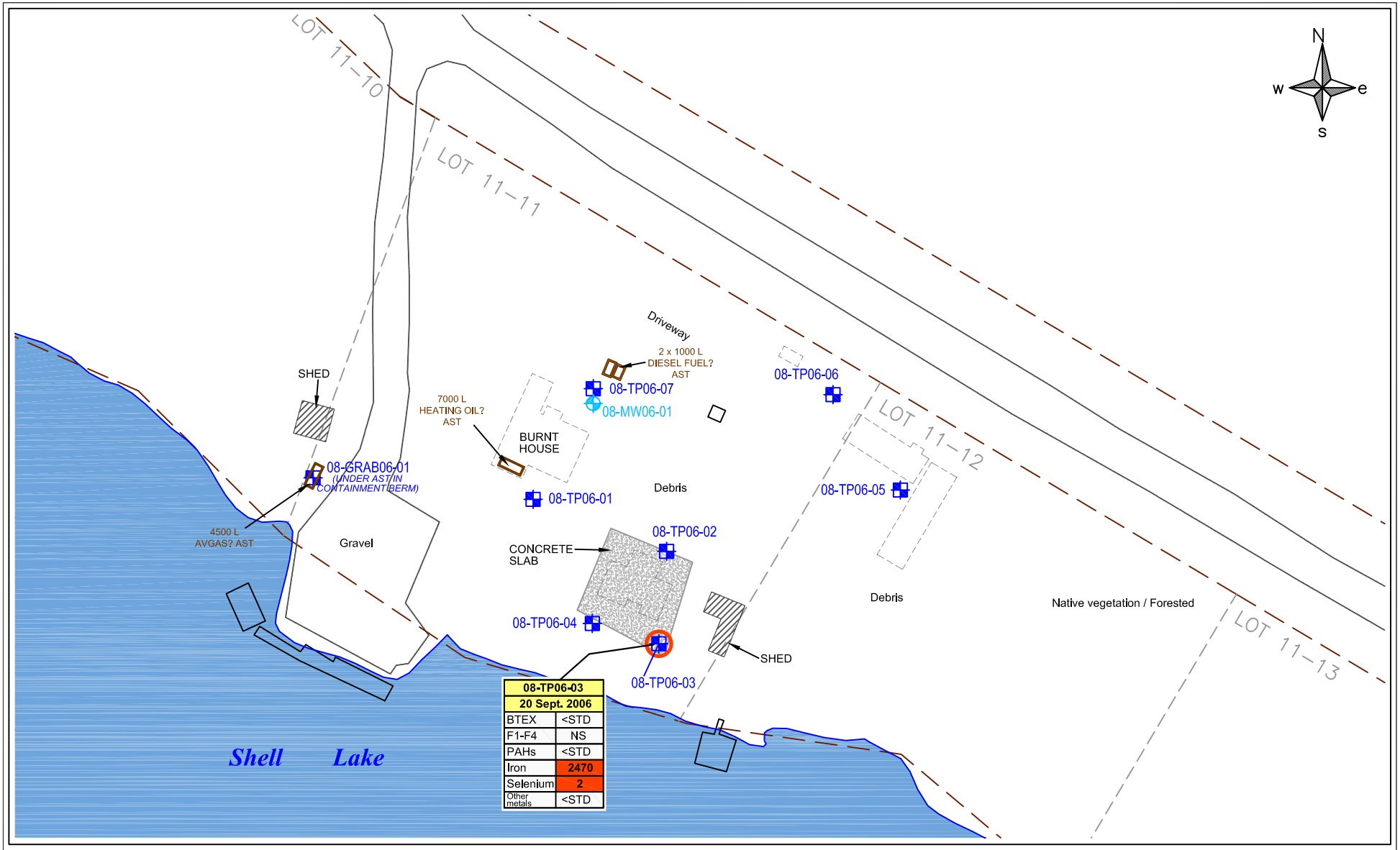
Date: DECEMBER 2006

Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:800
20 10 0 20
metres

FIGURE 5-4

Z/project/1256-0601 Inuvik Airport/figures/Inuvik-Shelllaket-tkt.dwg (APEC 8-soil)



LEGEND:

- Monitoring Well
- Test Pit
- Former Building
- Existing Building
- Above Ground Storage Tank (existing)
- Sampling locations with one or more parameters at concentrations above standards
- Sampling locations with all concentrations below standards

01-TP06-04		Sample Location
-01 (0.4-0.6m)		Sample ID (Depth)
F2,F4	<STD	Concentration less than standard
F3	2830	Concentration exceeds standard
Metals	<STD	

Parameters analyzed

All concentrations shown in µg/L

NOTE: For comparison standards, please refer to tables and report

Title: APEC 8 - GROUNDWATER ANALYTICAL RESULTS

FRANZ ENVIRONMENTAL INC.
♦ CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES ♦

Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

Date: DECEMBER 2006

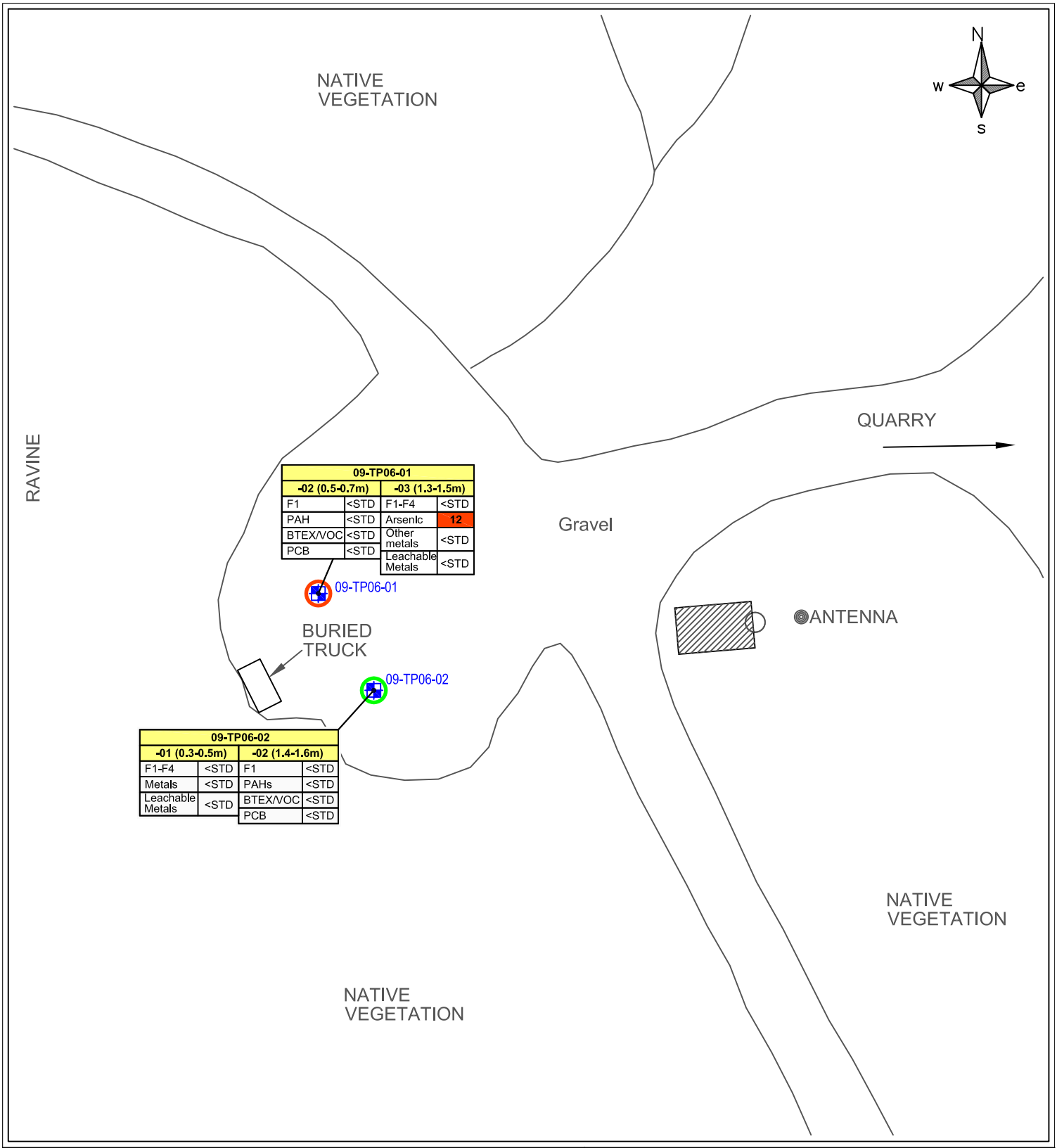
Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:800

20 10 0 20 metres

FIGURE 5-5

Z/project/1256-0601 Inuvik Airport/figures/Inuvik-Shelllaket-tkt.dwg (APEC 8-GW)



LEGEND:

- Monitoring Well
- Test Pit
- Former Building
- Existing Building

01-TP06-04	
-01 (0.4-0.6m)	
F2,F4	<STD
F3	2830
Metals	<STD

Parameters analyzed

Sample Location

Sample ID (Depth)

Concentration exceeds applicable standard

Concentration less than applicable standard

All concentrations shown in µg/g

NOTE: For applicable standards, please refer to tables and report

Sampling locations with all concentrations below applicable standards

Sampling locations with one or more parameters at concentrations above applicable standards

Title: APEC 9 - SOIL ANALYTICAL RESULTS

FRANZ ENVIRONMENTAL INC.
♦ CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES ♦

Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

Date: DECEMBER 2006

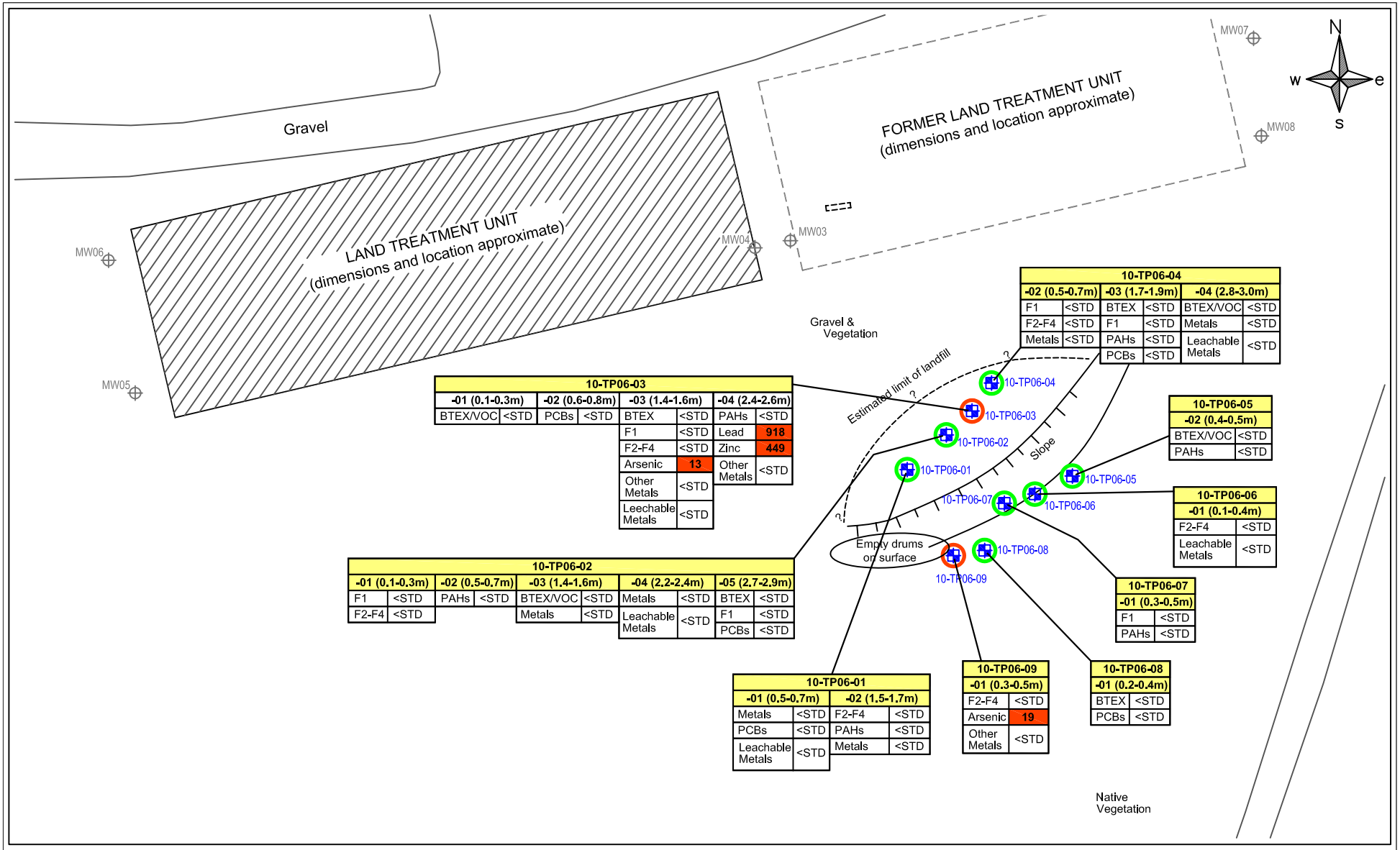
Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:400

10 8 6 4 2 0 10
metres

FIGURE 5-6

Z/project/1256-0601 Inuvik Airport/figures/InuvikAriport-tkt.dwg (APEC 9)



10-TP06-03					
-01 (0.1-0.3m)		-02 (0.6-0.8m)		-03 (1.4-1.6m)	
BTEX/VOC	<STD	PCBs	<STD	BTEX	<STD
				F1	<STD
				F2-F4	<STD
				Arsenic	13
				Other Metals	<STD
				Leechable Metals	<STD

-04 (2.4-2.6m)	
PAHs	<STD
Lead	918
Zinc	449
Other Metals	<STD

10-TP06-04					
-02 (0.5-0.7m)		-03 (1.7-1.9m)		-04 (2.8-3.0m)	
F1	<STD	BTEX	<STD	BTEX/VOC	<STD
F2-F4	<STD	F1	<STD	Metals	<STD
Metals	<STD	PAHs	<STD	Leachable Metals	<STD
		PCBs	<STD		

10-TP06-05	
-02 (0.4-0.5m)	
BTEX/VOC	<STD
PAHs	<STD

10-TP06-06	
-01 (0.1-0.4m)	
F2-F4	<STD
Leachable Metals	<STD

10-TP06-07	
-01 (0.3-0.5m)	
F1	<STD
PAHs	<STD

10-TP06-02									
-01 (0.1-0.3m)		-02 (0.5-0.7m)		-03 (1.4-1.6m)		-04 (2.2-2.4m)		-05 (2.7-2.9m)	
F1	<STD	PAHs	<STD	BTEX/VOC	<STD	Metals	<STD	BTEX	<STD
F2-F4	<STD			Metals	<STD	Leachable Metals	<STD	F1	<STD
								PCBs	<STD

10-TP06-01			
-01 (0.5-0.7m)		-02 (1.5-1.7m)	
Metals	<STD	F2-F4	<STD
PCBs	<STD	PAHs	<STD
Leachable Metals	<STD	Metals	<STD

10-TP06-09	
-01 (0.3-0.5m)	
F2-F4	<STD
Arsenic	19
Other Metals	<STD

10-TP06-08	
-01 (0.2-0.4m)	
BTEX	<STD
PCBs	<STD

LEGEND:

- Monitoring Well
- Test Pit
- Former Structure
- Existing Structure
- MW03 Pre-Existiong Monitoring Well
- Sampling locations with one or more parameters at concentrations above standards
- Sampling locations with all concentrations below standards

01-TP06-04	
-01 (0.4-0.6m)	
F2,F4	<STD
F3	2830
Metals	<STD

Parameters analyzed

- Sample Location
- Sample ID (Depth)
- Concentration less than applicable standard
- Concentration exceeds applicable standard

All concentrations shown in µg/g

NOTE: For applicable standards, please refer to tables and report

Title: APEC 10 - SOIL ANALYTICAL RESULTS

FRANZ ENVIRONMENTAL INC.
CONSULTING ♦ ENGINEERING ♦ TECHNOLOGIES

Project: PHASE II AND III ENVIRONMENTAL SITE ASSESSMENT, MIKE ZUBKO AIRPORT, INUVIK, NORTHWEST TERRITORIES

Date: DECEMBER 2006

Client: PUBLIC WORKS AND GOVERNMENT SERVICES CANADA FOR TRANSPORT CANADA

SCALE 1:1000
25 20 15 10 5 0 25
metres

FIGURE 5-7

Z/project/1256-0601 Inuvik Airport/figures/InuvikAriport-tkt.dwg (APEC 10)

TABLES

General and CWS Endnotes for Soil

Endnotes

General Endnotes:

All values are reported as µg/g unless otherwise indicated.

10	=	Value is greater than the applicable CCME or CWS Guideline
NS	=	No Standard
-	=	Not Analyzed
NA	=	Not Applicable
NR	=	Not Recorded
NSA	=	Sample was submitted to laboratory but not scheduled for any analyses
IP	=	Some data for the sample is either still in progress at the lab or not yet received by Franz
RPD	=	Relative percent difference is calculated as the difference over the average of the two values and is only calculated when both concentrations are greater than 5 times the method detection limit.

Laboratory Notes

Refer to Laboratory reports for sample specific notes

< = less then method detection limit (mdl)

General CWS for Petroleum Hydrocarbons (PHC) in Soil

(B) *Canada-Wide Standards (CWS) for Petroleum Hydrocarbons (PHC) in Soil* , Endorsed by CCME Council of Ministers, April 20-May 1, 2001, Winnipeg

(i) PHC are considered to be comprised of 4 fractions

(ii) PHC exclude known carcinogens such as benzene and benzo(a)pyrene, which are addressed as target compounds.

(iii) PHC exclude toluene , ethylbenzene, and xylenes (TEX), which are addressed as target compounds.

PHC sub-fractions

The relative composition of each carbon (equivalent) range sub-fraction within each fraction, and the relative composition of aliphatics and aromatics within each sub-fraction.

F1 35% >C_5 to C_6(100% aliphatics); 35% >C_6 to C_8(100% aliphatics); 30% >C_8 to C_{10}(80% aliphatics, 20% aromatics);

F2 45% $C_{>10}$ to C_{12}(80% aliphatics, 20% aromatics); 55% >C_{12} to C_{16}(80% aliphatics, 20% aromatics);

F3 70% >C_{16} to C_{21}(80% aliphatics, 20% aromatics); 30% >C_{21} to C_{34}(80% aliphatics, 20% aromatics); and

F4 100% >C_{34}(80% aliphatics, 20% aromatics).

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	CWS Soil CL/IL (Fine)	01-TP06-08-1	01-TP06-21-03	01-TP06-28-02	01-TP06-28-03	02-TP06-02-02	02-TP06-02-04
Sample Depth (m):									**0.5-0.7**	**1.4-1.6**	**0.4-0.5**	**0.6-0.8**	**0.8-1.0**	**1.6-1.8**
Lab ID #:									*C80525*	*C80587*	*C82517*	*C82518*	*C82536*	*C82539*
Sample Date:									*15-Sep-06*	*16-Sep-06*	*17-Sep-06*	*17-Sep-06*	*17-Sep-06*	*17-Sep-06*
Prepared by:									***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Volatiles														
Benzene	5	5	NS	NS	NS	NS	NS	NS	<0.005	<0.005	<0.0050	<0.0050	<0.0050	0.074
Toluene	0.8	0.8	NS	NS	NS	NS	NS	NS	<0.02	<0.02	<0.020	<0.020	<0.020	0.14
Ethylbenzene	20	20	NS	NS	NS	NS	NS	NS	<0.01	<0.01	<0.010	<0.010	<0.010	0.33
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	NS	<0.04	<0.04	<0.020	<0.020	<0.020	3.6
o-Xylene	NS	NS	NS	NS	NS	NS	NS	NS	<0.02	<0.02	0.031	<0.020	0.038	1.3
Styrene	50	50	NS	NS	NS	NS	NS	NS	<0.02	<0.02	-	-	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	NS	<0.04	<0.04	0.031	<0.020	0.038	4.9
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	660	-	150	118	61	77	26
Volatiles														
F1 (C6-C10) - BTEX							NS	NA	-	150	118	61	77	21

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable GNWT criteria, CCME Standard or CWS Guideline

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	02-TP06-02-05	02-TP06-03-01	02-TP06-04-01	02-TP06-06-01	02-TP06-07-02	02-TP06-DUP7	RPD
Sample Depth (m):								**2.6-2.8**	**0.1-0.3**	**0.3-0.5**	**0.3-0.6**	**0.3-0.5**	**02-TP06-07-02**	
Lab ID #:								*C82540*	*C87432*	*C87446*	*C87453*	*C87459*	*C87552*	
Sample Date:								*17-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	
Prepared by:								***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	
Volatiles														
Benzene	5	5	NS	NS	NS	NS	NS	0.024	<0.0050	<0.0050	<0.0050	0.16	<0.0050	n/a
Toluene	0.8	0.8	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	<0.020	**1.2**	0.15	156%
Ethylbenzene	20	20	NS	NS	NS	NS	NS	<0.010	<0.010	<0.010	<0.010	4.7	0.19	184%
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	<0.020	40	35	13%
o-Xylene	NS	NS	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	<0.020	26	26	0%
Styrene	50	50	NS	NS	NS	NS	NS	-	-	-	-	-	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	<0.020	66	60	10%
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	<10	<10	<10	<10	**1530**	**1130**	30%
Volatiles														
F1 (C6-C10) - BTEX							NS	<10	<10	<10	<10	1460	1030	35%

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable GNWT criteria, CCME Standard or CWS Guideline

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	02-TP06-07-04	02-TP06-08-02	02-TP06-08-05	02-TP06-08-06	02-TP06-09-01	02-TP06-09-04	02-TP06-09-05
Sample Depth (m):								**0.9-1.1**	**0.5-0.7**	**1.7-1.9**	**2.3-2.5**	**0.1-0.3**	**2.0-2.2**	**2.6-2.8**
Lab ID #:								*C87462*	*C87466*	*C87478*	*C87480*	*C87492*	*C87495*	*C87496*
Sample Date:								*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*
Prepared by:								***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Volatiles														
Benzene	5	5	NS	NS	NS	NS	NS	0.26	0.45	3.8	1.1	0.1	0.8	0.27
Toluene	0.8	0.8	NS	NS	NS	NS	NS	**0.9**	0.45	**9.6**	**1.2**	0.068	0.2	0.21
Ethylbenzene	20	20	NS	NS	NS	NS	NS	0.098	2.5	7.4	0.61	0.49	1.1	0.031
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	0.24	37	36	2.2	5.1	2.9	0.062
o-Xylene	NS	NS	NS	NS	NS	NS	NS	0.068	13	11	0.94	0.49	1.7	<0.020
Styrene	50	50	NS	NS	NS	NS	NS	-	-	-	-	-	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	0.31	49	47	3.1	5.5	4.1	0.062
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	16	**1270**	**974**	47	**1380**	70	14
Volatiles														
F1 (C6-C10) - BTEX							NS	14	1220	906	41	1380	64	14

Notes (Refer to endnotes for complete list)

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NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	02-TP06-10-2	02-TP06-11-01	02-TP06-12-01	02-TP06-DUP8	RPD	02-TP06-13-02	02-TP06-14-02
Sample Depth (m):								**0.6-0.8**	**0.2-0.4**	**0.1-0.3**	**02-TP06-12-01**		**1.3-1.4**	**0.2-0.4**
Lab ID #:								*C87498*	*C87538*	*C87551*	*C87553*		*C87504*	*C87507*
Sample Date:								*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*		*19-Sep-06*	*19-Sep-06*
Prepared by:								***Franz***	***Franz***	***Franz***	***Franz***		***Franz***	***Franz***
Volatiles														
Benzene	5	5	NS	NS	NS	NS	NS	0.11	0.013	<0.0050	<0.0050	n/a	<0.0050	<0.0050
Toluene	0.8	0.8	NS	NS	NS	NS	NS	0.031	<0.020	<0.020	<0.020	n/a	<0.020	<0.020
Ethylbenzene	20	20	NS	NS	NS	NS	NS	0.38	<0.010	<0.010	<0.010	n/a	<0.010	<0.010
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	<0.020	n/a	<0.020	<0.020
o-Xylene	NS	NS	NS	NS	NS	NS	NS	<0.020	0.035	<0.020	<0.020	n/a	<0.020	<0.020
Styrene	50	50	NS	NS	NS	NS	NS	-	-	-	-	-	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	<0.020	0.035	<0.020	<0.020	n/a	<0.020	<0.020
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	138	15	<10	<10	n/a	<10	<10
Volatiles														
F1 (C6-C10) - BTEX							NS	138	15	<10	<10	n/a	<10	<10

Notes (Refer to endnotes for complete list)

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NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	02-TP06-15-02	02-TP06-16-01	02-TP06-DUP9	RPD	02-TP06-17-01	02-TP06-18-05	08-TP06-01-01
Sample Depth (m):								**1.7-1.9**	**0.0-0.1**	**02-TP06-16-01**		**0.0-0.15**	**2.4-2.6**	**0.2-0.4**
Lab ID #:								*C87512*	*C87515*	*C87537*		*C87516*	*C87521*	*C87839*
Sample Date:								*19-Sep-06*	*19-Sep-06*	*19-Sep-06*		*19-Sep-06*	*19-Sep-06*	*20-Sep-06*
Prepared by:								***Franz***	***Franz***	***Franz***		***Franz***	***Franz***	***Franz***
Volatiles														
Benzene	5	5	NS	NS	NS	NS	NS	<0.0050	<0.0050	<0.0050	n/a	<0.0050	0.0069	<0.0050
Toluene	0.8	0.8	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	n/a	<0.020	<0.020	<0.020
Ethylbenzene	20	20	NS	NS	NS	NS	NS	<0.010	<0.010	<0.010	n/a	<0.010	<0.010	<0.010
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	n/a	<0.020	<0.020	<0.020
o-Xylene	NS	NS	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	n/a	<0.020	0.037	<0.020
Styrene	50	50	NS	NS	NS	NS	NS	-	-	-	-	-	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	<0.020	<0.020	<0.020	n/a	<0.020	0.037	<0.020
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	<10	<10	<10	n/a	11	21	<10
Volatiles														
F1 (C6-C10) - BTEX							NS	<10	<10	<10	n/a	11	21	<10

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable GNWT criteria, CCME Standard or CWS Guideline

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	08-TP06-02-01	08-TP06-03-01	08-TP06-04-02	08-TP06-05-01	08-TP06-DUP10	RPD	08-TP06-06-01
Sample Depth (m):								0.1-0.3	0.1-0.3	0.4-0.6	0.3-0.5	08-TP06-05-01		0.1-0.3
Lab ID #:								*C87842*	*C87847*	*C87851*	*C87855*	*C87866*		*C87858*
Sample Date:								*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*		*20-Sep-06*
Prepared by:								***Franz***	***Franz***	***Franz***	***Franz***	***Franz***		***Franz***
Volatiles														
Benzene	5	5	NS	NS	NS	NS	NS	0.025	0.026	-	-	-	-	-
Toluene	0.8	0.8	NS	NS	NS	NS	NS	0.25	0.19	-	-	-	-	-
Ethylbenzene	20	20	NS	NS	NS	NS	NS	0.034	0.028	-	-	-	-	-
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	0.26	<0.020	-	-	-	-	-
o-Xylene	NS	NS	NS	NS	NS	NS	NS	0.079	<0.020	-	-	-	-	-
Styrene	50	50	NS	NS	NS	NS	NS	-	-	-	-	-	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	0.34	<0.020	-	-	-	-	-
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	<10	278	16	<10	<10	n/a	<10
Volatiles														
F1 (C6-C10) - BTEX							NS	<10	278	-	-	-	-	-

Notes (Refer to endnotes for complete list)

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\- Not analyzed

NA - Not applicable

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*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	08-TP06-07-01	08-TP06-07-04	08-TP06-07-05	08-GRAB06-01-01	09-TP06-01-02	09-TP06-01-03
Sample Depth (m):								**0.1-0.3**	**1.4-1.6**	**1.7-1.8**	**0.0-0.02**	**0.5-0.7**	**1.3-1.5**
Lab ID #:								*C87861*	*C87864*	*C87865*	*C87867*	*C87832*	*C87833*
Sample Date:								*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*
Prepared by:								***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Volatiles													
Benzene	5	5	NS	NS	NS	NS	NS	-	<0.0050	-	<0.0050	<0.005	-
Toluene	0.8	0.8	NS	NS	NS	NS	NS	-	0.074	-	0.16	<0.02	-
Ethylbenzene	20	20	NS	NS	NS	NS	NS	-	0.069	-	<0.010	<0.01	-
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	-	0.31	-	<0.020	<0.04	-
o-Xylene	NS	NS	NS	NS	NS	NS	NS	-	0.18	-	<0.020	<0.02	-
Styrene	50	50	NS	NS	NS	NS	NS	-	-	-	-	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	-	0.49	-	<0.020	<0.04	-
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	85	**901**	<10	<10	<10	<10
Volatiles													
F1 (C6-C10) - BTEX							NS	-	900	-	<10	<10	-

Notes (Refer to endnotes for complete list)

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\- Not analyzed

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*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	09-TP06-02-01	09-TP06-02-02	10-TP06-02-01	10-TP06-02-03	10-TP06-02-05	10-TP06-03-01	10-TP06-03-03
Sample Depth (m):								**0.3-0.5**	**1.4-1.6**	**0.1-0.3**	**1.4-1.6**	**2.7-2.9**	**0.1-0.3**	**1.3-1.5**
Lab ID #:								*C87836*	*C87837*	*C87524*	*C87526*	*C87528*	*C87529*	*C87531*
Sample Date:								*20-Sep-06*	*20-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*
Prepared by:								***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Volatiles														
Benzene	5	5	NS	NS	NS	NS	NS	-	<0.005	-	<0.005	<0.0050	<0.005	<0.0050
Toluene	0.8	0.8	NS	NS	NS	NS	NS	-	<0.02	-	<0.02	<0.020	<0.02	<0.020
Ethylbenzene	20	20	NS	NS	NS	NS	NS	-	<0.01	-	<0.01	<0.010	<0.01	<0.010
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	-	<0.04	-	<0.04	<0.020	<0.04	<0.020
o-Xylene	NS	NS	NS	NS	NS	NS	NS	-	<0.02	-	<0.02	<0.020	<0.02	<0.020
Styrene	50	50	NS	NS	NS	NS	NS	-	-	-	<0.02	-	<0.02	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	-	<0.04	-	<0.04	<0.020	<0.04	<0.020
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	<10	<10	<10	-	<10	-	<10
Volatiles														
F1 (C6-C10) - BTEX							NS	-	<10	-	-	<10	-	<10

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable GNWT criteria, CCME Standard or CWS Guideline

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 1

Analytical Results for BTEX/VPH, CWS F1 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	GNWT Tier 1 Soil CL/IL (coarse/surface)	GNWT Tier 1 Soil CL/IL (fine/surface)	GNWT Tier 1 Soil CL/IL (coarse/subsurface)	GNWT Tier 1 Soil CL/IL (fine/subsurface)	CWS Soil CL/IL (coarse)	10-TP06-04-02	10-TP06-04-03	10-TP06-04-04	10-TP06-05-02	10-TP06-07-01	10-TP06-08-01
Sample Depth (m):								**0.5-0.7**	**1.7-1.9**	**2.8-3.0**	**0.4-0.5**	**0.3-0.5**	**0.2-0.4**
Lab ID #:								*C87534*	*C87535*	*C87536*	*C93205*	*C93207*	*C93208*
Sample Date:								*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*22-Sep-06*	*22-Sep-06*	*22-Sep-06*
Prepared by:								***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Volatiles													
Benzene	5	5	NS	NS	NS	NS	NS	-	<0.0050	<0.005	<0.005	-	<0.0050
Toluene	0.8	0.8	NS	NS	NS	NS	NS	-	<0.020	<0.02	<0.02	-	<0.020
Ethylbenzene	20	20	NS	NS	NS	NS	NS	-	<0.010	<0.01	<0.01	-	<0.010
m & p-Xylene	NS	NS	NS	NS	NS	NS	NS	-	<0.020	<0.04	<0.04	-	<0.020
o-Xylene	NS	NS	NS	NS	NS	NS	NS	-	<0.020	<0.02	<0.02	-	<0.020
Styrene	50	50	NS	NS	NS	NS	NS	-	-	<0.02	<0.02	-	-
Xylenes (Total)	17	20	NS	NS	NS	NS	NS	-	<0.020	<0.04	<0.04	-	<0.020
F1 (C6-C10) - BTEX	NA	NA	310	660	700	1000	310	<10	<10	-	-	<10	-
Volatiles													
F1 (C6-C10) - BTEX							NS	-	<10	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable GNWT criteria, CCME Standard or CWS Guideline

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	01-TP06-01-03	01-TP06-02-03	01-TP06-03-03	01-TP06-04-01	01-TP06-04-02	01-TP06-05-01	01-TP06-06-02	01-TP06-07-1	01-TP06-07-3	01-TP06-08-1	01-TP06-09-2
Sample Depth (m):						**1.5-1.7**	**1.5-1.7**	**1.7-1.8**	**0.4-0.6**	**1.0-1.2**	**0.5-0.7**	**1.4-1.6**	**0.4-0.6**	**1.8-2.0**	**0.5-0.7**	**1.4-1.6**
Lab ID #:						A643248	A643248	A643248	A643248	A643248	A643248	A643248	A643216	A643216	A643216	A643216
Lab Sample ID #:						*C80865*	*C80868*	*C80872*	*C80873*	*C80874*	*C80877*	*C80881*	*C80522*	*C80524*	*C80525*	*C80529*
Sample Date:						*14/09/2006*	*14/09/2006*	*14/09/2006*	*14/09/2006*	*14/09/2006*	*14/09/2006*	*14-Sep-06*	*15-Sep-06*	*15-Sep-06*	*15-Sep-06*	*15-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	19	25	54	205	81	38	73	17	30	17	48
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	273	645	520	2830	1410	378	203	242	365	58	587
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	199	182	86	450	246	69	26	51	73	<10	114
Reached Baseline at C50						Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)																
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	-	-	-	-	-	-	-	-	0.11	-
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	0.09	-
Acenaphthylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	<0.05	-
Acenaphthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	0.39	-
Fluorene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	0.17	-
Phenanthrene	NA	NA	NA	NA	50	-	-	-	-	-	-	-	-	-	0.2	-
Anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	0.18	-
Fluoranthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	1.1	-
Pyrene	NA	NA	NA	NA	100	-	-	-	-	-	-	-	-	-	0.75	-
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	0.14	-
Chrysene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	0.14	-
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	-	-	-	-	-	-	-	-	0.06	-
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	<0.05	-
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	-	-	-	-	-	-	-	-	<0.05	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	<0.05	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	<0.05	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	<0.05	-
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	01-TP06-10-2	01-TP06-11-1	01-TP06-DUP1	RPD	01-TP06-12-3	01-TP06-13-1	01-TP06-14-3	01-TP06-15-3	01-TP06-16-3	01-TP06-17-3	01-TP06-18-01
Sample Depth (m):						1.4-1.6	0.4-0.6	01-TP06-11-1		1.6-1.8	0.4-0.6	1.7-1.9	2.2-2.4	2.2-2.4	2.0-2.2	0.3-0.5
Lab ID #:						A643216	A643216	A643216		A643216	A643216	A643216	A643216	A643216	A643216	A643216
Lab Sample ID #:						*C80532*	*C80534*	*C80561*		*C80540*	*C80542*	*C80547*	*C80553*	*C80556*	*C80559*	*C80562*
Sample Date:						*15-Sep-06*	*15-Sep-06*	*15-Sep-06*		*15-Sep-06*	*15-Sep-06*	*15-Sep-06*	*15-Sep-06*	*15-Sep-06*	*15-Sep-06*	*16-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***		***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	31	31	20	43%	70	25	16	32	15	<10	<10
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	451	342	338	1%	990	362	137	532	94	13	2330
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	64	67	120	57%	163	55	62	26	31	<10	1960
Reached Baseline at C50						Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes	Yes	No
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)																3200
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Fluorene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	NA	NA	NA	NA	50	-	-	-	-	-	-	-	-	-	-	-
Anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Pyrene	NA	NA	NA	NA	100	-	-	-	-	-	-	-	-	-	-	-
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	-	-
Chrysene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10	value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	01-TP06-18-02	01-TP06-19-01	01-TP06-20-04	01-TP06-21-02	01-TP06-DUP2	RPD	01-TP06-21-03	01-TP06-DUP3	RPD	01-TP06-21-04	01-TP06-22-03
Sample Depth (m):						1.3-1.5	0.3-0.5	2.3-2.5	0.4-0.6	01-TP06-21-02		1.4-1.6	01-TP06-21-03		2.1-2.4	1.4-1.6
Lab ID #:						A643216	A643216	A643216	A643216	A643216		A643216	A643216		A643216	A643216
Lab Sample ID #:						*C80576*	*C80578*	*C80584*	*C80586*	*C80662*		*C80587*	*C80669*		*C80655*	*C80658*
Sample Date:						*16-Sep-06*	*16-Sep-06*	*16-Sep-06*	*16-Sep-06*	*16-Sep-06*		*16-Sep-06*	*16-Sep-06*		*16-Sep-06*	*16-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***	***Franz***	***Franz***		***Franz***	***Franz***		***Franz***	***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	<10	<10	13	3930	3750	5%	3810	2770	32%	2840	11
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	394	52	57	1260	1260	0%	1110	919	19%	1060	31
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	337	38	23	14	14	n/a	<10	<10	n/a	18	<10
Reached Baseline at C50						Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	-	Yes	Yes
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)																
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	-	-	0.22	-	-	-	-	-	-	-
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	-	-	0.11	-	-	-	-	-	-	-
Acenaphthylene	NA	NA	NA	NA	NS	-	-	-	<0.05	-	-	-	-	-	-	-
Acenaphthene	NA	NA	NA	NA	NS	-	-	-	<0.05	-	-	-	-	-	-	-
Fluorene	NA	NA	NA	NA	NS	-	-	-	0.12	-	-	-	-	-	-	-
Phenanthrene	NA	NA	NA	NA	50	-	-	-	<0.05	-	-	-	-	-	-	-
Anthracene	NA	NA	NA	NA	NS	-	-	-	<0.05	-	-	-	-	-	-	-
Fluoranthene	NA	NA	NA	NA	NS	-	-	-	<0.05	-	-	-	-	-	-	-
Pyrene	NA	NA	NA	NA	100	-	-	-	<0.05	-	-	-	-	-	-	-
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	-	-	<0.05	-	-	-	-	-	-	-
Chrysene	NA	NA	NA	NA	NS	-	-	-	<0.05	-	-	-	-	-	-	-
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	-	-	<0.05	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	-	-	<0.05	-	-	-	-	-	-	-
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	-	-	<0.05	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	-	-	<0.05	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	-	-	<0.05	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	-	-	<0.05	-	-	-	-	-	-	-
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	01-TP06-23-01	01-TP06-24-03	01-TP06-DUP4	RPD	01-TP06-25-04	01-TP06-26-03	01-TP06-27-03	01-TP06-DUP5	01-TP06-28-02	01-TP06-28-03	02-TP06-01-04
Sample Depth (m):						0.2-0.4	2.6-2.8	01-TP06-24-03		2.8-3.0	1.4-1.6	2.1-2.3	01-TP06-28-01	0.4-0.5	0.6-0.8	1.4-1.6
Lab ID #:						A643216	A643501	A643501		A643501	A643501	A643501	A643501	A643501	A643501	A643501
Lab Sample ID #:						*C80663*	*C82495*	*C82542*		*C82500*	*C82503*	*C82515*	*C82543*	*C82517*	*C82518*	*C82522*
Sample Date:						*16-Sep-06*	*17-Sep-06*	*17-Sep-06*		*17-Sep-06*	*17/09/2006*	*17/09/2006*	*17-Sep-06*	*17-Sep-06*	*17-Sep-06*	*17-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***		***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	17	<10	<10	n/a	<10	15	<10	171	2560	559	25
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	123	64	178	94%	<10	10	<10	8440	3650	6920	24
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	207	24	46	n/a	<10	51	<10	6680	630	1070	26
Reached Baseline at C50						Yes	Yes	Yes	-	Yes	Yes	Yes	No	Yes	Yes	Yes
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)																
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	-	-	-	-	-	-	<0.05	0.21	-	-
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	1.7	-	-
Acenaphthylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Acenaphthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	0.09	-	-
Fluorene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	0.24	-	-
Phenanthrene	NA	NA	NA	NA	50	-	-	-	-	-	-	-	0.05	0.34	-	-
Anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Fluoranthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Pyrene	NA	NA	NA	NA	100	-	-	-	-	-	-	-	0.08	<0.05	-	-
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Chrysene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	-	-	-	-	-	-	<0.05	<0.05	-	-
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	<0.05	<0.05	-	-
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	02-TP06-02-02	02-TP06-02-04	02-TP06-03-01	02-TP06-03-03	02-TP06-04-01	02-TP06-05-01	02-TP06-06-01	02-TP06-07-02	02-TP06-DUP7	RPD	02-TP06-07-04
Sample Depth (m):						**0.8-1.0**	**1.6-1.8**	**0.1-0.3**	**0.7-0.9**	**0.3-0.5**	**0.2-0.4**	**0.3-0.6**	**0.3-0.5**	**02-TP06-07-02**		**0.9-1.1**
Lab ID #:						A643501	A643501	A644350	A644350	A644350	A644350	A644350	A644350	A644350		A644350
Lab Sample ID #:						*C82536*	*C82539*	*C87432*	*C87442*	*C87446*	*C87449*	*C87453*	*C87459*	*C87552*		*C87462*
Sample Date:						*17-Sep-06*	*17-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*		*18-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***		***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	610	32	175	12	13	71	96	**2830**	**4530**	46%	49
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	1460	68	**3240**	257	31	760	1040	**4910**	**7180**	38%	80
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	449	47	2250	119	69	1420	623	1690	2190	26%	71
Reached Baseline at C50						Yes	Yes	No	Yes	Yes	No	No	No	No	-	Yes
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)								8000				2700	8300			
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	-	-	-	-	19	-	<0.05	-	-	<0.05
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	-	-	-	-	40	-	<0.05	-	-	<0.05
Acenaphthylene	NA	NA	NA	NA	NS	-	-	-	-	-	0.36	-	<0.05	-	-	<0.05
Acenaphthene	NA	NA	NA	NA	NS	-	-	-	-	-	0.5	-	<0.05	-	-	<0.05
Fluorene	NA	NA	NA	NA	NS	-	-	-	-	-	1.5	-	<0.05	-	-	<0.05
Phenanthrene	NA	NA	NA	NA	50	-	-	-	-	-	2.4	-	<0.05	-	-	<0.05
Anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	0.1	-	<0.05	-	-	<0.05
Fluoranthene	NA	NA	NA	NA	NS	-	-	-	-	-	0.16	-	<0.05	-	-	<0.05
Pyrene	NA	NA	NA	NA	100	-	-	-	-	-	0.27	-	<0.05	-	-	<0.05
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Benzo(a)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Chrysene	NA	NA	NA	NA	NS	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	0.06	-	<0.05	-	-	<0.05
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	<0.05	-	<0.05	-	-	<0.05

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	02-TP06-08-02	02-TP06-08-05	02-TP06-08-06	02-TP06-09-01	02-TP06-09-03	02-TP06-09-04	02-TP06-09-05	02-TP06-10-2	02-TP06-11-01
Sample Depth (m):						**0.5-0.7**	**1.7-1.9**	**2.3-2.5**	**0.1-0.3**	**1.2-1.4**	**2.0-2.2**	**2.6-2.8**	**0.6-0.8**	**0.2-0.4**
Lab ID #:						A644350	A644350	A644350	A644350	A644350	A644350	A644350	A644350	A644350
Lab Sample ID #:						*C87466*	*C87478*	*C87480*	*C87492*	*C87494*	*C87495*	*C87496*	*C87498*	*C87538*
Sample Date:						*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*	*18-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Extractable Petroleum Hydrocrabons														
CWS F2 (C10-C16)	760	1500	2000	3000	NA	**1880**	**968**	18	**3580**	-	43	<10	609	107
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	974	452	37	**12800**	-	45	27	**7600**	1070
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	535	135	49	**6830**	-	16	29	2670	1670
Reached Baseline at C50						No	Yes	Yes	No	-	Yes	Yes	No	No
OIL & GREASE														
F4SG (Heavy Hydrocarbons-SilicaGel)						2800			27000					
Polycyclic Aromatics Hydrocarbons														
Naphthalene	NA	NA	NA	NA	22	-	3.4	-	-	4	-	-	-	-
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	7.3	-	-	5.2	-	-	-	-
Acenaphthylene	NA	NA	NA	NA	NS	-	0.07	-	-	<0.05	-	-	-	-
Acenaphthene	NA	NA	NA	NA	NS	-	<0.05	-	-	<0.05	-	-	-	-
Fluorene	NA	NA	NA	NA	NS	-	0.22	-	-	0.15	-	-	-	-
Phenanthrene	NA	NA	NA	NA	50	-	0.13	-	-	0.19	-	-	-	-
Anthracene	NA	NA	NA	NA	NS	-	<0.05	-	-	<0.05	-	-	-	-
Fluoranthene	NA	NA	NA	NA	NS	-	<0.05	-	-	<0.05	-	-	-	-
Pyrene	NA	NA	NA	NA	100	-	<0.05	-	-	<0.05	-	-	-	-
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	<0.05	-	-	<0.05	-	-	-	-
Chrysene	NA	NA	NA	NA	NS	-	<0.05	-	-	<0.05	-	-	-	-
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	<0.05	-	-	<0.05	-	-	-	-
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	<0.05	-	-	<0.05	-	-	-	-
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	<0.05	-	-	<0.05	-	-	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	<0.05	-	-	<0.05	-	-	-	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	<0.05	-	-	<0.05	-	-	-	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	<0.05	-	-	<0.05	-	-	-	-
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	02-TP06-12-01	02-TP06-DUP8	RPD	02-TP06-13-02	02-TP06-14-02	02-TP06-15-02	02-TP06-16-01	02-TP06-DUP9	RPD	02-TP06-17-01	02-TP06-18-05
Sample Depth (m):						**0.1-0.3**	02-TP06-12-01		**1.3-1.4**	**0.2-0.4**	**1.7-1.9**	**0.0-0.1**	02-TP06-16-01		**0.0-0.15**	**2.4-2.6**
Lab ID #:						A644350	A644350		A644354	A644354	A644354	A644354	A644354		A644354	A644354
Lab Sample ID #:						*C87551*	*C87553*		*C87504*	*C87507*	*C87512*	*C87515*	*C87537*		*C87516*	*C87521*
Sample Date:						*18-Sep-06*	*18-Sep-06*		*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*		*19-Sep-06*	*19-Sep-06*
Prepared by:						***Franz***	***Franz***		***Franz***	***Franz***	***Franz***	***Franz***	***Franz***		***Franz***	***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	314	383	20%	15	11	<10	588	564	4%	602	<10
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	1280	1220	5%	75	129	<10	**28500**	**31000**	8%	**14200**	<10
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	599	563	6%	31	72	<10	**3420**	**3630**	6%	**8660**	<10
Reached Baseline at C50						No	Yes	-	Yes	Yes	Yes	No	Yes	-	No	Yes
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)																
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	-	-	-	-	-	0.21	<0.05	n/a	-	-
Acenaphthylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	0.49	0.32	42%	-	-
Acenaphthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Fluorene	NA	NA	NA	NA	NS	-	-	-	-	-	-	0.18	<0.05	n/a	-	-
Phenanthrene	NA	NA	NA	NA	50	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Fluoranthene	NA	NA	NA	NA	NS	-	-	-	-	-	-	0.07	0.07	n/a	-	-
Pyrene	NA	NA	NA	NA	100	-	-	-	-	-	-	0.27	0.28	4%	-	-
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Chrysene	NA	NA	NA	NA	NS	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	-	-	-	-	-	<0.05	<0.05	n/a	-	-
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2

Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	08-TP06-01-01	08-TP06-02-01	08-TP06-03-01	08-TP06-03-02	08-TP06-04-02	08-TP06-05-01	08-TP06-DUP10	RPD	08-TP06-06-01	08-TP06-07-01	08-TP06-07-04
Sample Depth (m):						**0.2-0.4**	**0.1-0.3**	**0.1-0.3**	**0.6-0.8**	**0.4-0.6**	**0.3-0.5**	**08-TP06-05-01**		**0.1-0.3**	**0.1-0.3**	**1.4-1.6**
Lab ID #:						A644374	A644374	A644374	A644374	A644374	A644374	A644374		A644374	A644374	A644374
Lab Sample ID #:						*C87839*	*C87842*	*C87847*	*C87848*	*C87851*	*C87855*	*C87866*		*C87858*	*C87861*	*C87864*
Sample Date:						*20-Sep-06*	*20/09/2006*	*20/09/2006*	*20/09/2006*	*20-Sep-06*	*20/09/2006*	*20-Sep-06*		*20-Sep-06*	*20-Sep-06*	*20-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***		***Franz***	***Franz***	***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	15	14	423	19	17	12	<10	n/a	<10	**1080**	**5020**
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	173	95	**12800**	73	111	221	150	38%	23	298	841
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	277	65	**7090**	26	57	113	75	40%	<10	<10	<10
Reached Baseline at C50						Yes	Yes	No	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)																
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	-	0.34	-	-	-	-	-	-	-	<0.05
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	-	0.71	-	-	-	-	-	-	-	2.2
Acenaphthylene	NA	NA	NA	NA	NS	-	-	0.05	-	-	-	-	-	-	-	0.12
Acenaphthene	NA	NA	NA	NA	NS	-	-	<0.05	-	-	-	-	-	-	-	0.17
Fluorene	NA	NA	NA	NA	NS	-	-	0.06	-	-	-	-	-	-	-	0.5
Phenanthrene	NA	NA	NA	NA	50	-	-	0.19	-	-	-	-	-	-	-	0.6
Anthracene	NA	NA	NA	NA	NS	-	-	<0.05	-	-	-	-	-	-	-	<0.05
Fluoranthene	NA	NA	NA	NA	NS	-	-	0.14	-	-	-	-	-	-	-	<0.05
Pyrene	NA	NA	NA	NA	100	-	-	0.35	-	-	-	-	-	-	-	<0.05
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	-	0.08	-	-	-	-	-	-	-	<0.05
Chrysene	NA	NA	NA	NA	NS	-	-	0.12	-	-	-	-	-	-	-	<0.05
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	-	<0.05	-	-	-	-	-	-	-	<0.05
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	-	<0.05	-	-	-	-	-	-	-	<0.05
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	-	0.06	-	-	-	-	-	-	-	<0.05
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	-	<0.05	-	-	-	-	-	-	-	<0.05
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	-	<0.05	-	-	-	-	-	-	-	<0.05
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	-	<0.05	-	-	-	-	-	-	-	<0.05
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	08-TP06-07-05	08-GRAB06-01-01	09-TP06-01-02	09-TP06-01-03	09-TP06-02-01	09-TP06-02-02	10-TP06-01-02	10-TP06-02-01	10-TP06-02-02	10-TP06-03-03	10-TP06-03-04
Sample Depth (m):						**1.7-1.8**	**0.0-0.02**	**0.5-0.7**	**1.3-1.5**	**0.3-0.5**	**1.4-1.6**	**0.5-0.7**	**1.5-1.7**	**0.5-0.7**	**1.3-1.5**	**2.4-2.6**
Lab ID #:						A644374	A644374	A644374	A644374	A644374	A644374	A644354	A644354	A644354	A644354	A644354
Lab Sample ID #:						*C87865*	*C87867*	*C87832*	*C87833*	*C87836*	*C87837*	*C87523*	*C87524*	*C87525*	*C87531*	*C87532*
Sample Date:						*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*20-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Extractable Petroleum Hydrocrabons																
CWS F2 (C10-C16)	760	1500	2000	3000	NA	13	12	-	<10	<10	-	<10	<10	-	<10	-
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	19	199	-	132	<10	-	134	17	-	15	-
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	<10	<10	-	99	<10	-	389	43	-	58	-
Reached Baseline at C50						Yes	Yes	-	Yes	Yes	-	Yes	Yes	-	Yes	-
OIL & GREASE																
F4SG (Heavy Hydrocarbons-SilicaGel)																
Polycyclic Aromatics Hydrocarbons																
Naphthalene	NA	NA	NA	NA	22	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	0.06	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Acenaphthylene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Acenaphthene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Fluorene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Phenanthrene	NA	NA	NA	NA	50	-	0.16	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Anthracene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Fluoranthene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Pyrene	NA	NA	NA	NA	100	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Chrysene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	-	<0.05	<0.05	-	<0.05	-	<0.05
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 2
Analytical Results for PAH, CWS F2-F4 in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Tier 1 Soil CL/IL (coarse/surface) CWS Soil CL/IL (coarse)	GNWT Tier 1 Soil CL/IL (fine/surface) CWS Soil CL/IL (fine)	GNWT Generic Soil CL/IL (coarse/subsurface)	GNWT Generic Soil CL/IL (fine/subsurface)	GNWT Soil CL/IL CCME Soil CL/IL (coarse/fine)	10-TP06-04-02	10-TP06-04-03	10-TP06-05-02	10-TP06-06-01	10-TP06-07-01	10-TP06-09-01
Sample Depth (m):						**0.5-0.7**	**1.7-1.9**	**0.4-0.5**	**0.1-0.4**	**0.3-0.5**	**0.3-0.5**
Lab ID #:						A644354	A644354	A645233	A645233	A645233	A645233
Lab Sample ID #:						*C87534*	*C87535*	*C93205*	*C93206*	*C93207*	*C93209*
Sample Date:						*19-Sep-06*	*19-Sep-06*	*22-Sep-06*	*22-Sep-06*	*22-Sep-06*	*22-Sep-06*
Prepared by:						***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Extractable Petroleum Hydrocrabons											
CWS F2 (C10-C16)	760	1500	2000	3000	NA	<10	-	-	11	-	15
CWS F3 (C16-C34)	1700	2500	3500	5000	NA	39	-	-	19	-	104
CWS F4 (C34-C50)	3300	6600	10000	10000	NA	155	-	-	14	-	128
Reached Baseline at C50						Yes	-	-	Yes	-	Yes
OIL & GREASE											
F4SG (Heavy Hydrocarbons-SilicaGel)											
Polycyclic Aromatics Hydrocarbons											
Naphthalene	NA	NA	NA	NA	22	-	<0.05	<0.05	-	<0.05	-
2-Methylnaphthalene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Acenaphthylene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Acenaphthene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Fluorene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Phenanthrene	NA	NA	NA	NA	50	-	<0.05	<0.05	-	<0.05	-
Anthracene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Fluoranthene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Pyrene	NA	NA	NA	NA	100	-	<0.05	<0.05	-	<0.05	-
Benzo(c)phenanthrene	NA	NA	NA	NA	NS	-	-	-	-	-	-
Benzo(a)anthracene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	<0.05	-
Chrysene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Benzo(b&j)fluoranthene	NA	NA	NA	NA	10[x]	-	<0.05	<0.05	-	<0.05	-
7,12-Dimethylbenz(a)anthracene	NA	NA	NA	NA	NS	-	-	-	-	-	-
Benzo(k)fluoranthene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	<0.05	-
Benzo(a)pyrene	NA	NA	NA	NA	0.7	-	<0.05	<0.05	-	<0.05	-
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	<0.05	-
Dibenz(a,h)anthracene	NA	NA	NA	NA	10	-	<0.05	<0.05	-	<0.05	-
Benzo(g,h,i)perylene	NA	NA	NA	NA	NS	-	<0.05	<0.05	-	<0.05	-
Dibenzo(a,h)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-
Dibenzo(a,i)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-
Dibenzo(a,l)pyrene	NA	NA	NA	NA	NS	-	-	-	-	-	-

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard or GNWT

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

[x] Standard is for Benzo(b)fluoranthene; analytical results are cumulative Benzo(b&j)fluoranthene

Table 3

Analytical Results for VOCs/Chlorobenzenes in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	CCME Soil CL/IL (coarse)	CCME Soil IL/CL (Fine)	01-TP06-08-1	01-TP06-21-03	09-TP06-01-02	09-TP06-02-02	10-TP06-02-03
Sample Depth (m):					**0.5-0.7**	**1.4-1.6**	**0.5-0.7**	**1.4-1.6**	**1.4-1.6**
Lab ID #:					*C80525*	*C80587*	*C87832*	*C87837*	*C87526*
Sample Date:					*15-Sep-06*	*16-Sep-06*	*20-Sep-06*	*20-Sep-06*	*19-Sep-06*
Prepared by:					***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Chlorobenzenes									
1,2-dichlorobenzene	10	10	10	10	<0.02	<0.02	<0.02	<0.02	<0.02
1,3-dichlorobenzene	10	10	10	10	<0.02	<0.02	<0.02	<0.02	<0.02
1,4-dichlorobenzene	10	10	10	10	<0.02	<0.02	<0.02	<0.02	<0.02
Chlorobenzene	10	10	10	10	<0.02	<0.02	<0.02	<0.02	<0.02
Volatiles									
1,1,1,2-tetrachloroethane	50	50	50	50	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1-trichloroethane	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
1,1,2,2-tetrachloroethane	50	50	50	50	<0.1	0.8	<0.1	<0.1	<0.1
1,1,2-trichloroethane	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
1,1-dichloroethane	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
1,1-dichloroethene	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-dibromoethane	NS	NS	NS	NS	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-dichloroethane	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-dichloropropane	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	NS	NS	NS	NS	<0.03	<0.03	<0.03	<0.03	<0.03
Bromoform	NS	NS	NS	NS	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	NS	NS	NS	NS	<0.02	<0.02	<0.02	<0.02	<0.02
Carbon tetrachloride	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
Chlorodibromomethane	NS	NS	NS	NS	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroethane	NS	NS	NS	NS	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
Chloromethane	NS	NS	NS	NS	<0.03	<0.03	<0.03	<0.03	<0.03
cis-1,2-dichloroethene	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
cis-1,3-dichloropropene	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
Dibromoethane	NS	NS	NS	NS	<0.1	<0.1	-	-	-
Dichloromethane	50	50	50	50	<0.02	<0.02	<0.1	<0.1	<0.1
Tetrachloroethene	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
trans-1,2-dichloroethene	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
trans-1,3-dichloropropene	50	50	50	50	<0.02	<0.02	<0.02	<0.02	<0.02
Trichloroethene	31	31	0.01	0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Trichlorofluoromethane	NS	NS	NS	NS	<0.02	<0.02	<0.02	<0.02	<0.02
Vinyl chloride	NS	NS	NS	NS	<0.02	<0.02	<0.02	<0.02	<0.02

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable GNWT or CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 3

Analytical Results for VOCs/Chlorobenzenes in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWT Soil CL	GNWT Soil IL	CCME Soil CL/IL (coarse)	10-TP06-03-01	10-TP06-04-04	10-TP06-05-02
Sample Depth (m):				**0.1-0.3**	**2.8-3.0**	**0.4-0.5**
Lab ID #:				*C87529*	*C87536*	*C93205*
Sample Date:				*19-Sep-06*	*19-Sep-06*	*22-Sep-06*
Prepared by:				***Franz***	***Franz***	***Franz***
Chlorobenzenes						
1,2-dichlorobenzene	10	10	10	<0.02	<0.02	<0.02
1,3-dichlorobenzene	10	10	10	<0.02	<0.02	<0.02
1,4-dichlorobenzene	10	10	10	<0.02	<0.02	<0.02
Chlorobenzene	10	10	10	<0.02	<0.02	<0.02
Volatiles						
1,1,1,2-tetrachloroethane	50	50	50	<0.1	<0.1	<0.1
1,1,1-trichloroethane	50	50	50	<0.02	<0.02	<0.02
1,1,2,2-tetrachloroethane	50	50	50	<0.1	<0.1	<0.1
1,1,2-trichloroethane	50	50	50	<0.02	<0.02	<0.02
1,1-dichloroethane	50	50	50	<0.02	<0.02	<0.02
1,1-dichloroethene	50	50	50	<0.02	<0.02	<0.02
1,2-dibromoethane	NS	NS	NS	<0.02	<0.02	<0.02
1,2-dichloroethane	50	50	50	<0.02	<0.02	<0.02
1,2-dichloropropane	50	50	50	<0.02	<0.02	<0.02
Bromodichloromethane	NS	NS	NS	<0.03	<0.03	<0.03
Bromoform	NS	NS	NS	<0.05	<0.05	<0.05
Bromomethane	NS	NS	NS	<0.02	<0.02	<0.02
Carbon tetrachloride	50	50	50	<0.02	<0.02	<0.02
Chlorodibromomethane	NS	NS	NS	<0.02	<0.02	<0.02
Chloroethane	NS	NS	NS	<0.02	<0.02	<0.02
Chloroform	50	50	50	<0.02	<0.02	<0.02
Chloromethane	NS	NS	NS	<0.03	<0.03	<0.03
cis-1,2-dichloroethene	50	50	50	<0.02	<0.02	<0.02
cis-1,3-dichloropropene	50	50	50	<0.02	<0.02	<0.02
Dibromoethane	NS	NS	NS	-	-	-
Dichloromethane	50	50	50	<0.1	<0.1	<0.1
Tetrachloroethene	50	50	50	<0.02	<0.02	<0.02
trans-1,2-dichloroethene	50	50	50	<0.02	<0.02	<0.02
trans-1,3-dichloropropene	50	50	50	<0.02	<0.02	<0.02
Trichloroethene	31	31	0.01	<0.02	<0.02	<0.02
Trichlorofluoromethane	NS	NS	NS	<0.02	<0.02	<0.02
Vinyl chloride	NS	NS	NS	<0.02	<0.02	<0.02

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable GNWT or CCME Standard

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\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 4
Analytical Results for Total Metals in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWTSoil CL CCME Soil CL (coarse/fine)	GNWT Soil IL CCME Soil IL (coarse/fine)	SAND PACK	01-TP06-04-01	01-TP06-12-3	01-TP06-18-01	01-TP06-21-03	01-TP06-DUP3	RPD
Sample Depth (m):			**0.4-0.6**	**0.4-0.6**	**1.6-1.8**	**0.3-0.5**	**1.4-1.6**	**01-TP06-21-03**	
Lab ID #:			*C80487*	*C80873*	*C80540*	*C80562*	*C80587*	*C80669*	
Sample Date:			*15/09/2006*	*14/09/2006*	*15-Sep-06*	*16-Sep-06*	*16-Sep-06*	*16-Sep-06*	
Prepared by:			***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	
Total Metals									
Soluble (Hot water) Boron (B)	NS	NS	<0.1	-	-	-	-	-	-
Hex. Chromium (Cr 6+)	1.4	1.4	<0.3	-	-	-	-	-	-
Aluminum (Al)	NS	NS	1260	6450	7350	7620	7680	8700	12%
Antimony (Sb)	40	40	<2	1	<1	<1	<1	<1	NC
Arsenic (As)	12	12	2	5	9	5	3	3	NC
Barium (Ba)	2000	2000	25.5	140	107	165	140	93	40%
Beryllium (Be)	8	8	<0.1	0.8	0.8	0.9	1.1	0.8	NC
Boron (B)	NS	NS	<10	12	12	8	10	13	26%
Cadmium (Cd)	22	22	<0.2	2.2	0.5	0.4	0.2	0.2	NC
Calcium (Ca)	NS	NS	366000	114000	114000	120000	105000	113000	7%
Chromium (Cr)	87	87	2	29	21	17	15	10	40%
Cobalt (Co)	300	300	1.3	12	11	13	13	9	36%
Copper (Cu)	91	91	3	72	32	26	45	32	34%
Iron (Fe)	NS	NS	1970	16500	18300	18800	21500	21300	1%
Lead (Pb)	260	600	<10	156	39	70	13	9	36%
Lithium (Li)	NS	NS	1.6	15	17	17	18	18	NC
Magnesium (Mg)	NS	NS	14600	45000	44100	38400	41500	46000	10%
Manganese (Mn)	NS	NS	67	379	394	343	351	386	9%
Mercury (Hg)	24	50	<0.05	-	-	-	-	-	-
Molybdenum (Mo)	40	40	2.5	4.6	0.7	0.6	<0.4	<0.4	NC
Nickel (Ni)	50	50	7	24	22	24	24	17	34%
Phosphorus (P)	NS	NS	559	1150	680	708	436	539	21%
Potassium (K)	NS	NS	249	1060	1230	1060	1330	1620	20%
Selenium (Se)	3.9	3.9	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	NC
Silver (Ag)	40	40	<1	<1	<1	<1	<1	<1	NC
Sodium (Na)	NS	NS	98	167	203	97	185	153	NC
Strontium (Sr)	NS	NS	160	80	78	88	71	76	7%
Sulphur (S)	NS	NS	707	901	972	648	3050	2320	27%
Thallium (Tl)	1	1	<1	<0.3	<0.3	<0.3	<0.3	<0.3	NC
Tin (Sn)	300	300	5	4	<1	<1	<1	<1	NC
Uranium (U)	NS	NS	3.8	<1	<1	<1	<1	<1	NC
Vanadium (V)	130	130	6	17	14	14	14	10	33%
Zinc (Zn)	360	360	10	151	90	162	57	42	NC

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 4
Analytical Results for Total Metals in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWTSoil CL CCME Soil CL (coarse/fine)	01-TP06-28-02	02-TP06-05-01	02-TP06-08-02	02-TP06-09-04	02-TP06-16-01	08-TP06-03-01	08-TP06-03-02	09-TP06-01-03
Sample Depth (m):		**0.4-0.5**	**0.2-0.4**	**0.5-0.7**	**2.0-2.2**	**0.0-0.1**	**0.1-0.3**	**0.6-0.8**	**1.3-1.5**
Lab ID #:		*C82517*	*C87449*	*C87466*	*C87495*	*C87515*	*C87847*	*C87848*	*C87833*
Sample Date:		*17-Sep-06*	*18/09/2006*	*18/09/2006*	*18-Sep-06*	*19-Sep-06*	*20-Sep-06*	*20/09/2006*	*20-Sep-06*
Prepared by:		***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Total Metals									
Soluble (Hot water) Boron (B)	NS	-	1.4	-	-	-	5.9	-	-
Hex. Chromium (Cr 6+)	1.4	-	<0.2	-	-	-	<0.2	-	<0.2
Aluminum (Al)	NS	8170	8050	-	-	10100	11000	9650	6920
Antimony (Sb)	40	<1	<1	-	-	<1	2	<1	<1
Arsenic (As)	12	7	2	-	-	6	**30**	**23**	12
Barium (Ba)	2000	204	113	-	-	84	216	327	164
Beryllium (Be)	8	0.9	0.9	-	-	1	0.7	0.8	0.8
Boron (B)	NS	13	11	-	-	15	27	6	12
Cadmium (Cd)	22	1.8	0.2	-	-	0.3	4.1	0.4	0.9
Calcium (Ca)	NS	89900	122000	-	-	82100	45700	7600	79800
Chromium (Cr)	87	15	26	-	-	16	34	57	31
Cobalt (Co)	300	12	8	-	-	13	13	16	13
Copper (Cu)	91	36	27	-	-	16	65	30	31
Iron (Fe)	NS	29300	19400	-	-	24200	64000	30100	37500
Lead (Pb)	260	51	7	21	18	22	**371**	20	28
Lithium (Li)	NS	17	15	-	-	24	15	21	11
Magnesium (Mg)	NS	27300	46200	-	-	22900	15200	3630	37400
Manganese (Mn)	NS	533	418	-	-	381	1930	298	532
Mercury (Hg)	24	-	<0.05	-	-	-	0.1	-	-
Molybdenum (Mo)	40	1.1	1.0	-	-	1.4	3.2	1.2	1.4
Nickel (Ni)	50	26	18	-	-	27	30	43	26
Phosphorus (P)	NS	628	527	-	-	725	3000	2630	517
Potassium (K)	NS	1390	1580	-	-	2250	1400	726	793
Selenium (Se)	3.9	<0.5	<0.5	-	-	<0.5	0.6	1.1	0.7
Silver (Ag)	40	<1	<1	-	-	<1	<1	<1	<1
Sodium (Na)	NS	90	114	-	-	119	225	132	157
Strontium (Sr)	NS	75	73	-	-	87	94	65	48
Sulphur (S)	NS	2030	676	-	-	900	3890	241	1480
Thallium (Tl)	1	<0.3	<0.3	-	-	<0.3	<0.3	<0.3	<0.3
Tin (Sn)	300	4	<1	-	-	<1	6	<1	<1
Uranium (U)	NS	<1	-	-	-	<1	-	-	-
Vanadium (V)	130	19	13	-	-	17	31	53	22
Zinc (Zn)	360	111	37	-	-	178	**643**	144	120

Notes (Refer to endnotes for complete

10 value is greater than the applicable CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 4
Analytical Results for Total Metals in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWTSoil CL CCME Soil CL (coarse/fine)	09-TP06-02-01	10-TP06-01-01	10-TP06-01-02	10-TP06-02-03	10-TP06-02-04	10-TP06-03-03	10-TP06-03-04	10-TP06-04-02
Sample Depth (m):		**0.3-0.5**	**0.5-0.7**	**1.5-1.7**	**1.4-1.6**	**2.2-2.4**	**1.3-1.5**	**2.4-2.6**	**0.5-0.7**
Lab ID #:		*C87836*	*C87522*	*C87523*	*C87526*	*C87527*	*C87531*	*C87532*	*C87534*
Sample Date:		*20-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*
Prepared by:		***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Total Metals									
Soluble (Hot water) Boron (B)	NS	-	1.7	0.6	1.4	1.5	0.7	0.6	0.4
Hex. Chromium (Cr 6+)	1.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Aluminum (Al)	NS	4500	-	-	-	-	-	-	-
Antimony (Sb)	40	<1	<1	<1	<1	<1	<1	1	<1
Arsenic (As)	12	10	8	2	8	11	13	6	5
Barium (Ba)	2000	143	114	69	90	76	139	204	63
Beryllium (Be)	8	0.6	0.7	0.8	0.5	0.6	0.7	0.8	0.5
Boron (B)	NS	12	-	-	-	-	-	-	-
Cadmium (Cd)	22	0.4	0.3	0.3	0.2	0.2	0.2	1.3	0.2
Calcium (Ca)	NS	119000	-	-	-	-	-	-	-
Chromium (Cr)	87	27	31	34	32	35	31	36	24
Cobalt (Co)	300	11	10	11	10	10	11	11	7
Copper (Cu)	91	25	22	10	20	23	69	22	11
Iron (Fe)	NS	17500	-	-	-	-	-	-	-
Lead (Pb)	260	15	12	10	13	25	20	918	31
Lithium (Li)	NS	<10	-	-	-	-	-	-	-
Magnesium (Mg)	NS	65400	-	-	-	-	-	-	-
Manganese (Mn)	NS	771	-	-	-	-	-	-	-
Mercury (Hg)	24	-	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Molybdenum (Mo)	40	0.7	0.7	<0.4	0.7	1.3	1.6	0.8	0.8
Nickel (Ni)	50	22	24	28	24	25	29	29	18
Phosphorus (P)	NS	598	-	-	-	-	-	-	-
Potassium (K)	NS	819	-	-	-	-	-	-	-
Selenium (Se)	3.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver (Ag)	40	<1	<1	<1	<1	<1	<1	<1	<1
Sodium (Na)	NS	158	-	-	-	-	-	-	-
Strontium (Sr)	NS	52	-	-	-	-	-	-	-
Sulphur (S)	NS	1260	-	-	-	-	-	-	-
Thallium (Tl)	1	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Tin (Sn)	300	<1	<1	<1	<1	1	<1	<1	<1
Uranium (U)	NS	-	-	-	-	-	-	-	-
Vanadium (V)	130	15	17	12	16	14	22	20	10
Zinc (Zn)	360	56	52	56	45	49	62	449	39

Notes (Refer to endnotes for complete

10 value is greater than the applicable CCME Standard

not requested

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 4
Analytical Results for Total Metals in Soil
Inuvik Mike Zubko Airport
(all units µg/g unless otherwise stated)

Parameters	GNWTSoil CL CCME Soil CL (coarse/fine)	10-TP06-04-04	10-TP06-09-01
Sample Depth (m):		**2.8-3.0**	**0.3-0.5**
Lab ID #:		*C87536*	*C93209*
Sample Date:		*19-Sep-06*	*22-Sep-06*
Prepared by:		***Franz***	***Franz***
Total Metals			
Soluble (Hot water) Boron (B)	NS	0.3	-
Hex. Chromium (Cr 6+)	1.4	<0.2	-
Aluminum (Al)	NS	-	15000
Antimony (Sb)	40	<1	<1
Arsenic (As)	12	4	19
Barium (Ba)	2000	64	306
Beryllium (Be)	8	0.9	0.8
Boron (B)	NS	-	15
Cadmium (Cd)	22	0.2	0.4
Calcium (Ca)	NS	-	23200
Chromium (Cr)	87	33	70
Cobalt (Co)	300	12	17
Copper (Cu)	91	13	36
Iron (Fe)	NS	-	40500
Lead (Pb)	260	13	21
Lithium (Li)	NS	-	29
Magnesium (Mg)	NS	-	11900
Manganese (Mn)	NS	-	458
Mercury (Hg)	24	<0.05	-
Molybdenum (Mo)	40	<0.4	1.5
Nickel (Ni)	50	28	46
Phosphorus (P)	NS	-	2240
Potassium (K)	NS	-	1050
Selenium (Se)	3.9	<0.5	1.5
Silver (Ag)	40	<1	<1
Sodium (Na)	NS	-	306
Strontium (Sr)	NS	-	87
Sulphur (S)	NS	-	888
Thallium (Tl)	1	<0.3	<0.3
Tin (Sn)	300	<1	<1
Uranium (U)	NS	-	-
Vanadium (V)	130	13	105
Zinc (Zn)	360	57	121

Notes (Refer to endnotes for complete

10 value is greater than the applicable CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 5

Analytical Results for Leachable Metals in Soil
Inuvik Mike Zubko Airport
(all units mg/L unless otherwise stated)

Parameters	SAND PACK	09-TP06-01-03	09-TP06-02-01	10-TP06-01-01	10-TP06-02-04	10-TP06-03-03	10-TP06-04-04	10-TP06-06-01
Sample Depth (m):	**0.4-0.6**	**1.3-1.5**	**0.3-0.5**	**0.5-0.7**	**2.2-2.4**	**1.3-1.5**	**2.8-3.0**	**0.1-0.4**
Lab ID #:	*C80487*	*C87833*	*C87836*	*C87522*	*C87527*	*C87531*	*C87536*	*C93206*
Sample Date:	*15/09/2006*	*20-Sep-06*	*20-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*22-Sep-06*
Prepared by:	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
Elements								
Leachable Mercury (Hg) (ug/L)	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Leachable Metals								
Leachable Arsenic (As)	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Barium (Ba)	<10	0.4	0.6	0.6	0.5	1.1	0.6	0.2
Leachable Boron (B)	<50	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Cadmium (Cd)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Chromium (Cr)	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Copper (Cu)	<10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Lead (Pb)	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Molybdenum (Mo)	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Selenium (Se)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Silver (Ag)	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Uranium (U)	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Leachable Zinc (Zn)	<50	0.2	<0.1	<0.1	0.1	<0.1	<0.1	<0.1

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Guideline

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

Table 6

Analytical Results for PCBs in Soil
Inuvik Mike Zubko Airport
(all units μg/g unless otherwise stated)

Parameters	GNWTSoil CL CCME Soil CL (coarse/fine)	GNWT Soil IL CCME Soil IL (coarse/fine)	09-TP06-01-02	09-TP06-02-02	10-TP06-01-01	10-TP06-02-05	10-TP06-03-02	10-TP06-04-03	10-TP06-08-01
Sample Depth (m):			**0.5-0.7**	**1.4-1.6**	**0.5-0.7**	**2.7-2.9**	**0.6-0.8**	**1.7-1.9**	**0.2-0.4**
Lab ID #:			*C87832*	*C87837*	*C87522*	*C87528*	*C87530*	*C87535*	*C93208*
Sample Date:			*20-Sep-06*	*20-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*19-Sep-06*	*22-Sep-06*
Prepared by:			***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***	***Franz***
PCB									
Aroclor 1016	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1221	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1232	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1242	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1248	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1254	-	-	<0.01	<0.01	0.01	0.06	<0.01	0.01	<0.01
Aroclor 1260	-	-	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01
Aroclor 1262	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor 1268	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Aroclors PCB	33	33	<0.01	<0.01	0.01	0.09	<0.01	0.01	<0.01

Notes (Refer to endnotes for complete list)

10 value is greater than the applicable CCME Guideline

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

*,** etc. Refer to Laboratory notes

General and CCME Endnotes for Water

General Endnotes:

All values are reported as µg/g unless otherwise indicated.

10	=	Value is greater than the applicable CCME or CWS Guideline
NS	=	No Standard
-	=	Not Analyzed
NA	=	Not Applicable
NR	=	Not Recorded
NSA	=	Sample was submitted to laboratory but not scheduled for any analyses
IP	=	Some data for the sample is either still in progress at the lab or not yet received by Franz
RPD	=	Relative percent difference is calculated as the difference over the average of the two values and is only calculated when both concentrations are greater than 5 times the method detection limit.

Laboratory Notes

Refer to Laboratory reports for sample specific notes

< = less then method detection limit (mdl)

General CCME Notes

(A) *Canadian Water Quality Guidelines for the Protection of Aquatic Life,* Canadian Environmental Quality Guidelines and Summary of Guidelines for Canadian Drinking Water Quality (04/04)

(4) ***Guidelines for the Protection of Community Water Supplies***
Summary of Guidelines for Canadian Drinking Water Quality (04/04)
Federal - Provincial - Territorial Committee on Drinking Water

(5) ***Guidelines for the Protection of Aquatic Life (Freshwater)***
Canadian Water Quality Guidelines for the Protection of Aquatic Life, Canadian Environmental Quality Guidelines
CCME, 1999, updated 2001, updated 2002, updated 2003.

CCME values are for surface water, and can be applied to groundwater by assuming a 1:10 dilution from groundwater to surface water, and therefore a 10-fold increase in standard value will apply to groundwater samples if in exceedance of the suraface water value.

Table 7

Analytical Results for BTEX/VPH, CWS F1 in Water
Inuvik Mike Zubko Airport
(all units µg/L unless otherwise stated)

Parameters	CCME Water Standards	08-TP06-03	01-CULVERT
Lab ID #:		*C90102*	*C93139*
Sample Date:		*20-Sep-06*	*23-Sep-06*
Prepared by:		***Franz***	***Franz***
Volatiles			
Benzene	370 [5]	<0.5	<0.4
Toluene	2 [5]	<0.5	<0.4
Ethylbenzene	90	<0.5	<0.4
m & p-Xylene	NS	<0.5	<0.8
o-Xylene	NS	<1	<0.4
Styrene	72 [5]	-	<0.5
Xylenes (Total)	<=300 [4]	<1	<0.8
F1 (C6-C10)	NS	<100	<100
Volatiles			
F1 (C6-C10) - BTEX	NS	<100	-

Notes

10 value is greater than the applicable CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

*,** etc. Refer to Laboratory notes

Table 8

Analytical Results for PAH, CWS F2-F4 in Water
Inuvik Mike Zubko Airport
(all units mg/L (CWS F2-F4) and μg/L (PAH) unless otherwise stated)

Parameters	CCME Water Standards	08-TP06-03	01-CULVERT
Lab ID #:		*C90102*	*C93139*
Sample Date:		*20-Sep-06*	*23-Sep-06*
Prepared by:		***Franz***	***Franz***
Extractable Petroleum Hydrocrabons (mg/L)			
CWS F2 (C10-C16)	NS	0.4	<0.1
CWS F3 (C16-C34)	NS	0.2	<0.1
CWS F4 (C34-C50)	NS	<0.1	<0.1
Reached Baseline at C50		Yes	Yes
Polycyclic Aromatics Hydrocarbons (μg/L)			
Naphthalene	1.1 [5]	<1	<1
Quinoline	3.4 [5]	<0.1	<0.1
Acenaphthylene	NS	<0.1	<0.1
Acenaphthene	5.8 [5]	<0.1	<0.1
Fluorene	3 [5]	<0.1	<0.1
Phenanthrene	0.4 [5]	<0.3	<0.3
Anthracene	0.012 [5]	<0.1	<0.01
Acridine	4.4 [5]	<0.1	<0.1
Fluoranthene	0.04 [5]	<0.1	<0.04
Pyrene	0.025 [5]	<0.1	<0.02
Benzo(a)anthracene	0.018 [5]	<0.1	<0.01
Chrysene	NS	<0.1	<0.1
Benzo(b&j)fluoranthene	NS	<0.1	<0.1
Benzo(k)fluoranthene	NS	<0.1	<0.1
Benzo(a)pyrene	0.015 [5]	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	NS	<0.1	<0.1
Dibenz(a,h)anthracene	NS	<0.1	<0.1
Benzo(g,h,i)perylene	NS	<0.1	<0.1

Notes

10 value is greater than the applicable CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

*,** etc. Refer to Laboratory notes

Table 9

Analytical Results for VOC in Water
Inuvik Mike Zubko Airport
(all units µg/L unless otherwise stated)

Parameters	CCME Water Standards	01-CULVERT
Lab ID #		C93139
Sample Date		23-Sep-06
Prepared by:		***Franz***
Chlorobenzenes		
1,2-dichlorobenzene	0.7 [5]	<0.5
1,3-dichlorobenzene	150 [5]	<0.5
1,4-dichlorobenzene	26 [5]	<0.5
Chlorobenzene	NS	<0.5
Volatiles		
1,1,1,2-tetrachloroethane	NS	<2
1,1,1-trichloroethane	NS	<0.5
1,1,2,2-tetrachloroethane	NS	<2
1,1,2-trichloroethane	NS	<0.5
1,1-dichloroethane	NS	<0.5
1,1-dichloroethene	NS	<0.5
1,2-dichloroethane	5 [4]	<0.5
1,2-dichloropropane	NS	<0.5
Bromodichloromethane	NS	<0.5
Bromoform	NS	<0.5
Bromomethane	NS	<2
Carbon tetrachloride	5 [4]	<0.5
Chlorodibromomethane	NS	<1
Chloroethane	NS	<1
Chloroform	1.8 [5]	<0.5
Chloromethane	NS	<2
cis-1,2-dichloroethene	NS	<0.5
1,3-dichloropropene	NS	<0.5
Dibromoethane	NS	<0.5
Dichloromethane	50 [4]	<2
Tetrachloroethene	30 [4]	<0.5
Total Trihalomethanes		<0.5
trans-1,2-dichloroethene	NS	<0.5
trans-1,3-dichloropropene	NS	<0.5
Trichloroethene	21 [5]	<0.5
Trichlorofluoromethane	NS	<0.5
Vinyl chloride	2 [4]	<0.5

Notes

10	value is greater than the applicable CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

*,** etc. Refer to Laboratory notes

Table 10

Analytical Results for Metals in Water
Inuvik Mike Zubko Airport
(all units µg/L unless otherwise stated)

Parameters	CCME CEQG for the Protection of Aquatic Life	08-TP06-03	01-CULVERT
Lab ID #:		*C90102*	*C93139*
Sample Date:		*20-Sep-06*	*23-Sep-06*
Prepared by:		***Franz***	***Franz***
Metals		Dissolved	Dissolved
Aluminum (Al)	5 @ pH<6.5 [5]	<40	<40
	100 @ pH>=6.5		
Antimony (Sb)	NS	0.8	0.5
Arsenic (As)	5 [5]	3	<1
Barium (Ba)	NS	90	30
Beryllium (Be)	NS	<1	<1
Boron (B)	NS	220	220
Cadmium (Cd)	0.017 [5]	<0.2	<0.2
Calcium (Ca)	NS	321000	55400
Chromium (Cr)	1 [5]	<10	<10
Cobalt (Co)	NS	7.8	0.7
Copper (Cu)	3 @ H: 120 -180 [5]	1.5	0.8
	4 @H>180 [5]		
Iron (Fe)	300 [5]	2470	<60
Lead (Pb)	4 @ H: 120 <180 [5]	2.2	0.5
	7 @ H: >180 [5]		
Lithium (Li)	NS	20	<20
Magnesium (Mg)	NS	84100	25100
Manganese (Mn)	NS	8890	32
Molybdenum (Mo)	73 [5]	2.5	0.6
Nickel (Ni)	110 @ H: 120 -180 [5]	18.5	4.4
	150 @H>180 [5]		
Phosphorus (P)	NS	200	<100
Potassium (K)	NS	5200	3800
Selenium (Se)	1 [5]	2	<1
Silicon (Si)	NS	7800	1000
Silver (Ag)	0.1 [5]	<0.1	<0.1
Sodium (Na)	<=200000 [4]	32600	6800
Strontium (Sr)	NS	780	330
Sulphur (S)	NS	140000	49800
Thallium (Tl)	0.8 [5]	<0.2	<0.2
Tin (Sn)	NS	<1	<1
Titanium (Ti)	NS	7	3
Uranium (U)	NS	2.1	0.7
Vanadium (V)	NS	38	<1
Zinc (Zn)	30 [5]	25	2960

Notes

10	Value is greater than 10 times the CCME Standard

NS - No Standard.

\- Not analyzed

NA - Not applicable

NC - Not calculated

4,5 etc. Refer to endnotes

APPENDIX A

Photograph Log

APEC 01 : Former Maintenance Garage, Test pits program

Photo 1 : View toward west of APEC 01, former maintenance garage.

Photo 2 : Staining on ground surface near by buildings W56 and W57. View looking toward north.

Photo 3 : View toward west at 01-TP06-06, inside former maintenance garage footprint.

Photo 4 : Typical fill material encountered in test pits located at the former maintenance garage inside footprint. Permafrost at bottom. At 01-TP06-02

Photo 5 : View toward west at 01-TP06-21. Sampling soil from bucket for deep samples.

Photo 6 : Typical fill material in former ASTs area, south of former maintenance garage and asphalt road. At 01-TP06-22.

Photo 7 : View of test pit sidewall at 01-TP-06-24.

Photo 8 : View of test pit sidewall at 01-TP-06-28, black staining.

APEC 02 : Former Firefighting Training Area, Test pits program

Photo 9 : Tar found in fill material at 02-TP06-04.

Photo 10 : Debris of all kind found in fill material at 02-TP06-05.

Photo 11 : General stratigraphy observed at FFTA. Fill material at surface, peat layer and native soil. 02-TP06-08

Photo 12 : Bedrock outcrop at 0.4m below ground surface at 02-TP06-12. Steel pipe fixture anchored in bedrock.

Photo 13 : General view toward south at 02-TP06-14. View of Land Treatment Utility at back.

Photo 14 : View of test pit sidewall at 02-TP06-15.

APEC 03 : Former Campsite, General views

Photo 15 : Surfaces debris observed.

Photo 16 : Site is still being used as a recreative place, it seems to be a temporary fishman camp.

Photo 17 : View toward east at former campsite area.

Photo 18 : View toward southeast, former campsite is on the shore of lake dolomite.

APEC 05 : DME Buildings, General views

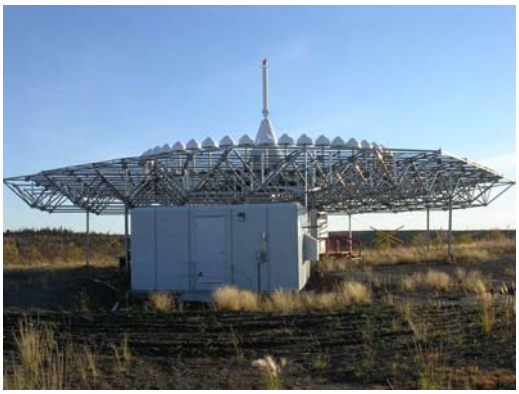

Photo 19 : New DME building located west of the airport terminal and runway.

Photo 20 : Old DME building located east of the airport terminal and runway.

APEC 08 : Shell Lake, Lots number 11-11 and 11-12, Test pits program

Photo 21 : View toward north at 08-TP06-01 south of burnt house.

Photo 22 : View toward east at 08-TP06-02, lot of debris all over the place.

Photo 23 : Presence of water coming from the fill material layer at surface. 08-TP06-03

Photo 24 : Typical stratigraphy observed at Shell Lake. Fill material at surface, peat layer and native soil. 08-TP06-05

Photo 25 : View toward north at 08-TP06-07, south of two ASTs.

Photo 26 : Sample of permafrost collected from bottom of 08-TP06-07. 1.7 to 1.8 m below ground surface

APEC 09 : Landfill area west of main quarry, Test pits program

Photo 27 : Debris found at 09-TP06-01. Refusal, pieces are too big, backhoe can not go deeper.

Photo 28 : At 09-TP06-01, because of refusal, extent Test pit toward west to complete it.

Photo 29 : View toward north at 09-TP06-01.

Photo 30 : Debris found at 09-TP06-02.

APEC 10 : Landfill area south of Land Treatment Utility, Test pits program

Photo 31 : Debris mainly composed of drums found in 10-TP06-01.

Photo 32 : View toward west at 10-TP06-01.

Photo 33 : Ice blocks encountered at 2.9 m below ground surface at 10-TP06-02

Photo 34 : View of Test pit 10-TP06-02, presence of lot of debris.

Photo 35 : Debris encountered at test pit 10-TP06-03.

Photo 36 : General view toward west at 10-TP06-04.

Photo 37 : Debris encountered at 10-TP06-04.

Drilling program, Monitoring Wells installation, APEC 02, 08 and 01

Photo 38 : Drilling borehole for monitoring well installation 02-MW06-01 at APEC 02, FFTA.

Photo 39 : Drilling borehole for monitoring well installation 08-MW06-01 at APEC 08, Shell Lake.

Photo 40 : Monitoring Well 01-MW06-01 was installed inside a test pit due to collapsing material during drilling.

APPENDIX B

Test Pit and Borehole Logs

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Project No: 1256-0601

Borehole Log: 01-MW06-01

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 01

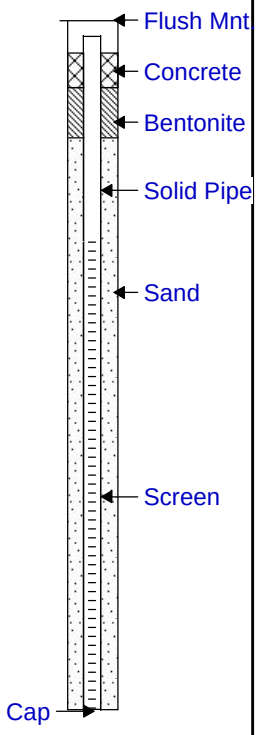
Logged By: JP

Checked By: JP

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Elev.
ft / m		Ground Surface	59.3
0 / 0		***Crushed Shale*** Green to purple, wet, some to trace wood debris	
1			
2			
3 / 1			
4			
5			
6			
7 / 2			57.2
		End of Borehole	
8			
9			

Well Compilation Details



Remarks

Monitoring well installed in test pit using temporary casing

Drilled By: Northwind Industries Ltd.
Hole Diameter: 250 mm
Well Diameter: 50 mm

Drill Method: Solid Stem Auger
Ground Elevation: 59.250
TOC Elevation: 59.200

Drill Date: 21/09/06
Northing: 7577740.44
Easting: 561822.309
Sheet: 1 of 1

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Log of Test Pit: 01-TP06-01

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.6				
		Crushed Shale Green to purple, wet, some wood debris, trace concrete.					
				1		20	
				2		25	
				3		25	Sample analysed for F2-F4
			57.8				Frozen at 1.8m
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
m: 0, 1, 2

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577725.418

Easting: 561847.541

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.563

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Log of Test Pit: 01-TP06-02

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.4				
1		***Crushed Shale*** Green to purple, wet, some wood debris, trace concrete.					
2				1		25	
3 / 1				2		25	
4							
5				3		25	Sample analysed for F2-F4
6 / 2							
7			57.2				
		Peat Some roots, ice (frozen), dark brown, some black and yellow	57.1	4		10	
8		End of Test Pit					
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577736.612

Easting: 561845.754

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.381

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Log of Test Pit: 01-TP06-03

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.4				
		Crushed Shale Green to purple, wet, some wood debris, trace concrete					
				1		25	
				2		20	
			57.6	3		30	Sample analysed for F2-F4
		End of Test Pit					Frozen at 1.8 m

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
m: 0, 1, 2

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577743.502

Easting: 561844.788

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.393

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Log of Test Pit: 01-TP06-04

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.3				
		Crushed Shale Green to purple, wet, trace wood debris					
		Slight hydrocarbon odour		1		20	Sample analysed for F2-F4, metals
1		No hydrocarbon odour		2		25	Sample analysed for F2-F4
			57.4	3		20	Frozen at 1.9 m
2		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577743.607

Easting: 561835.585

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.286

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Log of Test Pit: 01-TP06-05

Project No: 1256-0601

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.2				
1		**Crushed Shale** Green to purple, wet, trace wood debris					
2				1		35	Sample analysed for F2-F4
3 / 1							
4				2		30	
5			57.4				
6		**Peat** Sphagnum moss, some roots and rootlets, black, wet	57.3	3		70	
2 / 7		End of Test Pit					
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577736.343

Easting: 561837.407

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.240

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Log of Test Pit: 01-TP06-06

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.5				
		Crushed Shale Green to purple, wet, trace wood debris					
				1		25	
				2		35	Sample analysed for F2-F4, leachable metals
			57.7				
		Peat Sphagnum moss, some roots and rootlets, black, wet	57.6	3		55	
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
m: 0, 1, 2

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577727.4

Easting: 561837.418

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.471

Franz Environmental Inc.
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Log of Test Pit: 01-TP06-07

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft m 0 0		Ground Surface	59.9				
1		***Crushed Shale*** Green to purple, wet, some wood and concrete debris					
2		Slight hydrocarbon odour		1		35	Sample analysed for F2-F4, PAHs
3 1							
4		Trace wood debris and moderate hydrocarbon odour below 1.0 m		2		50	
5							
6 2			57.9	3		50	Sample analysed for F2-F4 Frozen at 2.0 m
7		End of Test Pit					
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577726.977

Easting: 561819.556

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.865

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Log of Test Pit: 01-TP06-08

Project No: 1256-0601
Project: Inuvik Airport Phase II/III ESA
Client: Transport Canada
Location: Inuvik, NWT

Site ID: 01
Logged By: JP
Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.8				
1		***Crushed Shale*** Purplish-red, some concrete and wood debris, wet, strong hydrocarbon odour, oily film					
2				1		45	Sample analysed for F2-F4, PAHs, VOC
3 / 1							
4							
5		Trace wood debris below 1.5 m					
				2		45	
6							
2		Mild hydrocarbon odour below 2.0 m					
7			57.6	3		45	
		End of Test Pit					
8							
9							

Excavated By: Northwind Industries Ltd.
Method of Excavation: Backhoe
Date of Excavation: 14/09/06

Northing: 7577726.205
Easting: 561827.368

Hole Size: 1.5 X 3.0 m
Elevation (m.a.s.l.): 59.802

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Log of Test Pit: 01-TP06-09

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.2				
1		***Crushed Shale*** Some medium to fine brown sand, moist to wet, trace wood and concrete debris, strong hydrocarbon odour	58.7	1		35	
2, 3, 1		***Crushed Shale*** Green to purple, wet, trace wood debris Strong hydrocarbon odour					
5				2		35	Sample analysed for F2-F4
6, 2			57.1				
7		***Peat*** Sphagnum moss, some roots and rootlets, black, wet	57.0	3		180	Frozen at 2.2 m
8		End of Test Pit					
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577734.733

Easting: 561828.731

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.235

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Log of Test Pit: 01-TP06-10

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.2				
		Crushed Shale Green to purple, wet, some to trace wood and concrete debris					
				1		45	
				2		40	Sample analysed for F2-F4
			57.3			70	
2		***Peat*** Some roots, black, wet	57.2	3			Frozen at 2.0 m
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 14/09/06

Northing: 7577734.583

Easting: 561818.588

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.201

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Log of Test Pit: 01-TP06-11

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.3				
1		***Crushed Shale*** Green to purple, wet, some to trace wood and concrete debris					
2		Slight hydrocarbon odour		1		40	Sample analysed for F2-F4
3 / 1							
4		Trace of ice, no hydrocarbon odour below 1.3 m		2		30	
5							
6			57.4	3		35	
2		End of Test Pit					
7							
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 15/09/06

Northing: 7577740.416

Easting: 561818.143

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.275

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Log of Test Pit: 01-TP06-12

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft / m		Ground Surface	59.1				
0 / 0		***Crushed Shale*** Green to purple, moist, trace wood debris					
1				1		35	
2							
3 / 1							
4				2		45	
5		Wet below 1.5m					
				3		45	Sample analysed for F2-F4, metals
6			57.2				
2		***Peat*** Some roots, dark brown with some black and yellow, wet	57.1	4		140	
7		End of Test Pit					
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 15/09/06

Northing: 7577742.093

Easting: 561826.305

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.123

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Log of Test Pit: 01-TP06-13

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.9				
1		***Crushed Shale with Silty Fine Sand*** Trace roots, brown, moist, some wood pieces		1		45	Sample analysed for F2-F4
2			59.1				
3 / 1		***Crushed Shale*** Green to purple, wet, trace wood and concrete debris					
4							
5				2		45	
6 / 2							
7			57.6	3		45	
8		End of Test Pit					
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 15/09/06

Northing: 7577749.922

Easting: 561827.164

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.878

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Log of Test Pit: 01-TP06-14

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.7				
		Crushed Shale with Silty Fine Sand Trace roots, brown, moist, some wood pieces	59.1	1		45	
1		***Crushed Shale*** Trace silty sand, greyish - brown, moist, slight hydrocarbon odour	58.6	2		25	
2		***Crushed Shale*** Green to purple, wet, trace wood and concrete debris, slight hydrocarbon odour	57.7	3		30	Sample analysed for F2-F4
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 15/09/06

Northing: 7577749.573

Easting: 561833.147

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.72

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Log of Test Pit: 01-TP06-15

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.6				
		Crushed Shale with Silty Fine Sand Trace roots, brown, moist, some wood pieces		1		40	
			58.8				
1		***Crushed Shale*** Trace silt (yellow), purple					
				2		35	
2		Ice from 2.2 to 2.4 m		3		35	Sample analysed for F2-F4
			57.2				
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 15/09/06

Northing: 7577752.822

Easting: 561832.182

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.632

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Log of Test Pit: 01-TP06-16

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	59.8				
		Crushed Shale with Silty Fine Sand Trace roots, trace wood, brown, moist, trace wood pieces		1		50	
1		***Crushed Shale*** Purple, wet, trace wood debris	58.8	2		45	
2				3		40	Sample analysed for F2-F4
		End of Test Pit	57.4				

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 15/09/06

Northing: 7577752.526

Easting: 561837.815

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 59.803

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Log of Test Pit: 01-TP06-17

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	61.2				
		Asphalt	61.1				
1		***Crushed Shale*** Trace silty sand, purple to grey, moist					
2				1		45	
3 / 1							
4							
5				2		40	
6							
2 / 7		Slight to very slight hydrocarbon odour from 2.0 to 2.6 m		3		45	Sample analysed for F2-F4
8				4		40	
			58.5				
9		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 15/09/06

Northing: 7577744.905

Easting: 561857.790

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 61.162

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Log of Test Pit: 01-TP06-18

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	61.0				
		Crushed Shale, Some Silty Sand Brown, moist, Slight hydrocarbon odour and trace of black staining from 0 to 0.6 m		1		50	Sample analysed for F2-F4, metals
				2		40	Sample analysed for F2-F4
			59.0	3		15	
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 16/09/06

Northing: 7577746.479

Easting: 561812.144

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 60.994

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Log of Test Pit: 01-TP06-19

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	60.3				
		Crushed Shale Grey to purple, moist					
1		Slight hydrocarbon odour		1		25	Sample analysed for F2-F4
2							
3 / 1		No hydrocarbon odour		2		5	
4							
5							
6				3		15	
2			58.3				
7		End of Test Pit					
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 16/09/06

Northing: 7577696.085

Easting: 561809.181

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 60.311

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Log of Test Pit: 01-TP06-20

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft / m		Ground Surface	60.5				
0 / 0		***Crushed Shale*** Fine, purple with some yellow, moist	60.4				
1		***Crushed Shale*** Grey, moist		1		10	
2							
3 / 1							
4				2		5	
5							
6 / 2							
7				3		15	
8		Trace of sulfur-iron staining below 2.3 m	58.0	4		25	Sample analysed for F2-F4
9		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 16/09/06

Northing: 7577695.828

Easting: 561814.423

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 60.452

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Log of Test Pit: 01-TP06-21

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	60.9				
1		***Crushed Shale with Silty Sand*** Fine, yellow, moist, strong hydrocarbon odour	60.5	1		20	
2		***Crushed Shale*** Fine to medium, grey and purple, moist, strong hydrocarbon odour		2		400	Sample analysed for F2-F4, PAHs
3 / 1							
4							
5				3		480	Sample analysed for F1, F2-F4, VOC, metals
6 / 2							
7		Moderate to slight hydrocarbon odour below 2.0 m		4		55	Sample analysed for F2-F4
8							
9		No odour below 2.7 m	58.0	5		45	
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 16/09/06

Northing: 7577700.835

Easting: 561822.576

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 60.903

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Log of Test Pit: 01-TP06-22

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	60.9				
		Crushed Shale with Silty Sand Fine, yellow, moist	60.5	1		35	
		Crushed Shale Fine to medium, grey and purple, moist		2		25	
				3		70	Sample analysed for F2-F4
			58.0	4		10	
		Peat Some roots and rootlets,black, moist	57.9	5		25	
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 16/09/06

Northing: 7577700.527

Easting: 561830.341

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 60.884

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Log of Test Pit: 01-TP06-23

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
		Ground Surface	61.0				
		Asphalt	60.9				
		Crushed Shale Fine, some fine sand, purple/grey/brown, moist		1		25	Sample analysed for F2-F4
			60.4				
		Crushed Shale grey, moist					
				2		10	
				3		15	
				4		15	
			58.0				
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
m: 0, 1, 2, 3

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 16/09/06

Northing: 7577717.864

Easting: 561811.816

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 61.026

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Log of Test Pit: 01-TP06-24

Project No: 1256-0601

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0, m 0		Ground Surface	61.1				
		Asphalt	61.0				
		Crushed Gravel	60.9				
1		Trace fine sand, grey, moist	60.8				
		Asphalt					
2		Crushed Shale		1		0	
3, 1		Greyish-purple, moist, slight hydrocarbon odour					
4							
5							
6				2		15	
7, 2							
8							
9				3		15	Sample analysed for F2-F4
10, 3							
11		Trace of ice, no hydrocarbon odour below 3.2 m	57.7	4		30	
12		End of Test Pit					
13							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577724.079

Easting: 561811.145

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 61.141

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Log of Test Pit: 01-TP06-25

Project No: 1256-0601

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	61.4				
		Asphalt	61.2				
1		***Crushed Shale*** Some fine sand grey-brown, moist		1		25	
2							
3 / 1		Brown below 1 metre					
4							
5				2		20	
6 / 2		From 1.80 to 1.95 m, some silty clay, grey blue					
7		Purple below 1.95m		3		10	
8							
9				4		15	Sample analysed for F2-F4
10 / 3			58.2				
11		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577732.172

Easting: 561810.698

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 61.367

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Log of Test Pit: 01-TP06-26

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	60.3				
		Crushed Shale (fine) and Medium Sand purple, moist, trace silt, yellow below 0.1 m	60.0				
		Crushed Shale Some medium to coarse sand, grey, moist					
			57.9				
		Peat Some rootlets, trace roots, black, moist, well decayed organic matter	57.7				
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577693.89

Easting: 561819.238

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 60.271

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Log of Test Pit: 01-TP06-27

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	61.3				
		Asphalt	61.2				
		Crushed Shale Trace of silty sand, brown, moist					
				1		0	
				2		0	
		Purple below 2.0 m					
			59.0	3		0	Sample analysed for F2-F4
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577742.643

Easting: 561809.293

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 61.258

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Log of Test Pit: 01-TP06-28

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 01

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft m 0 0		Ground Surface	61.3				Staining at surface
1		***Gravel (sorted)*** Fine, some coarse sand, dry, strong hydrocarbon odour		1		0	
		Black at 0.4 m		2		220	Sample analysed for F1, BTEX, F2-F4, PAHs, metals
2		Fine to coarse, purple below 0.5 m		3		60	Sample analysed for F1, BTEX, F2-F4
3 1			60.4				End of test pit due to underground services in the area
		End of Test Pit					
4							
5							
6 2							
7							
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577744.639

Easting: 561794.976

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 61.302

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Project No: 1256-0601

Borehole Log: 02-MW06-01

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 02

Logged By: JP

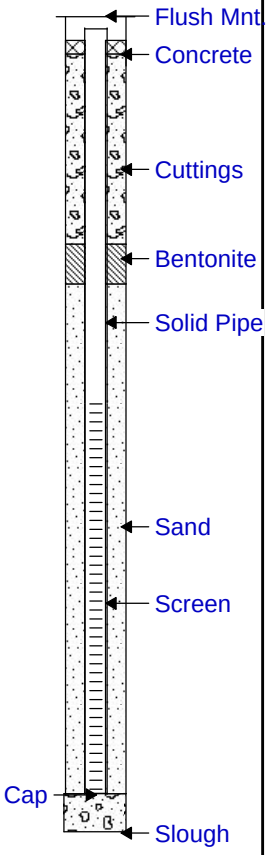
Checked By: JP

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Elev.
		Ground Surface	52.2
		Crushed Shale Crushed angular gravel with some sand, trace cobbles, purple, dry	
			51.2
		Peat Peat, roots and rootlets, black, moist	51.1
		Crushed Shale Crushed angular fine gravel, coated with sandy silt, brown, dry to moist	
			49.6
		Sandy Silt Trace gravel, brown black patches, wet	
			49.0
		End of Borehole	

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
m: 0, 1, 2, 3

Well Compilation Details



Remarks

Drilled By:Northwind Industries Ltd.	Hole Diameter: 250 mm	Well Diameter: 50 mm
Drill Method: Solid Stem Auger	Ground Elevation: 52.269	TOC Elevation: 52.219
Drill Date: 21/09/06	Northing: 7577250.429 Easting: 561104.336	Sheet: 1 of 1

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Project No: 1256-0601

Borehole Log: 02-MW06-02

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 02

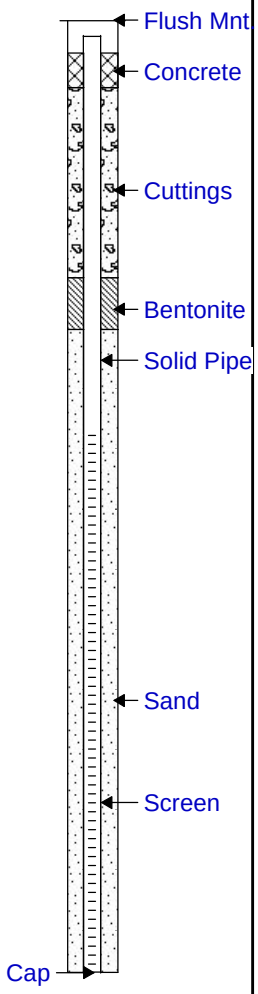
Logged By: JP

Checked By: JP

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Elev.
ft / m		Ground Surface	52.2
		Sand and Gravel Medium to coarse sand and gravel, some crushed shale, brown, dry, very strong hydrocarbon like odour	
			50.8
		Peat Black, dry	50.7
		Silty Fine Sand Trace gravel, trace clay, grey, moist	
			49.4
		End of Borehole	

Well Compilation Details



Remarks

Drilled By: Northwind Industries Ltd.
Hole Diameter: 250 mm
Well Diameter: 50 mm

Drill Method: Solid Stem Auger
Ground Elevation: 52.224
TOC Elevation: 52.224

Drill Date: 21/09/06
Northing: 7577244.8740 Easting: 561054.455
Sheet: 1 of 1

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Log of Test Pit: 02-TP06-01

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	51.6				
1		***Fine Gravel, Some Fine Sand*** trace of grey crushed shale, brown, dry	51.2	1		65	
2		***Crushed Shale*** Purple, dry, moderate hydrocarbon odour	50.4	2		15	
3 / 1							
4		***Peat*** Some roots and rootlets, trace fine sand, black, moist, moderate hydrocarbon odour	50.2	3		2500	
5				4		120	Sample analysed for F2-F4
6		***Silty Fine Sand*** Brown-grey, moist, trace of organic oxidation, moderate					
7 / 2		Wet below 2.0 m and slight hydrocarbon odour	49.2	5		85	
8		***Silty Clay*** Trace fine gravel, brown, wet	49.0	6		70	
9		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577230.995

Easting: 561022.464

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.572

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Log of Test Pit: 02-TP06-02

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft m		Ground Surface	51.4				
0 0		***Fine Gravel, Some Fine Sand*** trace grey crushed shale, brown, dry	50.8	1		50	
1		***Crushed Shale*** Purple, dry	49.9	2		520	Sample analysed for F1, BTEX, F2-F4
2							
3 1							
4							
5		***Peat*** Some roots and rootlets, trace fine sand, black, dry	49.8	3		>100% LEL	
6			49.5	4		590	Sample analysed for F1, BTEX, F2-F4
7 2		***Silt, Some Clay*** Trace sand, trace roots, grey-brown, moist					
8		***Silt, Some Clay*** Grey, moist, mixed horizons with fine orange/brown sand, moist					
9				5		25	Sample analysed for BTEX
10 3							
11		Wet with some fine sand below 3.1 m	47.8	6		65	
12		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577237.607

Easting: 561014.676

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.402

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Log of Test Pit: 02-TP06-03

Project No: 1256-0601

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft / m		Ground Surface	51.9				
0 / 0		***Medium to Coarse Sand and Gravel*** Brown, dry, trace debris (aluminum sheet), slight hydrocarbon odour	51.6	1		75	Sample analysed for F1, BTEX, F2-F4
1			51.5	2		30	
2		***Silty Sand*** Trace gravel, trace roots, dark grey to black, moist, slight hydrocarbon odour		3		45	Sample analysed for F2-F4
3 / 1							
4		***Coarse Sand, Some Crushed Shale*** Grey-purple, moist					
5			50.3				
		Peat Some roots and rootlets, trace sand, black, dry, slight hydrocarbon odour	50.2	4		0	
6 / 2				5		25	
7		***Silty Fine Sand*** Trace gravel, trace sand (brown-orange), grey, moist Wet below 2.3 m					
8							
9				6		70	
10 / 3							
11			48.5				
		End of Test Pit					
12							
13							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577251.14

Easting: 561017.367

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.91

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Log of Test Pit: 02-TP06-04

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	50.7				
		Crushed Shale, Some coarse sand Purple, dry					
1				1		110	Sample analysed for F1, BTEX, F2-F4
		Tar present from surface to 1.0 m					
2							
3 / 1							
4							
5							
			48.9	2		40	
6		***Silty Clay, Some Sand*** Dark grey, wet	48.8				
2		***Silty Sand, Some Clay*** Some roots, brownish-grey, frozen patches	48.6	3		0	
7		End of Test Pit					
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 17/09/06

Northing: 7577284.26

Easting: 561004.828

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 50.731

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Log of Test Pit: 02-TP06-05

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	52.1				
1		***Coarse Sand and Gravel (Shale)*** Grey and purple, dry, some asphalt and debris (wheel rim, steel wire, metal, pipes, nails)		1		80	Sample analysed for F2-F4, PAHs, metals
2							
3 / 1							
4							
5				2		60	
6		Black/brown/orange below 1.7 m		3		45	
2 / 7			49.8				
8		***Peat*** Some root and rootlets, black, moist		4		10	
9		***Medium Sand*** Trace grey silt and gravel, orange-brown gravel, wet	49.3				Frozen at 2.8 m
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577296.034

Easting: 561041.746

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 52.081

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Log of Test Pit: 02-TP06-06

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	51.9				
1		***Crushed Shale*** Trace coarse sand, purple to grey, dry, trace asphalt pieces		1		55	Sample analysed for F1, BTEX, F2-F4
2							
3			51.0				
1		***Peat*** Black, roots and rootlets, moist					
4		***Silty Fine Sand*** Trace medium to coarse sand and gravel, brown and grey, dry		2		20	
5							
6							
2							
7				3		25	
8			49.4				
9		***Clayey Silt*** Trace gravel (rounded), grey, hard	49.1	4		45	
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577275.472

Easting: 561032.837

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.944

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Log of Test Pit: 02-TP06-07

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft m		Ground Surface	52.5				
0 0		***Medium to Coarse Sand and Gravel*** Brown, dry, strong hydrocarbon odour		1		470	
1				2		880	Sample analysed for F1, BTEX, F2-F4, PAHs
		Black and dark grey below 0.3 m	51.8				
2		***Peat*** Black, dry, some roots and rootlets, trace fine sand, strong hydrocarbon odour	51.7	3		900	
3 1				4		120	Sample analysed for F1, BTEX, F2-F4, PAHs
4		***Silty Fine Sand*** Grey/brown with some orange medium sand, moist, strong hydrocarbon odour	50.7				
6		***Fine to Medium Sand*** Grey, moist, strong hydrocarbon odour					
7 2				5		160	
			50.1				
8		***Silty Fine Sand*** Grey/brown, with some orange medium sand, wet					
9		Saturated, trace clay below 2.8 m					
10 3			49.4	6		160	
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577255.315

Easting: 561037.6

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 52.484

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Log of Test Pit: 02-TP06-08

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	52.6				
		Medium to Coarse Sand and Gravel Brown, dry, very strong hydrocarbon odour		1		>100% LEL	
		Black/dark grey below 0.5m		2		3100	Sample analysed for F1, BTEX, F2-F4, lead
		Some purple crushed shale below 0.7 m		3		>100% LEL	
			51.2				
		Peat Some roots and rootlets, trace fine sand, black, dry	51.1	4		>100% LEL	
		Silty Fine to Medium Sand Trace gravel with some clay, grey, moist		5		>100% LEL	Sample analysed for F1, BTEX, F2-F4, PAHs
		Some ice crystals and wet below 2.2 m		6		580	Sample analysed for F1, BTEX, F2-F4
			50.1				
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577238.426

Easting: 561043.364

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 52.568

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Log of Test Pit: 02-TP06-09

Project No: 1256-0601
Project: Inuvik Airport Phase II/III ESA
Client: Transport Canada
Location: Inuvik, NWT

Site ID: 02
Logged By: JP
Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft / m		Ground Surface	52.7				
0 / 0		***Fine Sand, Some Crushed Shale*** Trace silt, grey, dry to moist, trace asphalt, some black staining, strong hydrocarbon odour	52.2	1		6400	Sample analysed for F1, BTEX, F2-F4
							Water coming in at 0.5m
		Crushed Shale Dark grey and brown, wet, strong hydrocarbon odour	51.6	2		3000	
1		***Peat*** Black, some roots and rootlets, moist, strong hydrocarbon odour		3		>100% LEL	Sample analysed for PAHs
		Silty Fine Sand Some organic matter, olive grey, moist, strong hydrocarbon odour	50.9				
2		***Silty Sand*** Trace clay, grey and brown, traces of pink and orange, wet	50.1	4		2750	Sample analysed for F1, BTEX, F2-F4, lead
		Silty fine Sand Orange, wet, moderate hydrocarbon odour	49.9	5		560	Sample analysed for F1, BTEX, F2-F4
							Frozen at 2.8
3		End of Test Pit					

Excavated By: Northwind Industries Ltd.
Method of Excavation: Backhoe
Date of Excavation: 18/09/06

Northing: 7577244.477
Easting: 561064.673

Hole Size: 1.5 X 3.0 m
Elevation (m.a.s.l.): 52.655

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Log of Test Pit: 02-TP06-10

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0, m 0		Ground Surface	52.8				
		Fine to Medium Sand, Some Silt and Gravel Trace roots, brown, dry, slight hydrocarbon odour	52.4	1		60	
		Peat Some roots and rootlets, black, moist	52.3				
		Fine Sand Trace silt, trace gravel, brown with patches of orange, moist, stiff, slight hydrocarbon odour	52.0	2		100	Sample analysed for F1, BTEX, F2-F4
		Shale Bedrock, purple	51.4				
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577259.839

Easting: 561060.628

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 52.806

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Log of Test Pit: 02-TP06-11

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	52.6				
1		***Gravel*** Grey, dry to moist, poorly sorted angular gravel (crushed shale), slight hydrocarbon odour	52.1	1		85	Sample analysed for F1, BTEX, F2-F4
2		***Peat*** Some rootlets, trace organic matter, black, moist	51.9	2		110	
3 / 1		***Fine to Medium Sand*** Trace silt, trace gravel, brown/orange/greenish grey, moist	51.0	3		85	
5 / 6 / 2 / 7		***Shale*** possible bedrock, purple	50.1				
8		End of Test Pit					
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577279.462

Easting: 561056.457

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 52.625

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Log of Test Pit: 02-TP06-12

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	53.2				
		Crushed Shale, Some Fine to Medium Sand Grey brown, dry	52.8	1		0	Sample analysed for F1, BTEX, F2-F4
		End of Test Pit					Bedrock at 0.4m

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
m: 0, 1, 2

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577265.134

Easting: 561080.778

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 53.191

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Log of Test Pit: 02-TP06-13

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	53.1				
		Silty Sand, Some Gravel Some roots and rootlets, brown, dry	52.5	1		55	
		Sandy Silt Trace of clay, grey brown with orange patches, moist, hard	52.1				
1		***Peat*** Some roots, trace organic matter, black, moist	51.8				
		Sandy Silt Trace clay, grey/brown, moist		2		50	Sample analysed for F1, BTEX, F2-F4
			51.3	3		35	Refusal at 1.8 at inferred bedrock
		End of Test Pit					
2							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577286.307

Easting: 561077.025

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 53.061

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Log of Test Pit: 02-TP06-14

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft m 0 0		Ground Surface	53.0				
		Crushed Shale, Some Fine to Medium Sand Brownish yellow, dry, strong hydrocarbon odour	52.8	1		50	
1				2		85	Sample analysed for F1, BTEX, F2-F4
		Crushed Shale Trace fine medium sand, purple, moist, strong hydrocarbon odour	52.5				
2				3		90	
			52.2				
			52.1	4		0	
3 1		***Silty Sand*** Trace clay, brown and grey, moist					
				5		25	
4		***Peat*** Some roots, trace organic matter, black, moist					
			51.5				
5		***Silty Sand*** Trace clay, trace gravel, orange and brown, wet					
			51.2				
6		***Shale*** Bedrock, grey					
2		End of Test Pit					
7							
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 18/09/06

Northing: 7577249.91

Easting: 561080.648

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 52.951

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Log of Test Pit: 02-TP06-15

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	52.6				
		Crushed Shale Crushed angular gravel with some sand, trace cobbles, purple, dry					
2				1		45	
3			51.6				
1		***Peat*** Peat, roots, black, moist	51.5				
4		***Crushed Shale*** Crushed angular fine gravel, coated with sandy silt, brown, dry to moist					
6				2		55	Sampled for F1, F2-F4, BTEX
2							
8				3		30	
			49.9				
9		***Sandy Silt*** Trace gravel, brown and black patches, wet		4		20	
3 / 10			49.5				
		End of Test Pit					
11							
12							
13							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577250.461

Easting: 561107.747

Hole Size: 1.5 X 3 m

Elevation (m.a.s.l.): 52.6250

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Log of Test Pit: 02-TP06-16

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
		Ground Surface	53.6				
		Silty Fine Sand Some fine angular gravel, moist, dark black staining at surface, hydrocarbon odour	53.5	1		25	Sampled for F1, F2-F4, BTEX, PAHs, metal
		Shale Olive grey to purple shale, assumed bedrock	53.1				
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6
m: 0, 1

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577271.892

Easting: 561104.442

Hole Size: 1.5 X 3 m

Elevation (m.a.s.l.): 53.647

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Log of Test Pit: 02-TP06-17

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
		Ground Surface	53.4				
		Fine to Medium Sand Some gravel, trace silt, brown, dry, moderate hydrocarbon odour, staining	53.2	1		0	Dark brown to black staining at surface Sample analysed for F1, BTEX, F2-F4
		Shale Bedrock, purplish grey	53.0				
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
m: 0, 1, 2

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577271.485

Easting: 561114.651

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 53.399

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Log of Test Pit: 02-TP06-18

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 02

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	52.7				
1		***Silty Fine Sand*** Some gravel, some rootlets, grey brown, dry	52.2	1		5	
2		***Sandy Silt*** Some angular gravel, yellow, moist	52.0	2		10	
3 / 1		***Sandy Silt*** Some gravel, brown, moist	51.4				
4		***Peat*** Black, some roots and rootlets, moist		3		0	
5		***Sandy Silt*** Trace subangular gravel, brown, moist		4		0	
6 / 2							
7		***Clayey Silt*** Grey, wet, conglomerate with pieces of purple shale (up to 50cm dia.)	50.5				
8				5		45	Sample analysed for F1, BTEX, F2-F4
9		End of Test Pit	49.9				

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577263.988

Easting: 561130.043

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 52.671

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Project No: 1256-0601

Borehole Log: 08-MW06-1

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 08

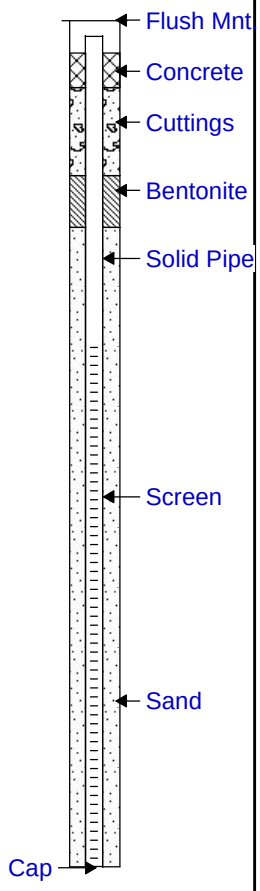
Logged By: JP

Checked By: JP

SUBSURFACE PROFILE

Depth (m)	Symbol	Description	Elev.
ft / m		Ground Surface	22.4
		Silty Sand Trace gravel, trace roots and rootlets, brownish-grey, moist to wet	22.0
		Peat Some roots, black, moist	
		Clayey Silt Trace fine sand, trace gravel, greyish-brown, moist to wet	
		Very hard below 1.7 m, inferred permafrost	19.9
		End of Borehole	

Well Compilation Details



Remarks

Drilled By:Northwind Industries Ltd.	Hole Diameter: 250 mm	Well Diameter: 50 mm
Drill Method: Solid Stem Auger	Ground Elevation: 22.359	TOC Elevation: 22.359
Drill Date: 21/09/06	Northing: 7579481.8 Easting: 556828.809	Sheet: 1 of 1

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Log of Test Pit: 08-TP06-01

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 08

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	20.1				
1		***Sandy Silt, Some Gravel*** Trace cobbles (shale), brown, wet		1		0	Sample analysed for F1, BTEX, F2-F4
2			19.3				
3 / 1		***Peat*** Some roots and rootlets, black, moist		2		0	
4		***Clayey Silt*** Grey-brown, wet					
5							
6 / 2		Saturated below 1.8 m		3		0	
7			17.7				
8		End of Test Pit					
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7579467.705

Easting: 556819.959

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 20.126

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Log of Test Pit: 08-TP06-02

Project No: 1256-0601
Project: Inuvik Airport Phase II/III ESA
Client: Transport Canada
Location: Inuvik, NWT
Site ID: 08
Logged By: JP
Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	19.9				
		Sandy Silt, Some Gravel Trace cobbles (shale), brown, wet, slight hydrocarbon odour	19.6	1		0	Sample analysed for F1, BTEX, F2-F4
1		***Clayey Silt*** Grey, mixed with peat, some roots and rootlets, black, wet	19.1	2		15	
2							
3 / 1		***Clayey Silt*** Trace gravel, brownish-grey, moist Wet below 1.2 m	18.5	3		0	
4							
5		***Medium Sand*** Trace gravel (rounded), grey, wet	18.3	4		0	
6		***Silty Clay*** Grey, wet	18.0	5		0	
2		End of Test Pit					
7							
8							
9							

Excavated By: Northwind Industries Ltd.
Method of Excavation: Backhoe
Date of Excavation: 20/09/06

Northing: 7579460.048
Easting: 556839.602

Hole Size: 1.5 X 3.0 m
Elevation (m.a.s.l.): 19.916

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Log of Test Pit: 08-TP06-03

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 08

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	19.4				Presence of water with sheen, water sample taken and analysed for F1, BTEX, F2-F4, PAHs, metals Sample 1 analysed for F2-F4, metals
		Sandy Silt, Some Gravel Trace cobbles (shale), brown, wet, some black staining	18.9	1		140	
		Peat Some roots and rootlets, black, wet	18.8	2		0	
1		***Clayey Silt*** Trace gravel, trace fine sand, brownish-grey, wet	17.9	3		15	
2		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7579446.449

Easting: 556838.461

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 19.441

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Log of Test Pit: 08-TP06-04

Project No: 1256-0601

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 08

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0, m 0		Ground Surface	19.6				
		Sand and Gravel Yellowish brown, moist to wet	19.3	1		5	
		Sandy Silt Trace fine sand, trace gravel, grey, moist to wet	18.9	2		5	Sample analysed for F1, F2-F4
		Peat Some roots and rootlets, black, moist					
		Silty Sand Grey, moist	18.5	3		0	
		Sandy Silt Grey and brown, moist	17.9	4		0	
		Clayey Silt Trace gravel, greyish-blue, wet	17.5	5		10	
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7579449.435

Easting: 556828.675

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 19.607

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Log of Test Pit: 08-TP06-05

Project No: 1256-0601

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 08

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0, m 0		Ground Surface	24.1				
		Silty Sand Trace gravel, grey, dry to moist		1		0	Sample analysed for F1, F2-F4
			23.3				
1		**Peat** Some roots and rootlets, black, moist					
		Clayey Silt Brownish-grey, moist		2		0	
			22.5	3		0	
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7579469.072

Easting: 556873.987

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 24.095

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Log of Test Pit: 08-TP06-06

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 08

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	24.5				
		Silty Sand Trace gravel, trace rootlets, greyish-brown, wet	24.1	1		10	Sample analysed for F1, F2-F4
		Sandy Silt Trace clay, greyish-brown and brown, moist	22.8	2		0	
		Silty Sand Greyish-brown, moist	22.6	3		0	
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
m: 0, 1, 2

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7579483.105

Easting: 556864.079

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 24.524

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Log of Test Pit: 08-TP06-07

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 08

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	22.7				
		Silty Sand Trace gravel, some roots and rootlets, brownish-grey, dry, slight hydrocarbon odour		1		150	Sample analysed for F1, F2-F4
			22.3				
		Peat Some rootlets, black, moist		2		510	
				3		420	
		Clayey Silt Trace fine sand, trace gravel, greyish-brown, moist					
		Wet below 1.4 m		4		660	Sample analysed for F1, BTEX, F2-F4, PAHs
		Permafrost at 1.7 m	20.9	5		10	Sample analysed for F1, F2-F4
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7579483.983

Easting: 556828.817

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 22.726

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Log of Test Pit: 09-TP06-01

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 09

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft m 0 0		Ground Surface	29.1				
1		***Fine to Medium Sand*** Some peat, some rootlets, trace gravel (angular) and cobbles, dark brown, moist	28.7	1		10	
2		***Silty Fine Sand, Some Gravel*** Trace cobbles, grey, moist, debris	28.3	2		0	Sample analysed for BTEX, PAHs, VOC, PCB
3 1 4		***Fine Sand*** Trace silt, trace gravel, dark brown, moist, debris					
5		Debris (corrugated metal sheet, airplane part, rusted crushed drums) at 0.7 m to 1.4 m	27.6	3		0	Sample analysed for F1, F2-F4, metals
				4		0	
6 2 7		***Fine Sand*** Trace silt, trace rootlets, brownish-grey, moist					
8		Wet below 2.3 m		5		0	
9		Partially frozen at 2.8 m	26.3				
		End of Test Pit					

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7577276.068

Easting: 560211.058

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 29.101

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Log of Test Pit: 09-TP06-02

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 09

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	29.2				
1		***Silty Fine Sand*** Trace cobbles, trace roots, dark brown, dry, debris (chain, drums, iron/pvc pipe, wires, fuel pump, fibreglass insulation, grain bag)		1		0	Sample analysed for F1, F2-F4, metals
2							
3 / 1							
4							
5			27.6	2		15	Sample analysed for BTEX, PAHs, VOC, PCB
		Peat Trace sand, some roots, black, moist	27.5				
6		***Fine Sand*** Trace silt, brownish-grey, wet		3		0	
2 / 7			27.1				
		End of Test Pit					
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 20/09/06

Northing: 7577268.786

Easting: 560215.236

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 29.19

Franz Environmental Inc.
CONSULTING ¨ ENGINEERS ¨ TECHNOLOGIES ¨

Log of Test Pit: 10-TP06-01

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	51.3				
		Organic Matter Some sand, some roots, dark brown, dry	50.9				
1		***Fine to Medium Sand*** Brown, dry, some moist patches, debris (tar, drum, lids, rusted metal, wood, tires)	49.9	1		35	Sample analysed for PCB, leachable test for metals
2		***Peat*** Some roots and rootlets, brown		2		25	Sample analysed for F2-F4, PAHs, metals
3		***Sandy Silt*** Trace gravel, purplish grey, dry	49.5				
4		***Shale*** Bedrock, purple	49.1				
5		End of Test Pit					
6							
7							
8							
9							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577144.693

Easting: 561095.428

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.269

Franz Environmental Inc.
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Log of Test Pit: 10-TP06-02

Project No: 1256-0601

Project: Inuvik Airport Phase II/III ESA

Client: Transport Canada

Location: Inuvik, NWT

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	51.6				
		Fine Sand Trace silt, trace gravel (angular), trace roots and rootlets, purple, dry with moist patches	51.2	1		30	Sample analysed for F1, F2-F4
		Silty Sand Trace crushed shale, grey and patches of dark brown, dry	50.7	2		25	Sample analysed for PAHs
1		***Fine Sand*** Trace silt, grey, dry, some ice and debris (tar, tar drums (~50), drum lids, wood, rusted metal)		3		15	Sample analysed for VOC, metals
2				4		25	Sample analysed for leachable test for metals
			48.7	5		25	Sample analysed for BTEX, PCB
		End of Test Pit					Refusal at 2.9 m

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577151.082

Easting: 561102.616

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.573

Franz Environmental Inc.
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Log of Test Pit: 10-TP06-03

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	51.8				
1		***Fine Sand*** Trace silt, trace gravel (angular), trace roots and rootlets, purple, dry with moist patches	51.4	1		20	Sample analysed for VOC
2		***Silty Sand*** Trace crushed shale, grey and patches of dark brown, dry		2		15	Sample analysed for PCB
3 / 1							
4		Below 1.3 m debris (drums, paper, wood, metal, tar)	50.3	3		20	Sample analysed for F1, BTEX, F2-F4, leachable test for metals
5		***Fine Sand, Some Crushed Shale*** Trace silt, trace pebbles and cobbles, purple, dry, debris (drums, paper, wood, metal, tar)					
6 / 2							
7							
8				4		15	Sample analysed for PAHs, metals
9			48.9				Refusal at 2.9m
10 / 3		End of Test Pit					
11							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577155.481

Easting: 561107.348

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.817

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Log of Test Pit: 10-TP06-04

Project No: *1256-0601*

Project: ***Inuvik Airport Phase II/III ESA***

Client: ***Transport Canada***

Location: ***Inuvik, NWT***

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	51.7				
1		***Sandy Silt*** Some rootlets, grey, dry, hard	51.3	1		55	
2		***Fine Sand, Some Crushed Shale*** Trace silt, trace cobbles and pebbles, purple, dry, trace tar	50.5	2		50	Sample analysed for F1, F2-F4, metals
3 / 1							
4		***Fine Sand, Some Crushed Shale*** Some silt, some cobbles, purple, dry, with debris (drums, wood)					
5							
6				3		40	Sample analysed for BTEX, PAHs, PCB
7 / 2							
8							
9		Wet below 2.8 m	48.7	4		60	Sample analysed for VOC, leachable test for metals
10 / 3		End of Test Pit					
11							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 19/09/06

Northing: 7577160.625

Easting: 561110.931

Hole Size: 1.5 X 3.0 m

Elevation (m.a.s.l.): 51.658

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Log of Test Pit: 10-TP06-05

Project No: *1256-0601*

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	44.1				
		Sandy Silt Trace clay, trace gravel (0.5-3cm), brownish grey with some peat horizons		1		> 100% LEL	
1			43.7				Sample analysed for PAHs, VOC
		Peat Peat with roots and rootlets, undecayed organic matter, trace gravel (up to 3cm dia.)	43.6	2		35	
2		End of Test Pit					
3 / 1							
4							
5							
6							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 22/09/06

Northing: 7577143.515

Easting: 561125.790

Hole Size: 0.5 X 0.5 m

Elevation (m.a.s.l.): 44.075

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Log of Test Pit: 10-TP06-06

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	44.9				
		Sandy Silt Some clay, trace roots, trace gravel, brownish grey, moist	44.4	1		0	Sample analysed for F2-F4, leachable metals
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6
m: 0, 1

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 22/09/06

Northing: 7577140.197

Easting: 561118.899

Hole Size: 0.5 X 0.5 m

Elevation (m.a.s.l.): 44.852

Franz Environmental Inc.
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Log of Test Pit: 10-TP06-07

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	45.3				
		Sandy Silt Trace clay, trace gravel (0.5-3cm dia.), brownish grey with some peat horizons, dry	44.9				
		Peat Roots and rootlets, undecayed organic matter, trace gravel (up to 3cm dia.), dry	44.8	1		0	Sample analysed for F1, PAHs
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6
m: 0, 1

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 22/09/06

Northing: 7577138.516

Easting: 561113.281

Hole Size: 0.5 X 0.5 m

Elevation (m.a.s.l.): 45.251

Franz Environmental Inc.
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Log of Test Pit: 10-TP06-08

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	44.0				
		Sandy Silt Trace clay, some gravel (0.5-3cm dia.), brownish grey with some peat horizons	43.6	1		0	Sample analysed for BTEX, PCBs
1		***Peat*** Roots and rootlets, undecayed organic matter, trace gravel (up to 3cm dia.)	43.6				
2		End of Test Pit					
3							
1							
4							
5							
6							

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 22/09/06

Northing: 7577129.83

Easting: 561109.66

Hole Size: 0.5 X 0.5 m

Elevation (m.a.s.l.): 43.974

Franz Environmental Inc.
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Log of Test Pit: 10-TP06-09

Project No: 1256-0601

Project: *Inuvik Airport Phase II/III ESA*

Client: *Transport Canada*

Location: *Inuvik, NWT*

Site ID: 10

Logged By: JP

Checked By: JP

SUBSURFACE PROFILE				SAMPLE			
Depth (m)	Symbol	Description	Depth/Elev.	Sample Number	Type	Vapour (ppm)	Remarks
ft 0 / m 0		Ground Surface	43.8				
		Sandy Silt Trace clay, trace gravel (0.5-3cm dia.), brownish grey with some peat horizons	43.4				
		Peat Roots and rootlets, undecayed organic matter, trace gravel (up to 3cm dia.)	43.3	1		0	Sample analysed for F2-F4 and metals
		End of Test Pit					

ft: 0, 1, 2, 3, 4, 5, 6
m: 0, 1

Excavated By: Northwind Industries Ltd.

Method of Excavation: Backhoe

Date of Excavation: 22/09/06

Northing: 7577128.888

Easting: 561103.917

Hole Size: 0.5 X 0.5 m

Elevation (m.a.s.l.): 43.750

APPENDIX C

Laboratory Certificates of Analysis

Maxxam Analytics Inc

Your Project #: 1256-0601 INUVIK
Your C.O.C. #: 115766

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
FRANZENV-VAN
1080 MAINLAND STREET
308
VANCOUVER, BC
Canada V6B 2T4

Report Date: 2006/09/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A643198
Received: 2006/09/18, 8:50

Sample Matrix: Leachate
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury (Leachable)	1	2006/09/19	2006/09/19	EENVSOP-00031 V.1	EPA 245.1
ICP Metals on leachate (1)	1	N/A	2006/09/19	EENVSOP-00034 v1	EPA SW846 6010C

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble) (1)	1	N/A	2006/09/19	EENVSOP-00034 V.1	SSMA 12.2.2
Chromium, Hexavalent (soil)	1	2006/09/19	2006/09/19	EENVSOP-00067 v4	SM 3500-Cr B
Mercury in Soil by CVAA	1	N/A	2006/09/19	EENVSOP-00032 V.1	EPA SW846 7471B
Elements by ICPMS (total) - Partial	1	N/A	2006/09/19	EENVSOP-00123 v2	EPA SW 846 6020 A
ICP - Acid Extractable - Soil (1)	1	2006/09/19	2006/09/19	EENVSOP-00034 v1	EPA SW846 6010C
Moisture	1	N/A	2006/09/18	EENVWI-00023 v2	Carter SSMA 51.2

(1)

Encryption Key Jeremy Wakaruk
Jeremy Wakaruk
20 Sep 2006 12:52:53 -06:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 468-3500 Ext:223

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Total cover pages: 1

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

Maxxam Analytics Inc

Maxxam Job #: A643198
Report Date: 2006/09/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

RESULTS OF CHEMICAL ANALYSES OF LEACHATE

Maxxam ID		C80487		
Sampling Date		2006/09/15		
COC Number		115766		
	Units	**SAND PACK**	**RDL**	**QC Batch**
Elements				
Leachable Silver (Ag)	mg/L	<0.5	0.5	1275584
Leachable Arsenic (As)	mg/L	<0.5	0.5	1275584
Leachable Boron (B)	mg/L	<50	50	1275584
Leachable Barium (Ba)	mg/L	<10	10	1275584
Leachable Beryllium (Be)	mg/L	<0.5	0.5	1275584
Leachable Cadmium (Cd)	mg/L	<0.1	0.1	1275584
Leachable Cobalt (Co)	mg/L	<10	10	1275584
Leachable Chromium (Cr)	mg/L	<0.5	0.5	1275584
Leachable Copper (Cu)	mg/L	<10	10	1275584
Leachable Iron (Fe)	mg/L	<100	100	1275584
Leachable Nickel (Ni)	mg/L	<0.5	0.5	1275584
Leachable Lead (Pb)	mg/L	<0.5	0.5	1275584
Leachable Antimony (Sb)	mg/L	<50	50	1275584
Leachable Selenium (Se)	mg/L	<0.1	0.1	1275584
Leachable Thallium (Tl)	mg/L	<0.5	0.5	1275584
Leachable Uranium (U)	mg/L	<0.5	0.5	1275584
Leachable Vanadium (V)	mg/L	<5	5	1275584
Leachable Zinc (Zn)	mg/L	<50	50	1275584
Leachable Zirconium (Zr)	mg/L	<50	50	1275584

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643198
Report Date: 2006/09/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

ELEMENTS BY ATOMIC SPECTROSCOPY (LEACHATE)

Maxxam ID		C80487		
Sampling Date		2006/09/15		
COC Number		115766		
	Units	**SAND PACK**	**RDL**	**QC Batch**
Elements				
Leachable Mercury (Hg)	ug/L	<0.05	0.05	1275814

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643198
Report Date: 2006/09/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C80487		
Sampling Date		2006/09/15		
COC Number		115766		
	Units	**SAND PACK**	**RDL**	**QC Batch**
Elements				
Soluble (Hot water) Boron (B)	mg/kg	<0.1	0.1	1275410
Mercury (Hg)	mg/kg	<0.05	0.05	1275740
Metals				
Soluble (5:1) Hex. Chromium (Cr 6+)	mg/kg	<0.3	0.3	1275131
Physical Properties				
Moisture	%	0.9	0.3	1274281

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643198
Report Date: 2006/09/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		C80487		
Sampling Date		2006/09/15		
COC Number		115766		
	Units	**SAND PACK**	**RDL**	**QC Batch**
Elements				
Total Aluminum (Al)	mg/kg	1260	10	1275154
Total Antimony (Sb)	mg/kg	<2	2	1275154
Total Arsenic (As)	mg/kg	2	1	1275593
Total Barium (Ba)	mg/kg	25.5	0.2	1275154
Total Beryllium (Be)	mg/kg	<0.1	0.1	1275154
Total Bismuth (Bi)	mg/kg	<10	10	1275154
Total Cadmium (Cd)	mg/kg	<0.2	0.2	1275154
Total Calcium (Ca)	mg/kg	366000	20	1275154
Total Chromium (Cr)	mg/kg	2	1	1275154
Total Cobalt (Co)	mg/kg	1.3	0.4	1275154
Total Copper (Cu)	mg/kg	3	2	1275154
Total Iron (Fe)	mg/kg	1970	10	1275154
Total Lead (Pb)	mg/kg	<10	10	1275154
Total Lithium (Li)	mg/kg	1.6	0.4	1275154
Total Magnesium (Mg)	mg/kg	14600	10	1275154
Total Manganese (Mn)	mg/kg	67.0	0.4	1275154
Total Molybdenum (Mo)	mg/kg	2.5	0.5	1275593
Total Nickel (Ni)	mg/kg	7	4	1275154
Total Phosphorus (P)	mg/kg	559	4	1275154
Total Potassium (K)	mg/kg	249	20	1275154
Total Selenium (Se)	mg/kg	<0.5	0.5	1275593
Total Silver (Ag)	mg/kg	<1	1	1275154
Total Sodium (Na)	mg/kg	98	10	1275154
Total Strontium (Sr)	mg/kg	160	0.4	1275154
Total Sulphur (S)	mg/kg	707	40	1275154
Total Thallium (Tl)	mg/kg	<1	1	1275593
Total Tin (Sn)	mg/kg	5	2	1275154
Total Titanium (Ti)	mg/kg	12.1	0.8	1275154
Total Uranium (U)	mg/kg	3.8	0.2	1275593
Total Vanadium (V)	mg/kg	6	2	1275154
Total Zinc (Zn)	mg/kg	10	2	1275154
Total Zirconium (Zr)	mg/kg	<1	1	1275154

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643198
Report Date: 2006/09/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

General Comments

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: EA643198

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1274281 MD1	BLANK	Moisture	2006/09/18	<0.3		%	
	RPD [C80487-01]	Moisture	2006/09/18	NC		%	20
1275131 AL2	Calibration Check	Soluble (5:1) Hex. Chromium (Cr 6+)	2006/09/19		102	%	75 - 125
	MATRIX SPIKE [C80487-01]	Soluble (5:1) Hex. Chromium (Cr 6+)	2006/09/19		99	%	75 - 125
	BLANK	Soluble (5:1) Hex. Chromium (Cr 6+)	2006/09/19	<0.3		mg/kg	
	RPD [C80487-01]	Soluble (5:1) Hex. Chromium (Cr 6+)	2006/09/19	NC		%	35
1275154 MC3	Calibration Check	Total Aluminum (Al)	2006/09/19		103	%	80 - 120
		Total Antimony (Sb)	2006/09/19		102	%	80 - 120
		Total Barium (Ba)	2006/09/19		99	%	80 - 120
		Total Beryllium (Be)	2006/09/19		100	%	80 - 120
		Total Bismuth (Bi)	2006/09/19		99	%	80 - 120
		Total Cadmium (Cd)	2006/09/19		102	%	80 - 120
		Total Calcium (Ca)	2006/09/19		95	%	80 - 120
		Total Chromium (Cr)	2006/09/19		100	%	80 - 120
		Total Cobalt (Co)	2006/09/19		101	%	80 - 120
		Total Copper (Cu)	2006/09/19		101	%	80 - 120
		Total Iron (Fe)	2006/09/19		99	%	80 - 120
		Total Lead (Pb)	2006/09/19		100	%	80 - 120
		Total Lithium (Li)	2006/09/19		101	%	80 - 120
		Total Magnesium (Mg)	2006/09/19		103	%	80 - 120
		Total Manganese (Mn)	2006/09/19		102	%	80 - 120
		Total Nickel (Ni)	2006/09/19		102	%	80 - 120
		Total Phosphorus (P)	2006/09/19		101	%	80 - 120
		Total Potassium (K)	2006/09/19		101	%	80 - 120
		Total Silver (Ag)	2006/09/19		102	%	80 - 120
		Total Sodium (Na)	2006/09/19		102	%	80 - 120
		Total Strontium (Sr)	2006/09/19		100	%	80 - 120
		Total Tin (Sn)	2006/09/19		99	%	80 - 120
		Total Titanium (Ti)	2006/09/19		99	%	80 - 120
		Total Vanadium (V)	2006/09/19		101	%	80 - 120
		Total Zinc (Zn)	2006/09/19		101	%	80 - 120
		Total Zirconium (Zr)	2006/09/19		96	%	80 - 120
	MATRIX SPIKE	Total Antimony (Sb)	2006/09/19		92	%	75 - 125
		Total Barium (Ba)	2006/09/19		94	%	75 - 125
		Total Beryllium (Be)	2006/09/19		102	%	75 - 125
		Total Cadmium (Cd)	2006/09/19		106	%	75 - 125
		Total Chromium (Cr)	2006/09/19		99	%	75 - 125
		Total Cobalt (Co)	2006/09/19		95	%	75 - 125
		Total Copper (Cu)	2006/09/19		103	%	75 - 125
		Total Lead (Pb)	2006/09/19		95	%	75 - 125
		Total Lithium (Li)	2006/09/19		103	%	75 - 125
		Total Manganese (Mn)	2006/09/19		112	%	75 - 125
		Total Nickel (Ni)	2006/09/19		97	%	75 - 125
		Total Sodium (Na)	2006/09/19		118	%	75 - 125
		Total Strontium (Sr)	2006/09/19		97	%	75 - 125
		Total Titanium (Ti)	2006/09/19		105	%	75 - 125
		Total Vanadium (V)	2006/09/19		106	%	75 - 125
		Total Zinc (Zn)	2006/09/19		94	%	75 - 125
	SPIKE	Total Antimony (Sb)	2006/09/19		104	%	N/A
		Total Barium (Ba)	2006/09/19		101	%	N/A
		Total Beryllium (Be)	2006/09/19		108	%	N/A
		Total Cadmium (Cd)	2006/09/19		104	%	N/A
		Total Chromium (Cr)	2006/09/19		100	%	N/A
		Total Cobalt (Co)	2006/09/19		101	%	N/A
		Total Copper (Cu)	2006/09/19		103	%	N/A

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643198

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275154 MC3	SPIKE	Total Lead (Pb)	2006/09/19		101	%	N/A
		Total Lithium (Li)	2006/09/19		101	%	N/A
		Total Manganese (Mn)	2006/09/19		103	%	N/A
		Total Nickel (Ni)	2006/09/19		104	%	N/A
		Total Sodium (Na)	2006/09/19		108	%	N/A
		Total Strontium (Sr)	2006/09/19		99	%	N/A
		Total Titanium (Ti)	2006/09/19		99	%	N/A
		Total Vanadium (V)	2006/09/19		100	%	N/A
		Total Zinc (Zn)	2006/09/19		102	%	N/A
	BLANK	Total Aluminum (Al)	2006/09/19	<10		mg/kg	
		Total Antimony (Sb)	2006/09/19	<2		mg/kg	
		Total Barium (Ba)	2006/09/19	<0.2		mg/kg	
		Total Beryllium (Be)	2006/09/19	<0.1		mg/kg	
		Total Bismuth (Bi)	2006/09/19	<10		mg/kg	
		Total Cadmium (Cd)	2006/09/19	<0.2		mg/kg	
		Total Calcium (Ca)	2006/09/19	<20		mg/kg	
		Total Chromium (Cr)	2006/09/19	<1		mg/kg	
		Total Cobalt (Co)	2006/09/19	<0.4		mg/kg	
		Total Copper (Cu)	2006/09/19	<2		mg/kg	
		Total Iron (Fe)	2006/09/19	<10		mg/kg	
		Total Lead (Pb)	2006/09/19	<10		mg/kg	
		Total Lithium (Li)	2006/09/19	<0.4		mg/kg	
		Total Magnesium (Mg)	2006/09/19	<10		mg/kg	
		Total Manganese (Mn)	2006/09/19	<0.4		mg/kg	
		Total Nickel (Ni)	2006/09/19	<4		mg/kg	
		Total Phosphorus (P)	2006/09/19	<4		mg/kg	
		Total Potassium (K)	2006/09/19	<20		mg/kg	
		Total Silver (Ag)	2006/09/19	<1		mg/kg	
		Total Sodium (Na)	2006/09/19	<10		mg/kg	
		Total Strontium (Sr)	2006/09/19	<0.4		mg/kg	
		Total Sulphur (S)	2006/09/19	<40		mg/kg	
		Total Tin (Sn)	2006/09/19	<2		mg/kg	
		Total Titanium (Ti)	2006/09/19	<0.8		mg/kg	
		Total Vanadium (V)	2006/09/19	<2		mg/kg	
		Total Zinc (Zn)	2006/09/19	<2		mg/kg	
		Total Zirconium (Zr)	2006/09/19	<1		mg/kg	
	RPD	Total Aluminum (Al)	2006/09/19	15.7		%	35
		Total Antimony (Sb)	2006/09/19	NC		%	35
		Total Barium (Ba)	2006/09/19	11.3		%	35
		Total Beryllium (Be)	2006/09/19	3.1		%	35
		Total Bismuth (Bi)	2006/09/19	NC		%	35
		Total Cadmium (Cd)	2006/09/19	NC		%	35
		Total Calcium (Ca)	2006/09/19	11.3		%	35
		Total Chromium (Cr)	2006/09/19	11.8		%	35
		Total Cobalt (Co)	2006/09/19	4.5		%	35
		Total Copper (Cu)	2006/09/19	1		%	35
		Total Iron (Fe)	2006/09/19	6.2		%	35
		Total Lead (Pb)	2006/09/19	NC		%	35
		Total Lithium (Li)	2006/09/19	10.4		%	35
		Total Magnesium (Mg)	2006/09/19	1.3		%	35
		Total Manganese (Mn)	2006/09/19	1.1		%	35
		Total Nickel (Ni)	2006/09/19	2.8		%	35
		Total Phosphorus (P)	2006/09/19	11.5		%	35
		Total Potassium (K)	2006/09/19	18.7		%	35
		Total Silver (Ag)	2006/09/19	NC		%	35
		Total Sodium (Na)	2006/09/19	8.8		%	35

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643198

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275154 MC3	RPD	Total Strontium (Sr)	2006/09/19	3.6		%	35
		Total Sulphur (S)	2006/09/19	NC		%	35
		Total Tin (Sn)	2006/09/19	NC		%	35
		Total Titanium (Ti)	2006/09/19	1.9		%	35
		Total Vanadium (V)	2006/09/19	13.5		%	35
		Total Zinc (Zn)	2006/09/19	3.7		%	35
		Total Zirconium (Zr)	2006/09/19	NC		%	35
1275410 MC3	Calibration Check	Soluble (Hot water) Boron (B)	2006/09/19		102	%	N/A
	MATRIX SPIKE	Soluble (Hot water) Boron (B)	2006/09/19		98	%	80 - 120
	SPIKE	Soluble (Hot water) Boron (B)	2006/09/19		106	%	85 - 115
	BLANK	Soluble (Hot water) Boron (B)	2006/09/19	<0.1		mg/kg	
	RPD	Soluble (Hot water) Boron (B)	2006/09/19	NC		%	35
1275584 MC3	Calibration Check	Leachable Silver (Ag)	2006/09/19		103	%	80 - 120
		Leachable Arsenic (As)	2006/09/19		101	%	80 - 120
		Leachable Boron (B)	2006/09/19		102	%	80 - 120
		Leachable Barium (Ba)	2006/09/19		99	%	80 - 120
		Leachable Beryllium (Be)	2006/09/19		100	%	80 - 120
		Leachable Cadmium (Cd)	2006/09/19		104	%	80 - 120
		Leachable Cobalt (Co)	2006/09/19		101	%	80 - 120
		Leachable Chromium (Cr)	2006/09/19		101	%	80 - 120
		Leachable Copper (Cu)	2006/09/19		100	%	80 - 120
		Leachable Iron (Fe)	2006/09/19		98	%	80 - 120
		Leachable Nickel (Ni)	2006/09/19		104	%	80 - 120
		Leachable Lead (Pb)	2006/09/19		100	%	80 - 120
		Leachable Antimony (Sb)	2006/09/19		102	%	80 - 120
		Leachable Selenium (Se)	2006/09/19		101	%	80 - 120
		Leachable Thallium (Tl)	2006/09/19		99	%	80 - 120
		Leachable Uranium (U)	2006/09/19		99	%	80 - 120
		Leachable Vanadium (V)	2006/09/19		102	%	80 - 120
		Leachable Zinc (Zn)	2006/09/19		103	%	80 - 120
		Leachable Zirconium (Zr)	2006/09/19		97	%	80 - 120
	MATRIX SPIKE	Leachable Arsenic (As)	2006/09/19		103	%	75 - 125
		Leachable Beryllium (Be)	2006/09/19		90	%	75 - 125
		Leachable Cadmium (Cd)	2006/09/19		103	%	75 - 125
		Leachable Chromium (Cr)	2006/09/19		86	%	75 - 125
		Leachable Nickel (Ni)	2006/09/19		85	%	75 - 125
		Leachable Lead (Pb)	2006/09/19		87	%	75 - 125
		Leachable Selenium (Se)	2006/09/19		117	%	75 - 125
		Leachable Thallium (Tl)	2006/09/19		79	%	75 - 125
	BLANK	Leachable Silver (Ag)	2006/09/19	<0.5		mg/L	
		Leachable Arsenic (As)	2006/09/19	<0.5		mg/L	
		Leachable Boron (B)	2006/09/19	<50		mg/L	
		Leachable Barium (Ba)	2006/09/19	<10		mg/L	
		Leachable Beryllium (Be)	2006/09/19	<0.5		mg/L	
		Leachable Cadmium (Cd)	2006/09/19	<0.1		mg/L	
		Leachable Cobalt (Co)	2006/09/19	<10		mg/L	
		Leachable Chromium (Cr)	2006/09/19	<0.5		mg/L	
		Leachable Copper (Cu)	2006/09/19	<10		mg/L	
		Leachable Iron (Fe)	2006/09/19	<100		mg/L	
		Leachable Nickel (Ni)	2006/09/19	<0.5		mg/L	
		Leachable Lead (Pb)	2006/09/19	<0.5		mg/L	
		Leachable Antimony (Sb)	2006/09/19	<50		mg/L	
		Leachable Selenium (Se)	2006/09/19	<0.1		mg/L	
		Leachable Thallium (Tl)	2006/09/19	<0.5		mg/L	
		Leachable Uranium (U)	2006/09/19	<0.5		mg/L	
		Leachable Vanadium (V)	2006/09/19	<5		mg/L	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643198

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275584 MC3	BLANK	Leachable Zinc (Zn)	2006/09/19	<50		mg/L	
		Leachable Zirconium (Zr)	2006/09/19	<50		mg/L	
	RPD	Leachable Silver (Ag)	2006/09/19	NC		%	35
		Leachable Arsenic (As)	2006/09/19	NC		%	35
		Leachable Boron (B)	2006/09/19	NC		%	35
		Leachable Barium (Ba)	2006/09/19	NC		%	35
		Leachable Beryllium (Be)	2006/09/19	NC		%	35
		Leachable Cadmium (Cd)	2006/09/19	NC		%	35
		Leachable Cobalt (Co)	2006/09/19	NC		%	35
		Leachable Chromium (Cr)	2006/09/19	NC		%	35
		Leachable Copper (Cu)	2006/09/19	NC		%	35
		Leachable Iron (Fe)	2006/09/19	NC		%	35
		Leachable Nickel (Ni)	2006/09/19	NC		%	35
		Leachable Lead (Pb)	2006/09/19	NC		%	35
		Leachable Antimony (Sb)	2006/09/19	NC		%	35
		Leachable Selenium (Se)	2006/09/19	NC		%	35
		Leachable Thallium (Tl)	2006/09/19	NC		%	35
		Leachable Uranium (U)	2006/09/19	NC		%	35
		Leachable Vanadium (V)	2006/09/19	NC		%	35
		Leachable Zinc (Zn)	2006/09/19	NC		%	35
		Leachable Zirconium (Zr)	2006/09/19	NC		%	35
1275593 AC4	Calibration Check	Total Arsenic (As)	2006/09/19		102	%	80 - 120
		Total Molybdenum (Mo)	2006/09/19		103	%	80 - 120
		Total Selenium (Se)	2006/09/19		98	%	80 - 120
		Total Thallium (Tl)	2006/09/19		97	%	80 - 120
		Total Uranium (U)	2006/09/19		97	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/09/19		92	%	80 - 120
		Total Selenium (Se)	2006/09/19		95	%	80 - 120
		Total Thallium (Tl)	2006/09/19		95	%	80 - 120
	BLANK	Total Arsenic (As)	2006/09/19	<1		mg/kg	
		Total Molybdenum (Mo)	2006/09/19	<0.5		mg/kg	
		Total Selenium (Se)	2006/09/19	<0.5		mg/kg	
		Total Thallium (Tl)	2006/09/19	<1		mg/kg	
		Total Uranium (U)	2006/09/19	<0.2		mg/kg	
	RPD	Total Arsenic (As)	2006/09/19	13.4		%	35
		Total Molybdenum (Mo)	2006/09/19	NC		%	35
		Total Selenium (Se)	2006/09/19	NC		%	35
		Total Thallium (Tl)	2006/09/19	NC		%	35
		Total Uranium (U)	2006/09/19	13.4		%	35
1275740 YY1	Calibration Check	Mercury (Hg)	2006/09/19		103	%	85 - 115
	QC STANDARD	Mercury (Hg)	2006/09/19		106	%	N/A
	BLANK	Mercury (Hg)	2006/09/19	<0.05		mg/kg	
	RPD	Mercury (Hg)	2006/09/19	NC		%	35
1275814 YY1	Calibration Check	Leachable Mercury (Hg)	2006/09/19		105	%	85 - 115
	MATRIX SPIKE	Leachable Mercury (Hg)	2006/09/19		94	%	85 - 115
	LEACHATE BLAN	Leachable Mercury (Hg)	2006/09/19	<0.05		ug/L	
	RPD	Leachable Mercury (Hg)	2006/09/19	NC		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

Maxxam Analytics Inc

Your Project #: 1256-0601 INUVIK
Your C.O.C. #: 115767, 115768, 115769, 115770, 115772, 1157

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
308-1080-MAINLAND STREET
VANCOUVER, BC
CANADA --- ---

Report Date: 2006/11/10

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A643216
Received: 2006/09/18, 8:50

Sample Matrix: Soil
Samples Received: 24

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
F1-BTEX Soil Cal	1	2006/09/18	2006/09/18		
CCME Hydrocarbons (F1; MeOH; HSGC)	1	2006/09/18	2006/09/19	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F2-F4 in soil)	15	2006/09/19	2006/09/19	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	3	2006/09/20	2006/09/20	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	3	2006/09/29	2006/10/02	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	3	2006/10/02	2006/10/02	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F4G in soil)	1	2006/09/22	2006/09/22	EENVSOP-00121 v1	CWS PHCS Tier 1
Elements by ICP -Soils	3	N/A	2006/11/02	EENVSOP-00034	EPA 6010C
Elements by ICP -Soils	1	N/A	2006/11/07	EENVSOP-00034	EPA 6010C
Elements by ICPMS - Soils	3	N/A	2006/11/02	EENVSOP-00123	EPA 6020A
Elements by ICPMS - Soils	1	N/A	2006/11/07	EENVSOP-00123	EPA 6020A
Moisture	16	N/A	2006/09/18	EENVWI-00023	Carter SSMA 51.2
Moisture	3	N/A	2006/09/20	EENVWI-00023	Carter SSMA 51.2
Moisture	2	N/A	2006/09/29	EENVWI-00023	Carter SSMA 51.2
Moisture	3	N/A	2006/10/02	EENVWI-00023	Carter SSMA 51.2
PAH in Soil by GC/MS (Extended)	2	2006/09/19	2006/09/21	EENVSOP-00010 v3	EPA 3510C/8270D
VOCs in Soil by P&T GC/MS (Std List)	2	N/A	2006/09/20	EENVSOP-00003 V.3	EPA SW843 8260 B

Encryption Key Jeremy Wakaruk 10 Nov 2006 10:21:41 -07:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Total cover pages: 1

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C80522	C80524	C80525	C80529	C80532		
Sampling Date		2006/09/15	2006/09/15	2006/09/15	2006/09/15	2006/09/15		
COC Number		115767	115767	115767	115767	115767		
	Units	**01-TP06-07-1**	**01-TP06-07-3**	**01-TP06-08-1**	**01-TP06-09-2**	**01-TP06-10-2**	**RDL**	**QC Batch**
Physical Properties								
Moisture	%	4.2	6.2	4.1	6.2	4.8	0.3	1274104

RDL = Reportable Detection Limit

Maxxam ID		C80534	C80540	C80542	C80547	C80553		
Sampling Date		2006/09/15	2006/09/15	2006/09/15	2006/09/15	2006/09/15		
COC Number		115768	115768	115768	115769	115769		
	Units	**01-TP06-11-1**	**01-TP06-12-3**	**01-TP06-13-1**	**01-TP06-14-3**	**01-TP06-15-3**	**RDL**	**QC Batch**
Physical Properties								
Moisture	%	5.8	7.4	13.7	5.6	10.1	0.3	1274104

RDL = Reportable Detection Limit

Maxxam ID		C80556	C80559		C80561		
Sampling Date		2006/09/15	2006/09/15		2006/09/15		
COC Number		115769	115769		115769		
	Units	**01-TP06-16-3**	**01-TP06-17-3**	**QC Batch**	**01-TP06-DUP1**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	4.9	4.1	1274104	4.9	0.3	1291437

RDL = Reportable Detection Limit

Maxxam ID		C80562		C80576		C80578		
Sampling Date		2006/09/16		2006/09/16		2006/09/16		
COC Number		115770		115770		115770		
	Units	**01-TP06-18-01**	**QC Batch**	**01-TP06-18-02**	**QC Batch**	**01-TP06-19-01**	**RDL**	**QC Batch**
Physical Properties								
Moisture	%	3.2	1276709	4.2	1290090	3.6	0.3	1276709

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C80584		C80586	C80587		
Sampling Date		2006/09/16		2006/09/16	2006/09/16		
COC Number		115770		115770	115772		
	Units	**01-TP06-20-04**	**QC Batch**	**01-TP06-21-02**	**01-TP06-21-03**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	4.6	1276709	5.3	8.3	0.3	1274104

RDL = Reportable Detection Limit

Maxxam ID		C80655		C80658		C80662		
Sampling Date		2006/09/16		2006/09/16		2006/09/16		
COC Number		115772		115772		115772		
	Units	**01-TP06-21-04**	**QC Batch**	**01-TP06-22-03**	**QC Batch**	**01-TP06-DUP-02**	**RDL**	**QC Batch**
Physical Properties								
Moisture	%	7.8	1290090	4.8	1274104	5.8	0.3	1291437

RDL = Reportable Detection Limit

Maxxam ID		C80663		C80669		
Sampling Date		2006/09/16		2006/09/16		
COC Number		115772		115771		
	Units	**01-TP06-23-01**	**QC Batch**	**01-TP06-DUP-03**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	3.1	1274104	7.7	0.3	1291437

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C80522	C80524	C80525	C80529		
Sampling Date		2006/09/15	2006/09/15	2006/09/15	2006/09/15		
COC Number		115767	115767	115767	115767		
	Units	**01-TP06-07-1**	**01-TP06-07-3**	**01-TP06-08-1**	**01-TP06-09-2**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	17	30	17	48	10	1275137
F3 (C16-C34 Hydrocarbons)	mg/kg	242	365	58	587	10	1275137
F4 (C34-C50 Hydrocarbons)	mg/kg	51	73	<10	114	10	1275137
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	1	1275137
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	71	69	68	70		1275137

RDL = Reportable Detection Limit

Maxxam ID		C80532	C80534	C80540	C80542		
Sampling Date		2006/09/15	2006/09/15	2006/09/15	2006/09/15		
COC Number		115767	115768	115768	115768		
	Units	**01-TP06-10-2**	**01-TP06-11-1**	**01-TP06-12-3**	**01-TP06-13-1**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	31	31	70	25	10	1275137
F3 (C16-C34 Hydrocarbons)	mg/kg	451	342	990	362	10	1275137
F4 (C34-C50 Hydrocarbons)	mg/kg	64	67	163	55	10	1275137
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	1	1275137
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	66	71	70	77		1275137

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C80547	C80553	C80556	C80559		
Sampling Date		2006/09/15	2006/09/15	2006/09/15	2006/09/15		
COC Number		115769	115769	115769	115769		
	Units	**01-TP06-14-3**	**01-TP06-15-3**	**01-TP06-16-3**	**01-TP06-17-3**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	16	32	15	<10	10	1275137
F3 (C16-C34 Hydrocarbons)	mg/kg	137	532	94	13	10	1275137
F4 (C34-C50 Hydrocarbons)	mg/kg	62	26	31	<10	10	1275137
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	1	1275137
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	70	76	72	69		1275137

RDL = Reportable Detection Limit

Maxxam ID		C80561		C80562		
Sampling Date		2006/09/15		2006/09/16		
COC Number		115769		115770		
	Units	**01-TP06-DUP1**	**QC Batch**	**01-TP06-18-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	20	1291480	<10	10	1276802
F3 (C16-C34 Hydrocarbons)	mg/kg	338	1291480	2330	10	1276802
F4 (C34-C50 Hydrocarbons)	mg/kg	120	1291480	1960	10	1276802
Reached Baseline at C50	mg/kg	Yes	1291480	No	1	1276802
OIL & GREASE						
F4SG (Heavy Hydrocarbons-SilicaGel)	mg/kg			3200	200	1280633
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	79	1291480	81		1276802

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C80576		C80578		
Sampling Date		2006/09/16		2006/09/16		
COC Number		115770		115770		
	Units	**01-TP06-18-02**	**QC Batch**	**01-TP06-19-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	1290350	<10	10	1276802
F3 (C16-C34 Hydrocarbons)	mg/kg	394	1290350	52	10	1276802
F4 (C34-C50 Hydrocarbons)	mg/kg	337	1290350	38	10	1276802
Reached Baseline at C50	mg/kg	Yes	1290350	Yes	1	1276802
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	89	1290350	82		1276802

RDL = Reportable Detection Limit

Maxxam ID		C80584		C80586		
Sampling Date		2006/09/16		2006/09/16		
COC Number		115770		115770		
	Units	**01-TP06-20-04**	**QC Batch**	**01-TP06-21-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	13	1276802	3930	10	1290350
F3 (C16-C34 Hydrocarbons)	mg/kg	57	1276802	1260	10	1290350
F4 (C34-C50 Hydrocarbons)	mg/kg	23	1276802	14	10	1290350
Reached Baseline at C50	mg/kg	Yes	1276802	Yes	1	1290350
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	80	1276802	84		1290350

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C80587		C80655		
Sampling Date		2006/09/16		2006/09/16		
COC Number		115772		115772		
	Units	**01-TP06-21-03**	**QC Batch**	**01-TP06-21-04**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	150	1274160		10	1274160
F1 (C06-C10) - BTEX	mg/kg	150	1274205		10	1274205
F2 (C10-C16 Hydrocarbons)	mg/kg	3810	1275137	2840	10	1290350
F3 (C16-C34 Hydrocarbons)	mg/kg	1110	1275137	1060	10	1290350
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	1275137	18	10	1290350
Reached Baseline at C50	mg/kg	Yes	1275137	Yes	1	1290350
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	115	1274160			
O-TERPHENYL (sur.)	%	79	1275137	86		1290350

RDL = Reportable Detection Limit

Maxxam ID		C80658		C80662		
Sampling Date		2006/09/16		2006/09/16		
COC Number		115772		115772		
	Units	**01-TP06-22-03**	**QC Batch**	**01-TP06-DUP-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	11	1275137	3750	10	1291480
F3 (C16-C34 Hydrocarbons)	mg/kg	31	1275137	1260	10	1291480
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	1275137	14	10	1291480
Reached Baseline at C50	mg/kg	Yes	1275137	Yes	1	1291480
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	69	1275137	83		1291480

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C80663		C80669		
Sampling Date		2006/09/16		2006/09/16		
COC Number		115772		115771		
	Units	**01-TP06-23-01**	**QC Batch**	**01-TP06-DUP-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	17	1275137	2770	10	1291480
F3 (C16-C34 Hydrocarbons)	mg/kg	123	1275137	919	10	1291480
F4 (C34-C50 Hydrocarbons)	mg/kg	207	1275137	<10	10	1291480
Reached Baseline at C50	mg/kg	Yes	1275137	Yes	1	1291480
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	73	1275137	79		1291480

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C80525	C80586		
Sampling Date		2006/09/15	2006/09/16		
COC Number		115767	115770		
	Units	**01-TP06-08-1**	**01-TP06-21-02**	**RDL**	**QC Batch**
Polycyclic Aromatics					
Naphthalene	mg/kg	0.11	0.22	0.05	1275926
2-Methylnaphthalene	mg/kg	0.09	0.11	0.05	1275926
Acenaphthylene	mg/kg	<0.05	<0.05	0.05	1275926
Acenaphthene	mg/kg	0.39	<0.05	0.05	1275926
Fluorene	mg/kg	0.17	0.12	0.05	1275926
Phenanthrene	mg/kg	0.20	<0.05	0.05	1275926
Anthracene	mg/kg	0.18	<0.05	0.05	1275926
Fluoranthene	mg/kg	1.1	<0.05	0.05	1275926
Pyrene	mg/kg	0.75	<0.05	0.05	1275926
Benzo(a)anthracene	mg/kg	0.14	<0.05	0.05	1275926
Chrysene	mg/kg	0.14	<0.05	0.05	1275926
Benzo(b&j)fluoranthene	mg/kg	0.06	<0.05	0.05	1275926
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	0.05	1275926
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.05	1275926
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	<0.05	0.05	1275926
Dibenz(a,h)anthracene	mg/kg	<0.05	<0.05	0.05	1275926
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	0.05	1275926
Surrogate Recovery (%)					
D10-ANTHRACENE (sur.)	%	118	119		1275926
D12-BENZO(A)PYRENE (sur.)	%	102	102		1275926
D8-ACENAPHTHYLENE (sur.)	%	109	118		1275926
TERPHENYL-D14 (sur.)	%	119	117		1275926

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		C80540	C80562	C80587		
Sampling Date		2006/09/15	2006/09/16	2006/09/16		
COC Number		115768	115770	115772		
	Units	**01-TP06-12-3**	**01-TP06-18-01**	**01-TP06-21-03**	**RDL**	**QC Batch**
Elements						
Total Aluminum (Al)	mg/kg	7350	7620	7680	10	1332906
Total Antimony (Sb)	mg/kg	<1	<1	<1	1	1332769
Total Arsenic (As)	mg/kg	9	5	3	1	1332769
Total Barium (Ba)	mg/kg	107	165	140	10	1332769
Total Beryllium (Be)	mg/kg	0.8	0.9	1.1	0.4	1332769
Total Boron (B)	mg/kg	12	8	10	2	1332906
Total Cadmium (Cd)	mg/kg	0.5	0.4	0.2	0.1	1332769
Total Calcium (Ca)	mg/kg	114000	120000	105000	50	1332906
Total Chromium (Cr)	mg/kg	21	17	15	1	1332769
Total Cobalt (Co)	mg/kg	11	13	13	1	1332769
Total Copper (Cu)	mg/kg	32	26	45	5	1332769
Total Iron (Fe)	mg/kg	18300	18800	21500	10	1332906
Total Lead (Pb)	mg/kg	39	70	13	1	1332769
Total Lithium (Li)	mg/kg	17	17	18	10	1332906
Total Magnesium (Mg)	mg/kg	44100	38400	41500	20	1332906
Total Manganese (Mn)	mg/kg	394	343	351	10	1332906
Total Molybdenum (Mo)	mg/kg	0.7	0.6	<0.4	0.4	1332769
Total Nickel (Ni)	mg/kg	22	24	24	1	1332769
Total Phosphorus (P)	mg/kg	680	708	436	20	1332906
Total Potassium (K)	mg/kg	1230	1060	1330	30	1332906
Total Selenium (Se)	mg/kg	<0.5	<0.5	<0.5	0.5	1332769
Total Silver (Ag)	mg/kg	<1	<1	<1	1	1332769
Total Sodium (Na)	mg/kg	203	97	185	50	1332906
Total Strontium (Sr)	mg/kg	78	88	71	10	1332906
Total Sulphur (S)	mg/kg	972	648	3050	20	1332906
Total Thallium (Tl)	mg/kg	<0.3	<0.3	<0.3	0.3	1332769
Total Tin (Sn)	mg/kg	<1	<1	<1	1	1332769
Total Uranium (U)	mg/kg	<1	<1	<1	1	1332769
Total Vanadium (V)	mg/kg	14	14	14	1	1332769
Total Zinc (Zn)	mg/kg	90	162	57	10	1332769

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		C80669		
Sampling Date		2006/09/16		
COC Number		115771		
	Units	**01-TP06-DUP-03**	**RDL**	**QC Batch**
Elements				
Total Aluminum (Al)	mg/kg	8700	10	1338469
Total Antimony (Sb)	mg/kg	<1	1	1339329
Total Arsenic (As)	mg/kg	3	1	1339329
Total Barium (Ba)	mg/kg	93	10	1339329
Total Beryllium (Be)	mg/kg	0.8	0.4	1339329
Total Boron (B)	mg/kg	13	2	1338469
Total Cadmium (Cd)	mg/kg	0.2	0.1	1339329
Total Calcium (Ca)	mg/kg	113000	50	1338469
Total Chromium (Cr)	mg/kg	10	1	1339329
Total Cobalt (Co)	mg/kg	9	1	1339329
Total Copper (Cu)	mg/kg	32	5	1339329
Total Iron (Fe)	mg/kg	21300	10	1338469
Total Lead (Pb)	mg/kg	9	1	1339329
Total Lithium (Li)	mg/kg	18	10	1338469
Total Magnesium (Mg)	mg/kg	46000	20	1338469
Total Manganese (Mn)	mg/kg	386	10	1338469
Total Molybdenum (Mo)	mg/kg	<0.4	0.4	1339329
Total Nickel (Ni)	mg/kg	17	1	1339329
Total Phosphorus (P)	mg/kg	539	20	1338469
Total Potassium (K)	mg/kg	1620	30	1338469
Total Selenium (Se)	mg/kg	<0.5	0.5	1339329
Total Silver (Ag)	mg/kg	<1	1	1339329
Total Sodium (Na)	mg/kg	153	50	1338469
Total Strontium (Sr)	mg/kg	76	10	1338469
Total Sulphur (S)	mg/kg	2320	20	1338469
Total Thallium (Tl)	mg/kg	<0.3	0.3	1339329
Total Tin (Sn)	mg/kg	<1	1	1339329
Total Uranium (U)	mg/kg	<1	1	1339329
Total Vanadium (V)	mg/kg	10	1	1339329
Total Zinc (Zn)	mg/kg	42	10	1339329

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C80525	C80587		
Sampling Date		2006/09/15	2006/09/16		
COC Number		115767	115772		
	Units	**01-TP06-08-1**	**01-TP06-21-03**	**RDL**	**QC Batch**
Volatiles					
Benzene	mg/kg	<0.005	<0.005	0.005	1275070
Bromodichloromethane	mg/kg	<0.03	<0.03	0.03	1275070
Bromoform	mg/kg	<0.05	<0.05	0.05	1275070
Bromomethane	mg/kg	<0.02	<0.02	0.02	1275070
Carbon tetrachloride	mg/kg	<0.02	<0.02	0.02	1275070
Chlorobenzene	mg/kg	<0.02	<0.02	0.02	1275070
Chlorodibromomethane	mg/kg	<0.02	<0.02	0.02	1275070
Chloroethane	mg/kg	<0.02	<0.02	0.02	1275070
Chloroform	mg/kg	<0.02	<0.02	0.02	1275070
Chloromethane	mg/kg	<0.03	<0.03	0.03	1275070
1,2-dibromoethane	mg/kg	<0.02	<0.02	0.02	1275070
1,2-dichlorobenzene	mg/kg	<0.02	<0.02	0.02	1275070
1,3-dichlorobenzene	mg/kg	<0.02	<0.02	0.02	1275070
1,4-dichlorobenzene	mg/kg	<0.02	<0.02	0.02	1275070
1,1-dichloroethane	mg/kg	<0.02	<0.02	0.02	1275070
1,2-dichloroethane	mg/kg	<0.02	<0.02	0.02	1275070
1,1-dichloroethene	mg/kg	<0.02	<0.02	0.02	1275070
cis-1,2-dichloroethene	mg/kg	<0.02	<0.02	0.02	1275070
trans-1,2-dichloroethene	mg/kg	<0.02	<0.02	0.02	1275070
Dichloromethane	mg/kg	<0.1	<0.1	0.1	1275070
1,2-dichloropropane	mg/kg	<0.02	<0.02	0.02	1275070
cis-1,3-dichloropropene	mg/kg	<0.02	<0.02	0.02	1275070
trans-1,3-dichloropropene	mg/kg	<0.02	<0.02	0.02	1275070
Ethylbenzene	mg/kg	<0.01	<0.01	0.01	1275070
Styrene	mg/kg	<0.02	<0.02	0.02	1275070
1,1,1,2-tetrachloroethane	mg/kg	<0.1	<0.1	0.1	1275070
1,1,2,2-tetrachloroethane	mg/kg	<0.1	0.8	0.1	1275070
Tetrachloroethene	mg/kg	<0.02	<0.02	0.02	1275070
Toluene	mg/kg	<0.02	<0.02	0.02	1275070
1,1,1-trichloroethane	mg/kg	<0.02	<0.02	0.02	1275070
1,1,2-trichloroethane	mg/kg	<0.02	<0.02	0.02	1275070
Trichloroethene	mg/kg	<0.02	<0.02	0.02	1275070
Trichlorofluoromethane	mg/kg	<0.02	<0.02	0.02	1275070

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C80525	C80587		
Sampling Date		2006/09/15	2006/09/16		
COC Number		115767	115772		
	Units	**01-TP06-08-1**	**01-TP06-21-03**	**RDL**	**QC Batch**
Vinyl chloride	mg/kg	<0.02	<0.02	0.02	1275070
Xylenes (Total)	mg/kg	<0.04	<0.04	0.04	1275070
m & p-Xylene	mg/kg	<0.04	<0.04	0.04	1275070
o-Xylene	mg/kg	<0.02	<0.02	0.02	1275070
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	95	88		1275070
D10-ETHYLBENZENE (sur.)	%	79	91		1275070
D4-1,2-DICHLOROETHANE (sur.)	%	116	115		1275070
D8-TOLUENE (sur.)	%	104	98		1275070

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643216
Report Date: 2006/11/10

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME) Comments

Sample C80562-01 CCME Hydrocarbons (F2-F4 in soil): DUPLICATES DO NOT MATCH DUE TO SAMPLE NON-HOMOGENEITY; DATA CONFIRMED VIA REANALYSIS

Sample C80586-01 CCME Hydrocarbons (F2-F4 in soil): MATRIX SPIKE OUTSIDE ACCEPTANCE SPECIFICATIONS DUE TO MATRIX INTERFERENCE

Sample C80562-01 CCME Hydrocarbons (F4G in soil): Duplicate exceeds acceptance criteria for oil and grease due to sample non homogeneity.

VOLATILE ORGANICS BY GC-MS (SOIL) Comments

Sample C80587-01 VOCs in Soil by P&T GC/MS (Std List): Matrix spike outside acceptance criteria for vinyl chloride due to matrix interference.

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1274104 MD1	BLANK	Moisture	2006/09/18	<0.3		%	
	RPD	Moisture	2006/09/18	4.6		%	20
1274160 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/19		93	%	60 - 130
		F1 (C06-C10)	2006/09/19		83	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/19		89	%	60 - 130
		F1 (C06-C10)	2006/09/19		104	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/19		91	%	60 - 130
		F1 (C06-C10)	2006/09/19	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/09/19	0.6		%	50
1275070 LM4	MATRIX SPIKE [C80587-01]	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		91	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/20		104	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/20		108	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/20		95	%	60 - 140
		Benzene	2006/09/20		86	%	60 - 140
		Bromodichloromethane	2006/09/20		91	%	60 - 140
		Bromoform	2006/09/20		119	%	60 - 140
		Bromomethane	2006/09/20		88	%	60 - 140
		Carbon tetrachloride	2006/09/20		101	%	60 - 140
		Chlorobenzene	2006/09/20		91	%	60 - 140
		Chlorodibromomethane	2006/09/20		97	%	60 - 140
		Chloroethane	2006/09/20		82	%	60 - 140
		Chloroform	2006/09/20		93	%	60 - 140
		Chloromethane	2006/09/20		65	%	60 - 140
		1,2-dibromoethane	2006/09/20		96	%	60 - 140
		1,2-dichlorobenzene	2006/09/20		100	%	60 - 140
		1,3-dichlorobenzene	2006/09/20		97	%	60 - 140
		1,4-dichlorobenzene	2006/09/20		90	%	60 - 140
		1,1-dichloroethane	2006/09/20		86	%	60 - 140
		1,2-dichloroethane	2006/09/20		98	%	60 - 140
		1,1-dichloroethene	2006/09/20		87	%	60 - 140
		cis-1,2-dichloroethene	2006/09/20		92	%	60 - 140
		trans-1,2-dichloroethene	2006/09/20		89	%	60 - 140
		Dichloromethane	2006/09/20		80	%	60 - 140
		1,2-dichloropropane	2006/09/20		85	%	60 - 140
		cis-1,3-dichloropropene	2006/09/20		97	%	60 - 140
		trans-1,3-dichloropropene	2006/09/20		100	%	60 - 140
		Ethylbenzene	2006/09/20		93	%	60 - 140
		Styrene	2006/09/20		95	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/09/20		97	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/09/20		89	%	60 - 140
		Tetrachloroethene	2006/09/20		99	%	60 - 140
		Toluene	2006/09/20		83	%	60 - 140
		1,1,1-trichloroethane	2006/09/20		102	%	60 - 140
		1,1,2-trichloroethane	2006/09/20		98	%	60 - 140
		Trichloroethene	2006/09/20		97	%	60 - 140
		Trichlorofluoromethane	2006/09/20		88	%	60 - 140
		Vinyl chloride	2006/09/20		52 (1)	%	60 - 140
		m & p-Xylene	2006/09/20		91	%	60 - 140
		o-Xylene	2006/09/20		92	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		93	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/20		74	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/20		115	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/20		99	%	60 - 140
		Benzene	2006/09/20		85	%	60 - 140

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
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Quality Assurance Report (Continued)

Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275070 LM4	SPIKE	Bromodichloromethane	2006/09/20		96	%	60 - 140
		Bromoform	2006/09/20		113	%	60 - 140
		Bromomethane	2006/09/20		108	%	60 - 140
		Carbon tetrachloride	2006/09/20		101	%	60 - 140
		Chlorobenzene	2006/09/20		88	%	60 - 140
		Chlorodibromomethane	2006/09/20		98	%	60 - 140
		Chloroethane	2006/09/20		92	%	60 - 140
		Chloroform	2006/09/20		106	%	60 - 140
		Chloromethane	2006/09/20		68	%	60 - 140
		1,2-dibromoethane	2006/09/20		90	%	60 - 140
		1,2-dichlorobenzene	2006/09/20		86	%	60 - 140
		1,3-dichlorobenzene	2006/09/20		83	%	60 - 140
		1,4-dichlorobenzene	2006/09/20		92	%	60 - 140
		1,1-dichloroethane	2006/09/20		95	%	60 - 140
		1,2-dichloroethane	2006/09/20		101	%	60 - 140
		1,1-dichloroethene	2006/09/20		91	%	60 - 140
		cis-1,2-dichloroethene	2006/09/20		93	%	60 - 140
		trans-1,2-dichloroethene	2006/09/20		92	%	60 - 140
		Dichloromethane	2006/09/20		92	%	60 - 140
		1,2-dichloropropane	2006/09/20		86	%	60 - 140
		cis-1,3-dichloropropene	2006/09/20		89	%	60 - 140
		trans-1,3-dichloropropene	2006/09/20		96	%	60 - 140
		Ethylbenzene	2006/09/20		79	%	60 - 140
		Styrene	2006/09/20		77	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/09/20		97	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/09/20		98	%	60 - 140
		Tetrachloroethene	2006/09/20		86	%	60 - 140
		Toluene	2006/09/20		84	%	60 - 140
		1,1,1-trichloroethane	2006/09/20		104	%	60 - 140
		1,1,2-trichloroethane	2006/09/20		89	%	60 - 140
		Trichloroethene	2006/09/20		90	%	60 - 140
		Trichlorofluoromethane	2006/09/20		97	%	60 - 140
		Vinyl chloride	2006/09/20		64	%	60 - 140
		m & p-Xylene	2006/09/20		86	%	60 - 140
		o-Xylene	2006/09/20		87	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		95	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/20		78	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/20		115	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/20		104	%	60 - 140
		Benzene	2006/09/20	<0.005		mg/kg	
		Bromodichloromethane	2006/09/20	<0.03		mg/kg	
		Bromoform	2006/09/20	<0.05		mg/kg	
		Bromomethane	2006/09/20	<0.02		mg/kg	
		Carbon tetrachloride	2006/09/20	<0.02		mg/kg	
		Chlorobenzene	2006/09/20	<0.02		mg/kg	
		Chlorodibromomethane	2006/09/20	<0.02		mg/kg	
		Chloroethane	2006/09/20	<0.02		mg/kg	
		Chloroform	2006/09/20	<0.02		mg/kg	
		Chloromethane	2006/09/20	<0.03		mg/kg	
		1,2-dibromoethane	2006/09/20	<0.02		mg/kg	
		1,2-dichlorobenzene	2006/09/20	<0.02		mg/kg	
		1,3-dichlorobenzene	2006/09/20	<0.02		mg/kg	
		1,4-dichlorobenzene	2006/09/20	<0.02		mg/kg	
		1,1-dichloroethane	2006/09/20	<0.02		mg/kg	
		1,2-dichloroethane	2006/09/20	<0.02		mg/kg	

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FRANZ ENVIRONMENTAL INC.
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Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275070 LM4	BLANK	1,1-dichloroethene	2006/09/20	<0.02		mg/kg	
		cis-1,2-dichloroethene	2006/09/20	<0.02		mg/kg	
		trans-1,2-dichloroethene	2006/09/20	<0.02		mg/kg	
		Dichloromethane	2006/09/20	<0.1		mg/kg	
		1,2-dichloropropane	2006/09/20	<0.02		mg/kg	
		cis-1,3-dichloropropene	2006/09/20	<0.02		mg/kg	
		trans-1,3-dichloropropene	2006/09/20	<0.02		mg/kg	
		Ethylbenzene	2006/09/20	<0.01		mg/kg	
		Styrene	2006/09/20	<0.02		mg/kg	
		1,1,1,2-tetrachloroethane	2006/09/20	<0.1		mg/kg	
		1,1,2,2-tetrachloroethane	2006/09/20	<0.1		mg/kg	
		Tetrachloroethene	2006/09/20	<0.02		mg/kg	
		Toluene	2006/09/20	<0.02		mg/kg	
		1,1,1-trichloroethane	2006/09/20	<0.02		mg/kg	
		1,1,2-trichloroethane	2006/09/20	<0.02		mg/kg	
		Trichloroethene	2006/09/20	<0.02		mg/kg	
		Trichlorofluoromethane	2006/09/20	<0.02		mg/kg	
		Vinyl chloride	2006/09/20	<0.02		mg/kg	
		Xylenes (Total)	2006/09/20	<0.04		mg/kg	
		m & p-Xylene	2006/09/20	<0.04		mg/kg	
		o-Xylene	2006/09/20	<0.02		mg/kg	
	RPD [C80525-01]	Benzene	2006/09/20	NC		%	50
		Bromodichloromethane	2006/09/20	NC		%	50
		Bromoform	2006/09/20	NC		%	50
		Bromomethane	2006/09/20	NC		%	50
		Carbon tetrachloride	2006/09/20	NC		%	50
		Chlorobenzene	2006/09/20	NC		%	50
		Chlorodibromomethane	2006/09/20	NC		%	50
		Chloroethane	2006/09/20	NC		%	50
		Chloroform	2006/09/20	NC		%	50
		Chloromethane	2006/09/20	NC		%	50
		1,2-dibromoethane	2006/09/20	NC		%	50
		1,2-dichlorobenzene	2006/09/20	NC		%	50
		1,3-dichlorobenzene	2006/09/20	NC		%	50
		1,4-dichlorobenzene	2006/09/20	NC		%	50
		1,1-dichloroethane	2006/09/20	NC		%	50
		1,2-dichloroethane	2006/09/20	NC		%	50
		1,1-dichloroethene	2006/09/20	NC		%	50
		cis-1,2-dichloroethene	2006/09/20	NC		%	50
		trans-1,2-dichloroethene	2006/09/20	NC		%	50
		Dichloromethane	2006/09/20	NC		%	50
		1,2-dichloropropane	2006/09/20	NC		%	50
		cis-1,3-dichloropropene	2006/09/20	NC		%	50
		trans-1,3-dichloropropene	2006/09/20	NC		%	50
		Ethylbenzene	2006/09/20	NC		%	50
		Styrene	2006/09/20	NC		%	50
		1,1,1,2-tetrachloroethane	2006/09/20	NC		%	50
		1,1,2,2-tetrachloroethane	2006/09/20	NC		%	50
		Tetrachloroethene	2006/09/20	NC		%	50
		Toluene	2006/09/20	NC		%	50
		1,1,1-trichloroethane	2006/09/20	NC		%	50
		1,1,2-trichloroethane	2006/09/20	NC		%	50
		Trichloroethene	2006/09/20	NC		%	50
		Trichlorofluoromethane	2006/09/20	NC		%	50
		Vinyl chloride	2006/09/20	NC		%	50

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Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275070 LM4	RPD [C80525-01]	Xylenes (Total)	2006/09/20	NC		%	50
		m & p-Xylene	2006/09/20	NC		%	50
		o-Xylene	2006/09/20	NC		%	50
1275137 AN1	MATRIX SPIKE [C80522-01]	O-TERPHENYL (sur.)	2006/09/19		103	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/19		126	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/19		128	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/19		117	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/19		75	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/19		95	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/19		88	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/19		90	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/19		71	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/19	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/19	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/19	<10		mg/kg	
		Reached Baseline at C50	2006/09/19	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/19	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/19	43.0		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/19	NC		%	50
		Reached Baseline at C50	2006/09/19	NC		%	50
1275926 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/09/21		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/21		111	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/21		114	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/21		127	%	30 - 130
		Naphthalene	2006/09/21		95	%	30 - 130
		2-Methylnaphthalene	2006/09/21		96	%	30 - 130
		Acenaphthylene	2006/09/21		104	%	30 - 130
		Acenaphthene	2006/09/21		94	%	30 - 130
		Fluorene	2006/09/21		96	%	30 - 130
		Phenanthrene	2006/09/21		88	%	30 - 130
		Anthracene	2006/09/21		98	%	30 - 130
		Fluoranthene	2006/09/21		102	%	30 - 130
		Pyrene	2006/09/21		100	%	30 - 130
		Benzo(a)anthracene	2006/09/21		106	%	30 - 130
		Chrysene	2006/09/21		104	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/21		93	%	30 - 130
		Benzo(k)fluoranthene	2006/09/21		95	%	30 - 130
		Benzo(a)pyrene	2006/09/21		94	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/21		103	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/21		128	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/21		91	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/09/21		116	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/21		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/21		105	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/21		112	%	30 - 130
		Naphthalene	2006/09/21		99	%	30 - 130
		2-Methylnaphthalene	2006/09/21		96	%	30 - 130
		Acenaphthylene	2006/09/21		97	%	30 - 130
		Acenaphthene	2006/09/21		96	%	30 - 130
		Fluorene	2006/09/21		94	%	30 - 130
		Phenanthrene	2006/09/21		98	%	30 - 130
		Anthracene	2006/09/21		97	%	30 - 130
		Fluoranthene	2006/09/21		96	%	30 - 130
		Pyrene	2006/09/21		97	%	30 - 130

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Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275926 AK3	SPIKE	Benzo(a)anthracene	2006/09/21		97	%	30 - 130
		Chrysene	2006/09/21		94	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/21		90	%	30 - 130
		Benzo(k)fluoranthene	2006/09/21		92	%	30 - 130
		Benzo(a)pyrene	2006/09/21		91	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/21		99	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/21		125	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/21		100	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/09/21		64	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/21		49	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/21		51	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/21		55	%	30 - 130
		Naphthalene	2006/09/21	<0.05		mg/kg	
		2-Methylnaphthalene	2006/09/21	<0.05		mg/kg	
		Acenaphthylene	2006/09/21	<0.05		mg/kg	
		Acenaphthene	2006/09/21	<0.05		mg/kg	
		Fluorene	2006/09/21	<0.05		mg/kg	
		Phenanthrene	2006/09/21	<0.05		mg/kg	
		Anthracene	2006/09/21	<0.05		mg/kg	
		Fluoranthene	2006/09/21	<0.05		mg/kg	
		Pyrene	2006/09/21	<0.05		mg/kg	
		Benzo(a)anthracene	2006/09/21	<0.05		mg/kg	
		Chrysene	2006/09/21	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/09/21	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/09/21	<0.05		mg/kg	
		Benzo(a)pyrene	2006/09/21	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/09/21	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/09/21	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/09/21	<0.05		mg/kg	
	RPD	Naphthalene	2006/09/21	NC		%	50
		2-Methylnaphthalene	2006/09/21	NC		%	50
		Acenaphthylene	2006/09/21	NC		%	50
		Acenaphthene	2006/09/21	NC		%	50
		Fluorene	2006/09/21	NC		%	50
		Phenanthrene	2006/09/21	NC		%	50
		Anthracene	2006/09/21	NC		%	50
		Fluoranthene	2006/09/21	NC		%	50
		Pyrene	2006/09/21	NC		%	50
		Benzo(a)anthracene	2006/09/21	NC		%	50
		Chrysene	2006/09/21	NC		%	50
		Benzo(b&j)fluoranthene	2006/09/21	NC		%	50
		Benzo(k)fluoranthene	2006/09/21	NC		%	50
		Benzo(a)pyrene	2006/09/21	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/09/21	NC		%	50
		Dibenz(a,h)anthracene	2006/09/21	NC		%	50
		Benzo(g,h,i)perylene	2006/09/21	NC		%	50
1276709 MD1	BLANK	Moisture	2006/09/20	<0.3		%	
	RPD	Moisture	2006/09/20	0.5		%	20
1276802 KB4	MATRIX SPIKE [C80578-01]	O-TERPHENYL (sur.)	2006/09/20		79	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/20		90	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/20		77	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/20		78	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/20		81	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/20		91	%	80 - 120

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Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1276802 KB4	SPIKE	F3 (C16-C34 Hydrocarbons)	2006/09/20		80	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/20		80	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/20		87	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/20	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/20	13, RDL=10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/20	<10		mg/kg	
		Reached Baseline at C50	2006/09/20	YES, RDL=1		mg/kg	
	RPD [C80562-01]	F2 (C10-C16 Hydrocarbons)	2006/09/20	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/20	57.1 (1)		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/20	54.8 (1)		%	50
		Reached Baseline at C50	2006/09/20	NC		%	50
1280633 JR1	SPIKE	F4SG (Heavy Hydrocarbons-SilicaGel)	2006/09/22		92	%	70 - 130
	BLANK	F4SG (Heavy Hydrocarbons-SilicaGel)	2006/09/22	<200		mg/kg	
	RPD [C80562-01]	F4SG (Heavy Hydrocarbons-SilicaGel)	2006/09/22	52.0 (1)		%	50
1290090 HL2	BLANK	Moisture	2006/09/29	<0.3		%	
	RPD [C80576-01]	Moisture	2006/09/29	13.3		%	20
1290350 KB4	MATRIX SPIKE						
	[C80586-01]	O-TERPHENYL (sur.)	2006/10/02		88	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		34	%	N/A
		F3 (C16-C34 Hydrocarbons)	2006/10/02		79	%	N/A
		F4 (C34-C50 Hydrocarbons)	2006/10/02		98	%	N/A
	SPIKE	O-TERPHENYL (sur.)	2006/10/02		81	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		98	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2006/10/02		98	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2006/10/02		101	%	85 - 115
	BLANK	O-TERPHENYL (sur.)	2006/10/02		85	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/02	<10		mg/kg	
		Reached Baseline at C50	2006/10/02	YES, RDL=1		mg/kg	
	RPD [C80576-01]	F2 (C10-C16 Hydrocarbons)	2006/10/02	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/02	24.1		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/02	36.0		%	50
		Reached Baseline at C50	2006/10/02	NC		%	50
1291437 HL2	BLANK	Moisture	2006/10/02	<0.3		%	
	RPD	Moisture	2006/10/02	6.8		%	20
1291480 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/02		83	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		104	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/10/02		107	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/10/02		115	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/10/02		78	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		97	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/10/02		96	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/10/02		101	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/10/02		87	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/02	<10		mg/kg	
		Reached Baseline at C50	2006/10/02	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/02	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/02	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/02	NC		%	50
		Reached Baseline at C50	2006/10/02	NC		%	50
1332769 LL2	Calibration Check	Total Antimony (Sb)	2006/11/02		105	%	80 - 120
		Total Arsenic (As)	2006/11/02		103	%	80 - 120

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1332769 LL2	Calibration Check	Total Barium (Ba)	2006/11/02		98	%	80 - 120
		Total Beryllium (Be)	2006/11/02		99	%	80 - 120
		Total Cadmium (Cd)	2006/11/02		98	%	80 - 120
		Total Chromium (Cr)	2006/11/02		99	%	80 - 120
		Total Cobalt (Co)	2006/11/02		101	%	80 - 120
		Total Copper (Cu)	2006/11/02		103	%	80 - 120
		Total Lead (Pb)	2006/11/02		99	%	80 - 120
		Total Molybdenum (Mo)	2006/11/02		98	%	80 - 120
		Total Nickel (Ni)	2006/11/02		101	%	80 - 120
		Total Selenium (Se)	2006/11/02		102	%	80 - 120
		Total Silver (Ag)	2006/11/02		103	%	80 - 120
		Total Thallium (Tl)	2006/11/02		97	%	80 - 120
		Total Tin (Sn)	2006/11/02		100	%	80 - 120
		Total Uranium (U)	2006/11/02		104	%	80 - 120
		Total Vanadium (V)	2006/11/02		100	%	80 - 120
		Total Zinc (Zn)	2006/11/02		100	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/11/02		97	%	75 - 125
		Total Cadmium (Cd)	2006/11/02		96	%	75 - 125
		Total Lead (Pb)	2006/11/02		82	%	75 - 125
		Total Selenium (Se)	2006/11/02		106	%	75 - 125
		Total Thallium (Tl)	2006/11/02		95	%	75 - 125
	BLANK	Total Antimony (Sb)	2006/11/02	<1		mg/kg	
		Total Arsenic (As)	2006/11/02	<1		mg/kg	
		Total Barium (Ba)	2006/11/02	<10		mg/kg	
		Total Beryllium (Be)	2006/11/02	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/11/02	<0.1		mg/kg	
		Total Chromium (Cr)	2006/11/02	<1		mg/kg	
		Total Cobalt (Co)	2006/11/02	<1		mg/kg	
		Total Copper (Cu)	2006/11/02	<5		mg/kg	
		Total Lead (Pb)	2006/11/02	<1		mg/kg	
		Total Molybdenum (Mo)	2006/11/02	<0.4		mg/kg	
		Total Nickel (Ni)	2006/11/02	<1		mg/kg	
		Total Selenium (Se)	2006/11/02	<0.5		mg/kg	
		Total Silver (Ag)	2006/11/02	<1		mg/kg	
		Total Thallium (Tl)	2006/11/02	<0.3		mg/kg	
		Total Tin (Sn)	2006/11/02	<1		mg/kg	
		Total Uranium (U)	2006/11/02	<1		mg/kg	
		Total Vanadium (V)	2006/11/02	<1		mg/kg	
		Total Zinc (Zn)	2006/11/02	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/11/02	NC		%	35
		Total Arsenic (As)	2006/11/02	NC		%	35
		Total Barium (Ba)	2006/11/02	9.1		%	35
		Total Beryllium (Be)	2006/11/02	NC		%	35
		Total Cadmium (Cd)	2006/11/02	NC		%	35
		Total Chromium (Cr)	2006/11/02	6.4		%	35
		Total Cobalt (Co)	2006/11/02	1.9		%	35
		Total Copper (Cu)	2006/11/02	NC		%	35
		Total Lead (Pb)	2006/11/02	1.9		%	35
		Total Molybdenum (Mo)	2006/11/02	NC		%	35
		Total Nickel (Ni)	2006/11/02	3.2		%	35
		Total Selenium (Se)	2006/11/02	NC		%	35
		Total Silver (Ag)	2006/11/02	NC		%	35
		Total Thallium (Tl)	2006/11/02	NC		%	35
		Total Tin (Sn)	2006/11/02	NC		%	35
		Total Uranium (U)	2006/11/02	NC		%	35

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1332769 LL2	RPD	Total Vanadium (V)	2006/11/02	12.9		%	35
		Total Zinc (Zn)	2006/11/02	10.1		%	35
1332906 MC3	Calibration Check	Total Aluminum (Al)	2006/11/02		96	%	80 - 120
		Total Boron (B)	2006/11/02		97	%	80 - 120
		Total Calcium (Ca)	2006/11/02		98	%	80 - 120
		Total Iron (Fe)	2006/11/02		95	%	80 - 120
		Total Lithium (Li)	2006/11/02		103	%	80 - 120
		Total Magnesium (Mg)	2006/11/02		97	%	80 - 120
		Total Manganese (Mn)	2006/11/02		94	%	80 - 120
		Total Phosphorus (P)	2006/11/02		98	%	80 - 120
		Total Potassium (K)	2006/11/02		101	%	80 - 120
		Total Sodium (Na)	2006/11/02		102	%	80 - 120
		Total Strontium (Sr)	2006/11/02		95	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/11/02		100	%	75 - 125
		Total Boron (B)	2006/11/02		104	%	80 - 120
		Total Calcium (Ca)	2006/11/02		87	%	75 - 125
		Total Iron (Fe)	2006/11/02		92	%	75 - 125
		Total Lithium (Li)	2006/11/02		103	%	75 - 125
		Total Magnesium (Mg)	2006/11/02		100	%	75 - 125
		Total Manganese (Mn)	2006/11/02		95	%	75 - 125
		Total Phosphorus (P)	2006/11/02		98	%	75 - 125
		Total Potassium (K)	2006/11/02		102	%	75 - 125
		Total Sodium (Na)	2006/11/02		108	%	75 - 125
		Total Strontium (Sr)	2006/11/02		95	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/11/02	<10		mg/kg	
		Total Boron (B)	2006/11/02	<2		mg/kg	
		Total Calcium (Ca)	2006/11/02	<50		mg/kg	
		Total Iron (Fe)	2006/11/02	<10		mg/kg	
		Total Lithium (Li)	2006/11/02	<10		mg/kg	
		Total Magnesium (Mg)	2006/11/02	<20		mg/kg	
		Total Manganese (Mn)	2006/11/02	<10		mg/kg	
		Total Phosphorus (P)	2006/11/02	<20		mg/kg	
		Total Potassium (K)	2006/11/02	<30		mg/kg	
		Total Sodium (Na)	2006/11/02	<50		mg/kg	
		Total Strontium (Sr)	2006/11/02	<10		mg/kg	
		Total Sulphur (S)	2006/11/02	<20		mg/kg	
	RPD	Total Aluminum (Al)	2006/11/02	0.05		%	35
		Total Boron (B)	2006/11/02	2.2		%	35
		Total Calcium (Ca)	2006/11/02	0.3		%	35
		Total Iron (Fe)	2006/11/02	0.6		%	35
		Total Lithium (Li)	2006/11/02	NC		%	35
		Total Magnesium (Mg)	2006/11/02	0.2		%	35
		Total Manganese (Mn)	2006/11/02	0.2		%	35
		Total Phosphorus (P)	2006/11/02	1.3		%	35
		Total Potassium (K)	2006/11/02	0.1		%	35
		Total Sodium (Na)	2006/11/02	NC		%	35
		Total Strontium (Sr)	2006/11/02	0.4		%	35
		Total Sulphur (S)	2006/11/02	0.4		%	35
1338469 MC3	Calibration Check	Total Aluminum (Al)	2006/11/07		96	%	80 - 120
		Total Boron (B)	2006/11/07		97	%	80 - 120
		Total Calcium (Ca)	2006/11/07		94	%	80 - 120
		Total Iron (Fe)	2006/11/07		94	%	80 - 120
		Total Lithium (Li)	2006/11/07		98	%	80 - 120
		Total Magnesium (Mg)	2006/11/07		94	%	80 - 120
		Total Manganese (Mn)	2006/11/07		97	%	80 - 120

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1338469 MC3	Calibration Check	Total Phosphorus (P)	2006/11/07		102	%	80 - 120
		Total Potassium (K)	2006/11/07		97	%	80 - 120
		Total Sodium (Na)	2006/11/07		101	%	80 - 120
		Total Strontium (Sr)	2006/11/07		95	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/11/07		90	%	75 - 125
		Total Boron (B)	2006/11/07		93	%	80 - 120
		Total Calcium (Ca)	2006/11/07		87	%	75 - 125
		Total Iron (Fe)	2006/11/07		85	%	75 - 125
		Total Lithium (Li)	2006/11/07		90	%	75 - 125
		Total Magnesium (Mg)	2006/11/07		88	%	75 - 125
		Total Manganese (Mn)	2006/11/07		88	%	75 - 125
		Total Phosphorus (P)	2006/11/07		93	%	75 - 125
		Total Potassium (K)	2006/11/07		88	%	75 - 125
		Total Sodium (Na)	2006/11/07		99	%	75 - 125
		Total Strontium (Sr)	2006/11/07		86	%	75 - 125
		Total Sulphur (S)	2006/11/07		0.00000	%	N/A
	BLANK	Total Aluminum (Al)	2006/11/07	<10		mg/kg	
		Total Boron (B)	2006/11/07	<2		mg/kg	
		Total Calcium (Ca)	2006/11/07	<50		mg/kg	
		Total Iron (Fe)	2006/11/07	<10		mg/kg	
		Total Lithium (Li)	2006/11/07	<10		mg/kg	
		Total Magnesium (Mg)	2006/11/07	<20		mg/kg	
		Total Manganese (Mn)	2006/11/07	<10		mg/kg	
		Total Phosphorus (P)	2006/11/07	<20		mg/kg	
		Total Potassium (K)	2006/11/07	<30		mg/kg	
		Total Sodium (Na)	2006/11/07	<50		mg/kg	
		Total Strontium (Sr)	2006/11/07	<10		mg/kg	
		Total Sulphur (S)	2006/11/07	<20		mg/kg	
	RPD	Total Aluminum (Al)	2006/11/07	0.3		%	35
		Total Boron (B)	2006/11/07	NC		%	35
		Total Calcium (Ca)	2006/11/07	1		%	35
		Total Iron (Fe)	2006/11/07	0.3		%	35
		Total Lithium (Li)	2006/11/07	NC		%	35
		Total Magnesium (Mg)	2006/11/07	9.2		%	35
		Total Manganese (Mn)	2006/11/07	0.3		%	35
		Total Phosphorus (P)	2006/11/07	0.7		%	35
		Total Potassium (K)	2006/11/07	0.5		%	35
		Total Sodium (Na)	2006/11/07	NC		%	35
		Total Strontium (Sr)	2006/11/07	NC		%	35
		Total Sulphur (S)	2006/11/07	NC		%	35
1339329 LL2	Calibration Check	Total Antimony (Sb)	2006/11/07		107	%	80 - 120
		Total Arsenic (As)	2006/11/07		101	%	80 - 120
		Total Barium (Ba)	2006/11/07		105	%	80 - 120
		Total Beryllium (Be)	2006/11/07		105	%	80 - 120
		Total Cadmium (Cd)	2006/11/07		97	%	80 - 120
		Total Chromium (Cr)	2006/11/07		102	%	80 - 120
		Total Cobalt (Co)	2006/11/07		104	%	80 - 120
		Total Copper (Cu)	2006/11/07		105	%	80 - 120
		Total Lead (Pb)	2006/11/07		108	%	80 - 120
		Total Molybdenum (Mo)	2006/11/07		100	%	80 - 120
		Total Nickel (Ni)	2006/11/07		102	%	80 - 120
		Total Selenium (Se)	2006/11/07		103	%	80 - 120
		Total Silver (Ag)	2006/11/07		105	%	80 - 120
		Total Thallium (Tl)	2006/11/07		107	%	80 - 120
		Total Tin (Sn)	2006/11/07		100	%	80 - 120

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

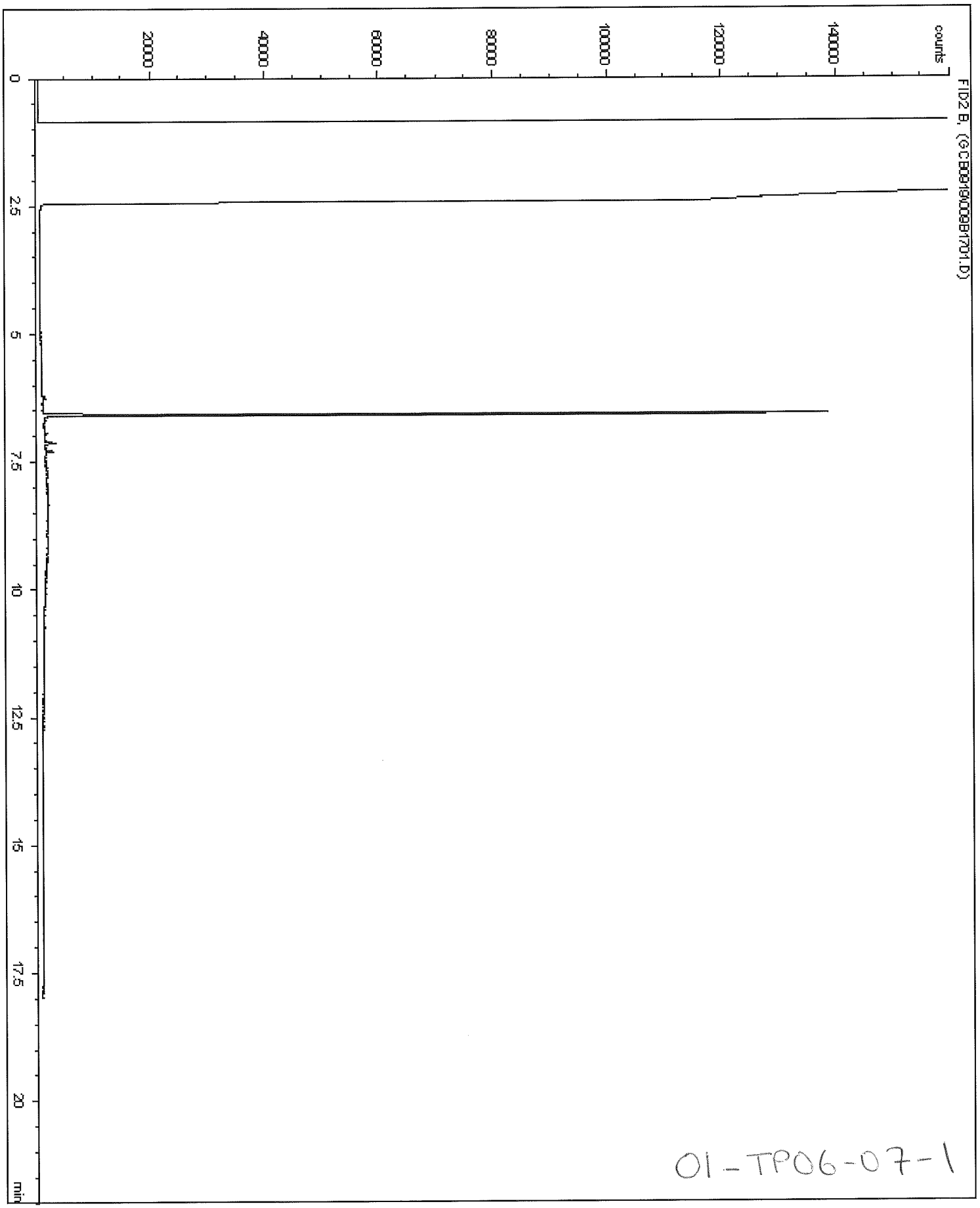
Quality Assurance Report (Continued)

Maxxam Job Number: EA643216

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1339329 LL2	Calibration Check	Total Uranium (U)	2006/11/07		106	%	80 - 120
		Total Vanadium (V)	2006/11/07		102	%	80 - 120
		Total Zinc (Zn)	2006/11/07		101	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/11/07		102	%	75 - 125
		Total Cadmium (Cd)	2006/11/07		97	%	75 - 125
		Total Lead (Pb)	2006/11/07		98	%	75 - 125
		Total Selenium (Se)	2006/11/07		109	%	75 - 125
		Total Thallium (Tl)	2006/11/07		96	%	75 - 125
	BLANK	Total Antimony (Sb)	2006/11/07	<1		mg/kg	
		Total Arsenic (As)	2006/11/07	<1		mg/kg	
		Total Barium (Ba)	2006/11/07	<10		mg/kg	
		Total Beryllium (Be)	2006/11/07	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/11/07	<0.1		mg/kg	
		Total Chromium (Cr)	2006/11/07	<1		mg/kg	
		Total Cobalt (Co)	2006/11/07	<1		mg/kg	
		Total Copper (Cu)	2006/11/07	<5		mg/kg	
		Total Lead (Pb)	2006/11/07	<1		mg/kg	
		Total Molybdenum (Mo)	2006/11/07	<0.4		mg/kg	
		Total Nickel (Ni)	2006/11/07	<1		mg/kg	
		Total Selenium (Se)	2006/11/07	<0.5		mg/kg	
		Total Silver (Ag)	2006/11/07	<1		mg/kg	
		Total Thallium (Tl)	2006/11/07	<0.3		mg/kg	
		Total Tin (Sn)	2006/11/07	<1		mg/kg	
		Total Uranium (U)	2006/11/07	<1		mg/kg	
		Total Vanadium (V)	2006/11/07	<1		mg/kg	
		Total Zinc (Zn)	2006/11/07	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/11/07	NC		%	35
		Total Arsenic (As)	2006/11/07	NC		%	35
		Total Barium (Ba)	2006/11/07	22.4		%	35
		Total Beryllium (Be)	2006/11/07	NC		%	35
		Total Cadmium (Cd)	2006/11/07	NC		%	35
		Total Chromium (Cr)	2006/11/07	26.1		%	35
		Total Cobalt (Co)	2006/11/07	NC		%	35
		Total Copper (Cu)	2006/11/07	NC		%	35
		Total Lead (Pb)	2006/11/07	NC		%	35
		Total Molybdenum (Mo)	2006/11/07	NC		%	35
		Total Nickel (Ni)	2006/11/07	78.2 (1)		%	35
		Total Selenium (Se)	2006/11/07	NC		%	35
		Total Silver (Ag)	2006/11/07	NC		%	35
		Total Tin (Sn)	2006/11/07	NC		%	35
		Total Uranium (U)	2006/11/07	NC		%	35
		Total Vanadium (V)	2006/11/07	32.2		%	35
		Total Zinc (Zn)	2006/11/07	NC		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference
(1) Please note that the recovery of some compounds are outside control limits however the overall quality control for this analysis meets our acceptability criteria.

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187



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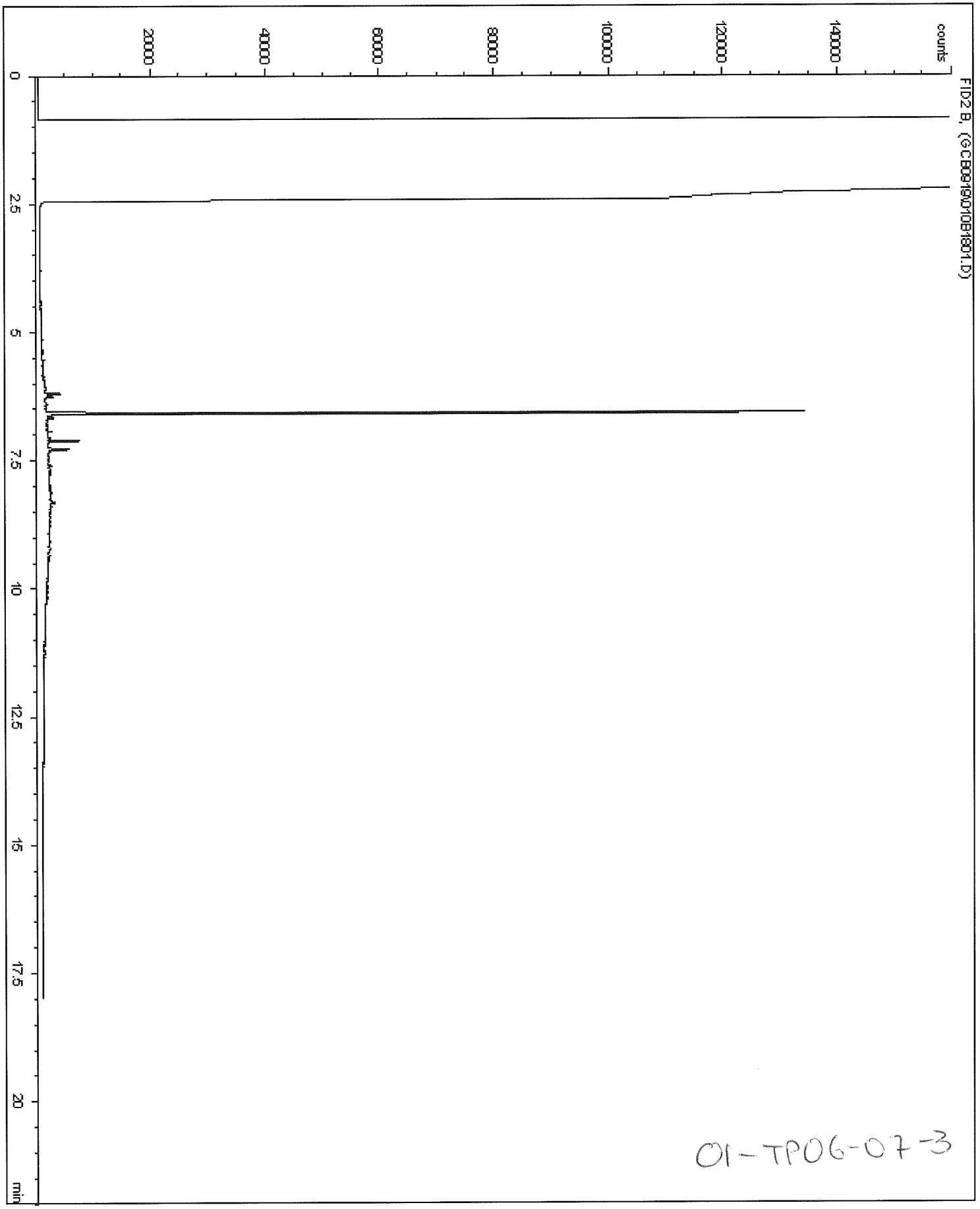

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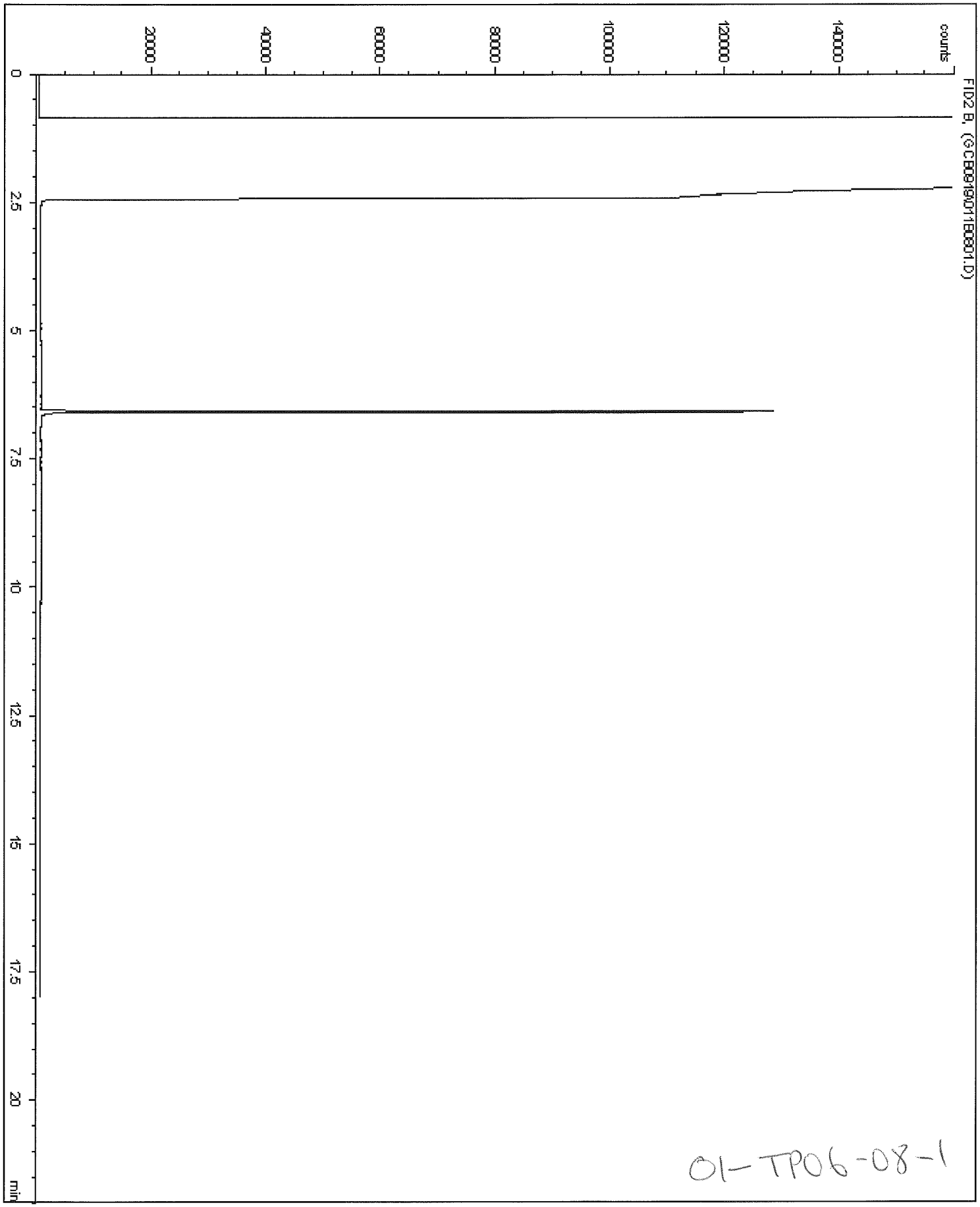

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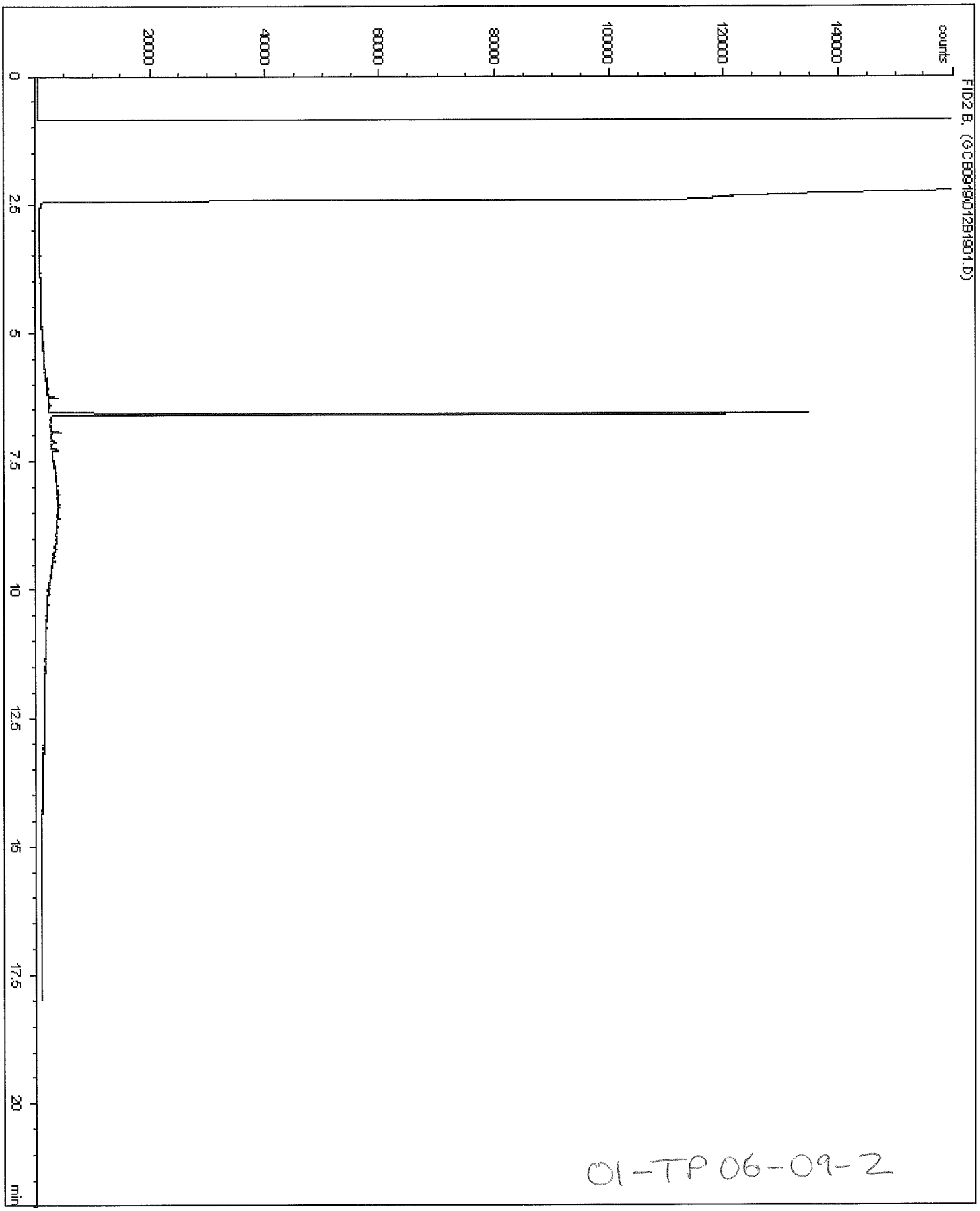

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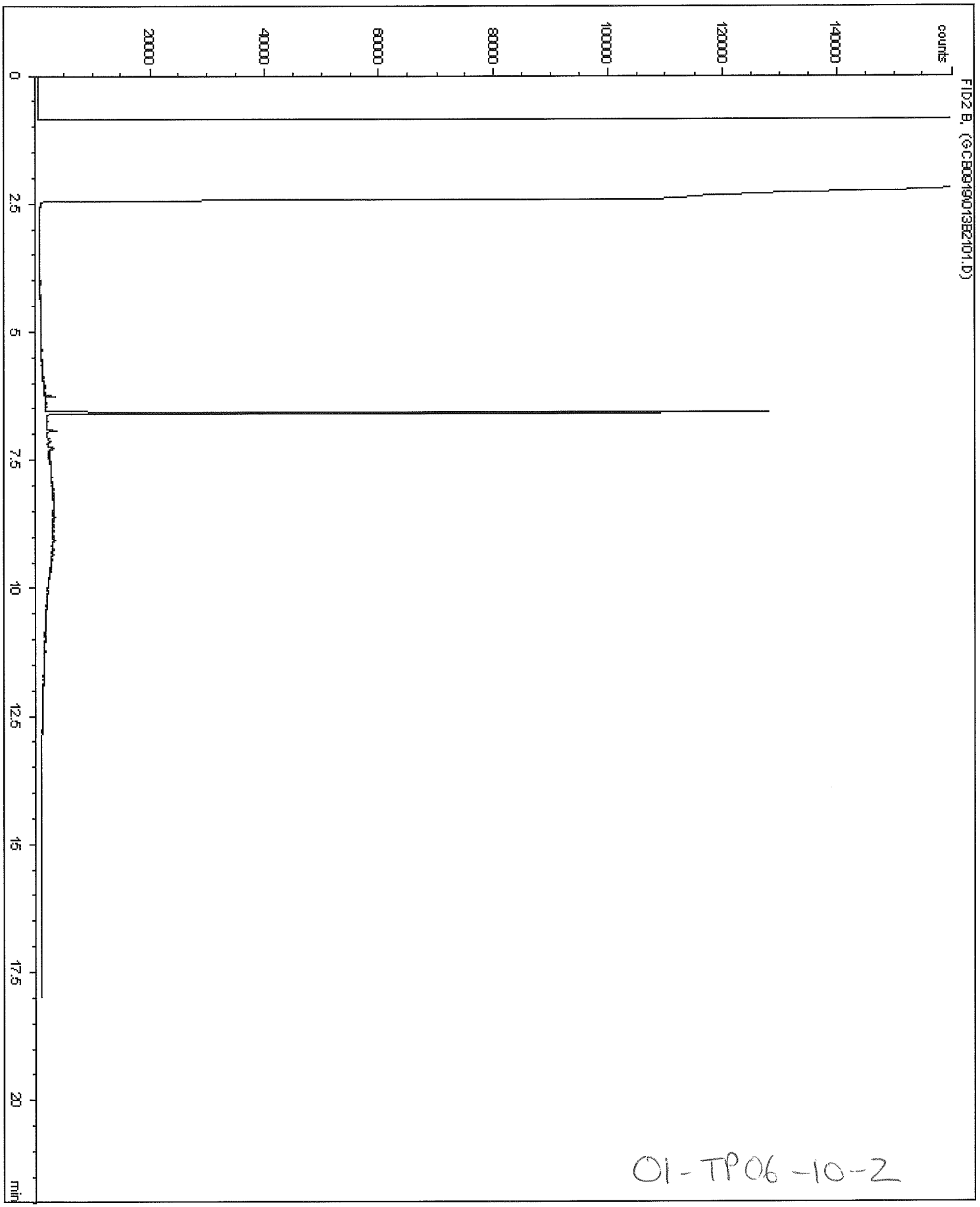

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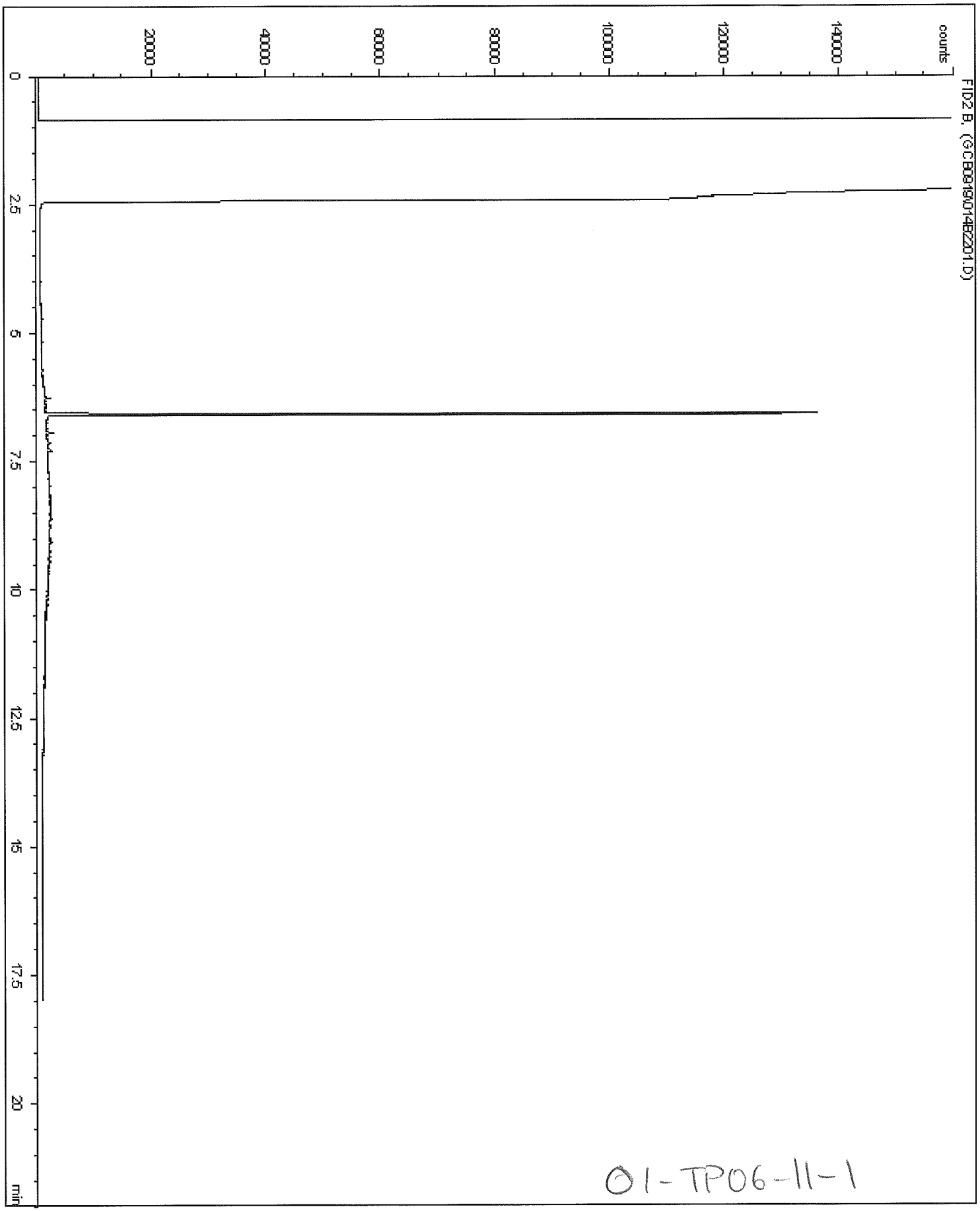

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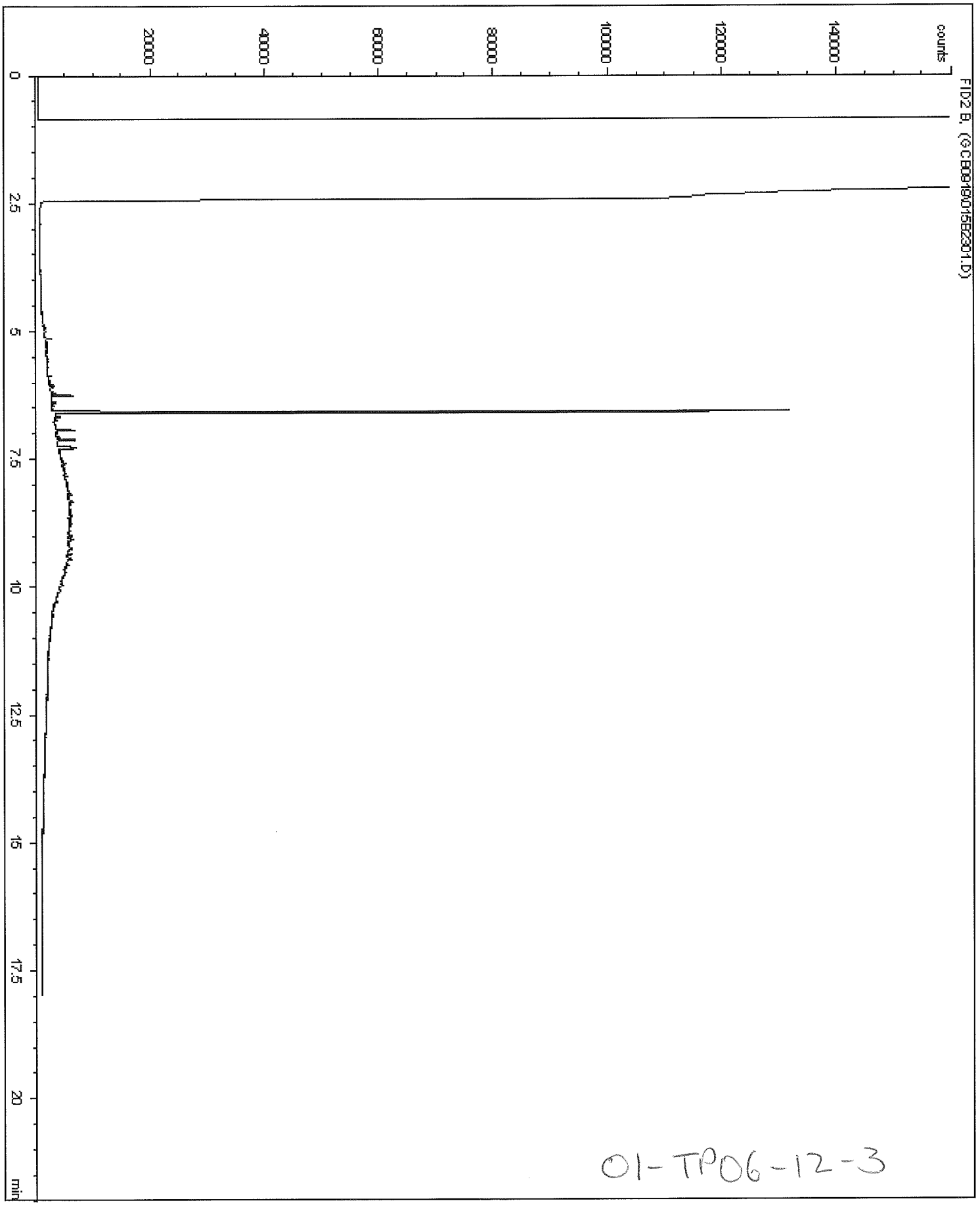

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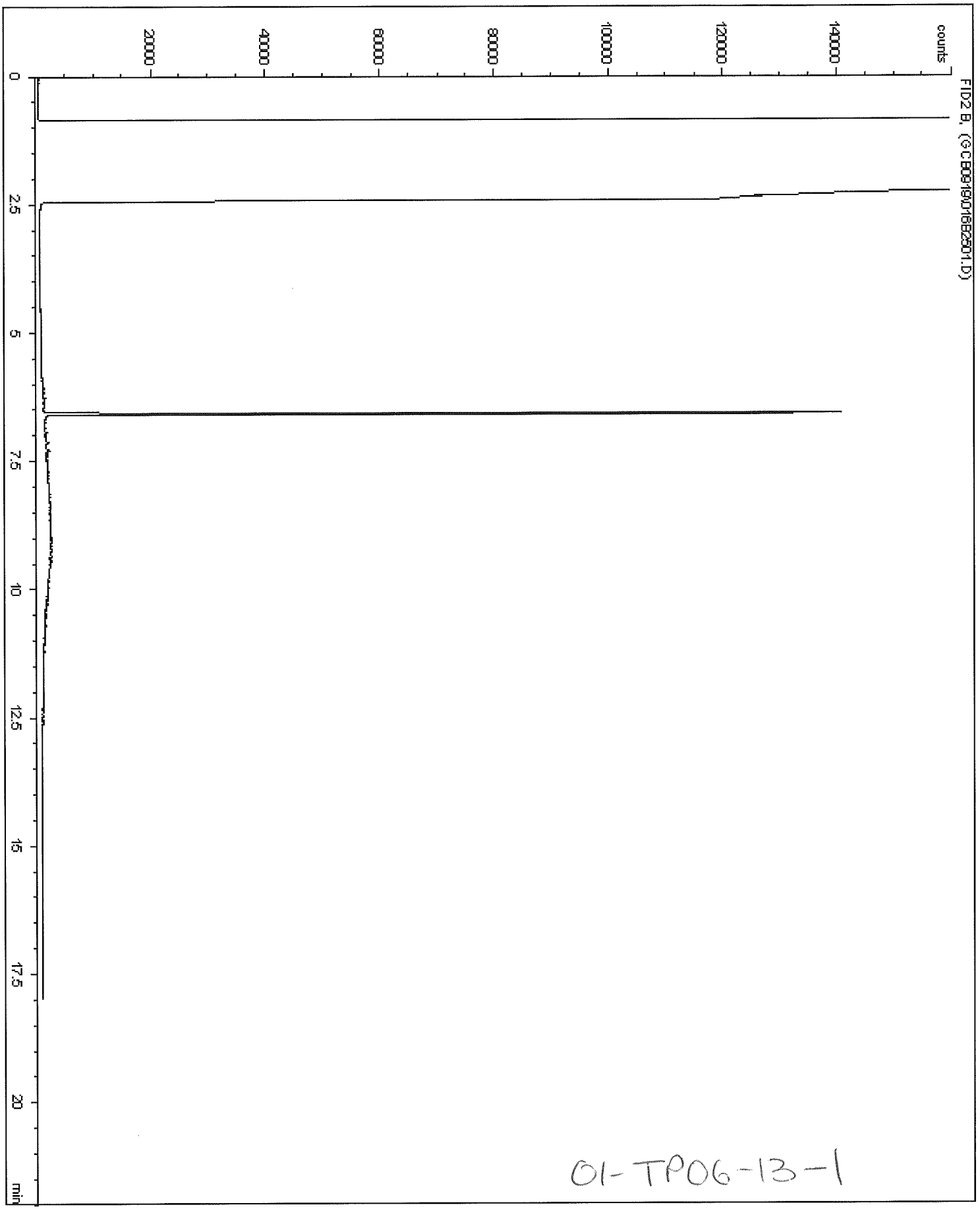

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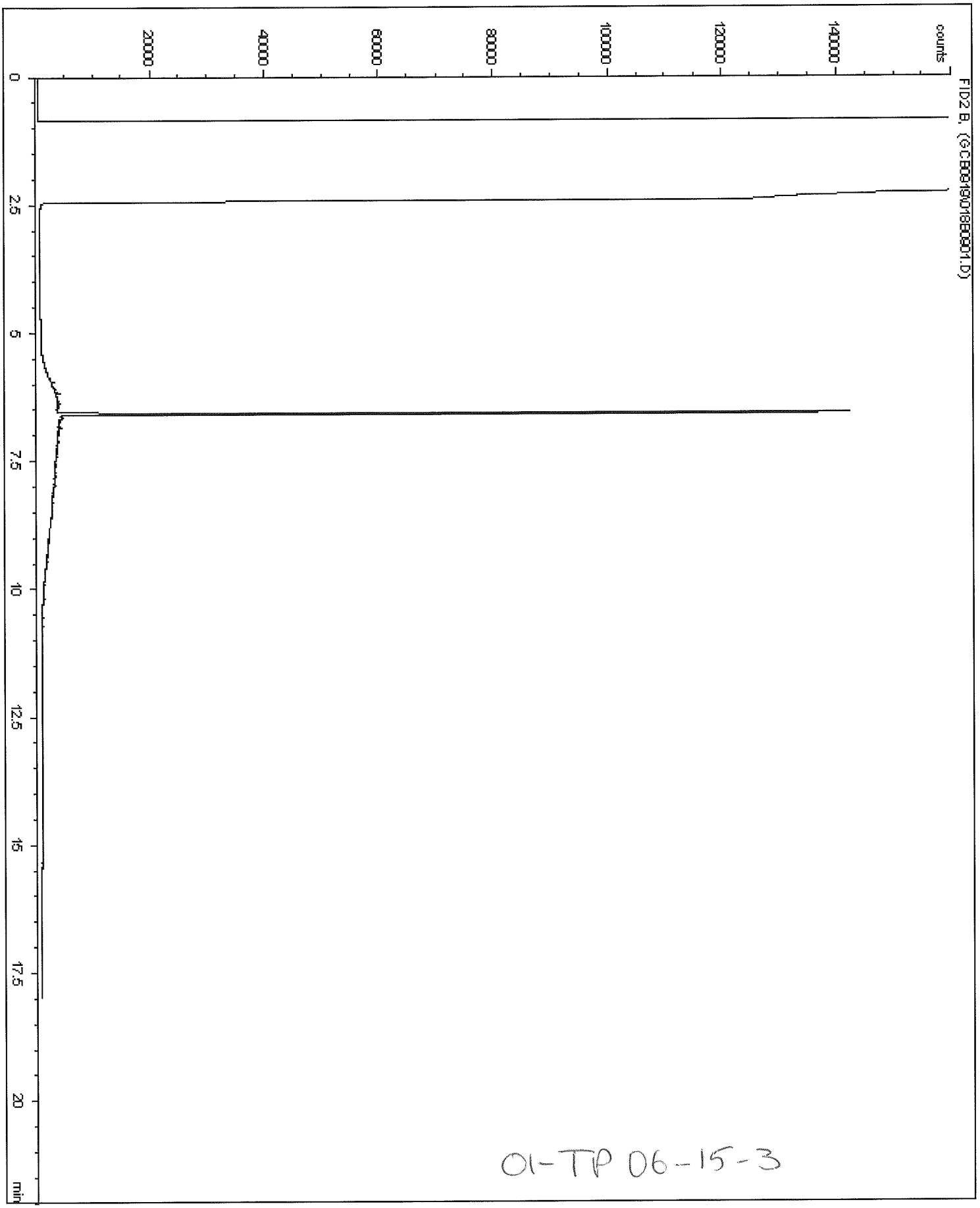

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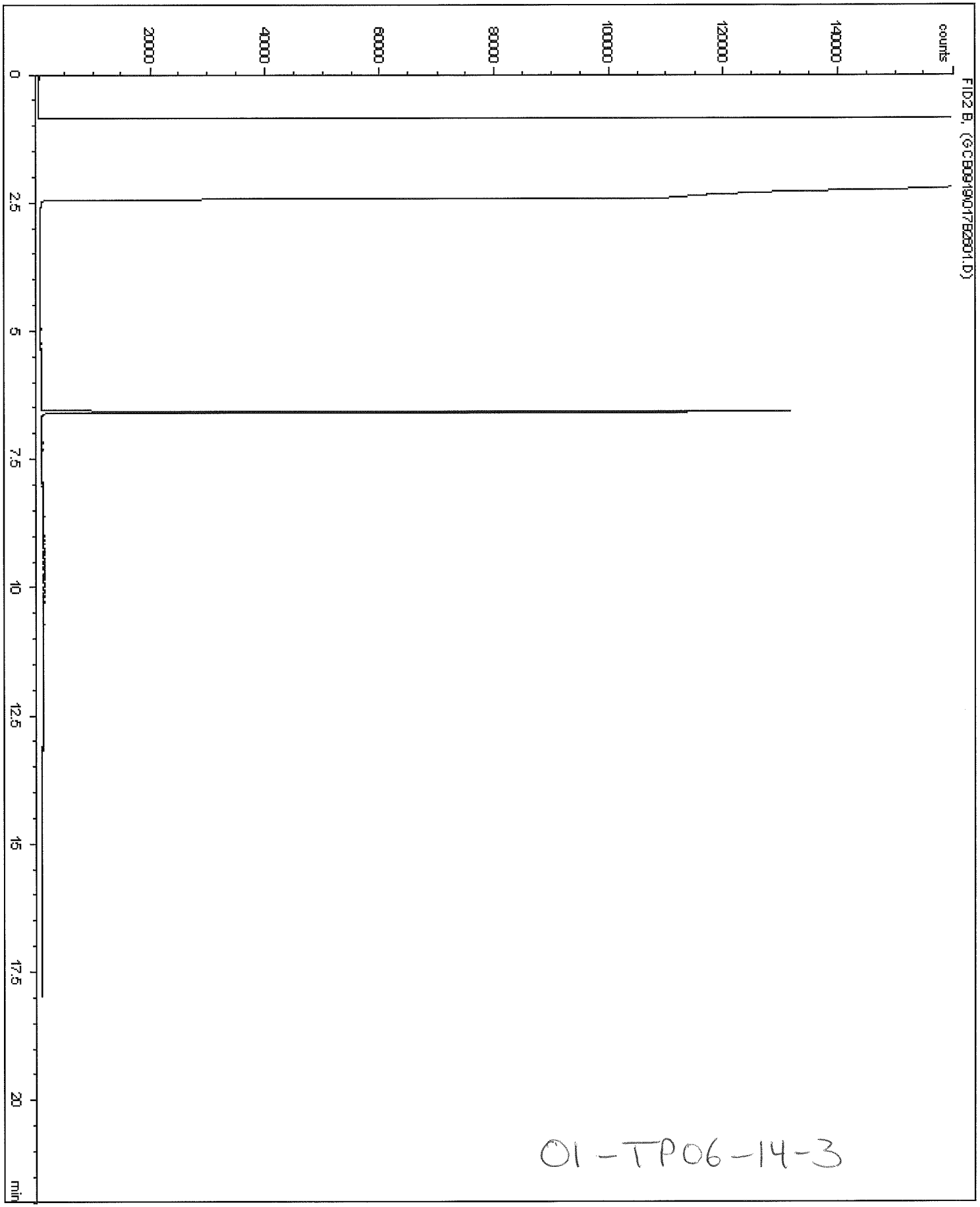

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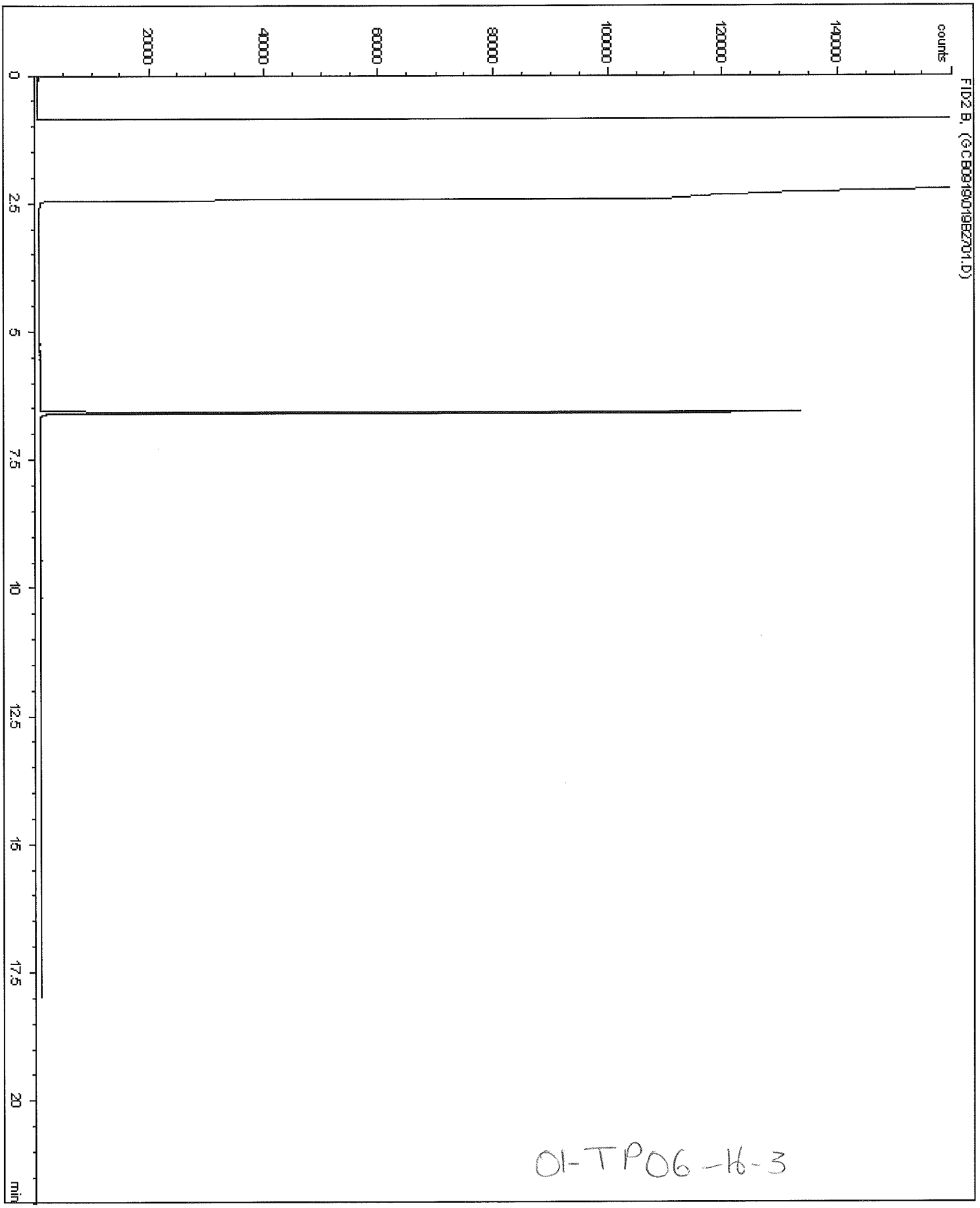

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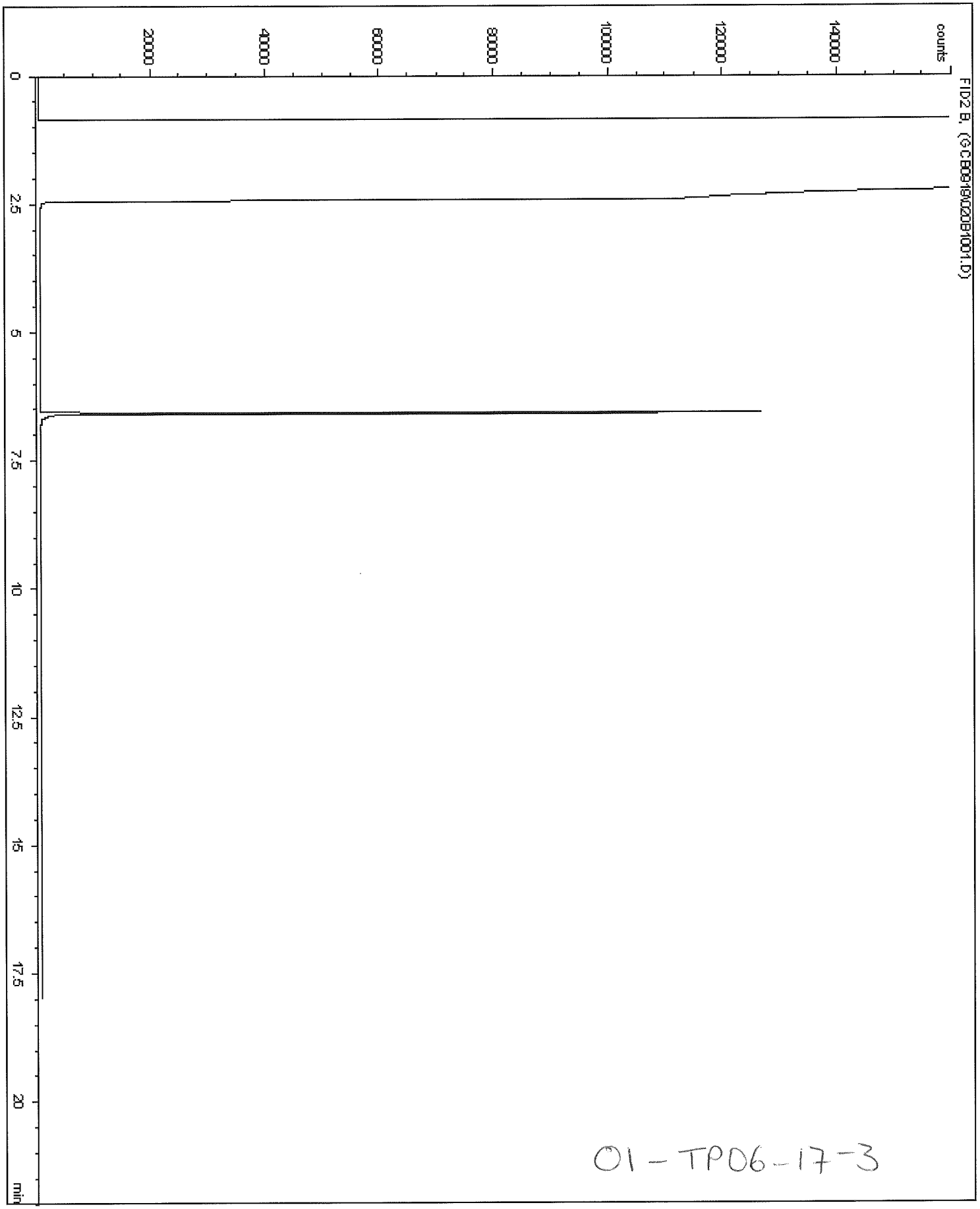

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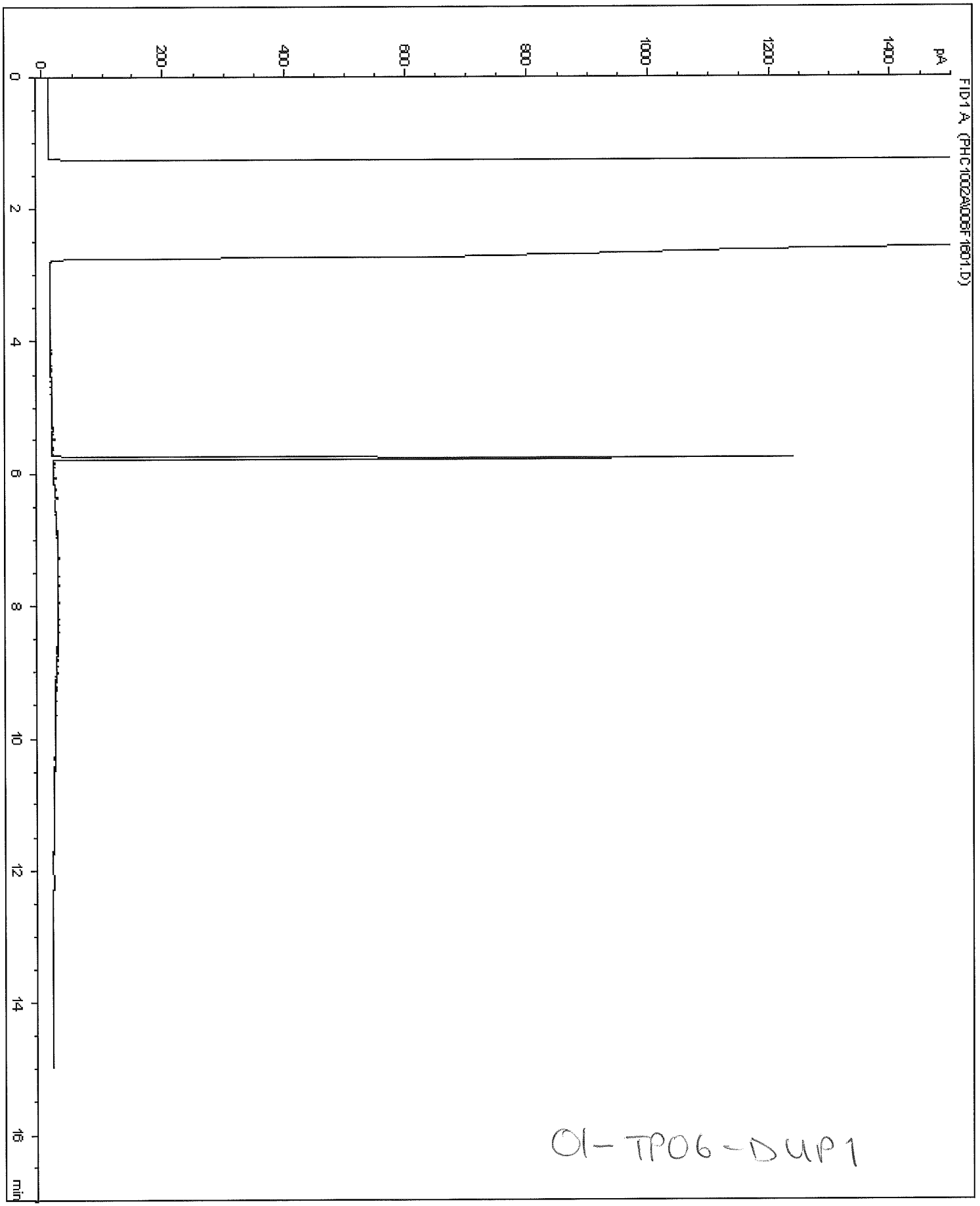

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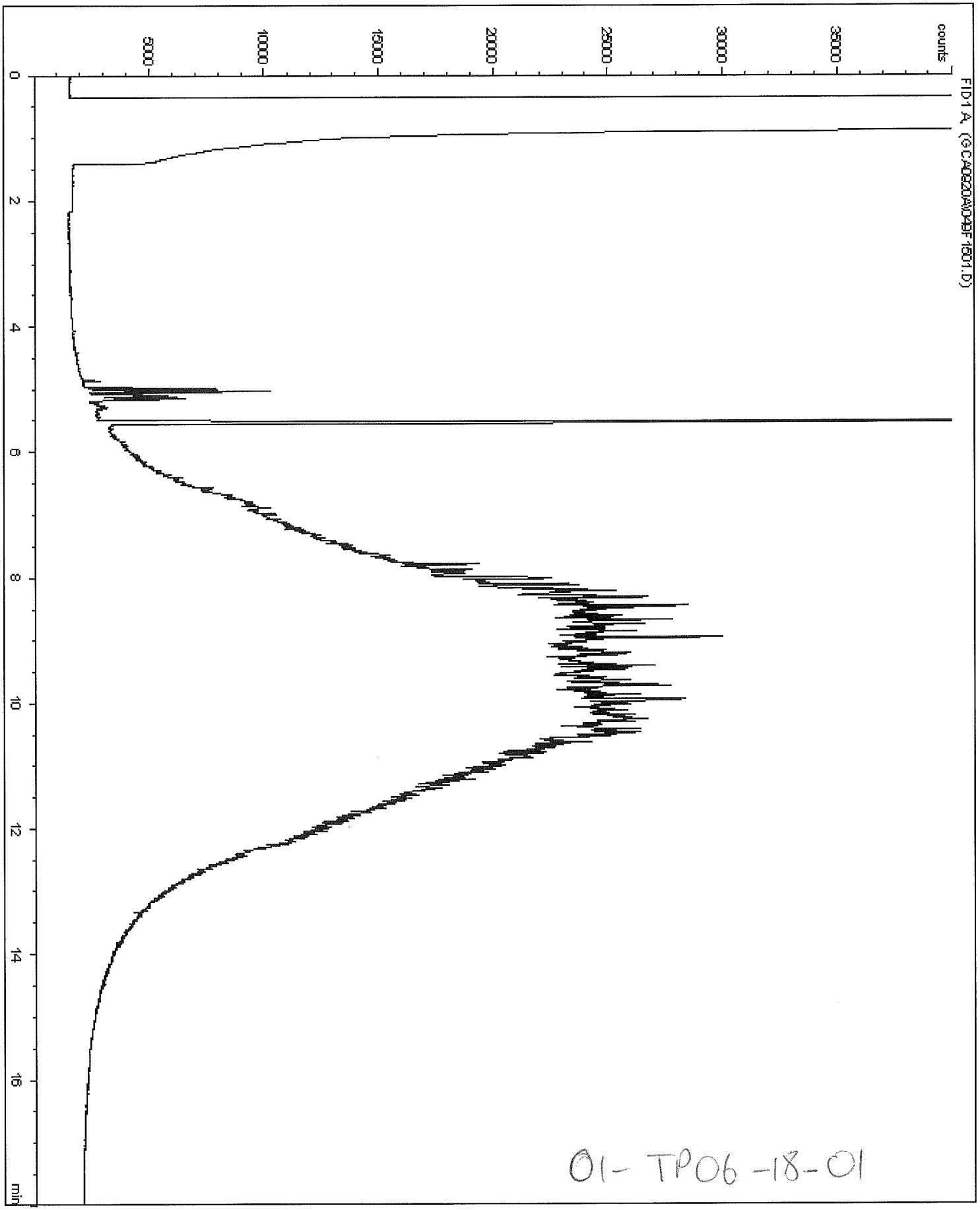

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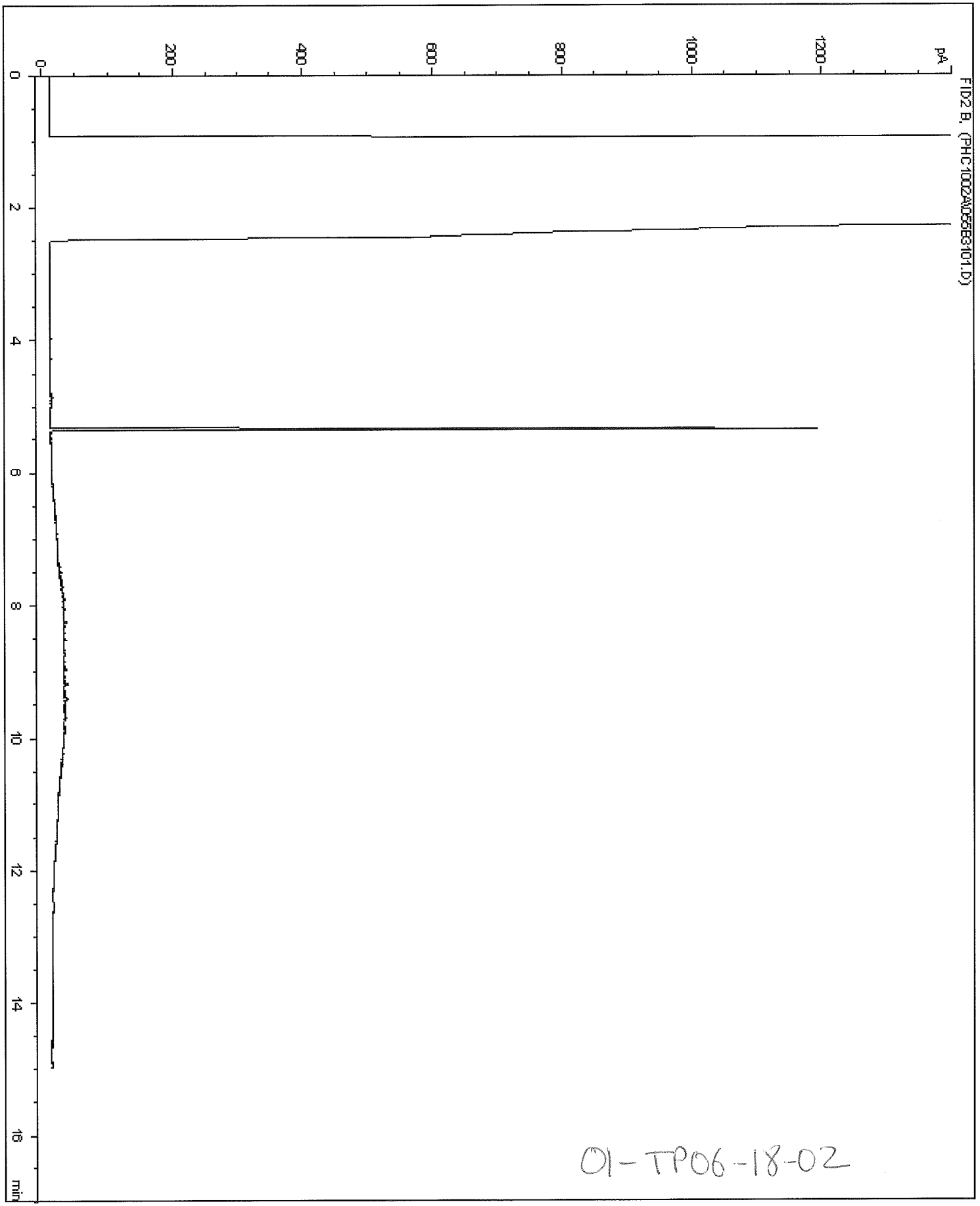
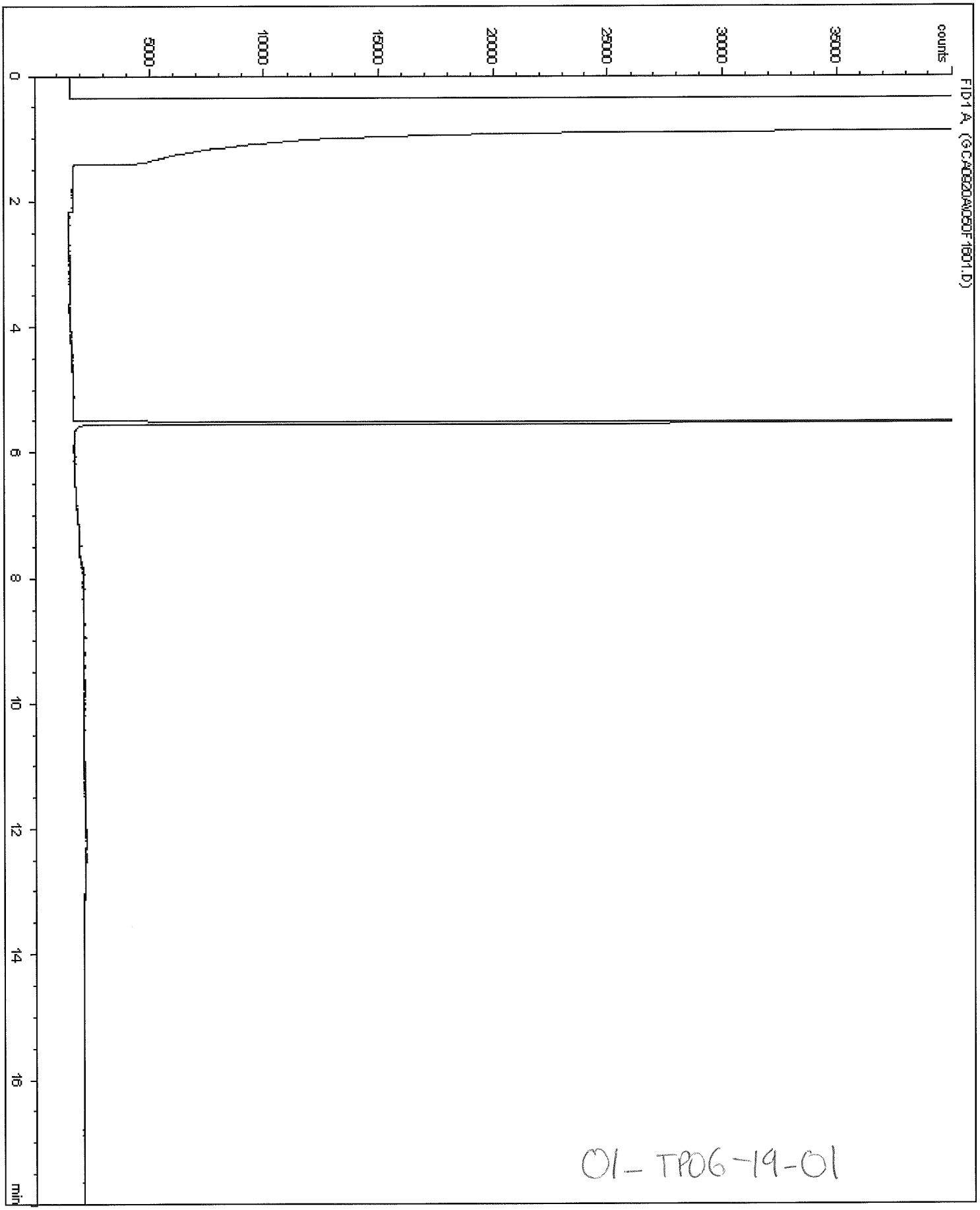
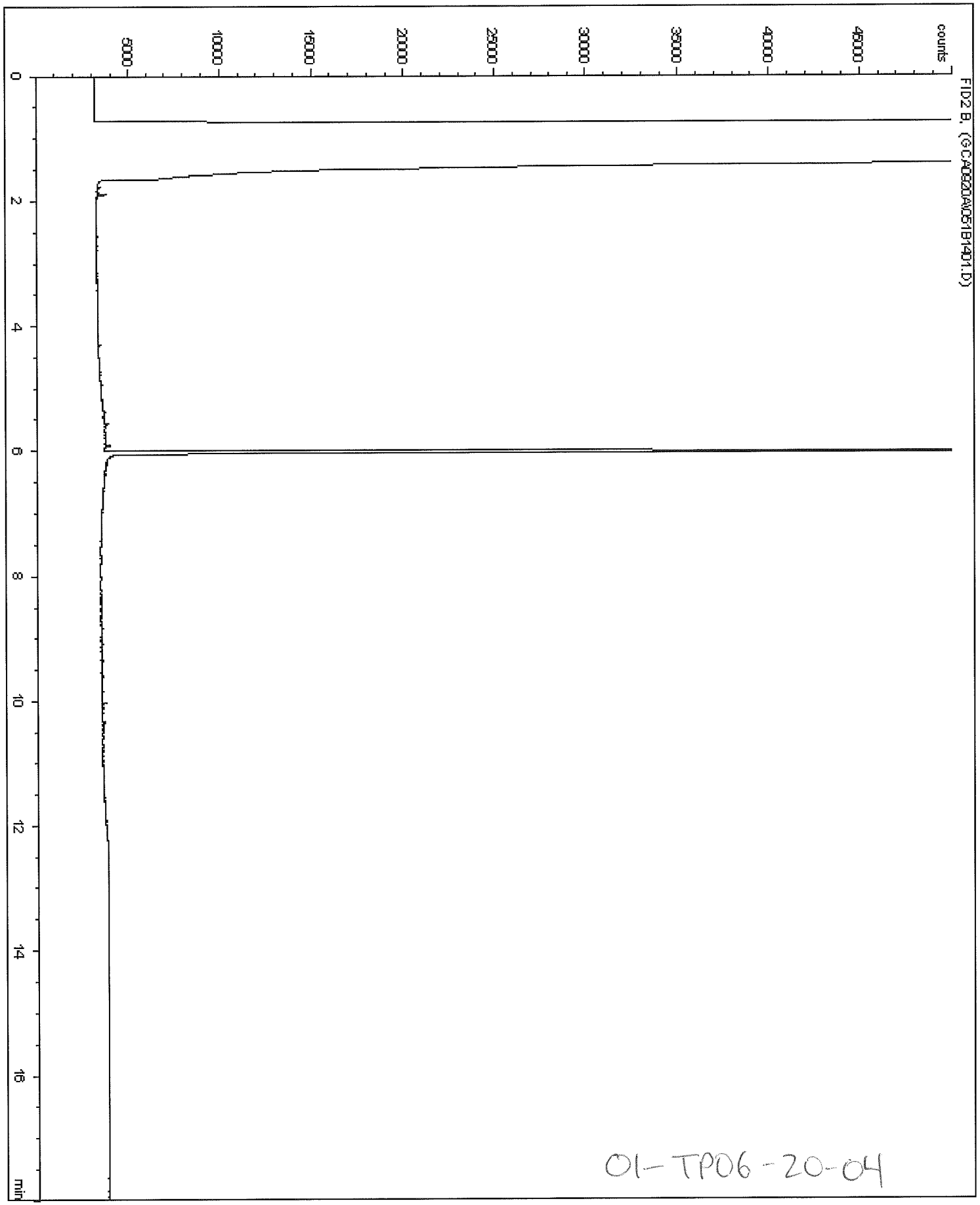


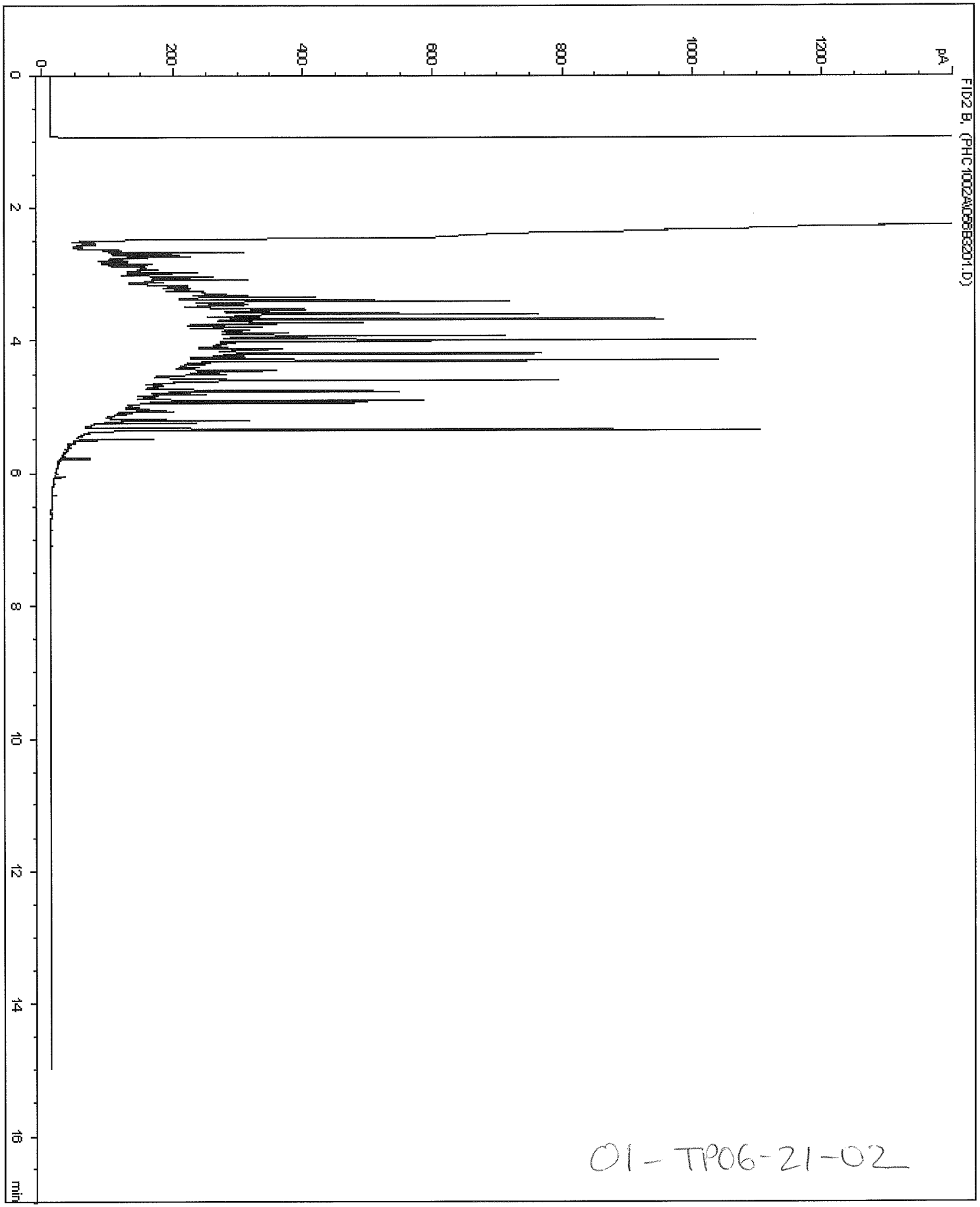
*** End of Report ***



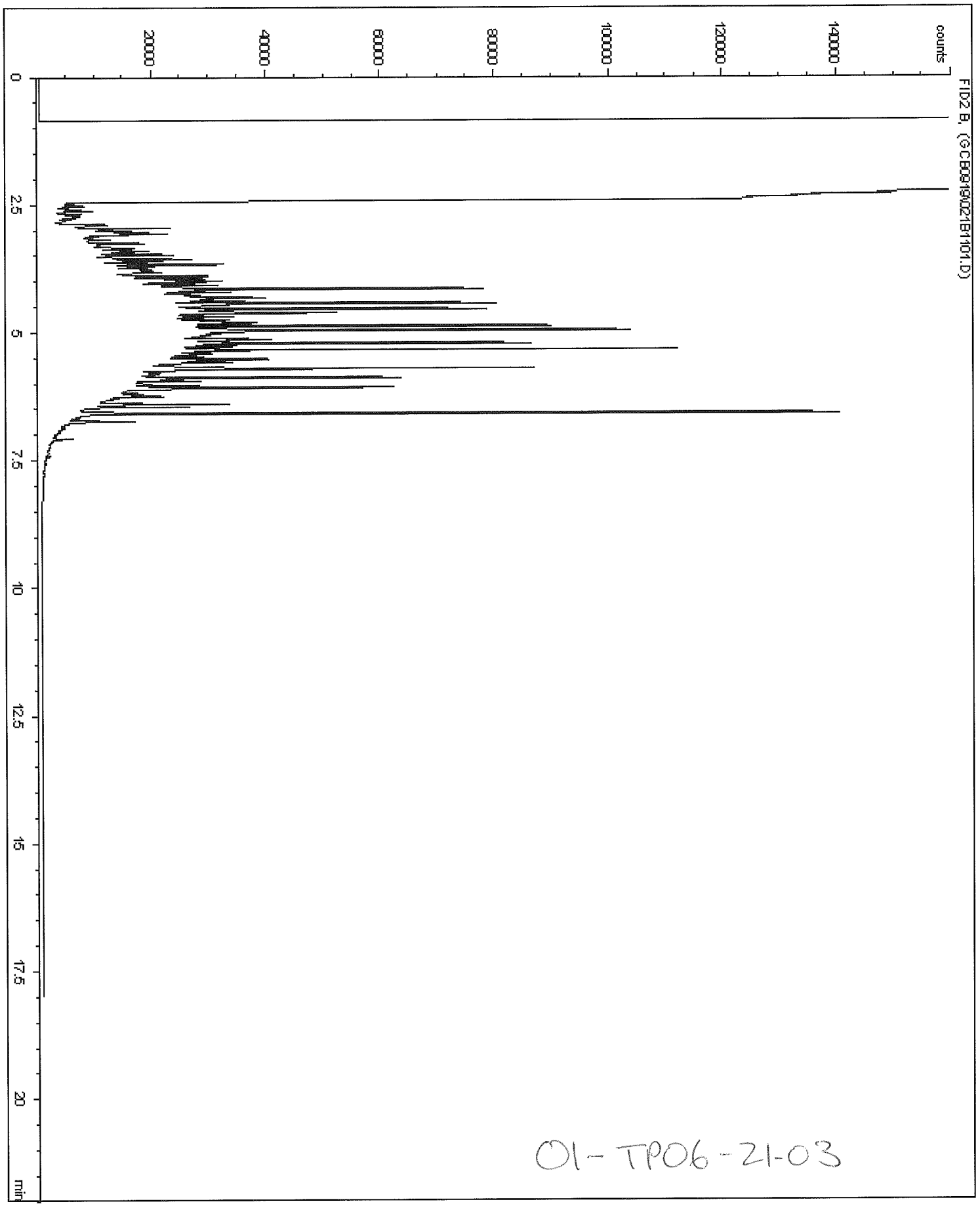
*** End of Report ***



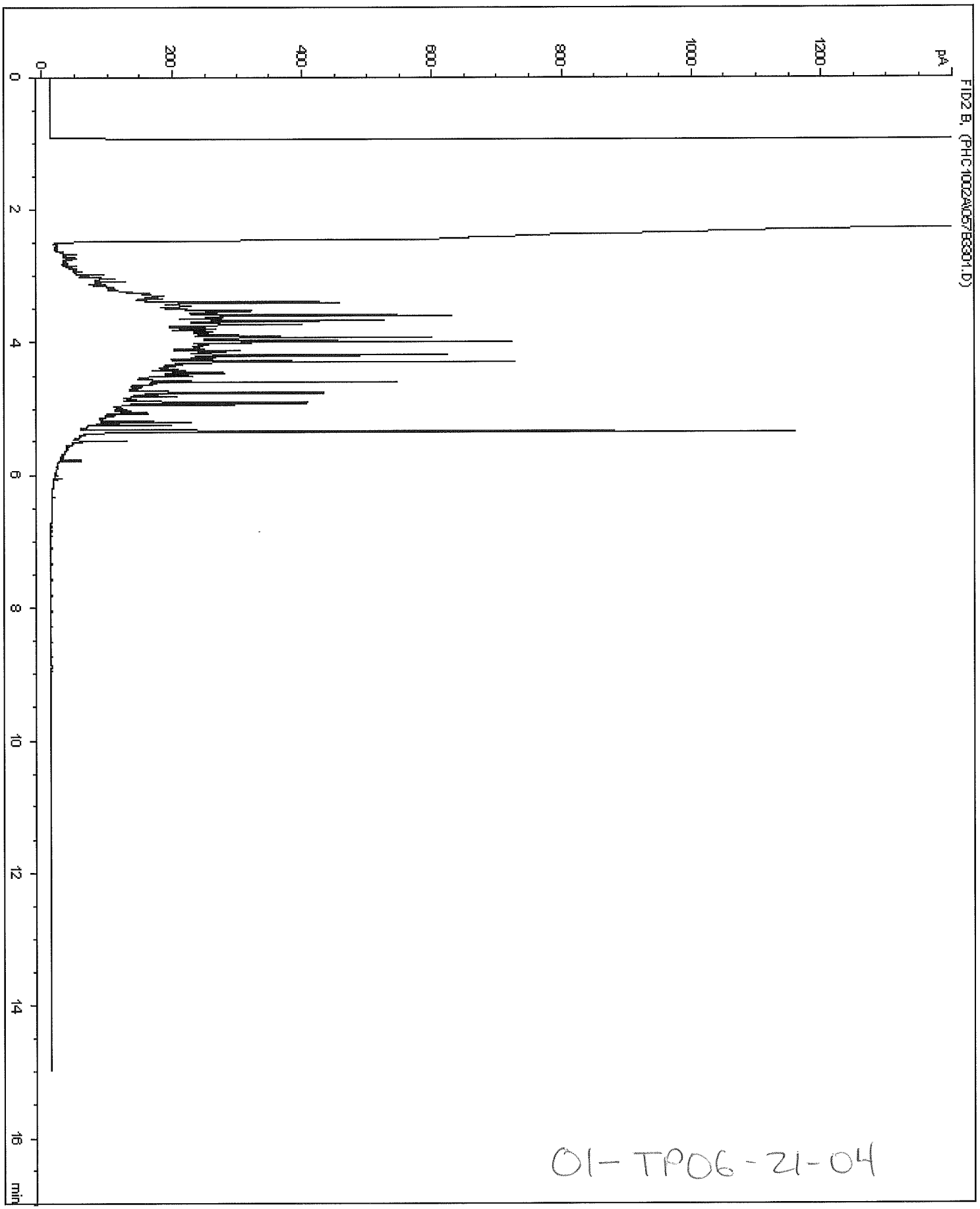
*** End of Report ***



*** End of Report ***



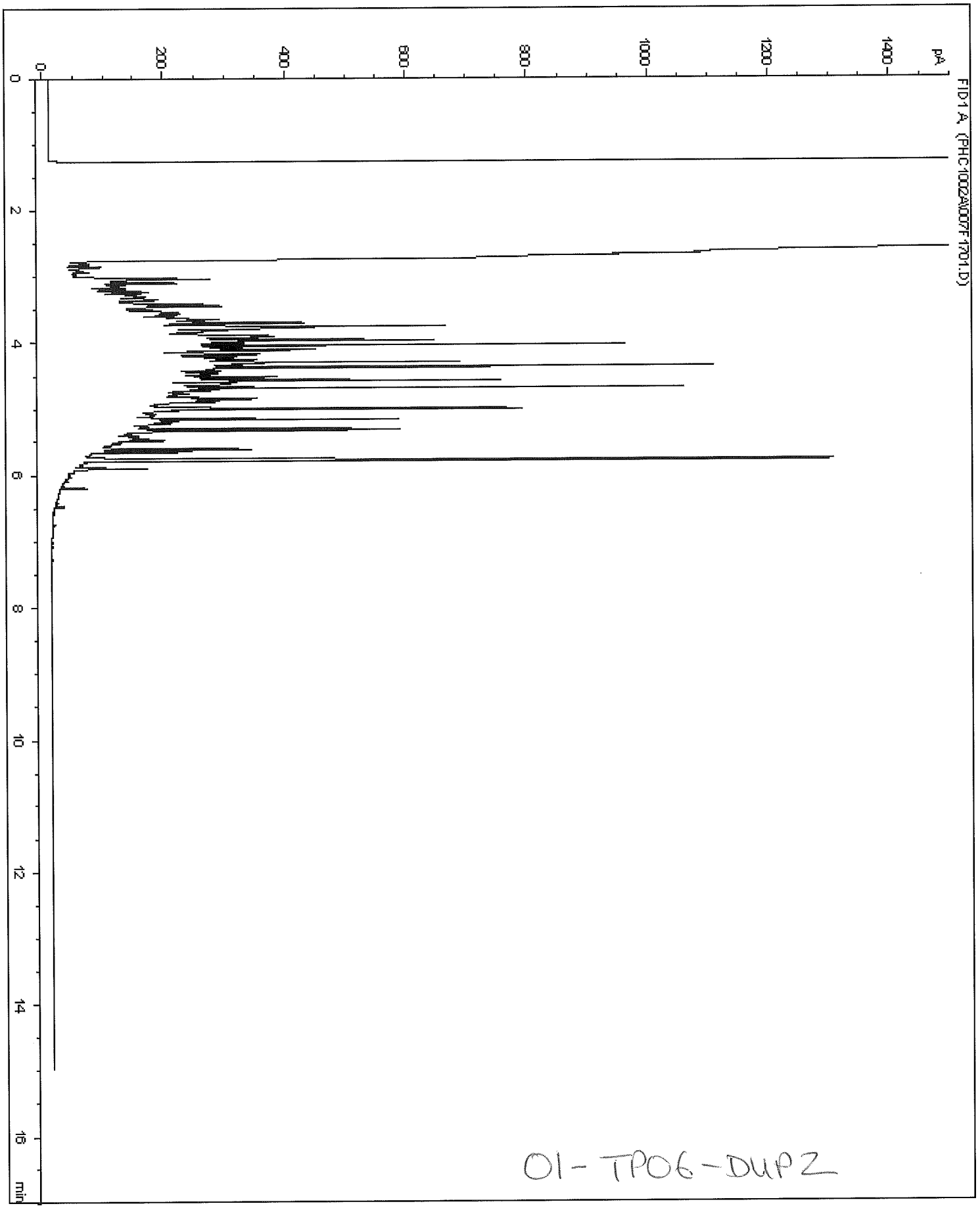
*** End of Report ***



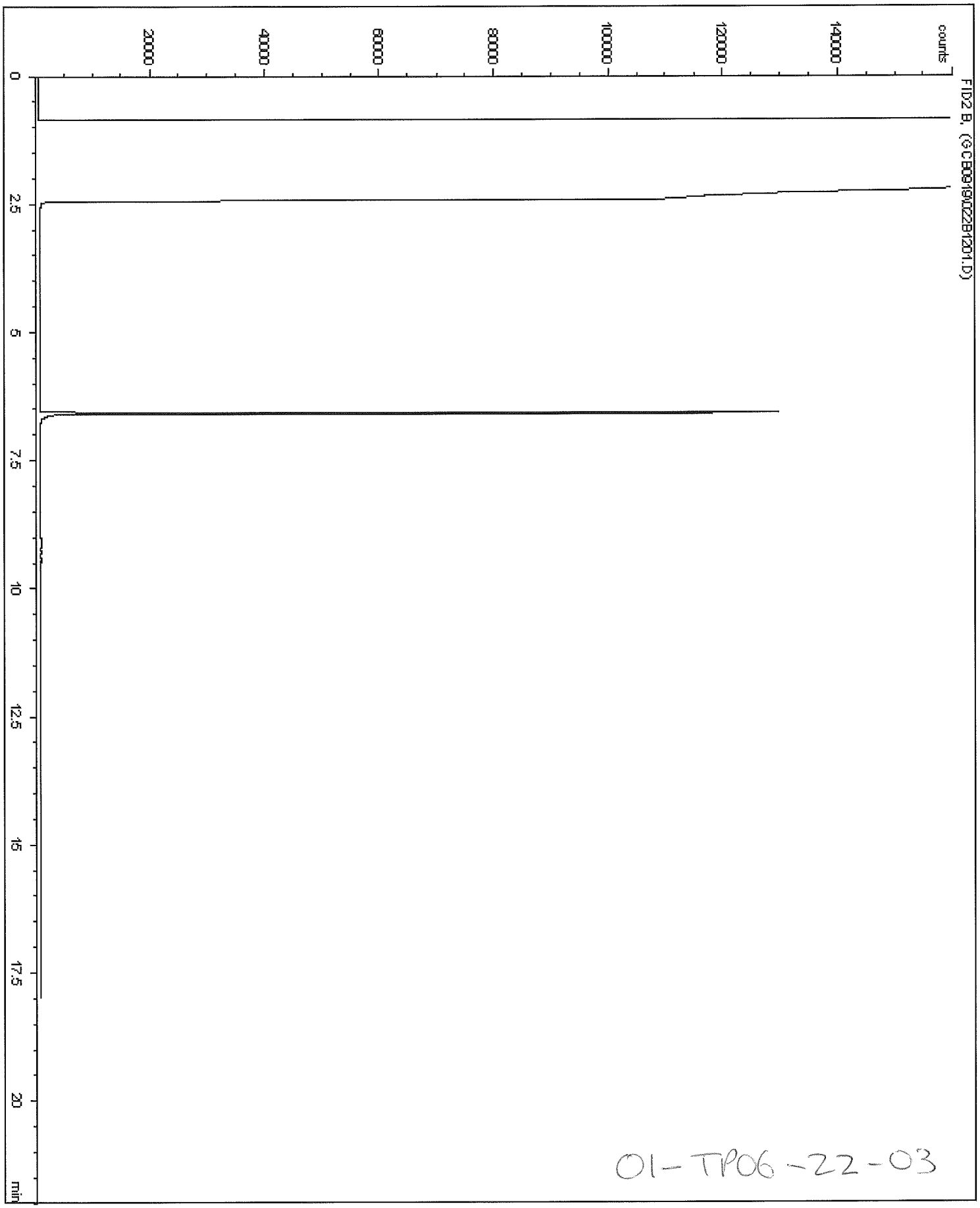
*** End of Report ***

Data File C:\HPCHEM\1\DATA\PHC1002A\007F1701.D

Sample Name: C80662



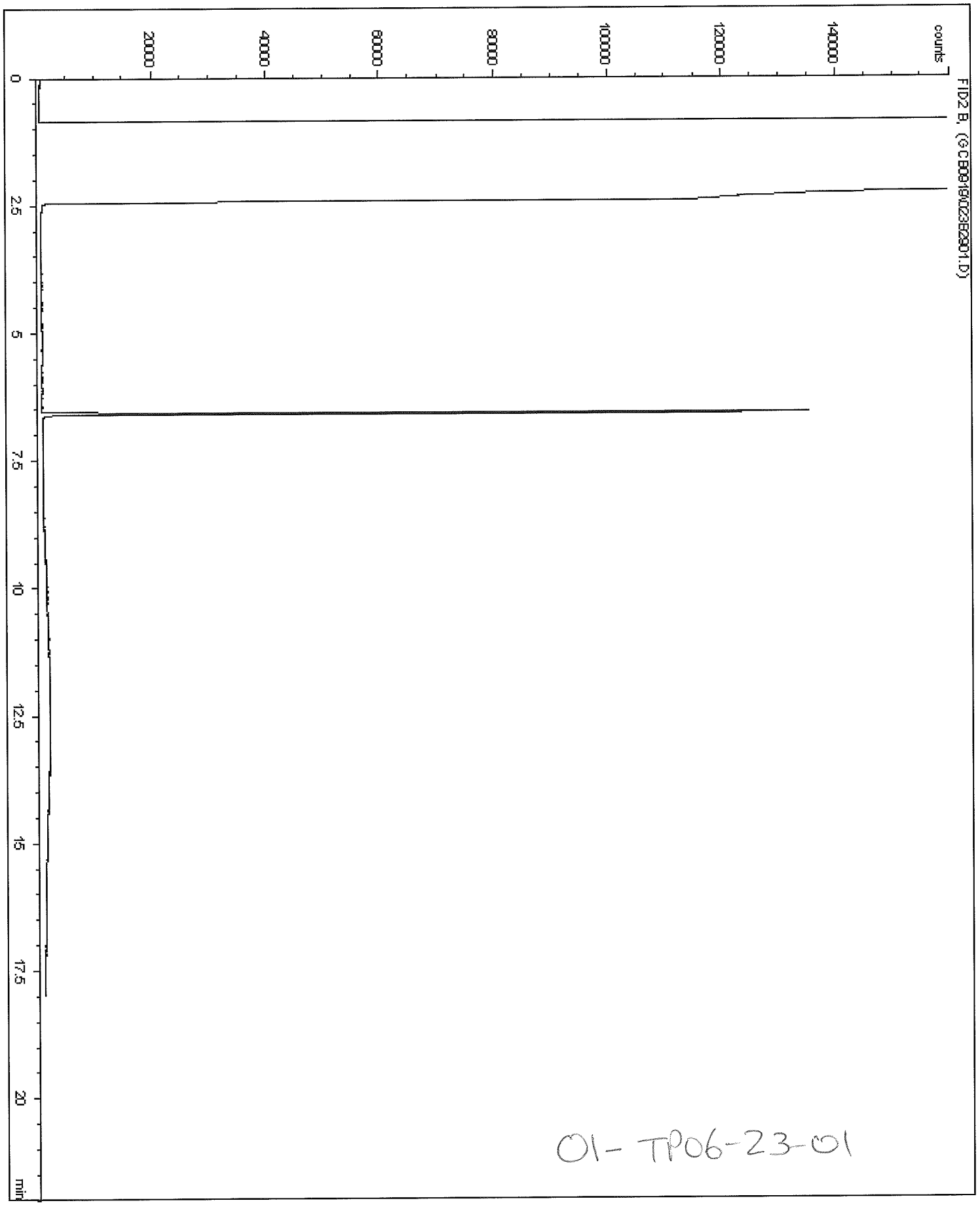
*** End of Report ***



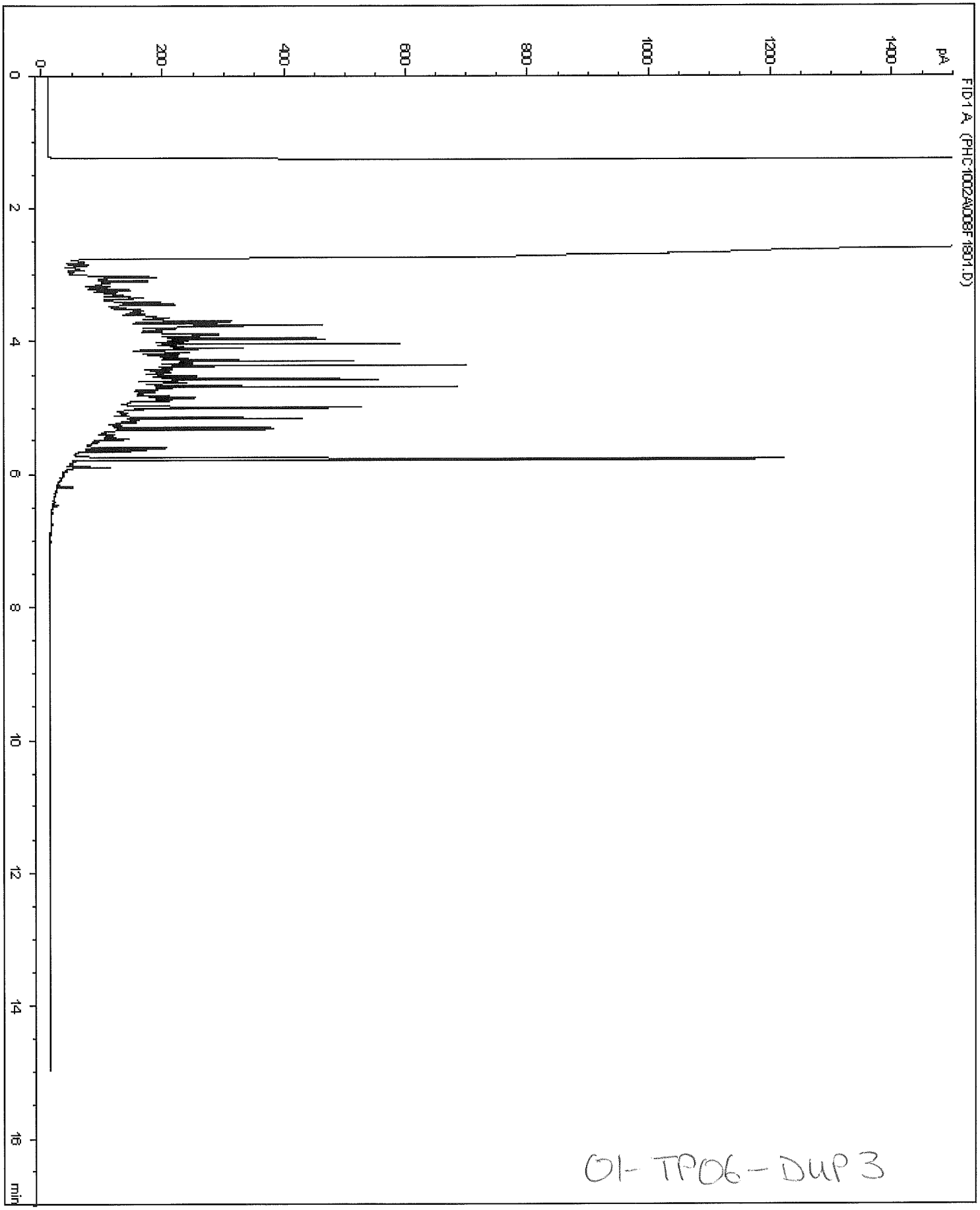
*** End of Report ***

Data File C:\HPCHEM\1\DATA\GCB0919\023B2901.D

Sample Name: C80663



*** End of Report ***



*** End of Report ***

Maxxam Analytics Inc

Your Project #: 1256-0601 INUVIK
Your C.O.C. #: 115764, 115765

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
308-1080-MAINLAND STREET
VANCOUVER, BC
CANADA --- ---

Report Date: 2006/11/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A643248
Received: 2006/09/18, 8:50

Sample Matrix: Soil
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
CCME Hydrocarbons (F2-F4 in soil)	2	2006/09/19	2006/09/19	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	4	2006/09/19	2006/09/20	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	1	2006/09/29	2006/10/02	EENVSOP-00007 v4	CWS PHCS Tier 1
Elements by ICP -Soils	1	N/A	2006/11/02	EENVSOP-00034 v1	EPA 6010C
Elements by ICPMS - Soils	1	N/A	2006/11/02	EENVSOP-00123 v2	EPA 6020A
Moisture	6	N/A	2006/09/20	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	1	N/A	2006/10/02	EENVWI-00023 v2	Carter SSMA 51.2

Encryption Key Jeremy Wakaruk
07 Nov 2006 09:08:05 -07:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Maxxam Analytics Inc

Maxxam Job #: A643248
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

EXTENDED METALS PACKAGE ON SOIL (SOIL)

Maxxam ID		C80873		
Sampling Date		2006/09/14		
COC Number		115764		
	Units	**01-TP06-04-01**	**RDL**	**QC Batch**
Elements				
Total Aluminum (Al)	mg/kg	6450	10	1332906
Total Antimony (Sb)	mg/kg	1	1	1332769
Total Arsenic (As)	mg/kg	5	1	1332769
Total Barium (Ba)	mg/kg	140	10	1332769
Total Beryllium (Be)	mg/kg	0.8	0.4	1332769
Total Boron (B)	mg/kg	12	2	1332906
Total Cadmium (Cd)	mg/kg	2.2	0.1	1332769
Total Calcium (Ca)	mg/kg	114000	50	1332906
Total Chromium (Cr)	mg/kg	29	1	1332769
Total Cobalt (Co)	mg/kg	12	1	1332769
Total Copper (Cu)	mg/kg	72	5	1332769
Total Iron (Fe)	mg/kg	16500	10	1332906
Total Lead (Pb)	mg/kg	156	1	1332769
Total Lithium (Li)	mg/kg	15	10	1332906
Total Magnesium (Mg)	mg/kg	45000	20	1332906
Total Manganese (Mn)	mg/kg	379	10	1332906
Total Molybdenum (Mo)	mg/kg	4.6	0.4	1332769
Total Nickel (Ni)	mg/kg	24	1	1332769
Total Phosphorus (P)	mg/kg	1150	20	1332906
Total Potassium (K)	mg/kg	1060	30	1332906
Total Selenium (Se)	mg/kg	0.6	0.5	1332769
Total Silver (Ag)	mg/kg	<1	1	1332769
Total Sodium (Na)	mg/kg	167	50	1332906
Total Strontium (Sr)	mg/kg	80	10	1332906
Total Sulphur (S)	mg/kg	901	20	1332906
Total Thallium (Tl)	mg/kg	<0.3	0.3	1332769
Total Tin (Sn)	mg/kg	4	1	1332769
Total Uranium (U)	mg/kg	<1	1	1332769
Total Vanadium (V)	mg/kg	17	1	1332769
Total Zinc (Zn)	mg/kg	151	10	1332769

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643248
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C80865	C80868	C80872	C80873		
Sampling Date		2006/09/14	2006/09/14	2006/09/14	2006/09/14		
COC Number		115764	115764	115764	115764		
	Units	**01-TP06-01-03**	**01-TP06-02-03**	**01-TP06-03-03**	**01-TP06-04-01**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	6.6	5.4	17.2	6.6	0.3	1275921

RDL = Reportable Detection Limit

Maxxam ID		C80874		C80877	C80881		
Sampling Date		2006/09/14		2006/09/14	2006/09/14		
COC Number		115764		115765	115765		
	Units	**01-TP06-04-02**	**QC Batch**	**01-TP06-05-01**	**01-TP06-06-02**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	6.2	1291312	5.5	4.9	0.3	1275921

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643248
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C80865	C80868		C80872		
Sampling Date		2006/09/14	2006/09/14		2006/09/14		
COC Number		115764	115764		115764		
	Units	**01-TP06-01-03**	**01-TP06-02-03**	**QC Batch**	**01-TP06-03-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	19	25	1275137	54	10	1275799
F3 (C16-C34 Hydrocarbons)	mg/kg	273	645	1275137	520	10	1275799
F4 (C34-C50 Hydrocarbons)	mg/kg	199	182	1275137	86	10	1275799
Reached Baseline at C50	mg/kg	Yes	Yes	1275137	Yes	1	1275799
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	64	76	1275137	83		1275799

RDL = Reportable Detection Limit

Maxxam ID		C80873		C80874		
Sampling Date		2006/09/14		2006/09/14		
COC Number		115764		115764		
	Units	**01-TP06-04-01**	**QC Batch**	**01-TP06-04-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F2 (C10-C16 Hydrocarbons)	mg/kg	205	1275799	81	10	1290350
F3 (C16-C34 Hydrocarbons)	mg/kg	2830	1275799	1410	10	1290350
F4 (C34-C50 Hydrocarbons)	mg/kg	450	1275799	246	10	1290350
Reached Baseline at C50	mg/kg	No	1275799	Yes	1	1290350
Surrogate Recovery (%)						
O-TERPHENYL (sur.)	%	82	1275799	78		1290350

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643248
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C80877	C80881		
Sampling Date		2006/09/14	2006/09/14		
COC Number		115765	115765		
	Units	**01-TP06-05-01**	**01-TP06-06-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon					
F2 (C10-C16 Hydrocarbons)	mg/kg	38	73	10	1275799
F3 (C16-C34 Hydrocarbons)	mg/kg	378	203	10	1275799
F4 (C34-C50 Hydrocarbons)	mg/kg	69	26	10	1275799
Reached Baseline at C50	mg/kg	Yes	Yes	1	1275799
Surrogate Recovery (%)					
O-TERPHENYL (sur.)	%	85	83		1275799

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643248
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: JP

PETROLEUM HYDROCARBONS (CCME) Comments

Sample C80872-01 CCME Hydrocarbons (F2-F4 in soil): DUPLICATES DO NOT MATCH DUE TO SAMPLE AND DUPLICATE BEING <5X'S MDL

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: EA643248

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275137 AN1	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/09/19		103	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/19		126	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/19		128	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/19		117	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/19		75	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/19		95	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/19		88	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/19		90	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/19		71	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/19	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/19	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/19	<10		mg/kg	
		Reached Baseline at C50	2006/09/19	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/19	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/19	43.0		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/19	NC		%	50
		Reached Baseline at C50	2006/09/19	NC		%	50
1275799 KB4	MATRIX SPIKE [C80873-01]	O-TERPHENYL (sur.)	2006/09/20		74	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/20		88	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/20		87	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/20		75	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/20		82	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/20		100	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/20		89	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/20		87	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/20		88	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/20	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/20	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/20	<10		mg/kg	
		Reached Baseline at C50	2006/09/20	YES, RDL=1		mg/kg	
	RPD [C80872-01]	F2 (C10-C16 Hydrocarbons)	2006/09/20	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/20	30.9		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/20	39.5		%	50
		Reached Baseline at C50	2006/09/20	NC		%	50
1275921 CN1	BLANK	Moisture	2006/09/20	<0.3		%	
	RPD	Moisture	2006/09/20	4.3		%	20
1290350 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/02		88	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		34	%	N/A
		F3 (C16-C34 Hydrocarbons)	2006/10/02		79	%	N/A
		F4 (C34-C50 Hydrocarbons)	2006/10/02		98	%	N/A
	SPIKE	O-TERPHENYL (sur.)	2006/10/02		81	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		98	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2006/10/02		98	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2006/10/02		101	%	85 - 115
	BLANK	O-TERPHENYL (sur.)	2006/10/02		85	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/02	<10		mg/kg	
		Reached Baseline at C50	2006/10/02	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/02	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/02	24.1		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/02	36.0		%	50
		Reached Baseline at C50	2006/10/02	NC		%	50
1291312 HL2	BLANK	Moisture	2006/10/02	<0.3		%	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643248

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1291312 HL2	RPD	Moisture	2006/10/02	1.2		%	20
1332769 LL2	Calibration Check	Total Antimony (Sb)	2006/11/02		105	%	80 - 120
		Total Arsenic (As)	2006/11/02		103	%	80 - 120
		Total Barium (Ba)	2006/11/02		98	%	80 - 120
		Total Beryllium (Be)	2006/11/02		99	%	80 - 120
		Total Cadmium (Cd)	2006/11/02		98	%	80 - 120
		Total Chromium (Cr)	2006/11/02		99	%	80 - 120
		Total Cobalt (Co)	2006/11/02		101	%	80 - 120
		Total Copper (Cu)	2006/11/02		103	%	80 - 120
		Total Lead (Pb)	2006/11/02		99	%	80 - 120
		Total Molybdenum (Mo)	2006/11/02		98	%	80 - 120
		Total Nickel (Ni)	2006/11/02		101	%	80 - 120
		Total Selenium (Se)	2006/11/02		102	%	80 - 120
		Total Silver (Ag)	2006/11/02		103	%	80 - 120
		Total Thallium (Tl)	2006/11/02		97	%	80 - 120
		Total Tin (Sn)	2006/11/02		100	%	80 - 120
		Total Uranium (U)	2006/11/02		104	%	80 - 120
		Total Vanadium (V)	2006/11/02		100	%	80 - 120
		Total Zinc (Zn)	2006/11/02		100	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/11/02		97	%	75 - 125
		Total Cadmium (Cd)	2006/11/02		96	%	75 - 125
		Total Lead (Pb)	2006/11/02		82	%	75 - 125
		Total Selenium (Se)	2006/11/02		106	%	75 - 125
		Total Thallium (Tl)	2006/11/02		95	%	75 - 125
	BLANK	Total Antimony (Sb)	2006/11/02	<1		mg/kg	
		Total Arsenic (As)	2006/11/02	<1		mg/kg	
		Total Barium (Ba)	2006/11/02	<10		mg/kg	
		Total Beryllium (Be)	2006/11/02	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/11/02	<0.1		mg/kg	
		Total Chromium (Cr)	2006/11/02	<1		mg/kg	
		Total Cobalt (Co)	2006/11/02	<1		mg/kg	
		Total Copper (Cu)	2006/11/02	<5		mg/kg	
		Total Lead (Pb)	2006/11/02	<1		mg/kg	
		Total Molybdenum (Mo)	2006/11/02	<0.4		mg/kg	
		Total Nickel (Ni)	2006/11/02	<1		mg/kg	
		Total Selenium (Se)	2006/11/02	<0.5		mg/kg	
		Total Silver (Ag)	2006/11/02	<1		mg/kg	
		Total Thallium (Tl)	2006/11/02	<0.3		mg/kg	
		Total Tin (Sn)	2006/11/02	<1		mg/kg	
		Total Uranium (U)	2006/11/02	<1		mg/kg	
		Total Vanadium (V)	2006/11/02	<1		mg/kg	
		Total Zinc (Zn)	2006/11/02	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/11/02	NC		%	35
		Total Arsenic (As)	2006/11/02	NC		%	35
		Total Barium (Ba)	2006/11/02	9.1		%	35
		Total Beryllium (Be)	2006/11/02	NC		%	35
		Total Cadmium (Cd)	2006/11/02	NC		%	35
		Total Chromium (Cr)	2006/11/02	6.4		%	35
		Total Cobalt (Co)	2006/11/02	1.9		%	35
		Total Copper (Cu)	2006/11/02	NC		%	35
		Total Lead (Pb)	2006/11/02	1.9		%	35
		Total Molybdenum (Mo)	2006/11/02	NC		%	35
		Total Nickel (Ni)	2006/11/02	3.2		%	35
		Total Selenium (Se)	2006/11/02	NC		%	35
		Total Silver (Ag)	2006/11/02	NC		%	35

Maxxam Analytics Inc

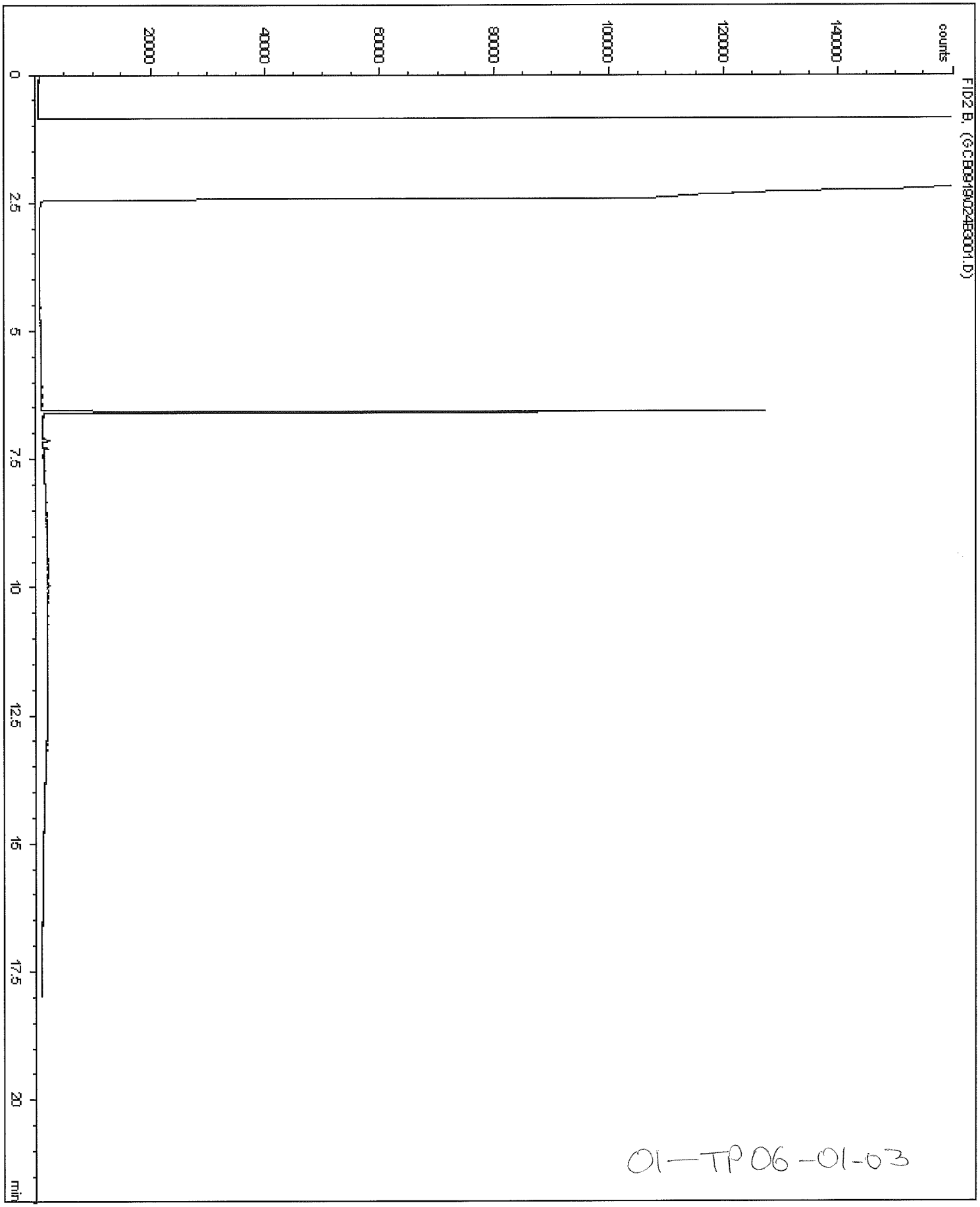
FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

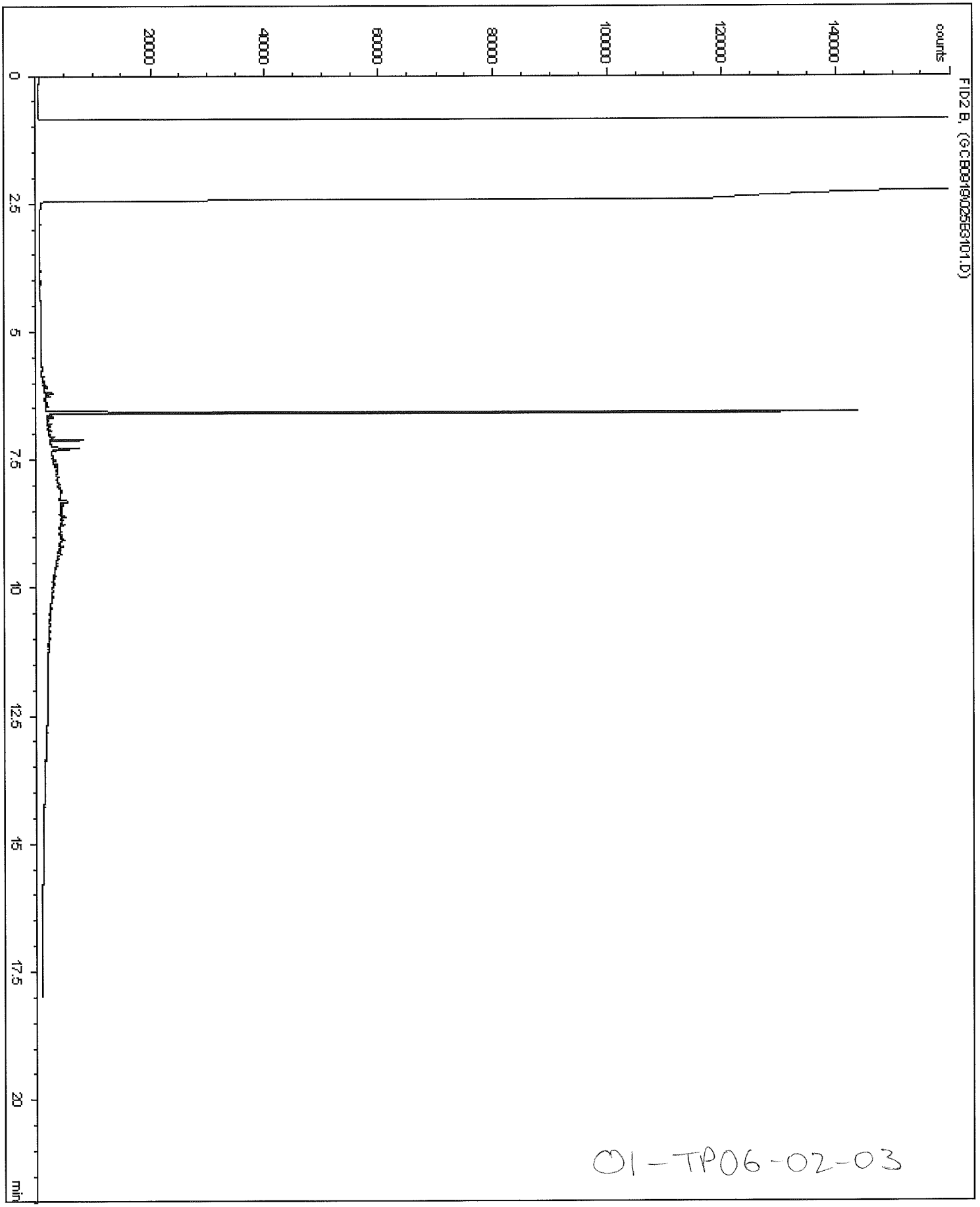
Maxxam Job Number: EA643248

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1332769 LL2	RPD	Total Thallium (Tl)	2006/11/02	NC		%	35
		Total Tin (Sn)	2006/11/02	NC		%	35
		Total Uranium (U)	2006/11/02	NC		%	35
		Total Vanadium (V)	2006/11/02	12.9		%	35
		Total Zinc (Zn)	2006/11/02	10.1		%	35
1332906 MC3	Calibration Check	Total Aluminum (Al)	2006/11/02		96	%	80 - 120
		Total Boron (B)	2006/11/02		97	%	80 - 120
		Total Calcium (Ca)	2006/11/02		98	%	80 - 120
		Total Iron (Fe)	2006/11/02		95	%	80 - 120
		Total Lithium (Li)	2006/11/02		103	%	80 - 120
		Total Magnesium (Mg)	2006/11/02		97	%	80 - 120
		Total Manganese (Mn)	2006/11/02		94	%	80 - 120
		Total Phosphorus (P)	2006/11/02		98	%	80 - 120
		Total Potassium (K)	2006/11/02		101	%	80 - 120
		Total Sodium (Na)	2006/11/02		102	%	80 - 120
		Total Strontium (Sr)	2006/11/02		95	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/11/02		100	%	75 - 125
		Total Boron (B)	2006/11/02		104	%	80 - 120
		Total Calcium (Ca)	2006/11/02		87	%	75 - 125
		Total Iron (Fe)	2006/11/02		92	%	75 - 125
		Total Lithium (Li)	2006/11/02		103	%	75 - 125
		Total Magnesium (Mg)	2006/11/02		100	%	75 - 125
		Total Manganese (Mn)	2006/11/02		95	%	75 - 125
		Total Phosphorus (P)	2006/11/02		98	%	75 - 125
		Total Potassium (K)	2006/11/02		102	%	75 - 125
		Total Sodium (Na)	2006/11/02		108	%	75 - 125
		Total Strontium (Sr)	2006/11/02		95	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/11/02	<10		mg/kg	
		Total Boron (B)	2006/11/02	<2		mg/kg	
		Total Calcium (Ca)	2006/11/02	<50		mg/kg	
		Total Iron (Fe)	2006/11/02	<10		mg/kg	
		Total Lithium (Li)	2006/11/02	<10		mg/kg	
		Total Magnesium (Mg)	2006/11/02	<20		mg/kg	
		Total Manganese (Mn)	2006/11/02	<10		mg/kg	
		Total Phosphorus (P)	2006/11/02	<20		mg/kg	
		Total Potassium (K)	2006/11/02	<30		mg/kg	
		Total Sodium (Na)	2006/11/02	<50		mg/kg	
		Total Strontium (Sr)	2006/11/02	<10		mg/kg	
		Total Sulphur (S)	2006/11/02	<20		mg/kg	
	RPD	Total Aluminum (Al)	2006/11/02	0.05		%	35
		Total Boron (B)	2006/11/02	2.2		%	35
		Total Calcium (Ca)	2006/11/02	0.3		%	35
		Total Iron (Fe)	2006/11/02	0.6		%	35
		Total Lithium (Li)	2006/11/02	NC		%	35
		Total Magnesium (Mg)	2006/11/02	0.2		%	35
		Total Manganese (Mn)	2006/11/02	0.2		%	35
		Total Phosphorus (P)	2006/11/02	1.3		%	35
		Total Potassium (K)	2006/11/02	0.1		%	35
		Total Sodium (Na)	2006/11/02	NC		%	35
		Total Strontium (Sr)	2006/11/02	0.4		%	35
		Total Sulphur (S)	2006/11/02	0.4		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference



*** End of Report ***



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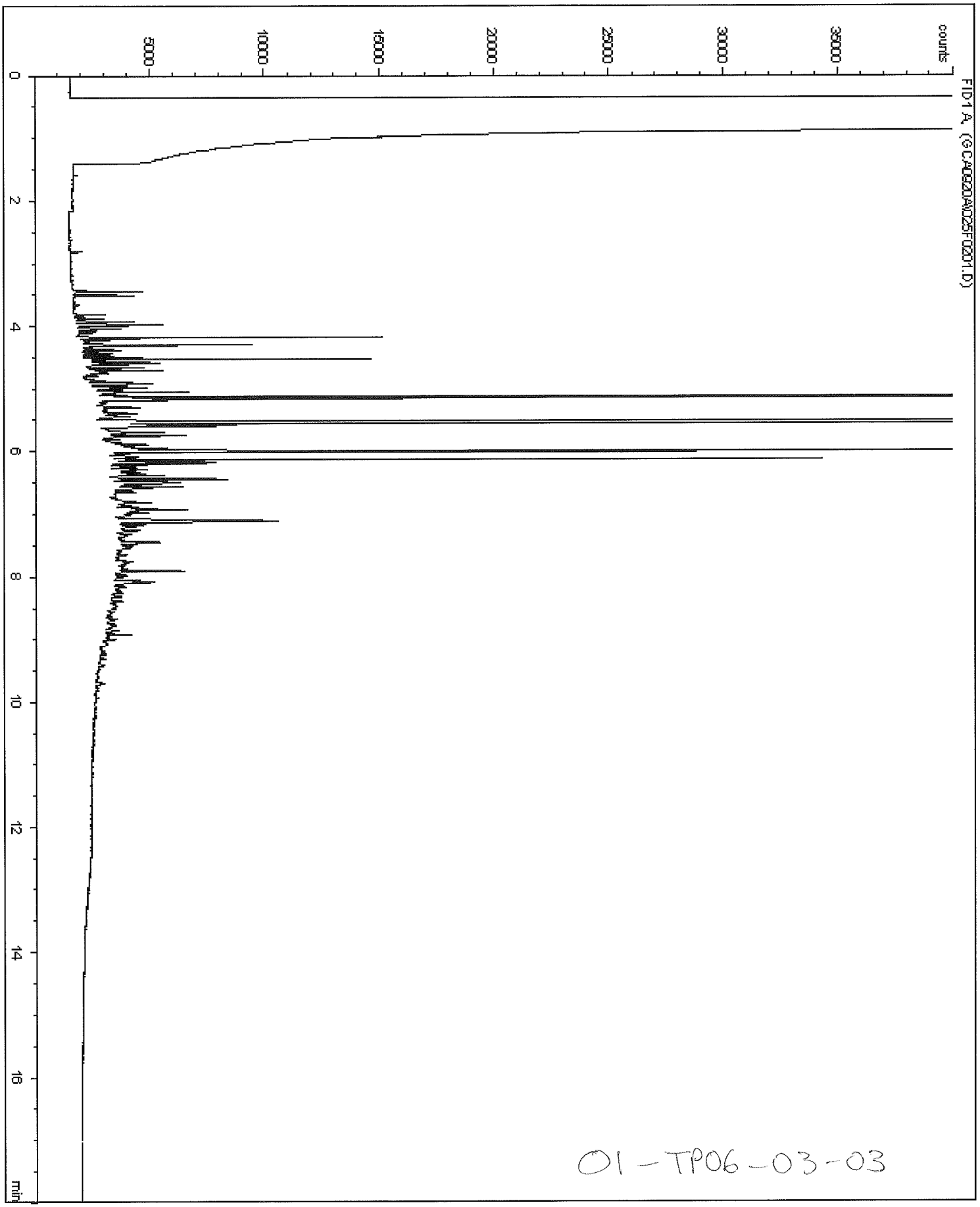

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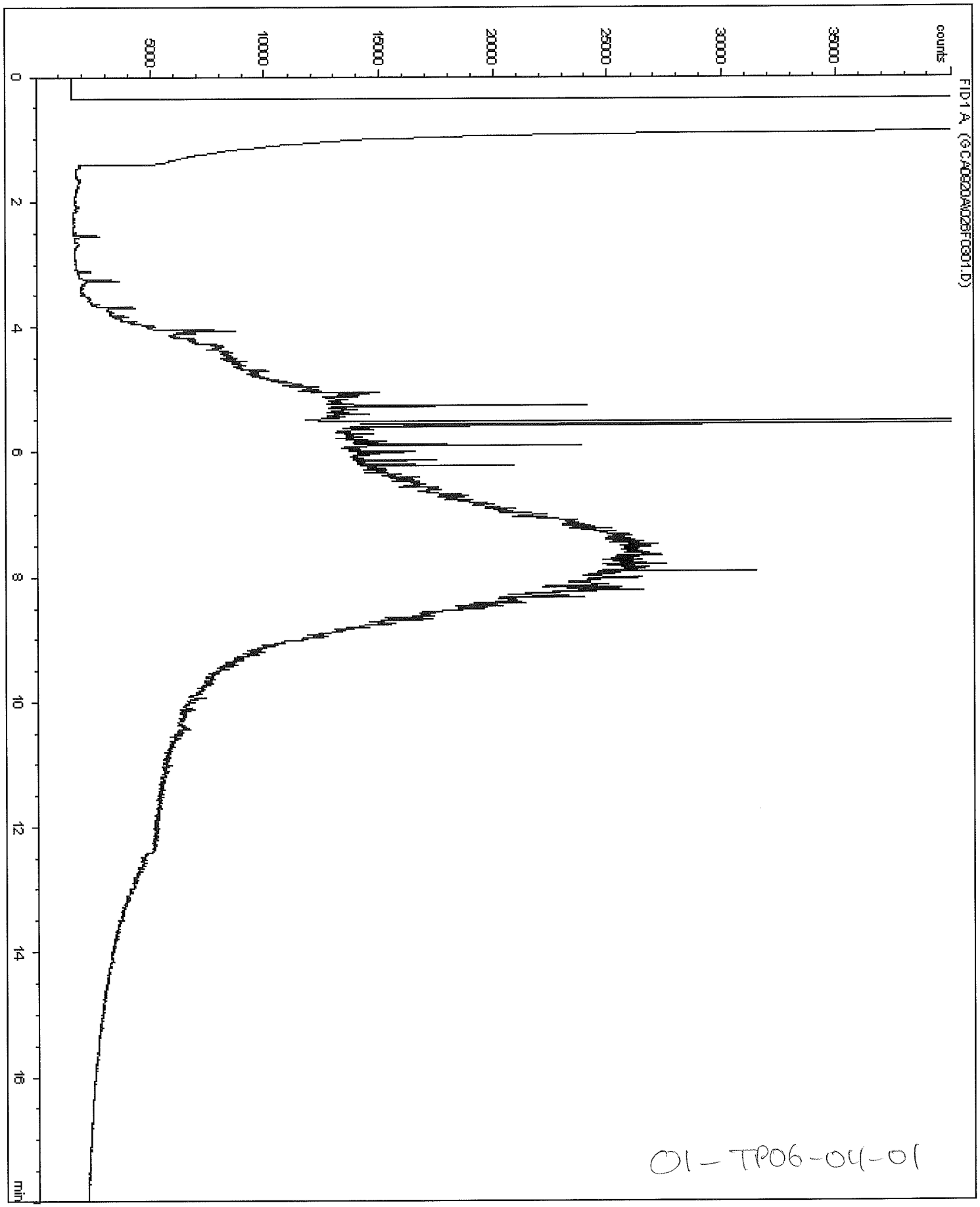
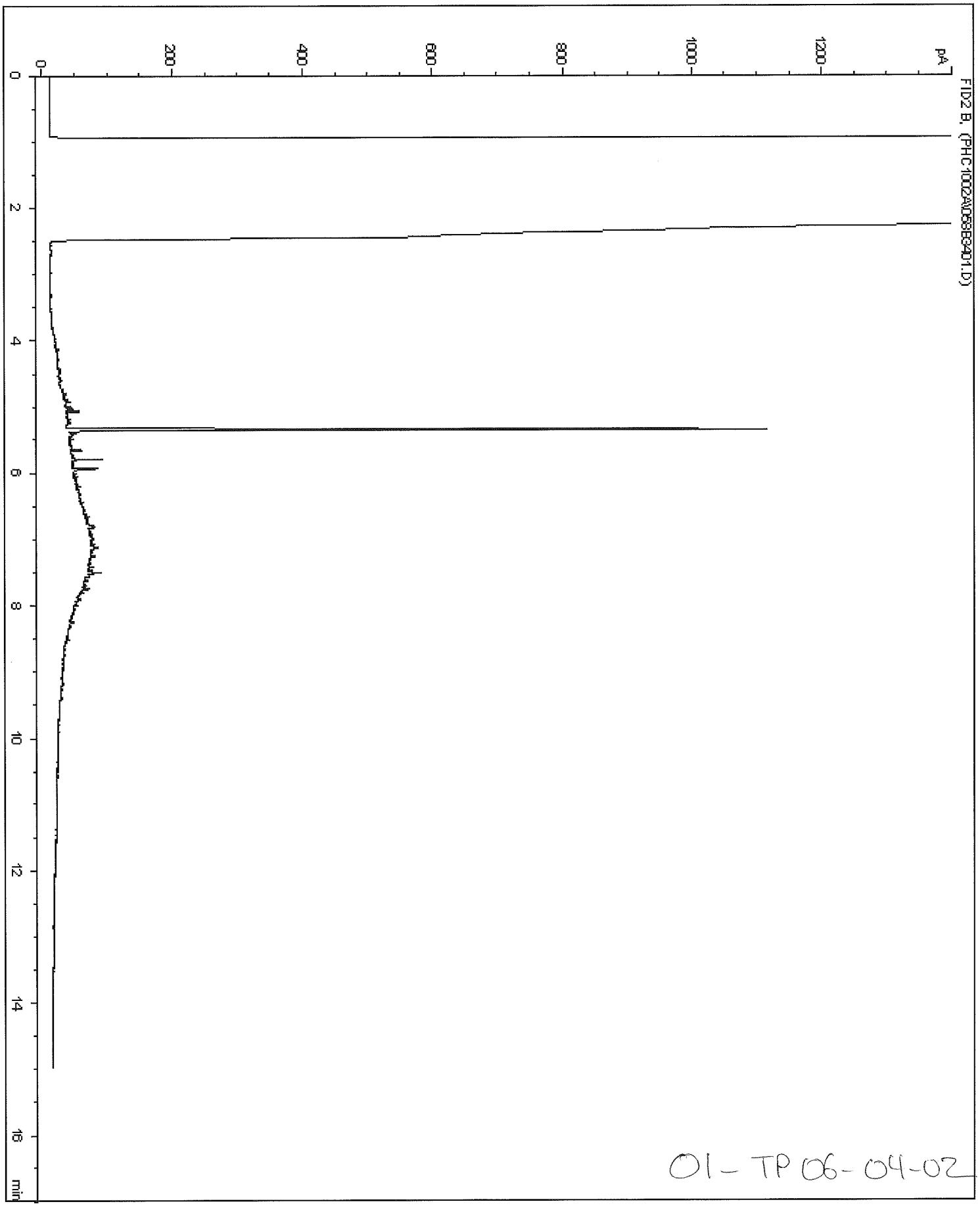


*** End of Report ***



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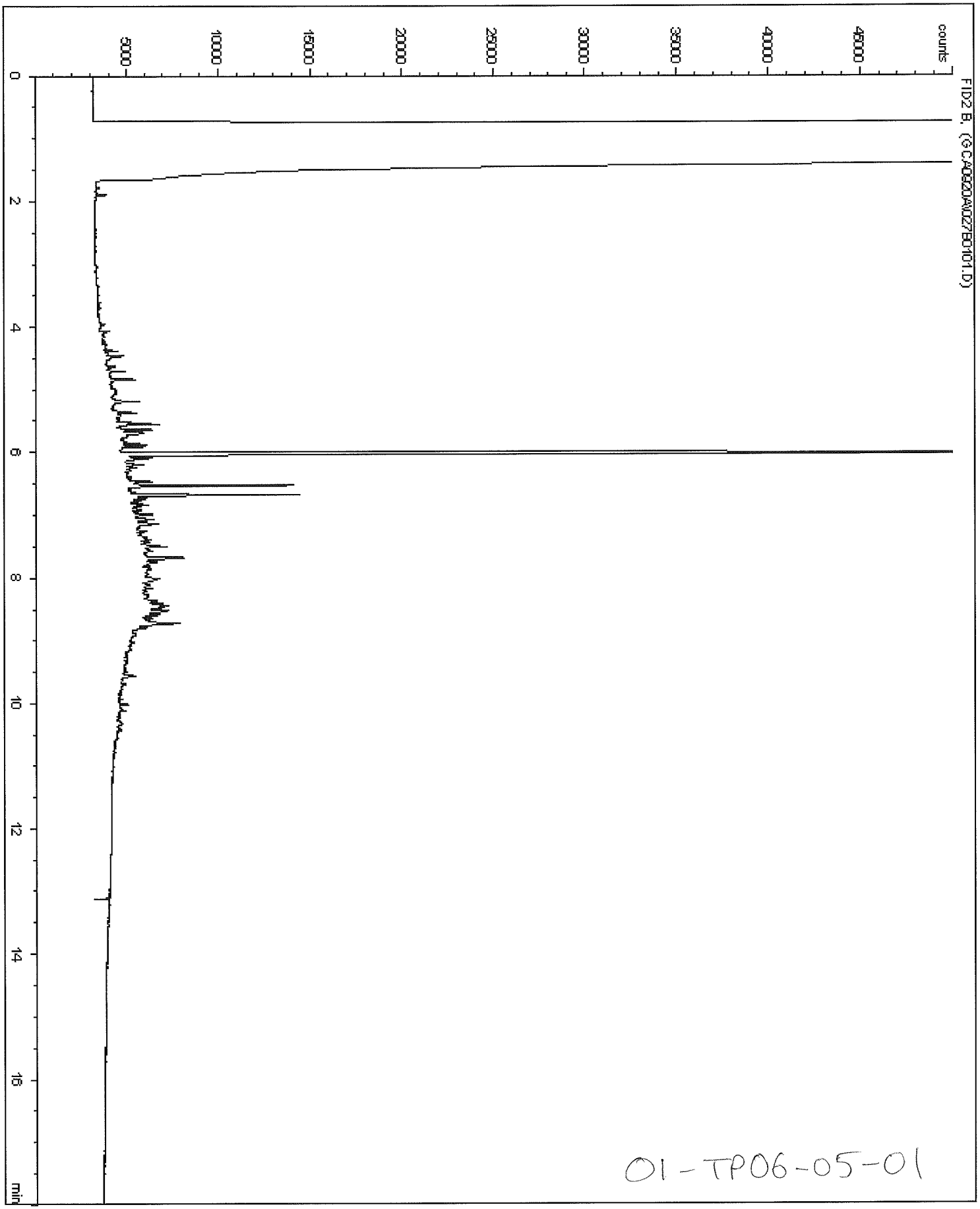
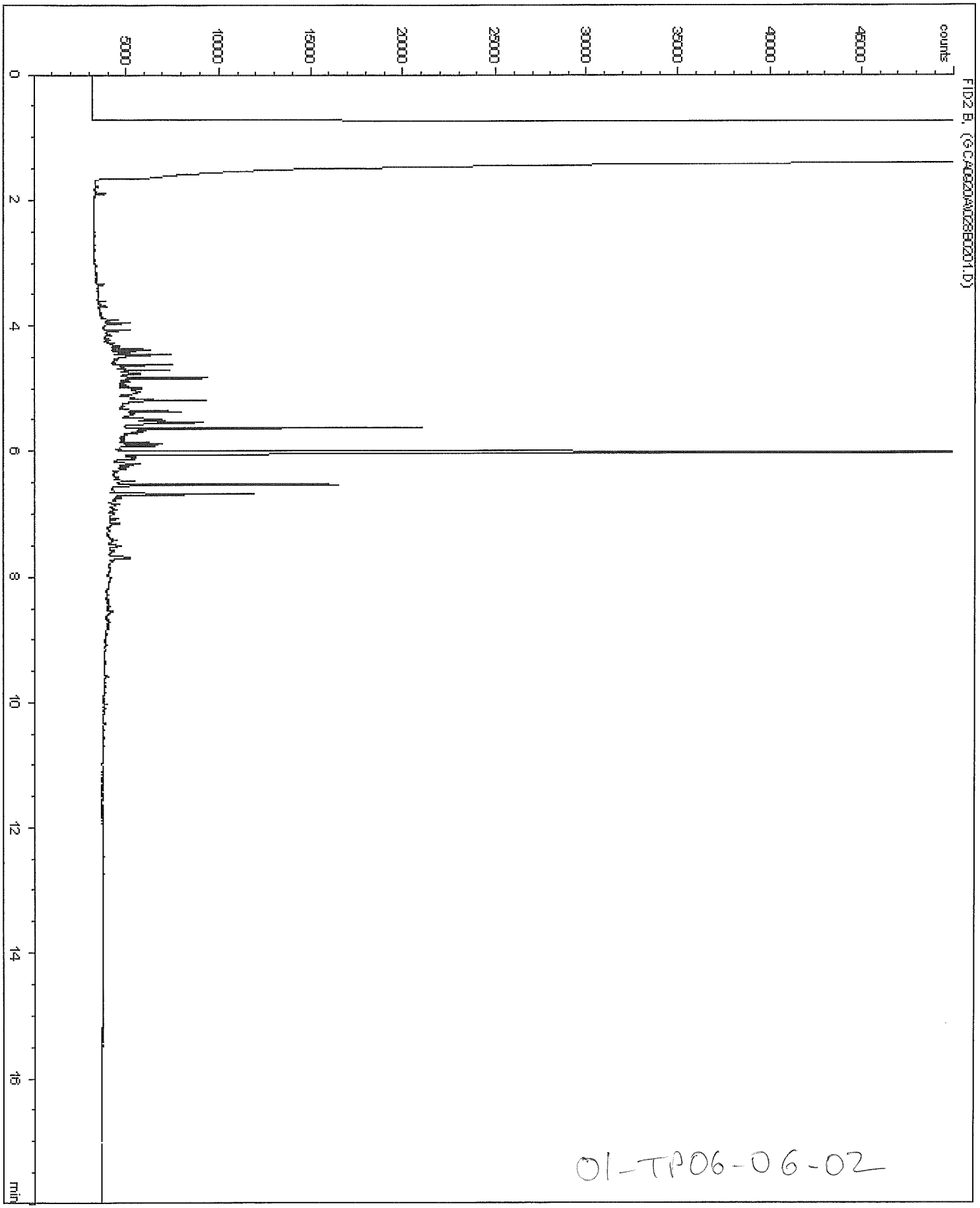


*** End of Report ***



*** End of Report ***

Maxxam Analytics Inc

Your Project #: 1256-0601 INUVIK
Your C.O.C. #: 115781, 115780, 115782

Attention: MICHAEL MUTTERSBACH
FRANZ ENVIRONMENTAL INC.
FRANZENV-VAN
1080 MAINLAND STREET
308
VANCOUVER, BC
Canada V6B 2T4

Report Date: 2006/11/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A643501
Received: 2006/09/19, 9:25

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX by HS GC/MS (MeOH extract)	1	2006/09/20	2006/09/20	EENVSOP-00005 V.2	EPA 8260B/5021A
BTEX by HS GC/MS (MeOH extract)	4	2006/09/29	2006/09/29	EENVSOP-00005 V.2	EPA 8260B/5021A
F1-BTEX Soil Cal	1	2006/09/20	2006/09/20		
F1-BTEX Soil Cal	4	2006/09/29	2006/09/29		
CCME Hydrocarbons (F1; MeOH; HSGC)	1	2006/09/20	2006/09/20	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F1; MeOH; HSGC)	4	2006/09/29	2006/10/02	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F2-F4 in soil)	7	2006/09/21	2006/09/21	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	2	2006/10/02	2006/10/02	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	2	2006/10/18	2006/10/18	EENVSOP-00007 v4	CWS PHCS Tier 1
Elements by ICP -Soils	1	N/A	2006/11/02	EENVSOP-00034 v1	EPA 6010C
Elements by ICPMS - Soils	1	N/A	2006/11/02	EENVSOP-00123 v2	EPA 6020A
Moisture	7	N/A	2006/09/20	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	3	N/A	2006/09/29	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	2	N/A	2006/10/02	EENVWI-00023 v2	Carter SSMA 51.2
PAH in Soil by GC/MS (Extended)	1	2006/09/19	2006/09/21	EENVSOP-00010 v3	EPA 3510C/8270D
PAH in Soil by GC/MS (Extended)	1	2006/09/29	2006/10/02	EENVSOP-00010 v3	EPA 3510C/8270D

Encryption Key Jeremy Wakaruk
07 Nov 2006 09:11:42 -07:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Total cover pages: 1

Maxxam Analytics Inc

Maxxam Job #: A643501
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

CCMEHC MECHANCIAL EXTRACTION (SOIL)

Maxxam ID		C82517		C82518	C82536		
Sampling Date		2006/09/17		2006/09/17	2006/09/17		
COC Number		115780		115780	115782		
	Units	**01-TP06-28-02**	**QC Batch**	**01-TP06-28-03**	**02-TP06-02-02**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	11.3	1276709	9.1	7.1	0.3	1290090
Ext. Pet. Hydrocarbon							
F1 (C06-C10)	mg/kg	118	1290080	61	77	10	1290080
F1 (C06-C10) - BTEX	mg/kg	118	1290328	61	77	10	1290328
F2 (C10-C16 Hydrocarbons)	mg/kg	2560	1278798	559	610	10	1312545
F3 (C16-C34 Hydrocarbons)	mg/kg	3650	1278798	6920	1460	10	1312545
F4 (C34-C50 Hydrocarbons)	mg/kg	630	1278798	1070	449	10	1312545
Reached Baseline at C50	mg/kg	Yes	1278798	Yes	Yes	1	1312545
Volatiles							
Benzene	mg/kg	<0.0050	1290079	<0.0050	<0.0050	0.0050	1290079
Toluene	mg/kg	<0.020	1290079	<0.020	<0.020	0.020	1290079
Ethylbenzene	mg/kg	<0.010	1290079	<0.010	<0.010	0.010	1290079
Xylenes (Total)	mg/kg	0.031	1290079	<0.020	0.038	0.020	1290079
m & p-Xylene	mg/kg	<0.020	1290079	<0.020	<0.020	0.020	1290079
o-Xylene	mg/kg	0.031	1290079	<0.020	0.038	0.020	1290079
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	83	1290080	84	84		1290080
O-TERPHENYL (sur.)	%	97	1278798	77	71		1312545
4-BROMOFLUOROBENZENE (sur.)	%	111	1290079	110	100		1290079
D10-ETHYLBENZENE (sur.)	%	128	1290079	129	120		1290079
D4-1,2-DICHLOROETHANE (sur.)	%	97	1290079	97	95		1290079
D8-TOLUENE (sur.)	%	101	1290079	100	102		1290079

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643501
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

CCMEHC MECHANCIAL EXTRACTION (SOIL)

Maxxam ID		C82539		C82540		
Sampling Date		2006/09/17		2006/09/17		
COC Number		115782		115782		
	Units	**02-TP06-02-04**	**QC Batch**	**02-TP06-02-05**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	20.3	1276709	15.7	0.3	1290090
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	26	1276706	<10	10	1290080
F1 (C06-C10) - BTEX	mg/kg	21	1276559	<10	10	1290328
F2 (C10-C16 Hydrocarbons)	mg/kg	32	1278798		10	
F3 (C16-C34 Hydrocarbons)	mg/kg	68	1278798		10	
F4 (C34-C50 Hydrocarbons)	mg/kg	47	1278798		10	
Reached Baseline at C50	mg/kg	Yes	1278798		1	
Volatiles						
Benzene	mg/kg	0.074	1276705	0.024	0.0050	1290079
Toluene	mg/kg	0.14	1276705	<0.020	0.020	1290079
Ethylbenzene	mg/kg	0.33	1276705	<0.010	0.010	1290079
Xylenes (Total)	mg/kg	4.9	1276705	<0.020	0.020	1290079
m & p-Xylene	mg/kg	3.6	1276705	<0.020	0.020	1290079
o-Xylene	mg/kg	1.3	1276705	<0.020	0.020	1290079
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	87	1276706	97		1290080
O-TERPHENYL (sur.)	%	69	1278798			
4-BROMOFLUOROBENZENE (sur.)	%	99	1276705	99		1290079
D10-ETHYLBENZENE (sur.)	%	120	1276705	118		1290079
D4-1,2-DICHLOROETHANE (sur.)	%	93	1276705	89		1290079
D8-TOLUENE (sur.)	%	99	1276705	102		1290079

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643501
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

EXTENDED METALS PACKAGE ON SOIL (SOIL)

Maxxam ID		C82517		
Sampling Date		2006/09/17		
COC Number		115780		
	Units	**01-TP06-28-02**	**RDL**	**QC Batch**
Elements				
Total Aluminum (Al)	mg/kg	8170	10	1332906
Total Antimony (Sb)	mg/kg	<1	1	1332769
Total Arsenic (As)	mg/kg	7	1	1332769
Total Barium (Ba)	mg/kg	204	10	1332769
Total Beryllium (Be)	mg/kg	0.9	0.4	1332769
Total Boron (B)	mg/kg	13	2	1332906
Total Cadmium (Cd)	mg/kg	1.8	0.1	1332769
Total Calcium (Ca)	mg/kg	89900	50	1332906
Total Chromium (Cr)	mg/kg	15	1	1332769
Total Cobalt (Co)	mg/kg	12	1	1332769
Total Copper (Cu)	mg/kg	36	5	1332769
Total Iron (Fe)	mg/kg	29300	10	1332906
Total Lead (Pb)	mg/kg	51	1	1332769
Total Lithium (Li)	mg/kg	17	10	1332906
Total Magnesium (Mg)	mg/kg	27300	20	1332906
Total Manganese (Mn)	mg/kg	533	10	1332906
Total Molybdenum (Mo)	mg/kg	1.1	0.4	1332769
Total Nickel (Ni)	mg/kg	26	1	1332769
Total Phosphorus (P)	mg/kg	628	20	1332906
Total Potassium (K)	mg/kg	1390	30	1332906
Total Selenium (Se)	mg/kg	<0.5	0.5	1332769
Total Silver (Ag)	mg/kg	<1	1	1332769
Total Sodium (Na)	mg/kg	90	50	1332906
Total Strontium (Sr)	mg/kg	75	10	1332906
Total Sulphur (S)	mg/kg	2030	20	1332906
Total Thallium (Tl)	mg/kg	<0.3	0.3	1332769
Total Tin (Sn)	mg/kg	4	1	1332769
Total Uranium (U)	mg/kg	<1	1	1332769
Total Vanadium (V)	mg/kg	19	1	1332769
Total Zinc (Zn)	mg/kg	111	10	1332769

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643501
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

PAHS SOIL CCME (SOIL)

Maxxam ID		C82517		C82543		
Sampling Date		2006/09/17		2006/09/17		
COC Number		115780		115782		
	Units	**01-TP06-28-02**	**QC Batch**	**01-TP06-DUP-5**	**RDL**	**QC Batch**
Polycyclic Aromatics						
Naphthalene	mg/kg	0.21	1275926	<0.05	0.05	1289491
2-Methylnaphthalene	mg/kg	1.7	1275926	<0.05	0.05	1289491
Acenaphthylene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Acenaphthene	mg/kg	0.09	1275926	<0.05	0.05	1289491
Fluorene	mg/kg	0.24	1275926	<0.05	0.05	1289491
Phenanthrene	mg/kg	0.34	1275926	0.05	0.05	1289491
Anthracene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Fluoranthene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Pyrene	mg/kg	<0.05	1275926	0.08	0.05	1289491
Benzo(a)anthracene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Chrysene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Benzo(b&j)fluoranthene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Benzo(k)fluoranthene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Benzo(a)pyrene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Dibenz(a,h)anthracene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Benzo(g,h,i)perylene	mg/kg	<0.05	1275926	<0.05	0.05	1289491
Surrogate Recovery (%)						
D10-ANTHRACENE (sur.)	%	118	1275926	124		1289491
D12-BENZO(A)PYRENE (sur.)	%	111	1275926	115		1289491
D8-ACENAPHTHYLENE (sur.)	%	115	1275926	125		1289491
TERPHENYL-D14 (sur.)	%	114	1275926	120		1289491

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643501
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C82495	C82500	C82503	C82515		
Sampling Date		2006/09/17	2006/09/17	2006/09/17	2006/09/17		
COC Number		115781	115781	115781	115780		
	Units	**01-TP06-24-03**	**01-TP06-25-04**	**01-TP06-26-03**	**01-TP06-27-03**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	4.5	6.4	4.0	4.4	0.3	1276709

RDL = Reportable Detection Limit

Maxxam ID		C82522		C82542	C82543		
Sampling Date		2006/09/17		2006/09/17	2006/09/17		
COC Number		115780		115782	115782		
	Units	**02-TP06-01-04**	**QC Batch**	**01-TP06-DUP-4**	**01-TP06-DUP-5**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	16.6	1276709	4.8	3.5	0.3	1291437

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643501
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C82495	C82500	C82503	C82515		
Sampling Date		2006/09/17	2006/09/17	2006/09/17	2006/09/17		
COC Number		115781	115781	115781	115780		
	Units	**01-TP06-24-03**	**01-TP06-25-04**	**01-TP06-26-03**	**01-TP06-27-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	15	<10	10	1278798
F3 (C16-C34 Hydrocarbons)	mg/kg	64	<10	10	<10	10	1278798
F4 (C34-C50 Hydrocarbons)	mg/kg	24	<10	51	<10	10	1278798
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	Yes	1	1278798
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	73	71	83	71		1278798

RDL = Reportable Detection Limit

Maxxam ID		C82522		C82542	C82543		
Sampling Date		2006/09/17		2006/09/17	2006/09/17		
COC Number		115780		115782	115782		
	Units	**02-TP06-01-04**	**QC Batch**	**01-TP06-DUP-4**	**01-TP06-DUP-5**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F2 (C10-C16 Hydrocarbons)	mg/kg	25	1278798	<10	171	10	1291480
F3 (C16-C34 Hydrocarbons)	mg/kg	24	1278798	178	8440	10	1291480
F4 (C34-C50 Hydrocarbons)	mg/kg	26	1278798	46	6680	10	1291480
Reached Baseline at C50	mg/kg	Yes	1278798	Yes	No	1	1291480
Surrogate Recovery (%)							
O-TERPHENYL (sur.)	%	68	1278798	80	80		1291480

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A643501
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

CCMEHC MECHANCIAL EXTRACTION (SOIL) Comments

Sample C82518-01 CCME Hydrocarbons (F2-F4 in soil): SAMPLE EXTRACTED OUTSIDE METHOD-SPECIFIED HOLD TIME

Sample C82536-01 CCME Hydrocarbons (F2-F4 in soil): SAMPLE EXTRACTED OUTSIDE METHOD-SPECIFIED HOLD TIME

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: EA643501

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275926 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/09/21		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/21		111	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/21		114	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/21		127	%	30 - 130
		Naphthalene	2006/09/21		95	%	30 - 130
		2-Methylnaphthalene	2006/09/21		96	%	30 - 130
		Acenaphthylene	2006/09/21		104	%	30 - 130
		Acenaphthene	2006/09/21		94	%	30 - 130
		Fluorene	2006/09/21		96	%	30 - 130
		Phenanthrene	2006/09/21		88	%	30 - 130
		Anthracene	2006/09/21		98	%	30 - 130
		Fluoranthene	2006/09/21		102	%	30 - 130
		Pyrene	2006/09/21		100	%	30 - 130
		Benzo(a)anthracene	2006/09/21		106	%	30 - 130
		Chrysene	2006/09/21		104	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/21		93	%	30 - 130
		Benzo(k)fluoranthene	2006/09/21		95	%	30 - 130
		Benzo(a)pyrene	2006/09/21		94	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/21		103	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/21		128	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/21		91	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/09/21		116	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/21		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/21		105	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/21		112	%	30 - 130
		Naphthalene	2006/09/21		99	%	30 - 130
		2-Methylnaphthalene	2006/09/21		96	%	30 - 130
		Acenaphthylene	2006/09/21		97	%	30 - 130
		Acenaphthene	2006/09/21		96	%	30 - 130
		Fluorene	2006/09/21		94	%	30 - 130
		Phenanthrene	2006/09/21		98	%	30 - 130
		Anthracene	2006/09/21		97	%	30 - 130
		Fluoranthene	2006/09/21		96	%	30 - 130
		Pyrene	2006/09/21		97	%	30 - 130
		Benzo(a)anthracene	2006/09/21		97	%	30 - 130
		Chrysene	2006/09/21		94	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/21		90	%	30 - 130
		Benzo(k)fluoranthene	2006/09/21		92	%	30 - 130
		Benzo(a)pyrene	2006/09/21		91	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/21		99	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/21		125	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/21		100	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/09/21		64	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/21		49	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/21		51	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/21		55	%	30 - 130
		Naphthalene	2006/09/21	<0.05		mg/kg	
		2-Methylnaphthalene	2006/09/21	<0.05		mg/kg	
		Acenaphthylene	2006/09/21	<0.05		mg/kg	
		Acenaphthene	2006/09/21	<0.05		mg/kg	
		Fluorene	2006/09/21	<0.05		mg/kg	
		Phenanthrene	2006/09/21	<0.05		mg/kg	
		Anthracene	2006/09/21	<0.05		mg/kg	
		Fluoranthene	2006/09/21	<0.05		mg/kg	
		Pyrene	2006/09/21	<0.05		mg/kg	

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FRANZ ENVIRONMENTAL INC.
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Client Project #: 1256-0601 INUVIK
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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1275926 AK3	BLANK	Benzo(a)anthracene	2006/09/21	<0.05		mg/kg	
		Chrysene	2006/09/21	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/09/21	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/09/21	<0.05		mg/kg	
		Benzo(a)pyrene	2006/09/21	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/09/21	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/09/21	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/09/21	<0.05		mg/kg	
	RPD	Naphthalene	2006/09/21	NC		%	50
		2-Methylnaphthalene	2006/09/21	NC		%	50
		Acenaphthylene	2006/09/21	NC		%	50
		Acenaphthene	2006/09/21	NC		%	50
		Fluorene	2006/09/21	NC		%	50
		Phenanthrene	2006/09/21	NC		%	50
		Anthracene	2006/09/21	NC		%	50
		Fluoranthene	2006/09/21	NC		%	50
		Pyrene	2006/09/21	NC		%	50
		Benzo(a)anthracene	2006/09/21	NC		%	50
		Chrysene	2006/09/21	NC		%	50
		Benzo(b&j)fluoranthene	2006/09/21	NC		%	50
		Benzo(k)fluoranthene	2006/09/21	NC		%	50
		Benzo(a)pyrene	2006/09/21	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/09/21	NC		%	50
		Dibenz(a,h)anthracene	2006/09/21	NC		%	50
		Benzo(g,h,i)perylene	2006/09/21	NC		%	50
1276705 HW4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		118	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/20		124	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/20		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/20		97	%	60 - 140
		Benzene	2006/09/20		85	%	60 - 140
		Toluene	2006/09/20		92	%	60 - 140
		Ethylbenzene	2006/09/20		99	%	60 - 140
		m & p-Xylene	2006/09/20		99	%	60 - 140
		o-Xylene	2006/09/20		98	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		96	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/20		113	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/20		95	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/20		98	%	60 - 140
		Benzene	2006/09/20		82	%	60 - 140
		Toluene	2006/09/20		89	%	60 - 140
		Ethylbenzene	2006/09/20		92	%	60 - 140
		m & p-Xylene	2006/09/20		90	%	60 - 140
		o-Xylene	2006/09/20		91	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/20		113	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/20		100	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/20		99	%	60 - 140
		Benzene	2006/09/20	<0.0050		mg/kg	
		Toluene	2006/09/20	<0.020		mg/kg	
		Ethylbenzene	2006/09/20	<0.010		mg/kg	
		Xylenes (Total)	2006/09/20	<0.020		mg/kg	
		m & p-Xylene	2006/09/20	<0.020		mg/kg	
		o-Xylene	2006/09/20	<0.020		mg/kg	
	RPD	Benzene	2006/09/20	NC		%	50
		Toluene	2006/09/20	NC		%	50

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1276705 HW4	RPD	Ethylbenzene	2006/09/20	NC		%	50
		Xylenes (Total)	2006/09/20	NC		%	50
		m & p-Xylene	2006/09/20	NC		%	50
		o-Xylene	2006/09/20	NC		%	50
1276706 MA	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		91	%	60 - 130
		F1 (C06-C10)	2006/09/20		92	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		82	%	60 - 130
		F1 (C06-C10)	2006/09/20		90	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/20		86	%	60 - 130
		F1 (C06-C10)	2006/09/20	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/09/20	9.6		%	50
1276709 MD1	BLANK	Moisture	2006/09/20	<0.3		%	
	RPD	Moisture	2006/09/20	0.5		%	20
1278798 AN1	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/09/21		75	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/21		82	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/21		60	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/21		71	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/21		82	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/21		102	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/21		82	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/21		84	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/21		120	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/21	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/21	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/21	<10		mg/kg	
		Reached Baseline at C50	2006/09/21	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/21	23.0		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/21	25.9		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/21	12.6		%	50
		Reached Baseline at C50	2006/09/21	NC		%	50
1289491 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/10/02		125	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		117	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		118	%	30 - 130
		Naphthalene	2006/10/02		105	%	30 - 130
		2-Methylnaphthalene	2006/10/02		100	%	30 - 130
		Acenaphthylene	2006/10/02		102	%	30 - 130
		Acenaphthene	2006/10/02		98	%	30 - 130
		Fluorene	2006/10/02		94	%	30 - 130
		Phenanthrene	2006/10/02		101	%	30 - 130
		Anthracene	2006/10/02		97	%	30 - 130
		Fluoranthene	2006/10/02		97	%	30 - 130
		Pyrene	2006/10/02		97	%	30 - 130
		Benzo(a)anthracene	2006/10/02		96	%	30 - 130
		Chrysene	2006/10/02		98	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/02		98	%	30 - 130
		Benzo(k)fluoranthene	2006/10/02		104	%	30 - 130
		Benzo(a)pyrene	2006/10/02		103	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/02		102	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/02		122	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/02		99	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/10/02		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		118	%	30 - 130

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1289491 AK3	SPIKE	Naphthalene	2006/10/02		105	%	30 - 130
		2-Methylnaphthalene	2006/10/02		104	%	30 - 130
		Acenaphthylene	2006/10/02		105	%	30 - 130
		Acenaphthene	2006/10/02		101	%	30 - 130
		Fluorene	2006/10/02		100	%	30 - 130
		Phenanthrene	2006/10/02		104	%	30 - 130
		Anthracene	2006/10/02		101	%	30 - 130
		Fluoranthene	2006/10/02		100	%	30 - 130
		Pyrene	2006/10/02		100	%	30 - 130
		Benzo(a)anthracene	2006/10/02		99	%	30 - 130
		Chrysene	2006/10/02		99	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/02		94	%	30 - 130
		Benzo(k)fluoranthene	2006/10/02		98	%	30 - 130
		Benzo(a)pyrene	2006/10/02		96	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/02		107	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/02		124	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/02		108	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/10/02		119	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		107	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		123	%	30 - 130
		Naphthalene	2006/10/02	<0.05		mg/kg	
		2-Methylnaphthalene	2006/10/02	<0.05		mg/kg	
		Acenaphthylene	2006/10/02	<0.05		mg/kg	
		Acenaphthene	2006/10/02	<0.05		mg/kg	
		Fluorene	2006/10/02	<0.05		mg/kg	
		Phenanthrene	2006/10/02	<0.05		mg/kg	
		Anthracene	2006/10/02	<0.05		mg/kg	
		Fluoranthene	2006/10/02	<0.05		mg/kg	
		Pyrene	2006/10/02	<0.05		mg/kg	
		Benzo(a)anthracene	2006/10/02	<0.05		mg/kg	
		Chrysene	2006/10/02	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/10/02	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/10/02	<0.05		mg/kg	
		Benzo(a)pyrene	2006/10/02	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/10/02	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/10/02	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/10/02	<0.05		mg/kg	
	RPD	Naphthalene	2006/10/02	NC		%	50
		2-Methylnaphthalene	2006/10/02	NC		%	50
		Acenaphthylene	2006/10/02	NC		%	50
		Acenaphthene	2006/10/02	NC		%	50
		Fluorene	2006/10/02	NC		%	50
		Phenanthrene	2006/10/02	NC		%	50
		Anthracene	2006/10/02	NC		%	50
		Fluoranthene	2006/10/02	NC		%	50
		Pyrene	2006/10/02	NC		%	50
		Benzo(a)anthracene	2006/10/02	NC		%	50
		Chrysene	2006/10/02	NC		%	50
		Benzo(b&j)fluoranthene	2006/10/02	NC		%	50
		Benzo(k)fluoranthene	2006/10/02	NC		%	50
		Benzo(a)pyrene	2006/10/02	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/10/02	NC		%	50
		Dibenz(a,h)anthracene	2006/10/02	NC		%	50
		Benzo(g,h,i)perylene	2006/10/02	NC		%	50

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1290079 HW4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		95	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/29		119	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/29		88	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/29		99	%	60 - 140
		Benzene	2006/09/29		92	%	60 - 140
		Toluene	2006/09/29		98	%	60 - 140
		Ethylbenzene	2006/09/29		100	%	60 - 140
		m & p-Xylene	2006/09/29		98	%	60 - 140
		o-Xylene	2006/09/29		98	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		98	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/29		116	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/29		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/29		100	%	60 - 140
		Benzene	2006/09/29		90	%	60 - 140
		Toluene	2006/09/29		95	%	60 - 140
		Ethylbenzene	2006/09/29		99	%	60 - 140
		m & p-Xylene	2006/09/29		97	%	60 - 140
		o-Xylene	2006/09/29		97	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/29		114	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/29		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/29		100	%	60 - 140
		Benzene	2006/09/29	<0.0050		mg/kg	
		Toluene	2006/09/29	<0.020		mg/kg	
		Ethylbenzene	2006/09/29	<0.010		mg/kg	
		Xylenes (Total)	2006/09/29	<0.020		mg/kg	
		m & p-Xylene	2006/09/29	<0.020		mg/kg	
		o-Xylene	2006/09/29	<0.020		mg/kg	
	RPD	Benzene	2006/09/29	NC		%	50
		Toluene	2006/09/29	NC		%	50
		Ethylbenzene	2006/09/29	NC		%	50
		Xylenes (Total)	2006/09/29	NC		%	50
		m & p-Xylene	2006/09/29	NC		%	50
		o-Xylene	2006/09/29	NC		%	50
1290080 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		96	%	60 - 130
		F1 (C06-C10)	2006/10/02		91	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		72	%	60 - 130
		F1 (C06-C10)	2006/10/02		88	%	N/A
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		81	%	60 - 130
		F1 (C06-C10)	2006/10/02	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/10/02	NC		%	50
1290090 HL2	BLANK	Moisture	2006/09/29	<0.3		%	
	RPD	Moisture	2006/09/29	13.3		%	20
1291437 HL2	BLANK	Moisture	2006/10/02	<0.3		%	
	RPD	Moisture	2006/10/02	6.8		%	20
1291480 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/02		83	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		104	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/10/02		107	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/10/02		115	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/10/02		78	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		97	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/10/02		96	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/10/02		101	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/10/02		87	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02	<10		mg/kg	

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1291480 KB4	BLANK	F3 (C16-C34 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/02	<10		mg/kg	
		Reached Baseline at C50	2006/10/02	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/02	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/02	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/02	NC		%	50
		Reached Baseline at C50	2006/10/02	NC		%	50
1312545 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/18		68	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/18		-42	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/10/18		75	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/10/18		93	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/10/18		75	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/18		101	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/10/18		109	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/10/18		118	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/10/18		81	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/18	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/18	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/18	<10		mg/kg	
		Reached Baseline at C50	2006/10/18	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/18	10.7		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/18	16.1		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/18	NC		%	50
		Reached Baseline at C50	2006/10/18	NC		%	50
1332769 LL2	Calibration Check	Total Antimony (Sb)	2006/11/02		105	%	80 - 120
		Total Arsenic (As)	2006/11/02		103	%	80 - 120
		Total Barium (Ba)	2006/11/02		98	%	80 - 120
		Total Beryllium (Be)	2006/11/02		99	%	80 - 120
		Total Cadmium (Cd)	2006/11/02		98	%	80 - 120
		Total Chromium (Cr)	2006/11/02		99	%	80 - 120
		Total Cobalt (Co)	2006/11/02		101	%	80 - 120
		Total Copper (Cu)	2006/11/02		103	%	80 - 120
		Total Lead (Pb)	2006/11/02		99	%	80 - 120
		Total Molybdenum (Mo)	2006/11/02		98	%	80 - 120
		Total Nickel (Ni)	2006/11/02		101	%	80 - 120
		Total Selenium (Se)	2006/11/02		102	%	80 - 120
		Total Silver (Ag)	2006/11/02		103	%	80 - 120
		Total Thallium (Tl)	2006/11/02		97	%	80 - 120
		Total Tin (Sn)	2006/11/02		100	%	80 - 120
		Total Uranium (U)	2006/11/02		104	%	80 - 120
		Total Vanadium (V)	2006/11/02		100	%	80 - 120
		Total Zinc (Zn)	2006/11/02		100	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/11/02		97	%	75 - 125
		Total Cadmium (Cd)	2006/11/02		96	%	75 - 125
		Total Lead (Pb)	2006/11/02		82	%	75 - 125
		Total Selenium (Se)	2006/11/02		106	%	75 - 125
		Total Thallium (Tl)	2006/11/02		95	%	75 - 125
	BLANK	Total Antimony (Sb)	2006/11/02	<1		mg/kg	
		Total Arsenic (As)	2006/11/02	<1		mg/kg	
		Total Barium (Ba)	2006/11/02	<10		mg/kg	
		Total Beryllium (Be)	2006/11/02	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/11/02	<0.1		mg/kg	
		Total Chromium (Cr)	2006/11/02	<1		mg/kg	
		Total Cobalt (Co)	2006/11/02	<1		mg/kg	
		Total Copper (Cu)	2006/11/02	<5		mg/kg	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA643501

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1332769 LL2	BLANK	Total Lead (Pb)	2006/11/02	<1		mg/kg	
		Total Molybdenum (Mo)	2006/11/02	<0.4		mg/kg	
		Total Nickel (Ni)	2006/11/02	<1		mg/kg	
		Total Selenium (Se)	2006/11/02	<0.5		mg/kg	
		Total Silver (Ag)	2006/11/02	<1		mg/kg	
		Total Thallium (Tl)	2006/11/02	<0.3		mg/kg	
		Total Tin (Sn)	2006/11/02	<1		mg/kg	
		Total Uranium (U)	2006/11/02	<1		mg/kg	
		Total Vanadium (V)	2006/11/02	<1		mg/kg	
		Total Zinc (Zn)	2006/11/02	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/11/02	NC		%	35
		Total Arsenic (As)	2006/11/02	NC		%	35
		Total Barium (Ba)	2006/11/02	9.1		%	35
		Total Beryllium (Be)	2006/11/02	NC		%	35
		Total Cadmium (Cd)	2006/11/02	NC		%	35
		Total Chromium (Cr)	2006/11/02	6.4		%	35
		Total Cobalt (Co)	2006/11/02	1.9		%	35
		Total Copper (Cu)	2006/11/02	NC		%	35
		Total Lead (Pb)	2006/11/02	1.9		%	35
		Total Molybdenum (Mo)	2006/11/02	NC		%	35
		Total Nickel (Ni)	2006/11/02	3.2		%	35
		Total Selenium (Se)	2006/11/02	NC		%	35
		Total Silver (Ag)	2006/11/02	NC		%	35
		Total Thallium (Tl)	2006/11/02	NC		%	35
		Total Tin (Sn)	2006/11/02	NC		%	35
		Total Uranium (U)	2006/11/02	NC		%	35
		Total Vanadium (V)	2006/11/02	12.9		%	35
		Total Zinc (Zn)	2006/11/02	10.1		%	35
1332906 MC3	Calibration Check	Total Aluminum (Al)	2006/11/02		96	%	80 - 120
		Total Boron (B)	2006/11/02		97	%	80 - 120
		Total Calcium (Ca)	2006/11/02		98	%	80 - 120
		Total Iron (Fe)	2006/11/02		95	%	80 - 120
		Total Lithium (Li)	2006/11/02		103	%	80 - 120
		Total Magnesium (Mg)	2006/11/02		97	%	80 - 120
		Total Manganese (Mn)	2006/11/02		94	%	80 - 120
		Total Phosphorus (P)	2006/11/02		98	%	80 - 120
		Total Potassium (K)	2006/11/02		101	%	80 - 120
		Total Sodium (Na)	2006/11/02		102	%	80 - 120
		Total Strontium (Sr)	2006/11/02		95	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/11/02		100	%	75 - 125
		Total Boron (B)	2006/11/02		104	%	80 - 120
		Total Calcium (Ca)	2006/11/02		87	%	75 - 125
		Total Iron (Fe)	2006/11/02		92	%	75 - 125
		Total Lithium (Li)	2006/11/02		103	%	75 - 125
		Total Magnesium (Mg)	2006/11/02		100	%	75 - 125
		Total Manganese (Mn)	2006/11/02		95	%	75 - 125
		Total Phosphorus (P)	2006/11/02		98	%	75 - 125
		Total Potassium (K)	2006/11/02		102	%	75 - 125
		Total Sodium (Na)	2006/11/02		108	%	75 - 125
		Total Strontium (Sr)	2006/11/02		95	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/11/02	<10		mg/kg	
		Total Boron (B)	2006/11/02	<2		mg/kg	
		Total Calcium (Ca)	2006/11/02	<50		mg/kg	
		Total Iron (Fe)	2006/11/02	<10		mg/kg	
		Total Lithium (Li)	2006/11/02	<10		mg/kg	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

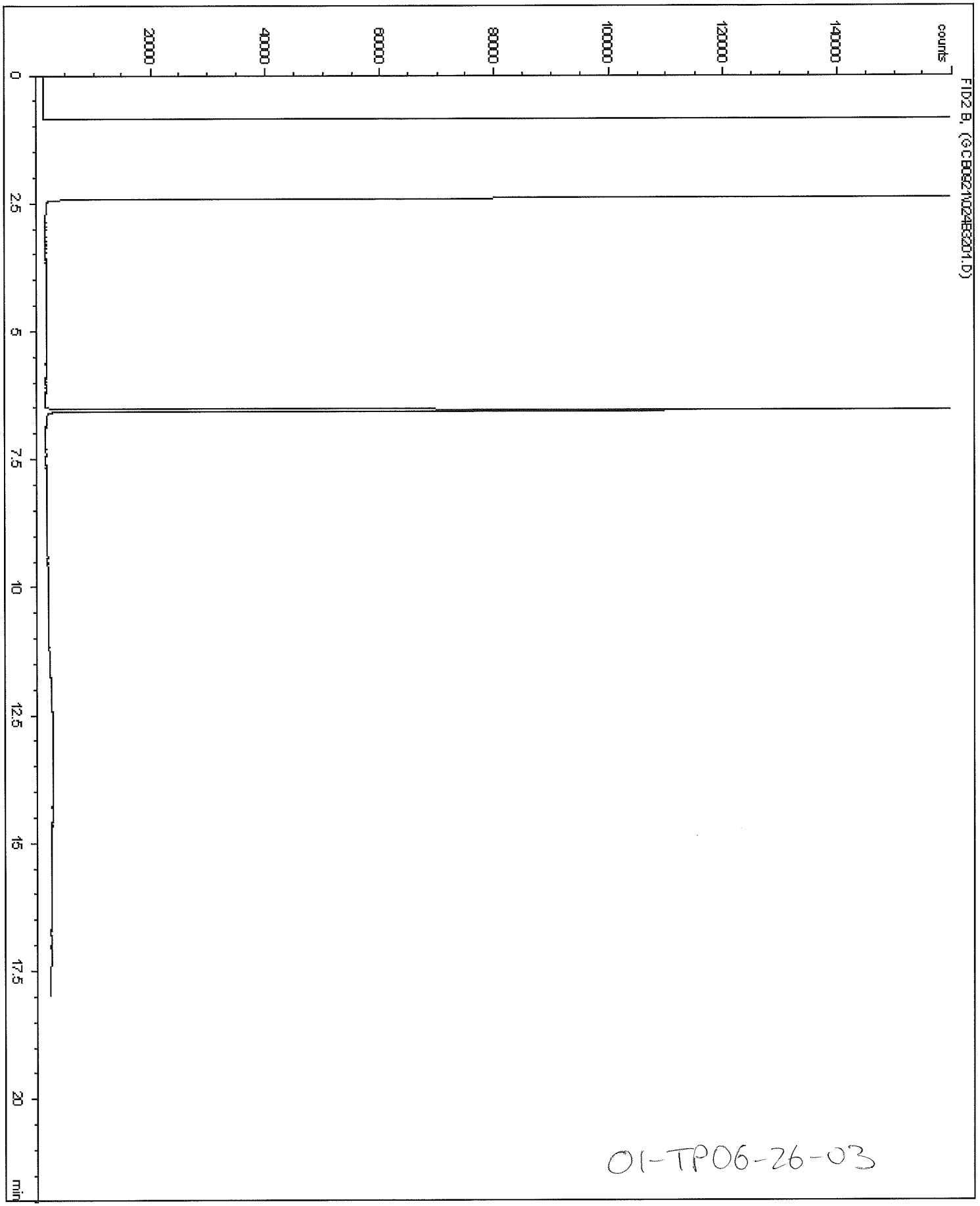
Quality Assurance Report (Continued)

Maxxam Job Number: EA643501

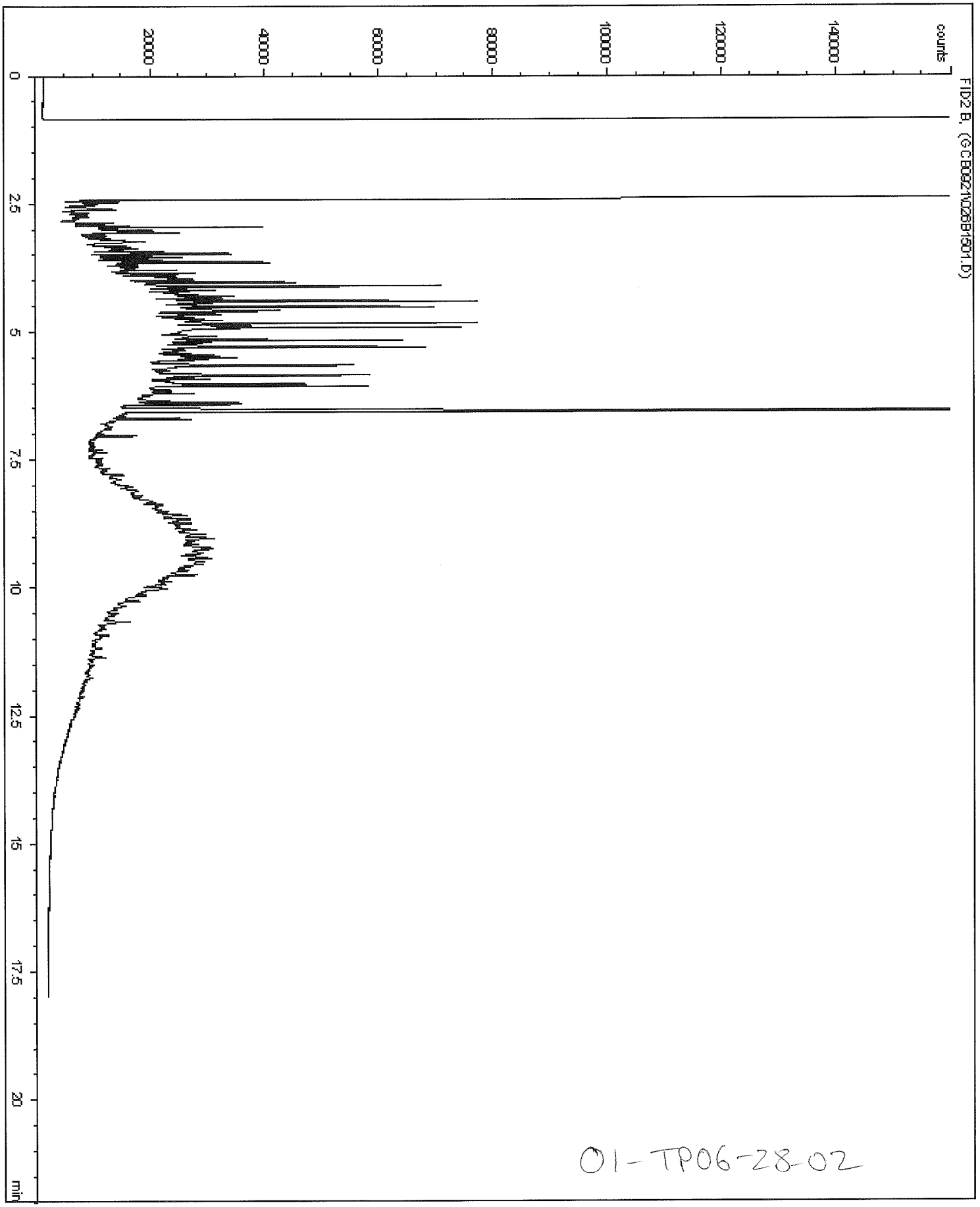
QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1332906 MC3	BLANK	Total Magnesium (Mg)	2006/11/02	<20		mg/kg	
		Total Manganese (Mn)	2006/11/02	<10		mg/kg	
		Total Phosphorus (P)	2006/11/02	<20		mg/kg	
		Total Potassium (K)	2006/11/02	<30		mg/kg	
		Total Sodium (Na)	2006/11/02	<50		mg/kg	
		Total Strontium (Sr)	2006/11/02	<10		mg/kg	
		Total Sulphur (S)	2006/11/02	<20		mg/kg	
	RPD	Total Aluminum (Al)	2006/11/02	0.05		%	35
		Total Boron (B)	2006/11/02	2.2		%	35
		Total Calcium (Ca)	2006/11/02	0.3		%	35
		Total Iron (Fe)	2006/11/02	0.6		%	35
		Total Lithium (Li)	2006/11/02	NC		%	35
		Total Magnesium (Mg)	2006/11/02	0.2		%	35
		Total Manganese (Mn)	2006/11/02	0.2		%	35
		Total Phosphorus (P)	2006/11/02	1.3		%	35
		Total Potassium (K)	2006/11/02	0.1		%	35
		Total Sodium (Na)	2006/11/02	NC		%	35
		Total Strontium (Sr)	2006/11/02	0.4		%	35
		Total Sulphur (S)	2006/11/02	0.4		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187



*** End of Report ***



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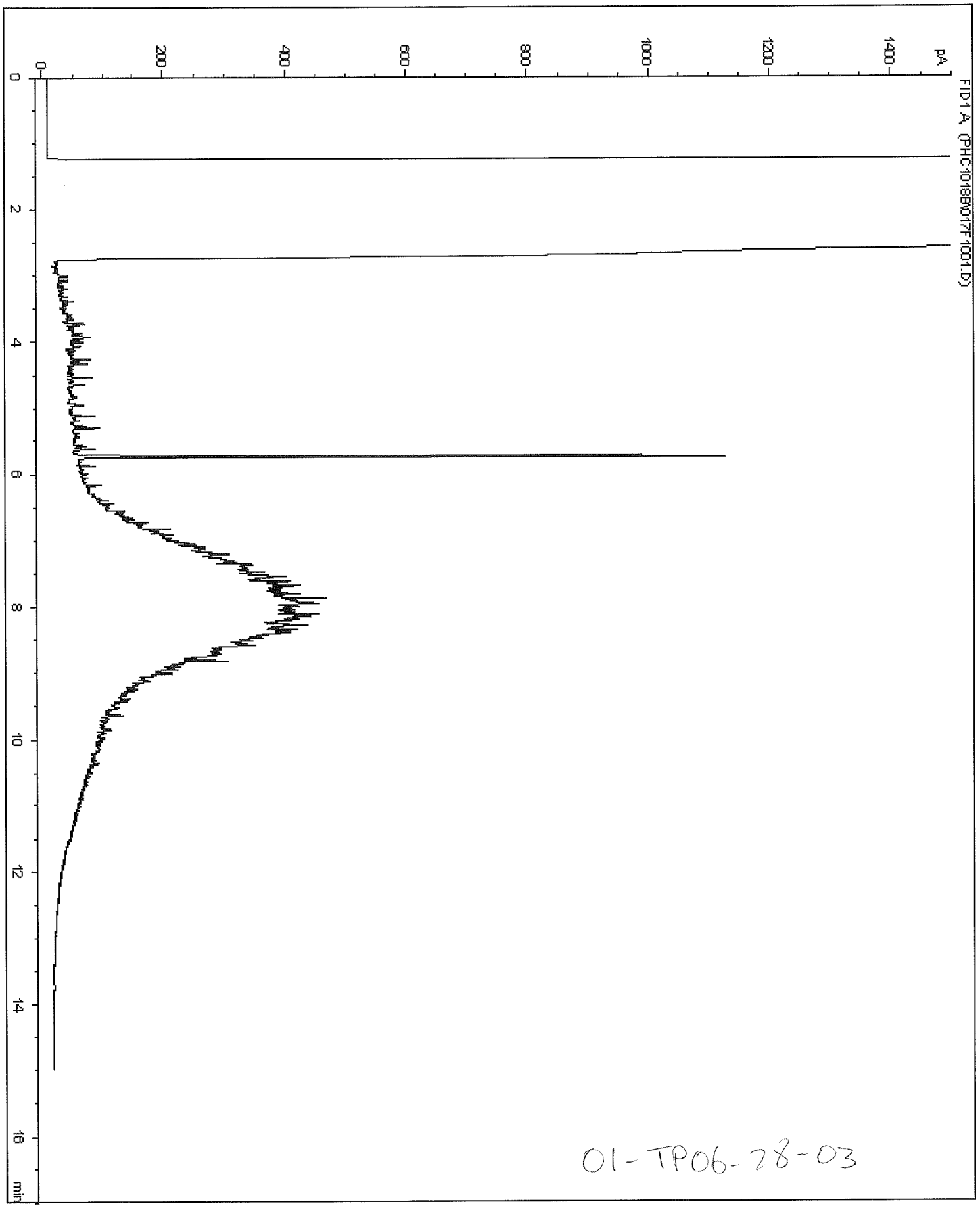

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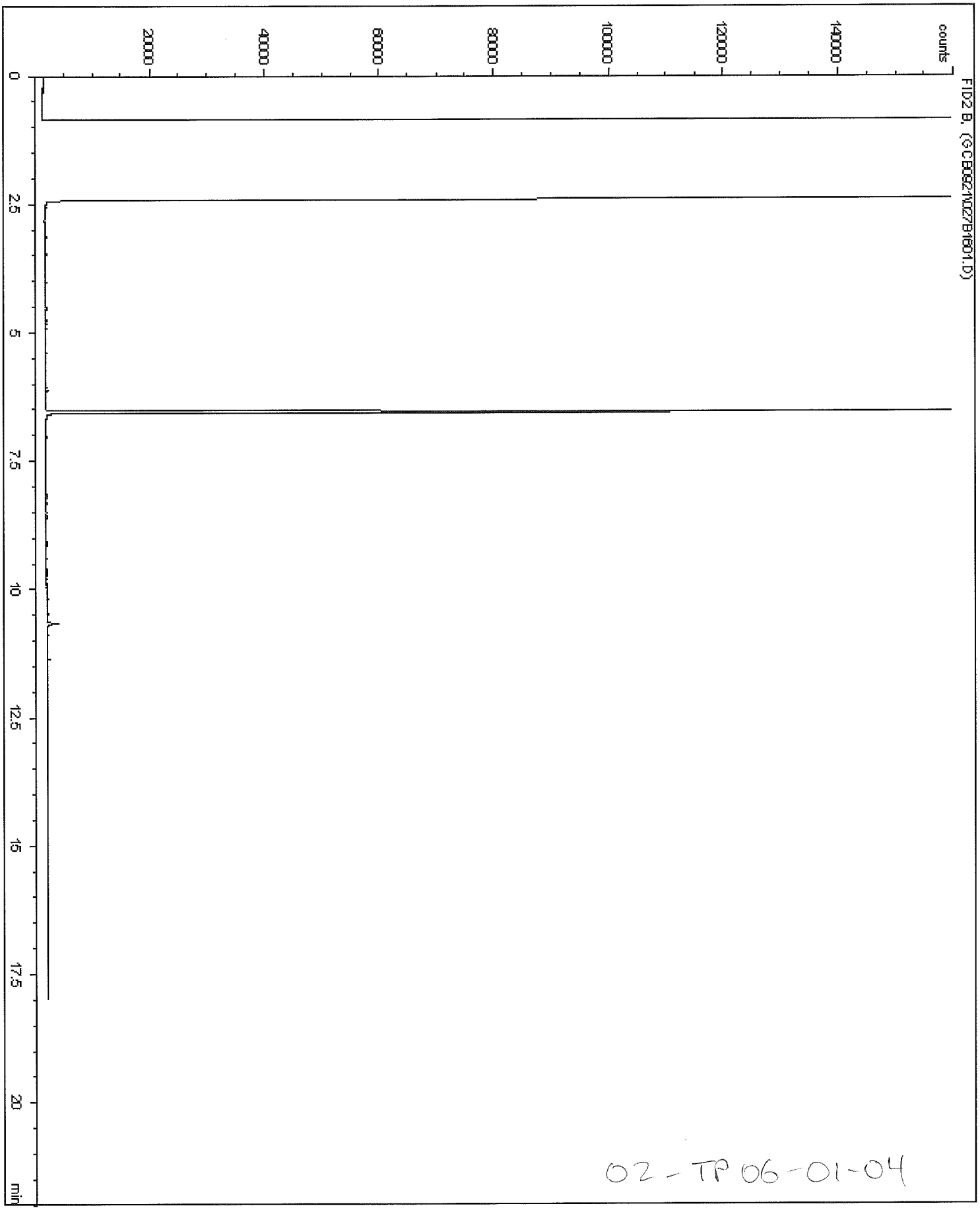

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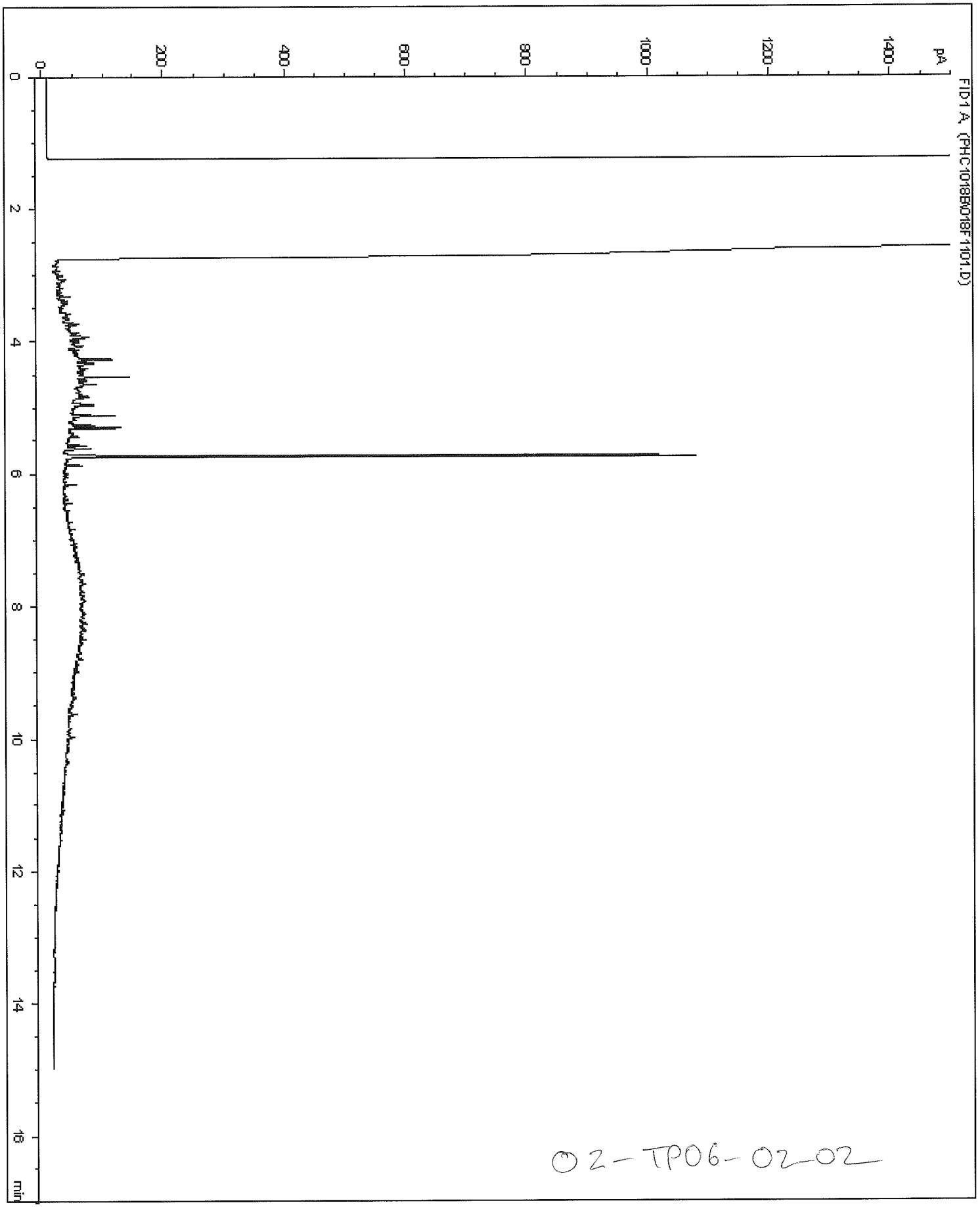

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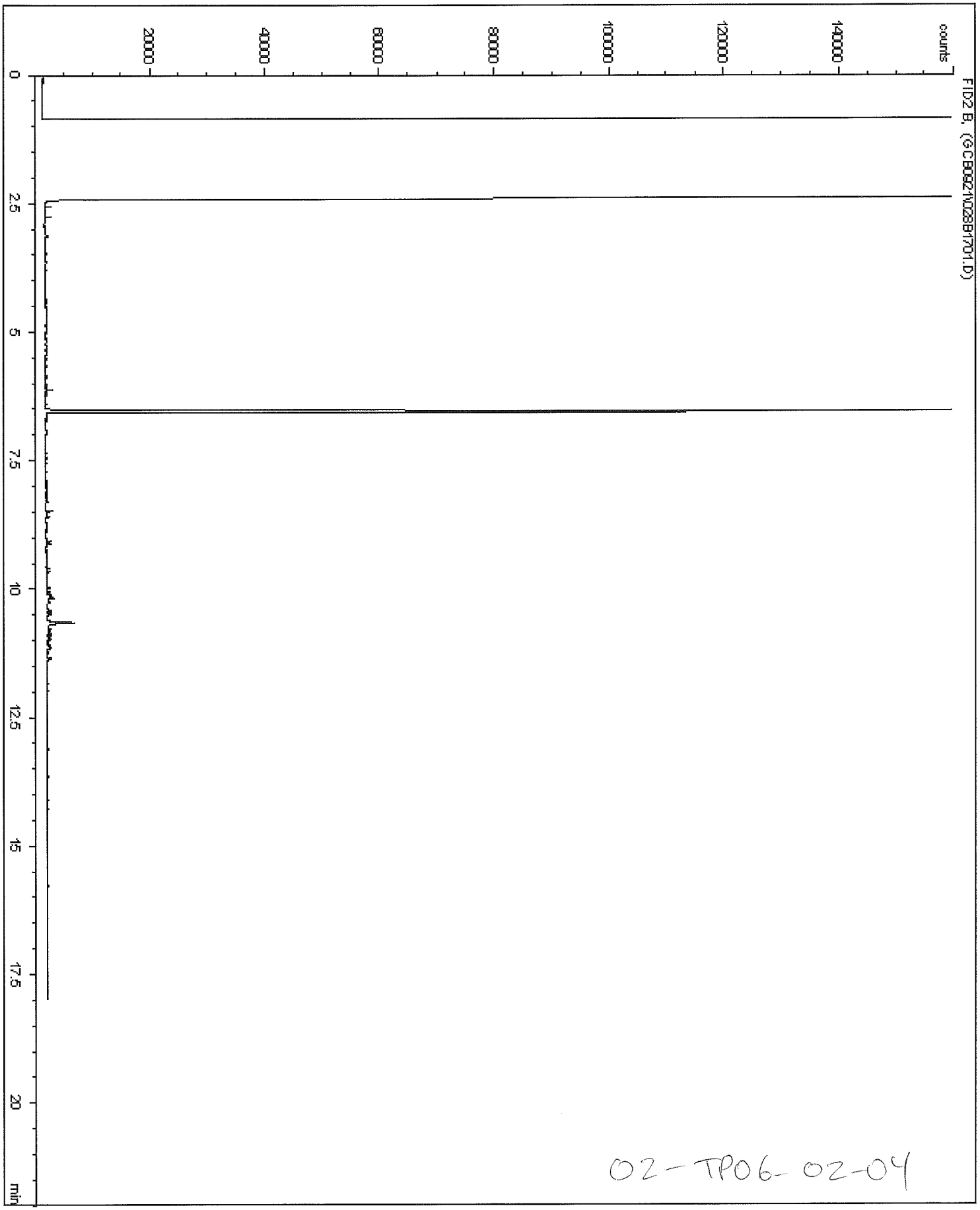
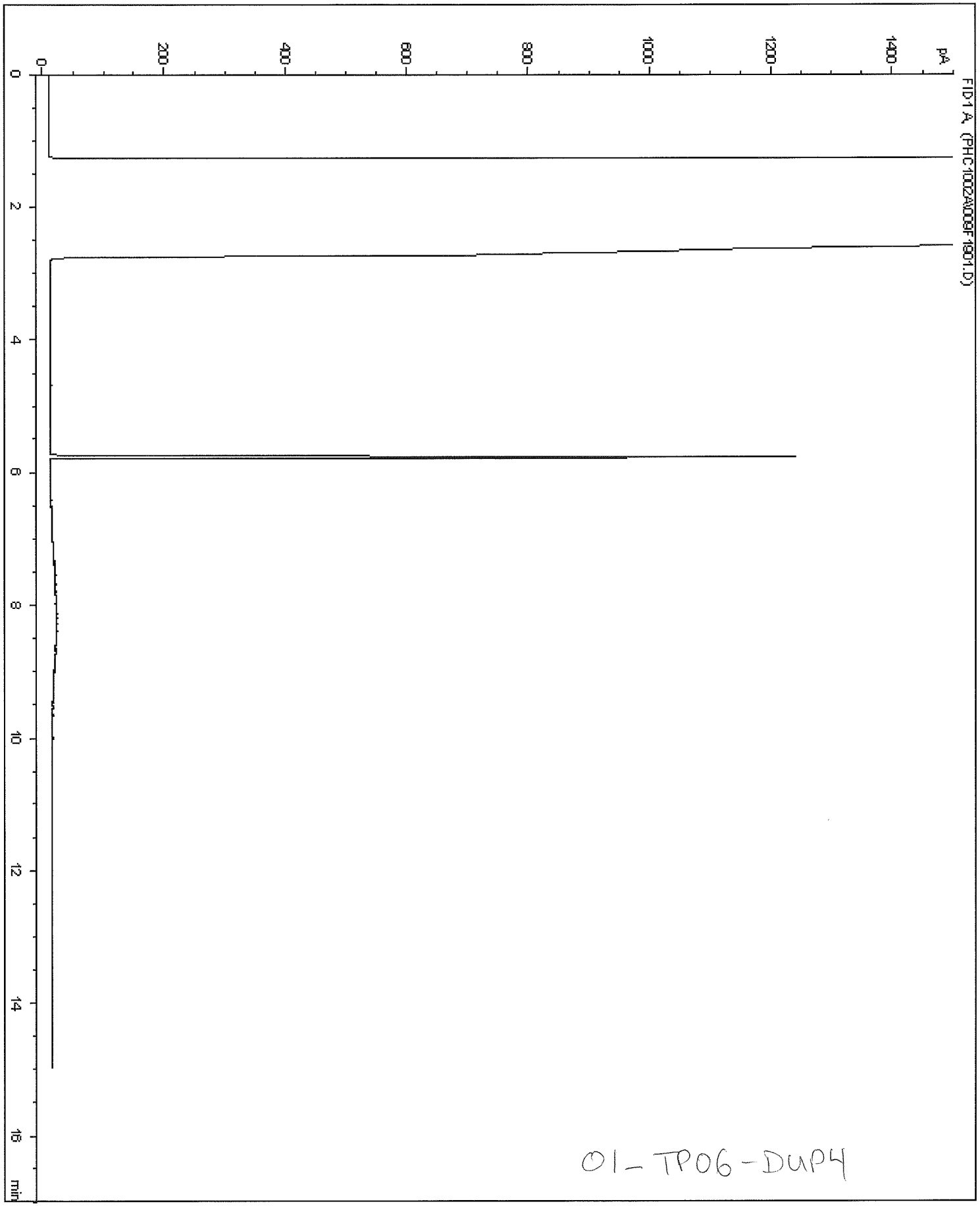
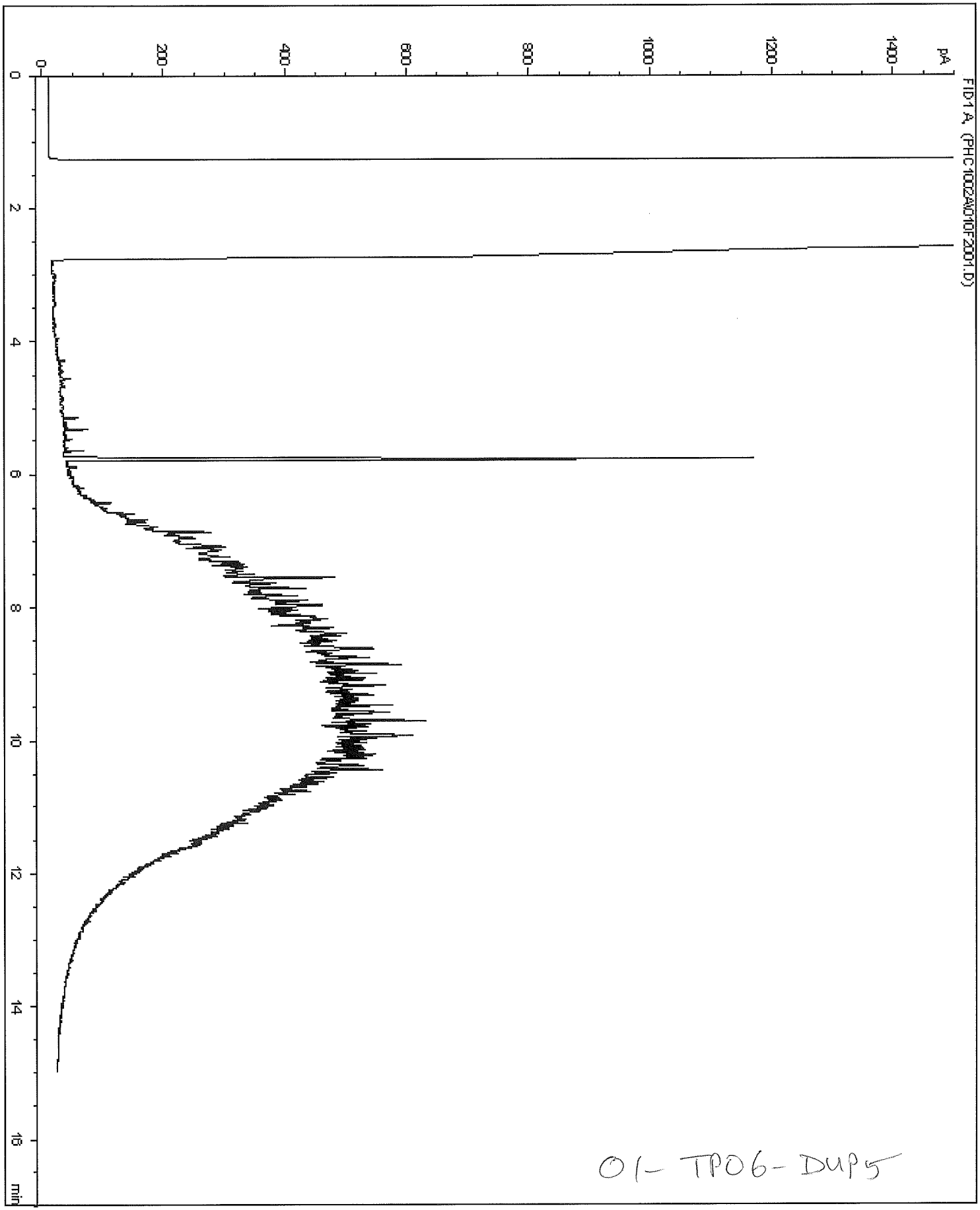


*** End of Report ***



*** End of Report ***



*** End of Report ***

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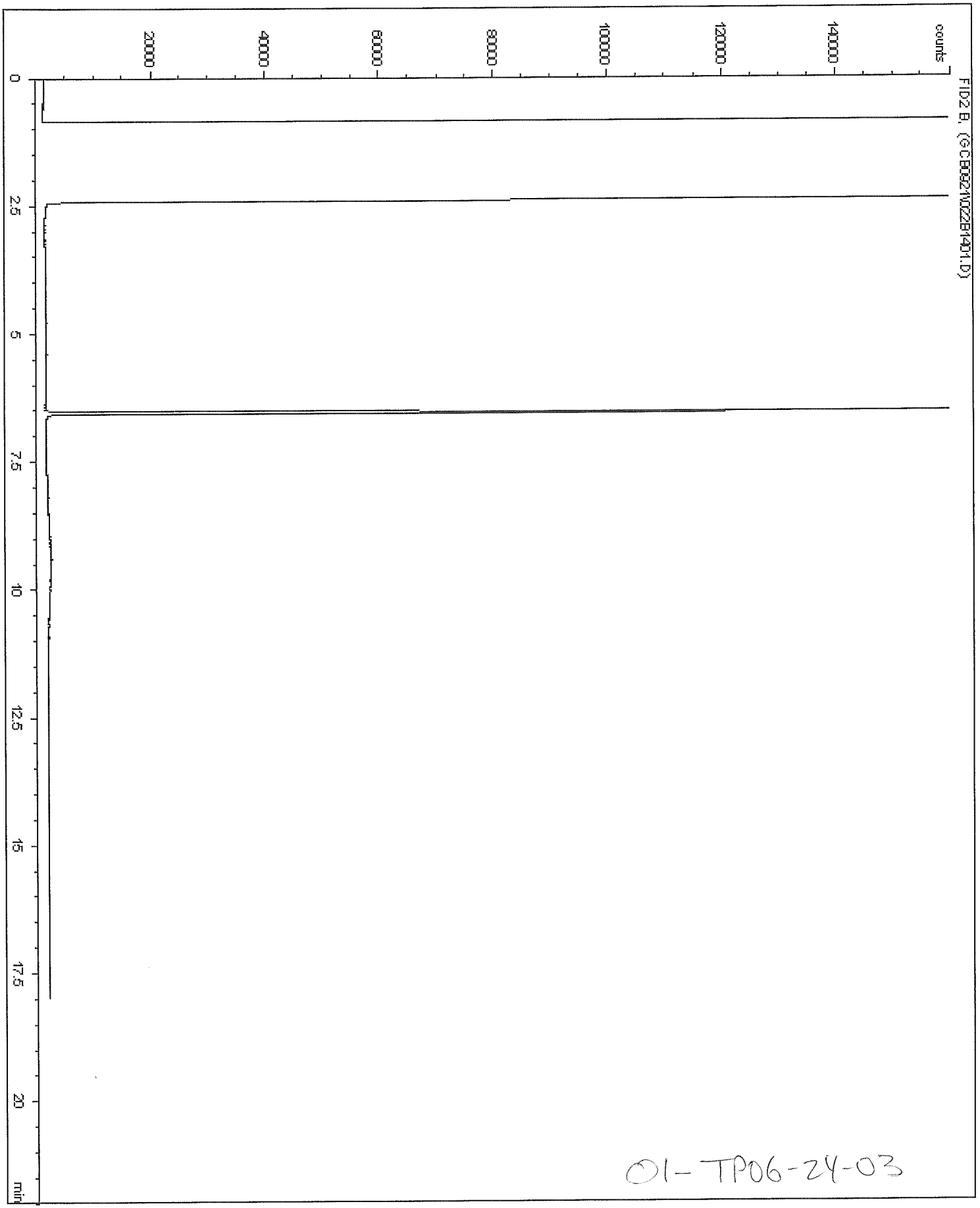

*** End of Report ***

Maxxam Analytics Inc

Your Project #: 1256-0601 INUVIK
Your C.O.C. #: 115775, 115774, 115773, 115776

Attention: MICHAEL MUTTERSBACH
FRANZ ENVIRONMENTAL INC.
308-1080-MAINLAND STREET
VANCOUVER, BC
CANADA --- ---

Report Date: 2006/10/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A644350
Received: 2006/09/21, 10:15

Sample Matrix: Soil
Samples Received: 19

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble)	1	N/A	2006/09/25	EENVSOP-00034 v1	Carter SSMA 12.2.2
BTEX by HS GC/MS (MeOH extract)	8	2006/09/23	2006/09/25	EENVSOP-00005 V.2	EPA 8260B/5021A
BTEX by HS GC/MS (MeOH extract)	3	2006/09/23	2006/09/26	EENVSOP-00005 V.2	EPA 8260B/5021A
BTEX by HS GC/MS (MeOH extract)	3	2006/09/29	2006/09/29	EENVSOP-00005 V.2	EPA 8260B/5021A
BTEX by HS GC/MS (MeOH extract)	2	2006/10/02	2006/10/02	EENVSOP-00005 V.2	EPA 8260B/5021A
Hexavalent Chromium (1)	1	2006/09/26	2006/09/26	EENVSOP-00067 v4	SM 3500-Cr B
F1-BTEX Soil Cal	11	2006/09/23	2006/09/23		
F1-BTEX Soil Cal	2	2006/09/29	2006/09/29		
F1-BTEX Soil Cal	2	2006/10/02	2006/10/02		
F1-BTEX Soil Cal	1	2006/10/17	2006/10/17		
CCME Hydrocarbons (F1; MeOH; HSGC)	6	2006/09/23	2006/09/23	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F1; MeOH; HSGC)	5	2006/09/23	2006/09/25	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F1; MeOH; HSGC)	5	2006/09/29	2006/10/02	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F2-F4 in soil)	3	2006/09/25	2006/09/25	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	8	2006/09/25	2006/09/26	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	7	2006/09/29	2006/10/02	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F4G in soil)	5	2006/09/26	2006/09/26	EENVSOP-00121 v1	CWS PHCS Tier 1
Mercury in Soil by CVAA	1	N/A	2006/09/26	EENVSOP-00032 V.1	EPA SW846 7471B
Elements by ICP -Soils	1	N/A	2006/10/26	EENVSOP-00034 v1	EPA 6010C
Elements by ICPMS - Soils	1	N/A	2006/09/26	EENVSOP-00123 v2	EPA 6020A
Moisture	11	N/A	2006/09/23	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	2	N/A	2006/09/25	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	4	N/A	2006/09/29	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	2	N/A	2006/10/02	EENVWI-00023 v2	Carter SSMA 51.2
PAH in Soil by GC/MS (Extended)	2	2006/09/25	2006/09/26	EENVSOP-00010 v3	EPA 3510C/8270D
PAH in Soil by GC/MS (Extended)	3	2006/09/29	2006/10/02	EENVSOP-00010 v3	EPA 3510C/8270D
Lead by ICPMS	2	N/A	2006/09/26	EENVSOP-00123 v2	EPA SW846 6020 A

(1) Results reported on a dry weight basis.

../2

Maxxam Analytics Inc

Your Project #: 1256-0601 INUVIK
Your C.O.C. #: 115775, 115774, 115773, 115776

Attention: MICHAEL MUTTERSBACH
FRANZ ENVIRONMENTAL INC.
308-1080-MAINLAND STREET
VANCOUVER, BC
CANADA --- ---

Report Date: 2006/10/27

CERTIFICATE OF ANALYSIS

Encryption Key

Jeremy Wakaruk
27 Oct 2006 07:49:00 -06:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

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Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C87432		C87442		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115775		115775		
	Units	**02-TP06-03-01**	**QC Batch**	**02-TP06-03-03**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	4.0	1282372	5.0	0.3	1290090

RDL = Reportable Detection Limit

Maxxam ID		C87446		C87449		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115775		115775		
	Units	**02-TP06-04-01**	**QC Batch**	**02-TP06-05-01**	**RDL**	**QC Batch**
Elements						
Soluble (Hot water) Boron (B)	mg/kg		1283806	1.4	0.1	1283806
Hex. Chromium (Cr 6+)	mg/kg		1285447	<0.2	0.2	1285447
Mercury (Hg)	mg/kg		1284758	<0.05	0.05	1284758
Physical Properties						
Moisture	%	5.0	1282372	3.2	0.3	1282719

RDL = Reportable Detection Limit

Maxxam ID		C87453	C87459		C87462		
Sampling Date		2006/09/18	2006/09/18		2006/09/18		
COC Number		115774	115774		115774		
	Units	**02-TP06-06-01**	**02-TP06-07-02**	**QC Batch**	**02-TP06-07-04**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	7.7	5.3	1282372	16.5	0.3	1290090

RDL = Reportable Detection Limit

Maxxam ID		C87466	C87478		C87480		
Sampling Date		2006/09/18	2006/09/18		2006/09/18		
COC Number		115773	115773		115773		
	Units	**02-TP06-08-02**	**02-TP06-08-05**	**QC Batch**	**02-TP06-08-06**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	17.3	19.8	1282372	13.5	0.3	1290090

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C87492		C87494		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115773		115773		
	Units	**02-TP06-09-01**	**QC Batch**	**02-TP06-09-03**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	9.3	1282388	18.8	0.3	1282719
RDL = Reportable Detection Limit						

Maxxam ID		C87495		C87496		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115773		115773		
	Units	**02-TP06-09-04**	**QC Batch**	**02-TP06-09-05**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	13.1	1282388	25.5	0.3	1290090
RDL = Reportable Detection Limit						

Maxxam ID		C87498	C87538	C87551		
Sampling Date		2006/09/18	2006/09/18	2006/09/18		
COC Number		115773	115776	115776		
	Units	**02-TP06-10-2**	**02-TP06-11-01**	**02-TP06-12-01**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	12.2	6.7	7.6	0.3	1282388
RDL = Reportable Detection Limit						

Maxxam ID		C87552	C87553		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115776	115776		
	Units	**02-TP06-DUP-07**	**02-TP06-DUP-08**	**RDL**	**QC Batch**
Physical Properties					
Moisture	%	9.2	8.7	0.3	1291437
RDL = Reportable Detection Limit					

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87432		C87442		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115775		115775		
	Units	**02-TP06-03-01**	**QC Batch**	**02-TP06-03-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	<10	1282371		10	1282371
F1 (C06-C10) - BTEX	mg/kg	<10	1282424		10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	175	1282698	12	10	1290350
F3 (C16-C34 Hydrocarbons)	mg/kg	3240	1282698	257	10	1290350
F4 (C34-C50 Hydrocarbons)	mg/kg	2250	1282698	119	10	1290350
Reached Baseline at C50	mg/kg	No	1282698	Yes	1	1290350
OIL & GREASE						
F4SG (Heavy Hydrocarbons-SilicaGel)	mg/kg	8000	1284713		200	
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	83	1282371			
O-TERPHENYL (sur.)	%	74	1282698	77		1290350

RDL = Reportable Detection Limit

Maxxam ID		C87446		C87449		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115775		115775		
	Units	**02-TP06-04-01**	**QC Batch**	**02-TP06-05-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	<10	1282371		10	1282371
F1 (C06-C10) - BTEX	mg/kg	<10	1282424		10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	13	1282698	71	10	1290350
F3 (C16-C34 Hydrocarbons)	mg/kg	31	1282698	760	10	1290350
F4 (C34-C50 Hydrocarbons)	mg/kg	69	1282698	1420	10	1290350
Reached Baseline at C50	mg/kg	Yes	1282698	No	1	1290350
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	98	1282371			
O-TERPHENYL (sur.)	%	74	1282698	75		1290350

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87453	C87459		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115774	115774		
	Units	**02-TP06-06-01**	**02-TP06-07-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon					
F1 (C06-C10)	mg/kg	<10	1530	10	1282371
F1 (C06-C10) - BTEX	mg/kg	<10	1460	10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	96	2830	10	1282698
F3 (C16-C34 Hydrocarbons)	mg/kg	1040	4910	10	1282698
F4 (C34-C50 Hydrocarbons)	mg/kg	623	1690	10	1282698
Reached Baseline at C50	mg/kg	No	No	1	1282698
OIL & GREASE					
F4SG (Heavy Hydrocarbons-SilicaGel)	mg/kg	2700	8300	200	1284713
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	89	86		1282371
O-TERPHENYL (sur.)	%	81	79		1282698

RDL = Reportable Detection Limit

Maxxam ID		C87462		C87466		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115774		115773		
	Units	**02-TP06-07-04**	**QC Batch**	**02-TP06-08-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	16	1290080	1270	10	1282371
F1 (C06-C10) - BTEX	mg/kg	14	1311295	1220	10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	49	1290350	1880	10	1282698
F3 (C16-C34 Hydrocarbons)	mg/kg	80	1290350	974	10	1282698
F4 (C34-C50 Hydrocarbons)	mg/kg	71	1290350	535	10	1282698
Reached Baseline at C50	mg/kg	Yes	1290350	No	1	1282698
OIL & GREASE						
F4SG (Heavy Hydrocarbons-SilicaGel)	mg/kg			2800	200	1284713
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	70	1290080	95		1282371
O-TERPHENYL (sur.)	%	80	1290350	80		1282698

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87478		C87480		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115773		115773		
	Units	**02-TP06-08-05**	**QC Batch**	**02-TP06-08-06**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	974	1282371	47	10	1290080
F1 (C06-C10) - BTEX	mg/kg	906	1282424	41	10	1290328
F2 (C10-C16 Hydrocarbons)	mg/kg	968	1282698	18	10	1290350
F3 (C16-C34 Hydrocarbons)	mg/kg	452	1282698	37	10	1290350
F4 (C34-C50 Hydrocarbons)	mg/kg	135	1282698	49	10	1290350
Reached Baseline at C50	mg/kg	Yes	1282698	Yes	1	1290350
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	94	1282371	84		1290080
O-TERPHENYL (sur.)	%	76	1282698	80		1290350

RDL = Reportable Detection Limit

Maxxam ID		C87492	C87495		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115773	115773		
	Units	**02-TP06-09-01**	**02-TP06-09-04**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon					
F1 (C06-C10)	mg/kg	1380	70	10	1282387
F1 (C06-C10) - BTEX	mg/kg	1380	64	10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	3580	43	10	1282698
F3 (C16-C34 Hydrocarbons)	mg/kg	12800	45	10	1282698
F4 (C34-C50 Hydrocarbons)	mg/kg	6830	16	10	1282698
Reached Baseline at C50	mg/kg	No	Yes	1	1282698
OIL & GREASE					
F4SG (Heavy Hydrocarbons-SilicaGel)	mg/kg	27000		200	1284713
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	97	95		1282387
O-TERPHENYL (sur.)	%	83	73		1282698

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87496		C87498		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115773		115773		
	Units	**02-TP06-09-05**	**QC Batch**	**02-TP06-10-2**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	14	1290080	138	10	1282387
F1 (C06-C10) - BTEX	mg/kg	14	1290328	138	10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	1290350	609	10	1282795
F3 (C16-C34 Hydrocarbons)	mg/kg	27	1290350	7600	10	1282795
F4 (C34-C50 Hydrocarbons)	mg/kg	29	1290350	2670	10	1282795
Reached Baseline at C50	mg/kg	Yes	1290350	No	1	1282795
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	83	1290080	93		1282387
O-TERPHENYL (sur.)	%	81	1290350	73		1282795

RDL = Reportable Detection Limit

Maxxam ID		C87538	C87551		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115776	115776		
	Units	**02-TP06-11-01**	**02-TP06-12-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon					
F1 (C06-C10)	mg/kg	15	<10	10	1282387
F1 (C06-C10) - BTEX	mg/kg	15	<10	10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	107	314	10	1282795
F3 (C16-C34 Hydrocarbons)	mg/kg	1070	1280	10	1282795
F4 (C34-C50 Hydrocarbons)	mg/kg	1670	599	10	1282795
Reached Baseline at C50	mg/kg	No	No	1	1282795
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	101	94		1282387
O-TERPHENYL (sur.)	%	75	76		1282795

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87552	C87553		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115776	115776		
	Units	**02-TP06-DUP-07**	**02-TP06-DUP-08**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon					
F1 (C06-C10)	mg/kg	1130	<10	10	1290080
F1 (C06-C10) - BTEX	mg/kg	1070	<10	10	1291783
F2 (C10-C16 Hydrocarbons)	mg/kg	4530	383	10	1290350
F3 (C16-C34 Hydrocarbons)	mg/kg	7180	1220	10	1290350
F4 (C34-C50 Hydrocarbons)	mg/kg	2190	563	10	1290350
Reached Baseline at C50	mg/kg	No	Yes	1	1290350
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	83	78		1290080
O-TERPHENYL (sur.)	%	92	80		1290350

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87449	C87459	C87462		
Sampling Date		2006/09/18	2006/09/18	2006/09/18		
COC Number		115775	115774	115774		
	Units	**02-TP06-05-01**	**02-TP06-07-02**	**02-TP06-07-04**	**RDL**	**QC Batch**
Polycyclic Aromatics						
Naphthalene	mg/kg	19	<0.05	<0.05	0.05	1289491
2-Methylnaphthalene	mg/kg	40	<0.05	<0.05	0.05	1289491
Acenaphthylene	mg/kg	0.36	<0.05	<0.05	0.05	1289491
Acenaphthene	mg/kg	0.50	<0.05	<0.05	0.05	1289491
Fluorene	mg/kg	1.5	<0.05	<0.05	0.05	1289491
Phenanthrene	mg/kg	2.4	<0.05	<0.05	0.05	1289491
Anthracene	mg/kg	0.10	<0.05	<0.05	0.05	1289491
Fluoranthene	mg/kg	0.16	<0.05	<0.05	0.05	1289491
Pyrene	mg/kg	0.27	<0.05	<0.05	0.05	1289491
Benzo(c)phenanthrene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Benzo(a)anthracene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Chrysene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Benzo(b&j)fluoranthene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
7,12-Dimethylbenz(a)anthracene	mg/kg	0.06	<0.05	<0.05	0.05	1289491
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Dibenz(a,h)anthracene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Dibenzo(a,h)pyrene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Dibenzo(a,i)pyrene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Dibenzo(a,l)pyrene	mg/kg	<0.05	<0.05	<0.05	0.05	1289491
Surrogate Recovery (%)						
D10-ANTHRACENE (sur.)	%	102	122	124		1289491
D12-BENZO(A)PYRENE (sur.)	%	114	106	101		1289491
D8-ACENAPHTHYLENE (sur.)	%	109	117	116		1289491
TERPHENYL-D14 (sur.)	%	115	121	125		1289491

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87478	C87494		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115773	115773		
	Units	**02-TP06-08-05**	**02-TP06-09-03**	**RDL**	**QC Batch**
Polycyclic Aromatics					
Naphthalene	mg/kg	3.4	4.0	0.05	1282944
2-Methylnaphthalene	mg/kg	7.3	5.2	0.05	1282944
Acenaphthylene	mg/kg	0.07	<0.05	0.05	1282944
Acenaphthene	mg/kg	<0.05	<0.05	0.05	1282944
Fluorene	mg/kg	0.22	0.15	0.05	1282944
Phenanthrene	mg/kg	0.13	0.19	0.05	1282944
Anthracene	mg/kg	<0.05	<0.05	0.05	1282944
Fluoranthene	mg/kg	<0.05	<0.05	0.05	1282944
Pyrene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(a)anthracene	mg/kg	<0.05	<0.05	0.05	1282944
Chrysene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(b&j)fluoranthene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.05	1282944
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	<0.05	0.05	1282944
Dibenz(a,h)anthracene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	0.05	1282944
Surrogate Recovery (%)					
D10-ANTHRACENE (sur.)	%	124	122		1282944
D12-BENZO(A)PYRENE (sur.)	%	107	103		1282944
D8-ACENAPHTHYLENE (sur.)	%	109	109		1282944
TERPHENYL-D14 (sur.)	%	119	118		1282944

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		C87449	C87466	C87495		
Sampling Date		2006/09/18	2006/09/18	2006/09/18		
COC Number		115775	115773	115773		
	Units	**02-TP06-05-01**	**02-TP06-08-02**	**02-TP06-09-04**	**RDL**	**QC Batch**
Elements						
Total Aluminum (Al)	mg/kg	8050			10	1322914
Total Antimony (Sb)	mg/kg	<1			1	1284161
Total Arsenic (As)	mg/kg	2			1	1284161
Total Barium (Ba)	mg/kg	113			10	1284161
Total Beryllium (Be)	mg/kg	0.9			0.4	1284161
Total Boron (B)	mg/kg	11			2	1322914
Total Cadmium (Cd)	mg/kg	0.2			0.1	1284161
Total Calcium (Ca)	mg/kg	122000			50	1322914
Total Chromium (Cr)	mg/kg	26			1	1284161
Total Cobalt (Co)	mg/kg	8			1	1284161
Total Copper (Cu)	mg/kg	27			5	1284161
Total Iron (Fe)	mg/kg	19400			10	1322914
Total Lead (Pb)	mg/kg	7			1	1284161
Total Lithium (Li)	mg/kg	15			10	1322914
Total Magnesium (Mg)	mg/kg	46200			20	1322914
Total Manganese (Mn)	mg/kg	418			10	1322914
Total Molybdenum (Mo)	mg/kg	1.0			0.4	1284161
Total Nickel (Ni)	mg/kg	18			1	1284161
Total Phosphorus (P)	mg/kg	527			20	1322914
Total Potassium (K)	mg/kg	1580			30	1322914
Total Selenium (Se)	mg/kg	<0.5			0.5	1284161
Total Silver (Ag)	mg/kg	<1			1	1284161
Total Sodium (Na)	mg/kg	114			50	1322914
Total Strontium (Sr)	mg/kg	73			10	1322914
Total Sulphur (S)	mg/kg	676			20	1322914
Total Thallium (Tl)	mg/kg	<0.3			0.3	1284161
Total Tin (Sn)	mg/kg	<1			1	1284161
Total Vanadium (V)	mg/kg	13			1	1284161
Total Zinc (Zn)	mg/kg	37			10	1284161
Metals						
Total Lead (Pb)	mg/kg		21	18	10	1284162

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87432	C87446	C87453		
Sampling Date		2006/09/18	2006/09/18	2006/09/18		
COC Number		115775	115775	115774		
	Units	**02-TP06-03-01**	**02-TP06-04-01**	**02-TP06-06-01**	**RDL**	**QC Batch**
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	1282369
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	1282369
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	1282369
Xylenes (Total)	mg/kg	<0.020	<0.020	<0.020	0.020	1282369
m & p-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	1282369
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	1282369
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	95	94		1282369
D10-ETHYLBENZENE (sur.)	%	111	112	107		1282369
D4-1,2-DICHLOROETHANE (sur.)	%	102	99	97		1282369
D8-TOLUENE (sur.)	%	102	101	102		1282369

RDL = Reportable Detection Limit

Maxxam ID		C87459			C87462		
Sampling Date		2006/09/18			2006/09/18		
COC Number		115774			115774		
	Units	**02-TP06-07-02**	**RDL**	**QC Batch**	**02-TP06-07-04**	**RDL**	**QC Batch**
Volatiles							
Benzene	mg/kg	0.16	0.050	1282369	0.26	0.0050	1290079
Toluene	mg/kg	1.2	0.20	1282369	0.90	0.020	1290079
Ethylbenzene	mg/kg	4.7	0.10	1282369	0.098	0.010	1290079
Xylenes (Total)	mg/kg	66	0.20	1282369	0.31	0.020	1290079
m & p-Xylene	mg/kg	40	0.20	1282369	0.24	0.020	1290079
o-Xylene	mg/kg	26	0.20	1282369	0.068	0.020	1290079
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	112		1282369	97		1290079
D10-ETHYLBENZENE (sur.)	%	101		1282369	129		1290079
D4-1,2-DICHLOROETHANE (sur.)	%	98		1282369	87		1290079
D8-TOLUENE (sur.)	%	103		1282369	100		1290079

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87466	C87478		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115773	115773		
	Units	**02-TP06-08-02**	**02-TP06-08-05**	**RDL**	**QC Batch**
Volatiles					
Benzene	mg/kg	0.45	3.8	0.050	1282369
Toluene	mg/kg	0.45	9.6	0.20	1282369
Ethylbenzene	mg/kg	2.5	7.4	0.10	1282369
Xylenes (Total)	mg/kg	49	47	0.20	1282369
m & p-Xylene	mg/kg	37	36	0.20	1282369
o-Xylene	mg/kg	13	11	0.20	1282369
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	108	103		1282369
D10-ETHYLBENZENE (sur.)	%	122	89		1282369
D4-1,2-DICHLOROETHANE (sur.)	%	96	97		1282369
D8-TOLUENE (sur.)	%	103	101		1282369

RDL = Reportable Detection Limit

Maxxam ID		C87480		C87492	C87495		
Sampling Date		2006/09/18		2006/09/18	2006/09/18		
COC Number		115773		115773	115773		
	Units	**02-TP06-08-06**	**QC Batch**	**02-TP06-09-01**	**02-TP06-09-04**	**RDL**	**QC Batch**
Volatiles							
Benzene	mg/kg	1.1	1290079	0.10	0.80	0.0050	1282386
Toluene	mg/kg	1.2	1290079	0.068	0.20	0.020	1282386
Ethylbenzene	mg/kg	0.61	1290079	0.49	1.1	0.010	1282386
Xylenes (Total)	mg/kg	3.1	1290079	5.5	4.1	0.020	1282386
m & p-Xylene	mg/kg	2.2	1290079	5.1	2.9	0.020	1282386
o-Xylene	mg/kg	0.94	1290079	0.49	1.7	0.020	1282386
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	100	1290079	120	110		1282386
D10-ETHYLBENZENE (sur.)	%	125	1290079	103	130		1282386
D4-1,2-DICHLOROETHANE (sur.)	%	95	1290079	97	93		1282386
D8-TOLUENE (sur.)	%	101	1290079	105	101		1282386

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87496		C87498	C87538		
Sampling Date		2006/09/18		2006/09/18	2006/09/18		
COC Number		115773		115773	115776		
	Units	**02-TP06-09-05**	**QC Batch**	**02-TP06-10-2**	**02-TP06-11-01**	**RDL**	**QC Batch**
Volatiles							
Benzene	mg/kg	0.27	1290079	0.11	0.013	0.0050	1282386
Toluene	mg/kg	0.21	1290079	0.031	<0.020	0.020	1282386
Ethylbenzene	mg/kg	0.031	1290079	0.38	<0.010	0.010	1282386
Xylenes (Total)	mg/kg	0.062	1290079	<0.020	0.035	0.020	1282386
m & p-Xylene	mg/kg	0.062	1290079	<0.020	<0.020	0.020	1282386
o-Xylene	mg/kg	<0.020	1290079	<0.020	0.035	0.020	1282386
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	97	1290079	107	97		1282386
D10-ETHYLBENZENE (sur.)	%	124	1290079	124	124		1282386
D4-1,2-DICHLOROETHANE (sur.)	%	96	1290079	96	90		1282386
D8-TOLUENE (sur.)	%	101	1290079	101	99		1282386

RDL = Reportable Detection Limit

Maxxam ID		C87551			C87552		
Sampling Date		2006/09/18			2006/09/18		
COC Number		115776			115776		
	Units	**02-TP06-12-01**	**RDL**	**QC Batch**	**02-TP06-DUP-07**	**RDL**	**QC Batch**
Volatiles							
Benzene	mg/kg	<0.0050	0.0050	1282386	<0.0050	0.0050	1291431
Toluene	mg/kg	<0.020	0.020	1282386	0.15	0.020	1291431
Ethylbenzene	mg/kg	<0.010	0.010	1282386	0.19	0.010	1291431
Xylenes (Total)	mg/kg	<0.020	0.020	1282386	60	0.20	1291431
m & p-Xylene	mg/kg	<0.020	0.020	1282386	35	0.20	1291431
o-Xylene	mg/kg	<0.020	0.020	1282386	26	0.20	1291431
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	98		1282386	104		1291431
D10-ETHYLBENZENE (sur.)	%	118		1282386	106		1291431
D4-1,2-DICHLOROETHANE (sur.)	%	96		1282386	101		1291431
D8-TOLUENE (sur.)	%	100		1282386	114		1291431

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87553		
Sampling Date		2006/09/18		
COC Number		115776		
	Units	**02-TP06-DUP-08**	**RDL**	**QC Batch**
Volatiles				
Benzene	mg/kg	<0.0050	0.0050	1291431
Toluene	mg/kg	<0.020	0.020	1291431
Ethylbenzene	mg/kg	<0.010	0.010	1291431
Xylenes (Total)	mg/kg	<0.020	0.020	1291431
m & p-Xylene	mg/kg	<0.020	0.020	1291431
o-Xylene	mg/kg	<0.020	0.020	1291431
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	115		1291431
D10-ETHYLBENZENE (sur.)	%	106		1291431
D4-1,2-DICHLOROETHANE (sur.)	%	95		1291431
D8-TOLUENE (sur.)	%	100		1291431

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644350
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL) Comments

Sample C87495-01 BTEX by HS GC/MS (MeOH extract): BTEX MATRIX SPIKE OUTSIDE ACCEPTANCE CRITERIA DUE TO MATRIX INTERFERENCE

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: EA644350

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282369 SD7	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		94	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		125	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		96	%	60 - 140
		Toluene	2006/09/25		105	%	60 - 140
		Ethylbenzene	2006/09/25		104	%	60 - 140
		m & p-Xylene	2006/09/25		108	%	60 - 140
		o-Xylene	2006/09/25		102	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		95	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		117	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		93	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		91	%	60 - 140
		Toluene	2006/09/25		100	%	60 - 140
		Ethylbenzene	2006/09/25		104	%	60 - 140
		m & p-Xylene	2006/09/25		106	%	60 - 140
		o-Xylene	2006/09/25		105	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		123	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		100	%	60 - 140
		Benzene	2006/09/25	<0.0050		mg/kg	
		Toluene	2006/09/25	<0.020		mg/kg	
		Ethylbenzene	2006/09/25	<0.010		mg/kg	
		Xylenes (Total)	2006/09/25	<0.020		mg/kg	
		m & p-Xylene	2006/09/25	<0.020		mg/kg	
		o-Xylene	2006/09/25	<0.020		mg/kg	
	RPD	Benzene	2006/09/25	NC		%	50
		Toluene	2006/09/25	NC		%	50
		Ethylbenzene	2006/09/25	NC		%	50
		Xylenes (Total)	2006/09/25	NC		%	50
		m & p-Xylene	2006/09/25	NC		%	50
		o-Xylene	2006/09/25	NC		%	50
1282371 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/23		93	%	60 - 130
		F1 (C06-C10)	2006/09/23		104	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/23		86	%	60 - 130
		F1 (C06-C10)	2006/09/23		96	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/23		86	%	60 - 130
		F1 (C06-C10)	2006/09/23	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/09/23	NC		%	50
1282372 SD7	BLANK	Moisture	2006/09/23	<0.3		%	
	RPD	Moisture	2006/09/23	8.2		%	20
1282386 HW4	MATRIX SPIKE [C87495-01]	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		101	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		122	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		90	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		111	%	60 - 140
		Toluene	2006/09/25		104	%	60 - 140
		Ethylbenzene	2006/09/25		167 (1)	%	60 - 140
		m & p-Xylene	2006/09/25		130	%	60 - 140
		o-Xylene	2006/09/25		87	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		119	%	60 - 130

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
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Quality Assurance Report (Continued)

Maxxam Job Number: EA644350

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282386 HW4	SPIKE	D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		82	%	60 - 140
		Toluene	2006/09/25		94	%	60 - 140
		Ethylbenzene	2006/09/25		103	%	60 - 140
		m & p-Xylene	2006/09/25		102	%	60 - 140
		o-Xylene	2006/09/25		103	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		121	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		92	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		100	%	60 - 140
		Benzene	2006/09/25	<0.0050		mg/kg	
		Toluene	2006/09/25	<0.020		mg/kg	
		Ethylbenzene	2006/09/25	<0.010		mg/kg	
		Xylenes (Total)	2006/09/25	<0.020		mg/kg	
		m & p-Xylene	2006/09/25	<0.020		mg/kg	
		o-Xylene	2006/09/25	<0.020		mg/kg	
	RPD [C87492-01]	Benzene	2006/09/25	6.4		%	50
		Toluene	2006/09/25	NC		%	50
		Ethylbenzene	2006/09/25	0.02		%	50
		Xylenes (Total)	2006/09/25	1.2		%	50
		m & p-Xylene	2006/09/25	0.2		%	50
		o-Xylene	2006/09/25	15.0		%	50
1282387 KO	MATRIX SPIKE [C87495-01]	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		88	%	60 - 130
		F1 (C06-C10)	2006/09/25		99	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		89	%	60 - 130
		F1 (C06-C10)	2006/09/25		92	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		86	%	60 - 130
		F1 (C06-C10)	2006/09/25	<10		mg/kg	
	RPD [C87492-01]	F1 (C06-C10)	2006/09/25	7.3		%	50
1282388 SD7	BLANK	Moisture	2006/09/23	<0.3		%	
	RPD [C87492-01]	Moisture	2006/09/23	1.1		%	20
1282698 AN1	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/09/26		74	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/26		92	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/26		61	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/26		76	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/26		76	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/26		97	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/26		88	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/26		87	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/26		87	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/26	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/26	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/26	<10		mg/kg	
		Reached Baseline at C50	2006/09/26	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/26	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/26	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/26	NC		%	50
		Reached Baseline at C50	2006/09/26	NC		%	50
1282719 HL2	BLANK	Moisture	2006/09/25	<0.3		%	
	RPD	Moisture	2006/09/25	3.5		%	20
1282795 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/09/25		78	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/25		81	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/25		69	%	50 - 130

Maxxam Analytics Inc

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Quality Assurance Report (Continued)

Maxxam Job Number: EA644350

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282795 KB4	MATRIX SPIKE	F4 (C34-C50 Hydrocarbons)	2006/09/25		69	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/25		84	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/25		101	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/25		92	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/25		84	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/25		82	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/25	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/25	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/25	<10		mg/kg	
		Reached Baseline at C50	2006/09/25	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/25	5.0		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/25	7.4		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/25	NC		%	50
		Reached Baseline at C50	2006/09/25	NC		%	50
1282944 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/09/26		129	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		117	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		121	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		127	%	30 - 130
		Naphthalene	2006/09/26		101	%	30 - 130
		2-Methylnaphthalene	2006/09/26		103	%	30 - 130
		Acenaphthylene	2006/09/26		107	%	30 - 130
		Acenaphthene	2006/09/26		97	%	30 - 130
		Fluorene	2006/09/26		100	%	30 - 130
		Phenanthrene	2006/09/26		100	%	30 - 130
		Anthracene	2006/09/26		98	%	30 - 130
		Fluoranthene	2006/09/26		101	%	30 - 130
		Pyrene	2006/09/26		100	%	30 - 130
		Benzo(a)anthracene	2006/09/26		103	%	30 - 130
		Chrysene	2006/09/26		97	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/26		98	%	30 - 130
		Benzo(k)fluoranthene	2006/09/26		100	%	30 - 130
		Benzo(a)pyrene	2006/09/26		102	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/26		111	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/26		124	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/26		107	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/09/26		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		118	%	30 - 130
		Naphthalene	2006/09/26		105	%	30 - 130
		2-Methylnaphthalene	2006/09/26		104	%	30 - 130
		Acenaphthylene	2006/09/26		105	%	30 - 130
		Acenaphthene	2006/09/26		101	%	30 - 130
		Fluorene	2006/09/26		100	%	30 - 130
		Phenanthrene	2006/09/26		104	%	30 - 130
		Anthracene	2006/09/26		101	%	30 - 130
		Fluoranthene	2006/09/26		100	%	30 - 130
		Pyrene	2006/09/26		100	%	30 - 130
		Benzo(a)anthracene	2006/09/26		99	%	30 - 130
		Chrysene	2006/09/26		99	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/26		94	%	30 - 130
		Benzo(k)fluoranthene	2006/09/26		98	%	30 - 130
		Benzo(a)pyrene	2006/09/26		96	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/26		107	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/26		104	%	30 - 130

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601 INUVIK
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Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA644350

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282944 AK3	SPIKE	Benzo(g,h,i)perylene	2006/09/26		108	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/09/26		119	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		107	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		123	%	30 - 130
		Naphthalene	2006/09/26	<0.05		mg/kg	
		2-Methylnaphthalene	2006/09/26	<0.05		mg/kg	
		Acenaphthylene	2006/09/26	<0.05		mg/kg	
		Acenaphthene	2006/09/26	<0.05		mg/kg	
		Fluorene	2006/09/26	<0.05		mg/kg	
		Phenanthrene	2006/09/26	<0.05		mg/kg	
		Anthracene	2006/09/26	<0.05		mg/kg	
		Fluoranthene	2006/09/26	<0.05		mg/kg	
		Pyrene	2006/09/26	<0.05		mg/kg	
		Benzo(a)anthracene	2006/09/26	<0.05		mg/kg	
		Chrysene	2006/09/26	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/09/26	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/09/26	<0.05		mg/kg	
		Benzo(a)pyrene	2006/09/26	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/09/26	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/09/26	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/09/26	<0.05		mg/kg	
	RPD	Naphthalene	2006/09/26	NC		%	50
		2-Methylnaphthalene	2006/09/26	NC		%	50
		Acenaphthylene	2006/09/26	NC		%	50
		Acenaphthene	2006/09/26	NC		%	50
		Fluorene	2006/09/26	NC		%	50
		Phenanthrene	2006/09/26	NC		%	50
		Anthracene	2006/09/26	NC		%	50
		Fluoranthene	2006/09/26	NC		%	50
		Pyrene	2006/09/26	NC		%	50
		Benzo(a)anthracene	2006/09/26	NC		%	50
		Chrysene	2006/09/26	NC		%	50
		Benzo(b&j)fluoranthene	2006/09/26	NC		%	50
		Benzo(k)fluoranthene	2006/09/26	NC		%	50
		Benzo(a)pyrene	2006/09/26	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/09/26	NC		%	50
		Dibenz(a,h)anthracene	2006/09/26	NC		%	50
		Benzo(g,h,i)perylene	2006/09/26	NC		%	50
1283806 MC3	MATRIX SPIKE	Soluble (Hot water) Boron (B)	2006/09/25		99	%	80 - 120
	SPIKE	Soluble (Hot water) Boron (B)	2006/09/25		106	%	85 - 115
	BLANK	Soluble (Hot water) Boron (B)	2006/09/25	<0.1		mg/kg	
	RPD	Soluble (Hot water) Boron (B)	2006/09/25	NC		%	40
1284161 AC4	Calibration Check	Total Antimony (Sb)	2006/09/26		103	%	80 - 120
		Total Arsenic (As)	2006/09/26		104	%	80 - 120
		Total Barium (Ba)	2006/09/26		101	%	80 - 120
		Total Beryllium (Be)	2006/09/26		106	%	80 - 120
		Total Cadmium (Cd)	2006/09/26		101	%	80 - 120
		Total Chromium (Cr)	2006/09/26		100	%	80 - 120
		Total Cobalt (Co)	2006/09/26		105	%	80 - 120
		Total Copper (Cu)	2006/09/26		104	%	80 - 120
		Total Lead (Pb)	2006/09/26		104	%	80 - 120
		Total Molybdenum (Mo)	2006/09/26		103	%	80 - 120
		Total Nickel (Ni)	2006/09/26		105	%	80 - 120
		Total Selenium (Se)	2006/09/26		104	%	80 - 120

Maxxam Analytics Inc

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Quality Assurance Report (Continued)

Maxxam Job Number: EA644350

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1284161 AC4	Calibration Check	Total Silver (Ag)	2006/09/26		104	%	80 - 120
		Total Thallium (Tl)	2006/09/26		103	%	80 - 120
		Total Tin (Sn)	2006/09/26		104	%	80 - 120
		Total Vanadium (V)	2006/09/26		103	%	80 - 120
		Total Zinc (Zn)	2006/09/26		104	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/09/26		99	%	80 - 120
		Total Cadmium (Cd)	2006/09/26		93	%	N/A
		Total Selenium (Se)	2006/09/26		104	%	80 - 120
		Total Thallium (Tl)	2006/09/26		94	%	80 - 120
	BLANK	Total Antimony (Sb)	2006/09/26	<1		mg/kg	
		Total Arsenic (As)	2006/09/26	<1		mg/kg	
		Total Barium (Ba)	2006/09/26	<10		mg/kg	
		Total Beryllium (Be)	2006/09/26	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/09/26	<0.1		mg/kg	
		Total Chromium (Cr)	2006/09/26	<1		mg/kg	
		Total Cobalt (Co)	2006/09/26	<1		mg/kg	
		Total Copper (Cu)	2006/09/26	<5		mg/kg	
		Total Lead (Pb)	2006/09/26	<1		mg/kg	
		Total Molybdenum (Mo)	2006/09/26	<0.4		mg/kg	
		Total Nickel (Ni)	2006/09/26	<1		mg/kg	
		Total Selenium (Se)	2006/09/26	<0.5		mg/kg	
		Total Silver (Ag)	2006/09/26	<1		mg/kg	
		Total Thallium (Tl)	2006/09/26	<0.3		mg/kg	
		Total Tin (Sn)	2006/09/26	<1		mg/kg	
		Total Vanadium (V)	2006/09/26	<1		mg/kg	
		Total Zinc (Zn)	2006/09/26	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/09/26	NC		%	35
		Total Arsenic (As)	2006/09/26	NC		%	35
		Total Barium (Ba)	2006/09/26	10.2		%	35
		Total Beryllium (Be)	2006/09/26	NC		%	35
		Total Cadmium (Cd)	2006/09/26	10.1		%	35
		Total Chromium (Cr)	2006/09/26	11.1		%	35
		Total Cobalt (Co)	2006/09/26	7.2		%	35
		Total Copper (Cu)	2006/09/26	NC		%	35
		Total Lead (Pb)	2006/09/26	9.4		%	35
		Total Molybdenum (Mo)	2006/09/26	NC		%	35
		Total Nickel (Ni)	2006/09/26	8.3		%	35
		Total Selenium (Se)	2006/09/26	NC		%	35
		Total Silver (Ag)	2006/09/26	NC		%	35
		Total Thallium (Tl)	2006/09/26	NC		%	35
		Total Tin (Sn)	2006/09/26	NC		%	35
		Total Vanadium (V)	2006/09/26	7.0		%	35
		Total Zinc (Zn)	2006/09/26	8.2		%	35
1284162 AC4	Calibration Check	Total Lead (Pb)	2006/09/26		104	%	80 - 120
	MATRIX SPIKE	Total Lead (Pb)	2006/09/26		85	%	75 - 125
	BLANK	Total Lead (Pb)	2006/09/26	<10		mg/kg	
	RPD	Total Lead (Pb)	2006/09/26	NC		%	35
1284713 JR1	SPIKE	F4SG (Heavy Hydrocarbons-SilicaGel)	2006/09/26		80	%	70 - 130
	BLANK	F4SG (Heavy Hydrocarbons-SilicaGel)	2006/09/26	<200		mg/kg	
	RPD	F4G (Heavy Hydrocarbons - Grav.)	2006/09/26	9.8		%	50
1284758 YY1	Calibration Check	Mercury (Hg)	2006/09/26		106	%	85 - 115
	QC STANDARD	Mercury (Hg)	2006/09/26		123	%	N/A
	BLANK	Mercury (Hg)	2006/09/26	<0.05		mg/kg	
	RPD	Mercury (Hg)	2006/09/26	NC		%	35
1285447 DD1	Calibration Check	Hex. Chromium (Cr 6+)	2006/09/26		101	%	75 - 125

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FRANZ ENVIRONMENTAL INC.
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Client Project #: 1256-0601 INUVIK
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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1285447 DD1	MATRIX SPIKE	Hex. Chromium (Cr 6+)	2006/09/26		69 (1)	%	75 - 125
	BLANK	Hex. Chromium (Cr 6+)	2006/09/26	<0.2		mg/kg	
	RPD	Hex. Chromium (Cr 6+)	2006/09/26	NC		%	35
1289491 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/10/02		125	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		117	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		118	%	30 - 130
		Naphthalene	2006/10/02		105	%	30 - 130
		2-Methylnaphthalene	2006/10/02		100	%	30 - 130
		Acenaphthylene	2006/10/02		102	%	30 - 130
		Acenaphthene	2006/10/02		98	%	30 - 130
		Fluorene	2006/10/02		94	%	30 - 130
		Phenanthrene	2006/10/02		101	%	30 - 130
		Anthracene	2006/10/02		97	%	30 - 130
		Fluoranthene	2006/10/02		97	%	30 - 130
		Pyrene	2006/10/02		97	%	30 - 130
		Benzo(c)phenanthrene	2006/10/02		96	%	30 - 130
		Benzo(a)anthracene	2006/10/02		96	%	30 - 130
		Chrysene	2006/10/02		98	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/02		98	%	30 - 130
		7,12-Dimethylbenz(a)anthracene	2006/10/02		112	%	30 - 130
		Benzo(k)fluoranthene	2006/10/02		104	%	30 - 130
		Benzo(a)pyrene	2006/10/02		103	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/02		102	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/02		122	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/02		99	%	30 - 130
		Dibenzo(a,h)pyrene	2006/10/02		75	%	30 - 130
		Dibenzo(a,i)pyrene	2006/10/02		70	%	30 - 130
		Dibenzo(a,l)pyrene	2006/10/02		95	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/10/02		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		118	%	30 - 130
		Naphthalene	2006/10/02		105	%	30 - 130
		2-Methylnaphthalene	2006/10/02		104	%	30 - 130
		Acenaphthylene	2006/10/02		105	%	30 - 130
		Acenaphthene	2006/10/02		101	%	30 - 130
		Fluorene	2006/10/02		100	%	30 - 130
		Phenanthrene	2006/10/02		104	%	30 - 130
		Anthracene	2006/10/02		101	%	30 - 130
		Fluoranthene	2006/10/02		100	%	30 - 130
		Pyrene	2006/10/02		100	%	30 - 130
		Benzo(c)phenanthrene	2006/10/02		97	%	30 - 130
		Benzo(a)anthracene	2006/10/02		99	%	30 - 130
		Chrysene	2006/10/02		99	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/02		94	%	30 - 130
		7,12-Dimethylbenz(a)anthracene	2006/10/02		102	%	30 - 130
		Benzo(k)fluoranthene	2006/10/02		98	%	30 - 130
		Benzo(a)pyrene	2006/10/02		96	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/02		107	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/02		124	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/02		108	%	30 - 130
		Dibenzo(a,h)pyrene	2006/10/02		101	%	30 - 130
		Dibenzo(a,i)pyrene	2006/10/02		120	%	30 - 130
		Dibenzo(a,l)pyrene	2006/10/02		110	%	30 - 130

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1289491 AK3	BLANK	D10-ANTHRACENE (sur.)	2006/10/02		119	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		107	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		123	%	30 - 130
		Naphthalene	2006/10/02	<0.05		mg/kg	
		2-Methylnaphthalene	2006/10/02	<0.05		mg/kg	
		Acenaphthylene	2006/10/02	<0.05		mg/kg	
		Acenaphthene	2006/10/02	<0.05		mg/kg	
		Fluorene	2006/10/02	<0.05		mg/kg	
		Phenanthrene	2006/10/02	<0.05		mg/kg	
		Anthracene	2006/10/02	<0.05		mg/kg	
		Fluoranthene	2006/10/02	<0.05		mg/kg	
		Pyrene	2006/10/02	<0.05		mg/kg	
		Benzo(c)phenanthrene	2006/10/02	<0.05		mg/kg	
		Benzo(a)anthracene	2006/10/02	<0.05		mg/kg	
		Chrysene	2006/10/02	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/10/02	<0.05		mg/kg	
		7,12-Dimethylbenz(a)anthracene	2006/10/02	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/10/02	<0.05		mg/kg	
		Benzo(a)pyrene	2006/10/02	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/10/02	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/10/02	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/10/02	<0.05		mg/kg	
		Dibenzo(a,h)pyrene	2006/10/02	<0.05		mg/kg	
		Dibenzo(a,i)pyrene	2006/10/02	<0.05		mg/kg	
		Dibenzo(a,l)pyrene	2006/10/02	<0.05		mg/kg	
	RPD	Naphthalene	2006/10/02	NC		%	50
		2-Methylnaphthalene	2006/10/02	NC		%	50
		Acenaphthylene	2006/10/02	NC		%	50
		Acenaphthene	2006/10/02	NC		%	50
		Fluorene	2006/10/02	NC		%	50
		Phenanthrene	2006/10/02	NC		%	50
		Anthracene	2006/10/02	NC		%	50
		Fluoranthene	2006/10/02	NC		%	50
		Pyrene	2006/10/02	NC		%	50
		Benzo(a)anthracene	2006/10/02	NC		%	50
		Chrysene	2006/10/02	NC		%	50
		Benzo(b&j)fluoranthene	2006/10/02	NC		%	50
		Benzo(k)fluoranthene	2006/10/02	NC		%	50
		Benzo(a)pyrene	2006/10/02	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/10/02	NC		%	50
		Dibenz(a,h)anthracene	2006/10/02	NC		%	50
		Benzo(g,h,i)perylene	2006/10/02	NC		%	50
1290079 HW4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		95	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/29		119	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/29		88	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/29		99	%	60 - 140
		Benzene	2006/09/29		92	%	60 - 140
		Toluene	2006/09/29		98	%	60 - 140
		Ethylbenzene	2006/09/29		100	%	60 - 140
		m & p-Xylene	2006/09/29		98	%	60 - 140
		o-Xylene	2006/09/29		98	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		98	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/29		116	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/29		96	%	60 - 140

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1290079 HW4	SPIKE	D8-TOLUENE (sur.)	2006/09/29		100	%	60 - 140
		Benzene	2006/09/29		90	%	60 - 140
		Toluene	2006/09/29		95	%	60 - 140
		Ethylbenzene	2006/09/29		99	%	60 - 140
		m & p-Xylene	2006/09/29		97	%	60 - 140
		o-Xylene	2006/09/29		97	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/29		114	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/29		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/29		100	%	60 - 140
		Benzene	2006/09/29	<0.0050		mg/kg	
		Toluene	2006/09/29	<0.020		mg/kg	
		Ethylbenzene	2006/09/29	<0.010		mg/kg	
		Xylenes (Total)	2006/09/29	<0.020		mg/kg	
		m & p-Xylene	2006/09/29	<0.020		mg/kg	
		o-Xylene	2006/09/29	<0.020		mg/kg	
	RPD	Benzene	2006/09/29	NC		%	50
		Toluene	2006/09/29	NC		%	50
		Ethylbenzene	2006/09/29	NC		%	50
		Xylenes (Total)	2006/09/29	NC		%	50
		m & p-Xylene	2006/09/29	NC		%	50
		o-Xylene	2006/09/29	NC		%	50
1290080 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		96	%	60 - 130
		F1 (C06-C10)	2006/10/02		91	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		72	%	60 - 130
		F1 (C06-C10)	2006/10/02		88	%	N/A
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		81	%	60 - 130
		F1 (C06-C10)	2006/10/02	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/10/02	NC		%	50
1290090 HL2	BLANK	Moisture	2006/09/29	<0.3		%	
	RPD	Moisture	2006/09/29	13.3		%	20
1290350 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/02		88	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		34	%	N/A
		F3 (C16-C34 Hydrocarbons)	2006/10/02		79	%	N/A
		F4 (C34-C50 Hydrocarbons)	2006/10/02		98	%	N/A
	SPIKE	O-TERPHENYL (sur.)	2006/10/02		81	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02		98	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2006/10/02		98	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2006/10/02		101	%	85 - 115
	BLANK	O-TERPHENYL (sur.)	2006/10/02		85	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/02	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/02	<10		mg/kg	
		Reached Baseline at C50	2006/10/02	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/02	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/02	24.1		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/02	36.0		%	50
		Reached Baseline at C50	2006/10/02	NC		%	50
1291431 HW4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/02		109	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/02		133	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/02		100	%	60 - 140
		Benzene	2006/10/02		125	%	60 - 140
		Toluene	2006/10/02		113	%	60 - 140
		Ethylbenzene	2006/10/02		130	%	60 - 140

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Quality Assurance Report (Continued)

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1291431 HW4	MATRIX SPIKE	m & p-Xylene	2006/10/02		110	%	60 - 140
		o-Xylene	2006/10/02		131	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		96	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/02		125	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/02		113	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/02		98	%	60 - 140
		Benzene	2006/10/02		120	%	60 - 140
		Toluene	2006/10/02		121	%	60 - 140
		Ethylbenzene	2006/10/02		120	%	60 - 140
		m & p-Xylene	2006/10/02		117	%	60 - 140
		o-Xylene	2006/10/02		116	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/02		98	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/02		130	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/02		104	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/02		99	%	60 - 140
		Benzene	2006/10/02	<0.0050		mg/kg	
		Toluene	2006/10/02	<0.020		mg/kg	
		Ethylbenzene	2006/10/02	<0.010		mg/kg	
		Xylenes (Total)	2006/10/02	<0.020		mg/kg	
		m & p-Xylene	2006/10/02	<0.020		mg/kg	
		o-Xylene	2006/10/02	<0.020		mg/kg	
	RPD	Benzene	2006/10/02	NC		%	50
		Toluene	2006/10/02	NC		%	50
		Ethylbenzene	2006/10/02	NC		%	50
		Xylenes (Total)	2006/10/02	NC		%	50
		m & p-Xylene	2006/10/02	NC		%	50
		o-Xylene	2006/10/02	NC		%	50
1291437 HL2	BLANK	Moisture	2006/10/02	<0.3		%	
	RPD	Moisture	2006/10/02	6.8		%	20
1322914 MC3	Calibration Check	Total Aluminum (Al)	2006/10/26		104	%	80 - 120
		Total Boron (B)	2006/10/26		100	%	80 - 120
		Total Calcium (Ca)	2006/10/26		95	%	80 - 120
		Total Iron (Fe)	2006/10/26		97	%	80 - 120
		Total Lithium (Li)	2006/10/26		102	%	80 - 120
		Total Magnesium (Mg)	2006/10/26		99	%	80 - 120
		Total Manganese (Mn)	2006/10/26		100	%	80 - 120
		Total Phosphorus (P)	2006/10/26		97	%	80 - 120
		Total Potassium (K)	2006/10/26		103	%	80 - 120
		Total Sodium (Na)	2006/10/26		106	%	80 - 120
		Total Strontium (Sr)	2006/10/26		97	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/10/26		107	%	75 - 125
		Total Boron (B)	2006/10/26		102	%	80 - 120
		Total Calcium (Ca)	2006/10/26		98	%	75 - 125
		Total Iron (Fe)	2006/10/26		99	%	75 - 125
		Total Lithium (Li)	2006/10/26		102	%	75 - 125
		Total Magnesium (Mg)	2006/10/26		103	%	75 - 125
		Total Manganese (Mn)	2006/10/26		104	%	75 - 125
		Total Phosphorus (P)	2006/10/26		101	%	75 - 125
		Total Potassium (K)	2006/10/26		103	%	75 - 125
		Total Sodium (Na)	2006/10/26		110	%	75 - 125
		Total Strontium (Sr)	2006/10/26		98	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/10/26	<10		mg/kg	
		Total Boron (B)	2006/10/26	<2		mg/kg	
		Total Calcium (Ca)	2006/10/26	<50		mg/kg	
		Total Iron (Fe)	2006/10/26	<10		mg/kg	

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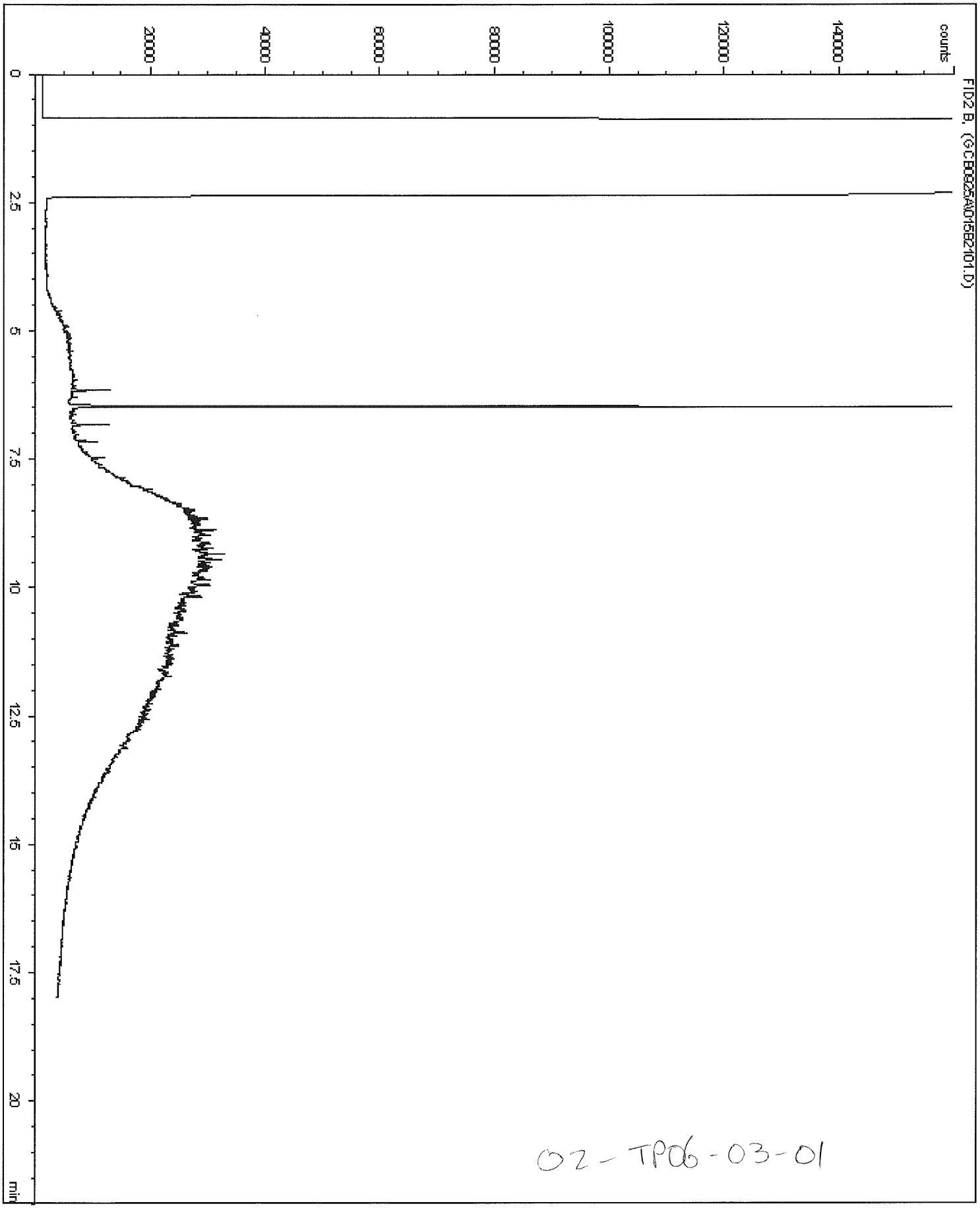
Maxxam Job Number: EA644350

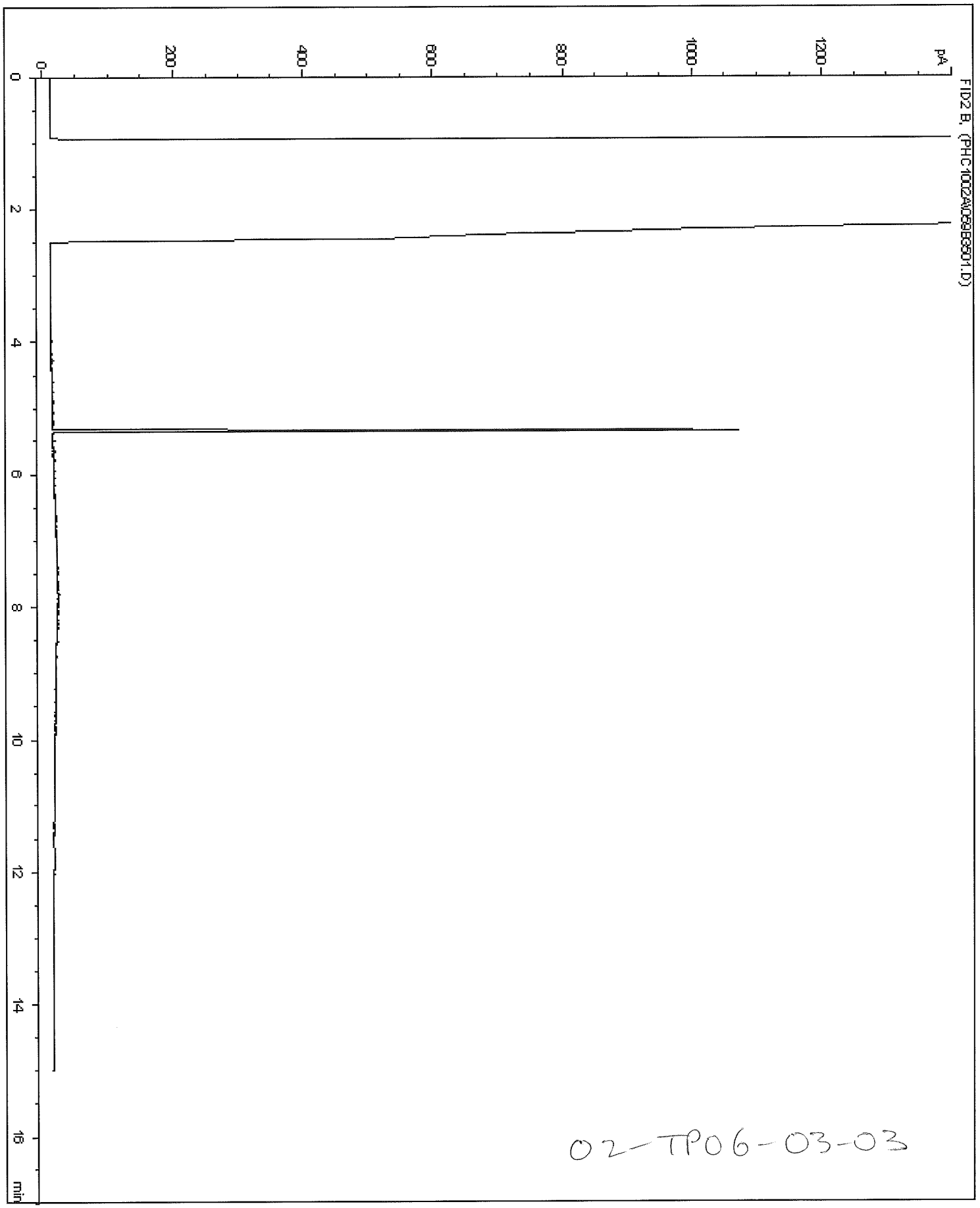
QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1322914 MC3	BLANK	Total Lithium (Li)	2006/10/26	<10		mg/kg	
		Total Magnesium (Mg)	2006/10/26	<20		mg/kg	
		Total Manganese (Mn)	2006/10/26	<10		mg/kg	
		Total Phosphorus (P)	2006/10/26	<20		mg/kg	
		Total Potassium (K)	2006/10/26	<30		mg/kg	
		Total Sodium (Na)	2006/10/26	<50		mg/kg	
		Total Strontium (Sr)	2006/10/26	<10		mg/kg	
		Total Sulphur (S)	2006/10/26	<20		mg/kg	
	RPD	Total Aluminum (Al)	2006/10/26	0.7		%	35
		Total Boron (B)	2006/10/26	2.4		%	35
		Total Calcium (Ca)	2006/10/26	1.3		%	35
		Total Iron (Fe)	2006/10/26	1.4		%	35
		Total Lithium (Li)	2006/10/26	NC		%	35
		Total Magnesium (Mg)	2006/10/26	0.6		%	35
		Total Manganese (Mn)	2006/10/26	1.4		%	35
		Total Phosphorus (P)	2006/10/26	0.7		%	35
		Total Potassium (K)	2006/10/26	0.5		%	35
		Total Sodium (Na)	2006/10/26	NC		%	35
		Total Strontium (Sr)	2006/10/26	0.1		%	35
		Total Sulphur (S)	2006/10/26	0.5		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference
(1) Please note that the recovery of some compounds are outside control limits however the overall quality control for this analysis meets our acceptability criteria.

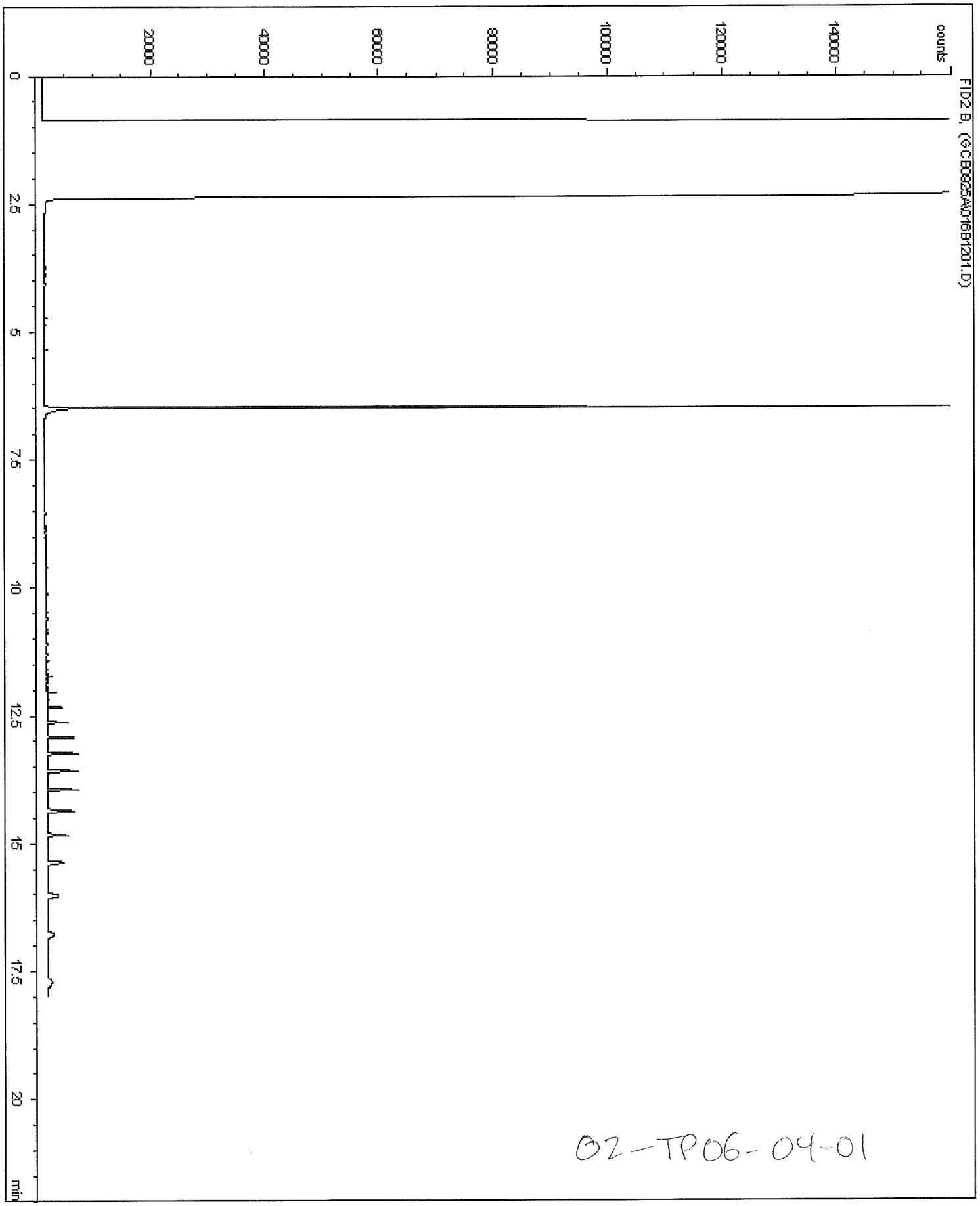
Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187



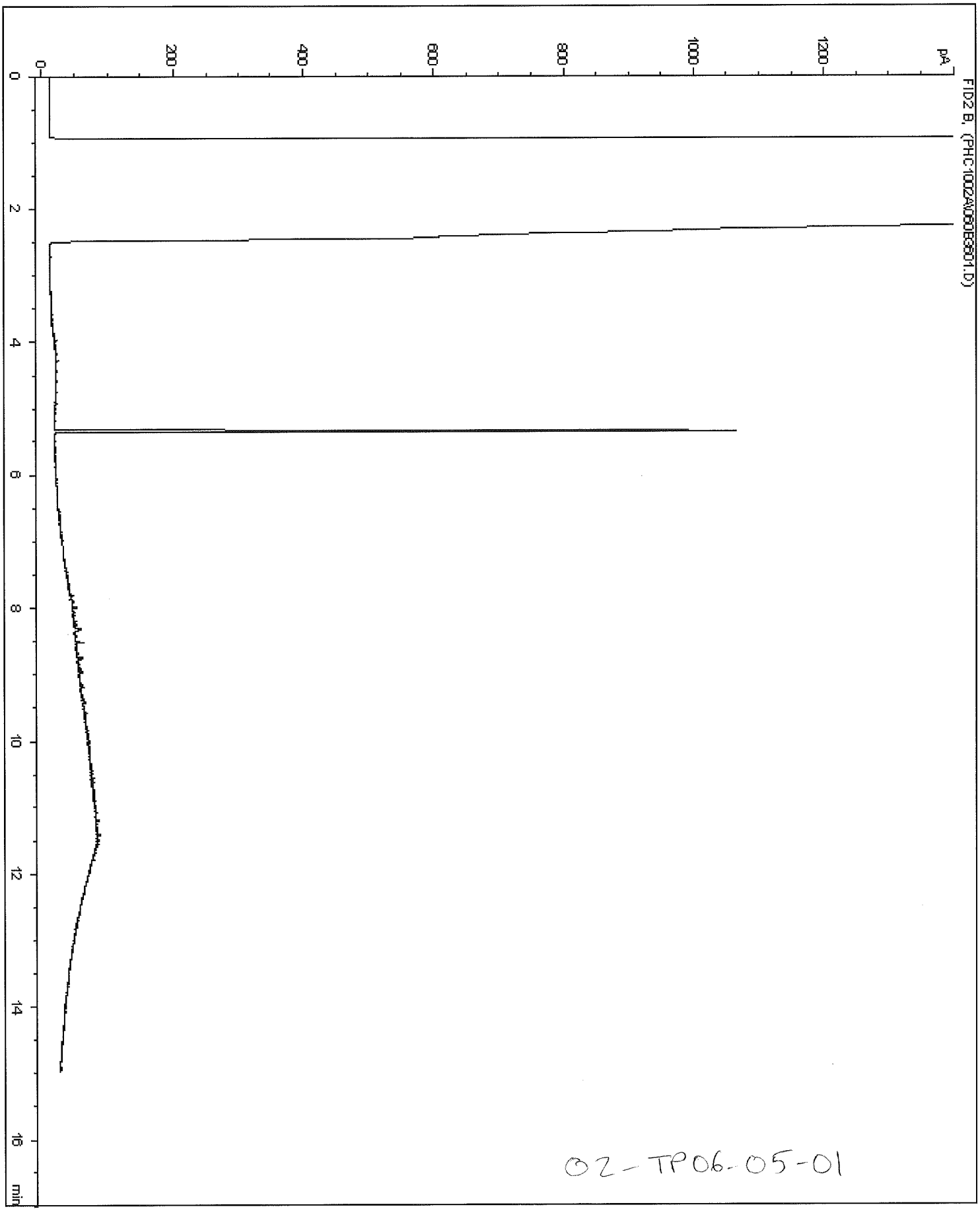
*** End of Report ***



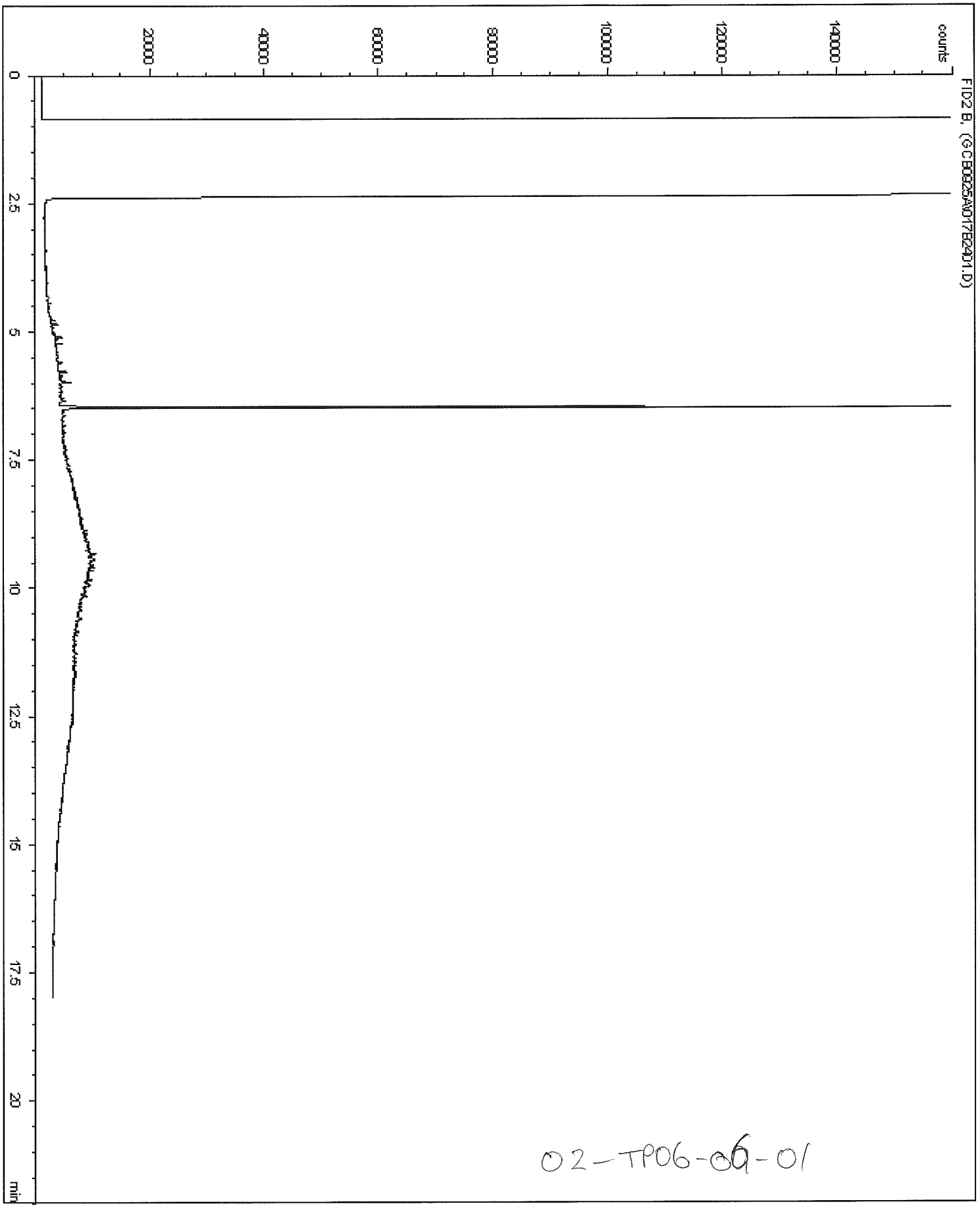
*** End of Report ***



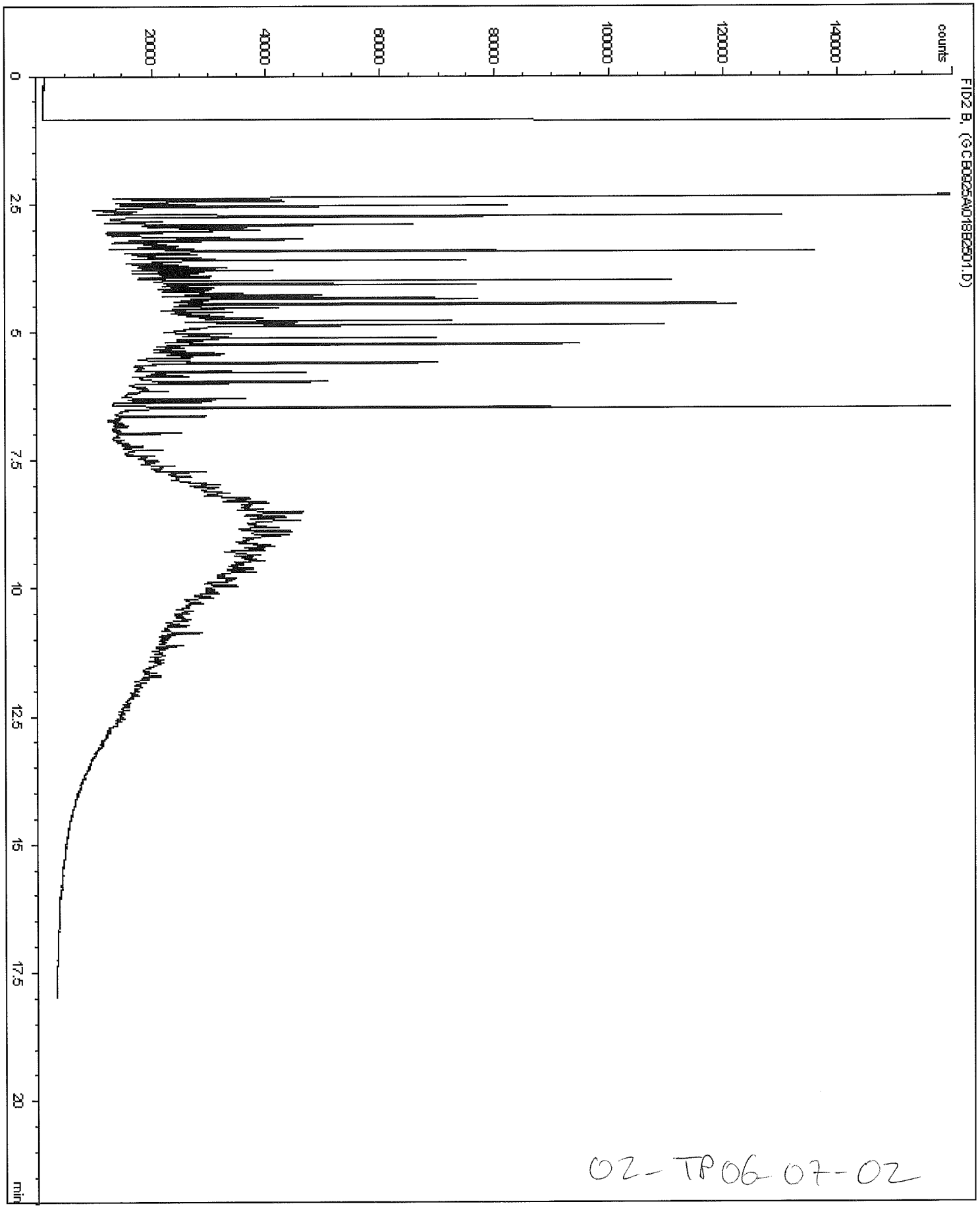
*** End of Report ***



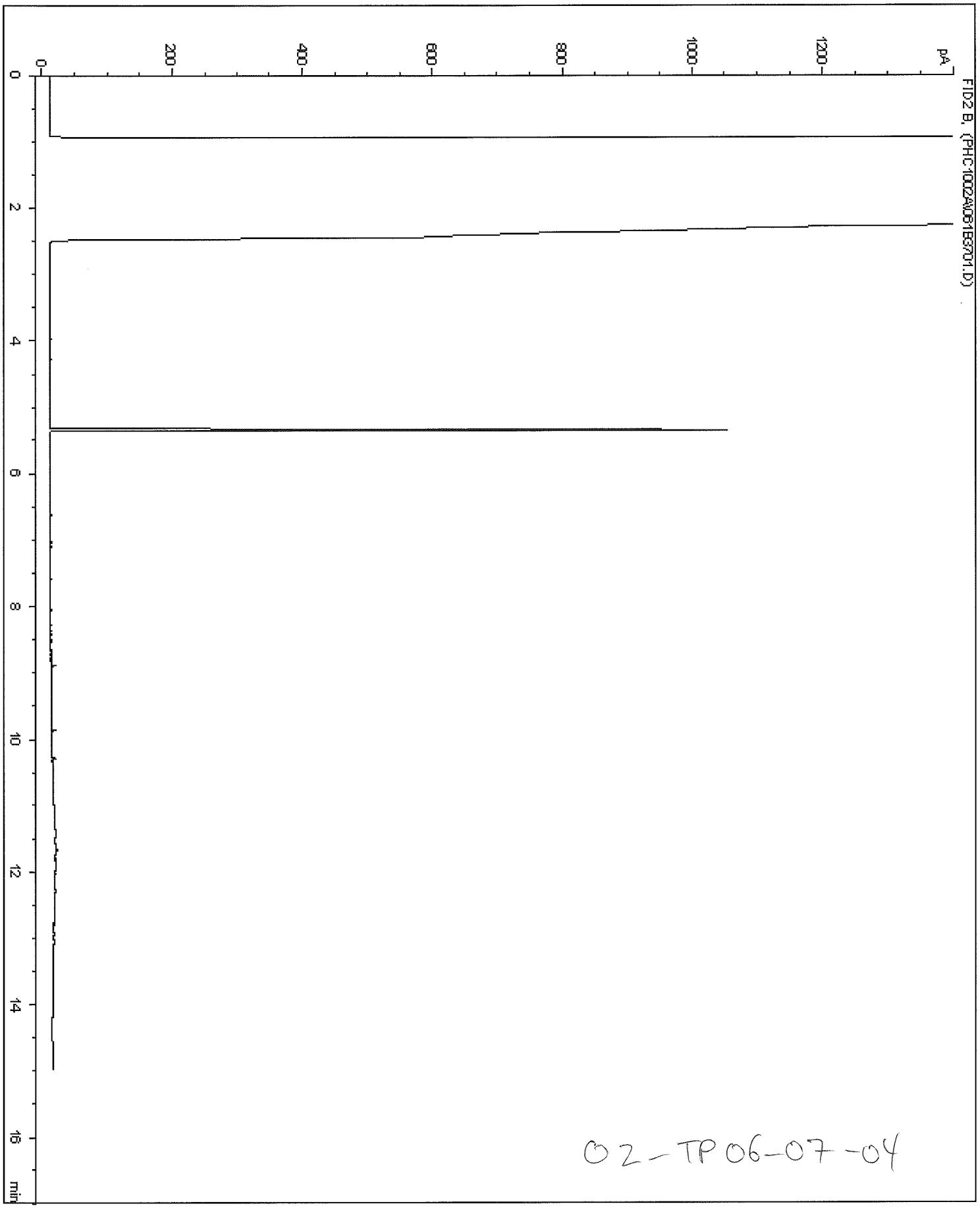
*** End of Report ***



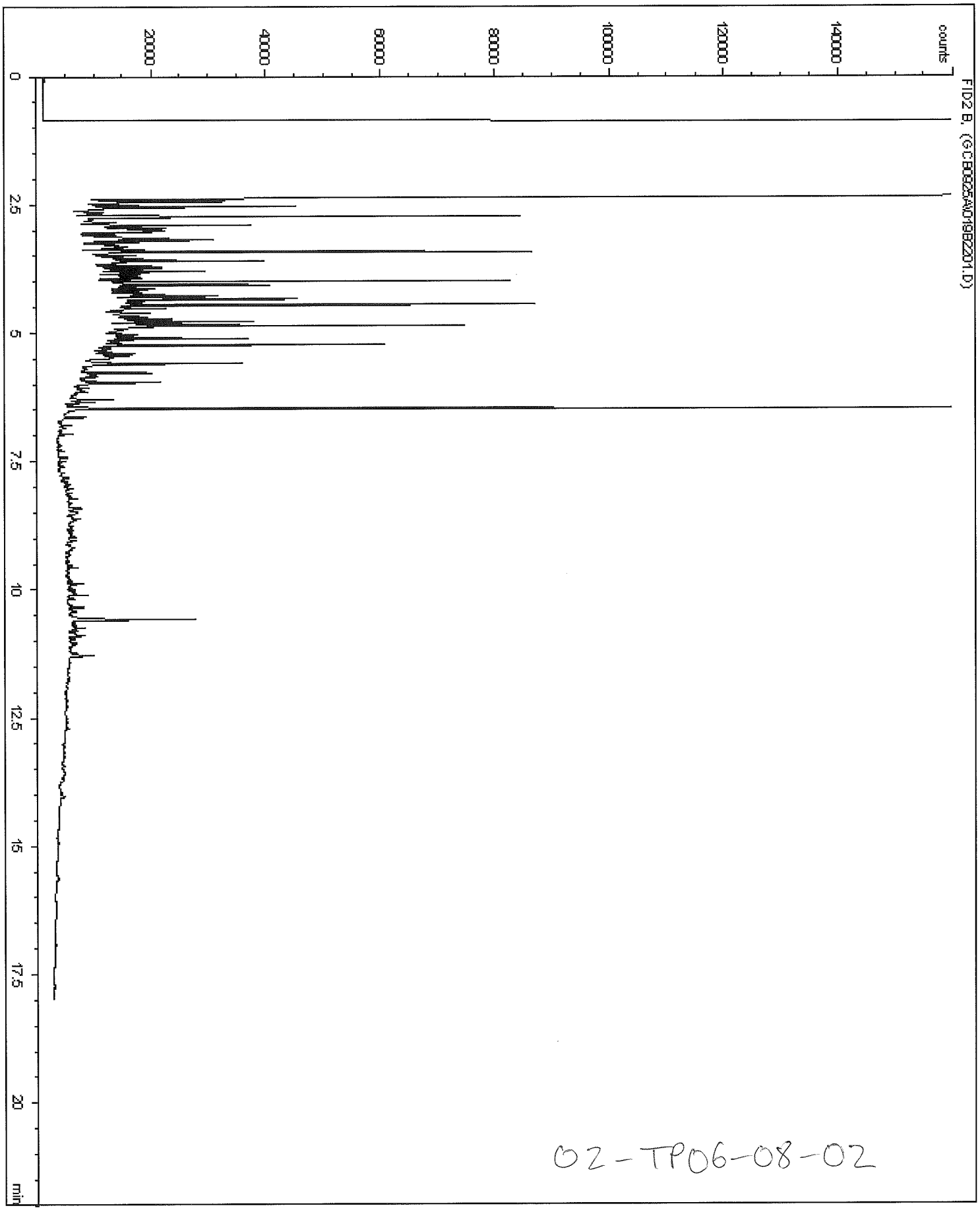
*** End of Report ***



*** End of Report ***

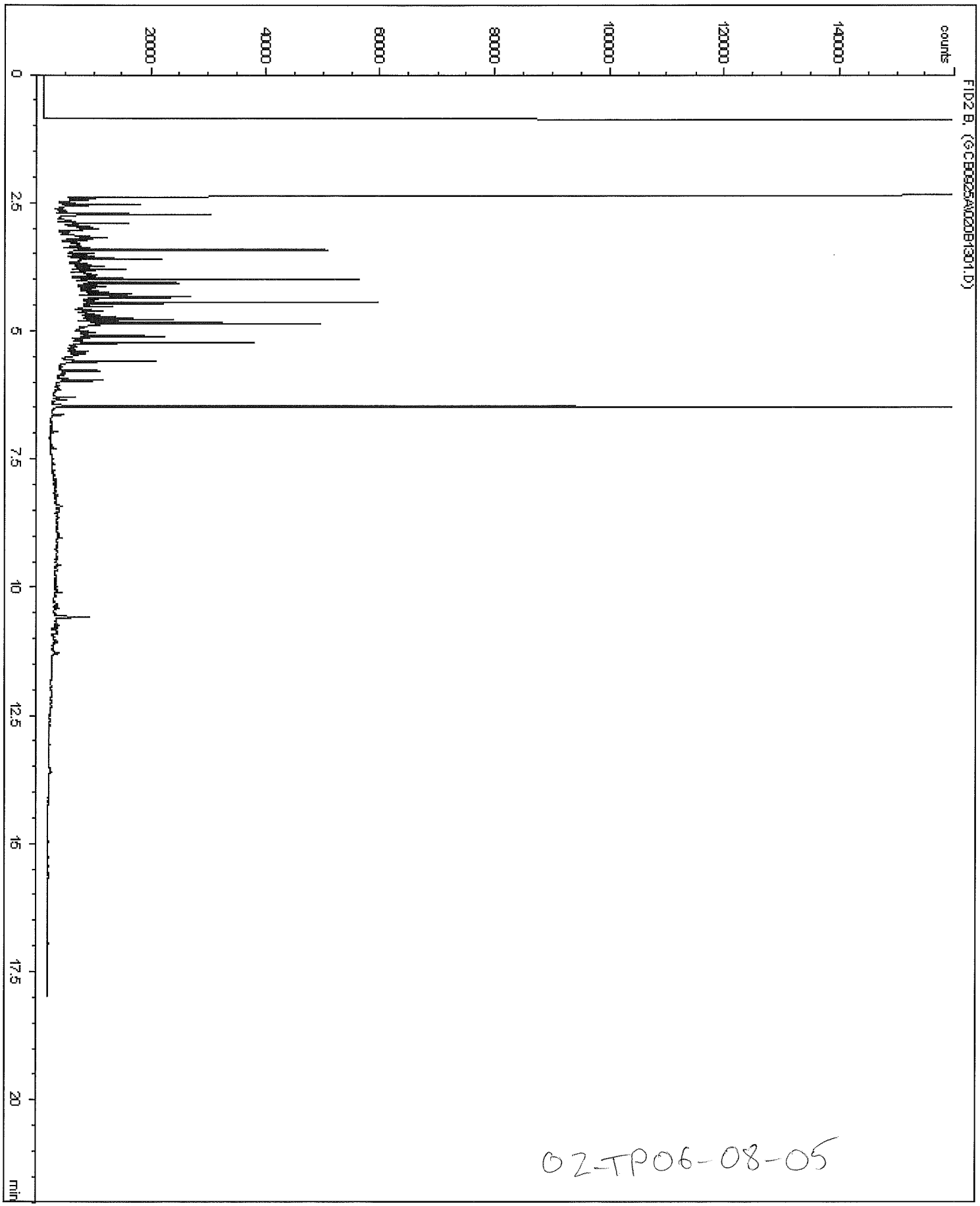


*** End of Report ***

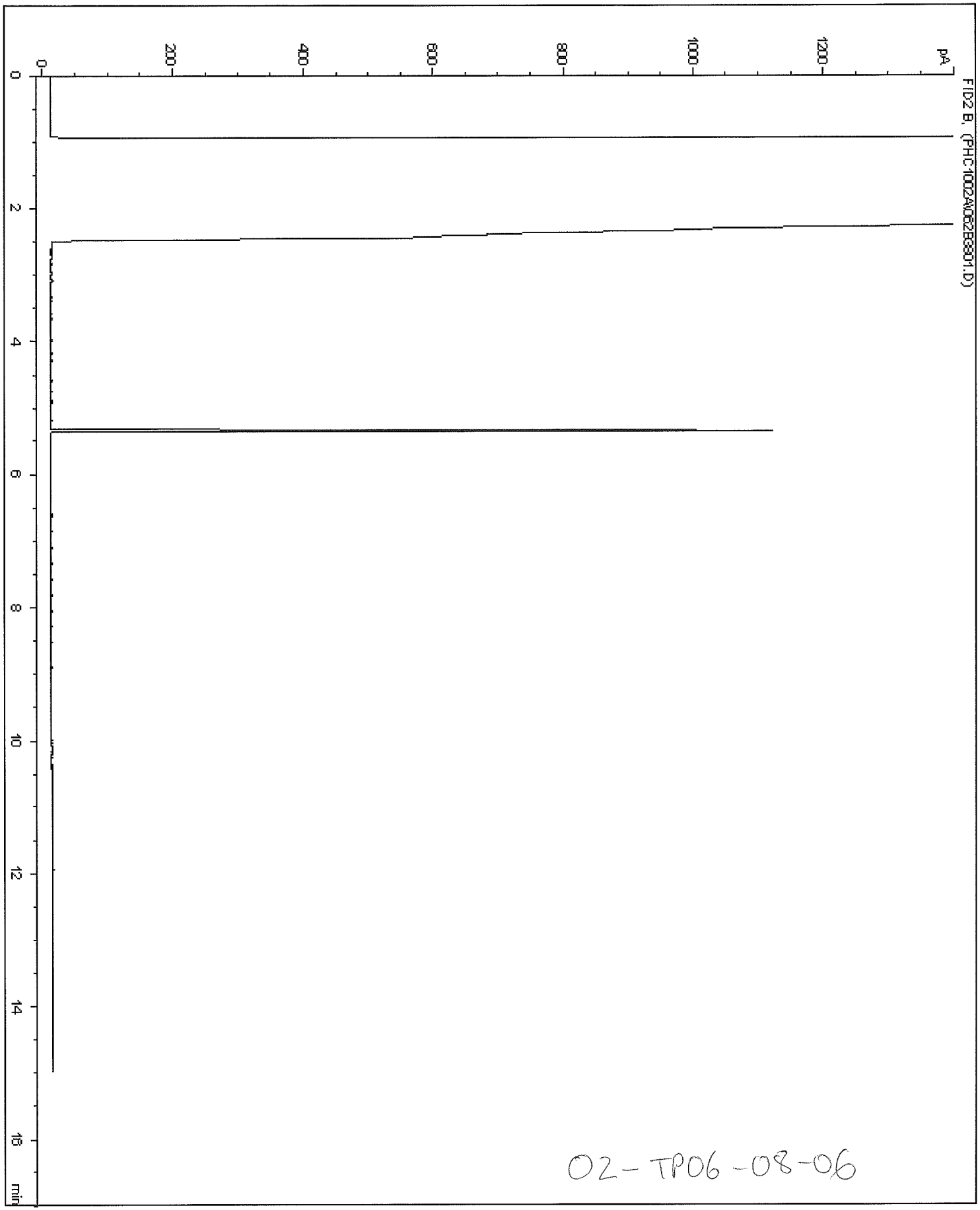


02-TP06-08-02

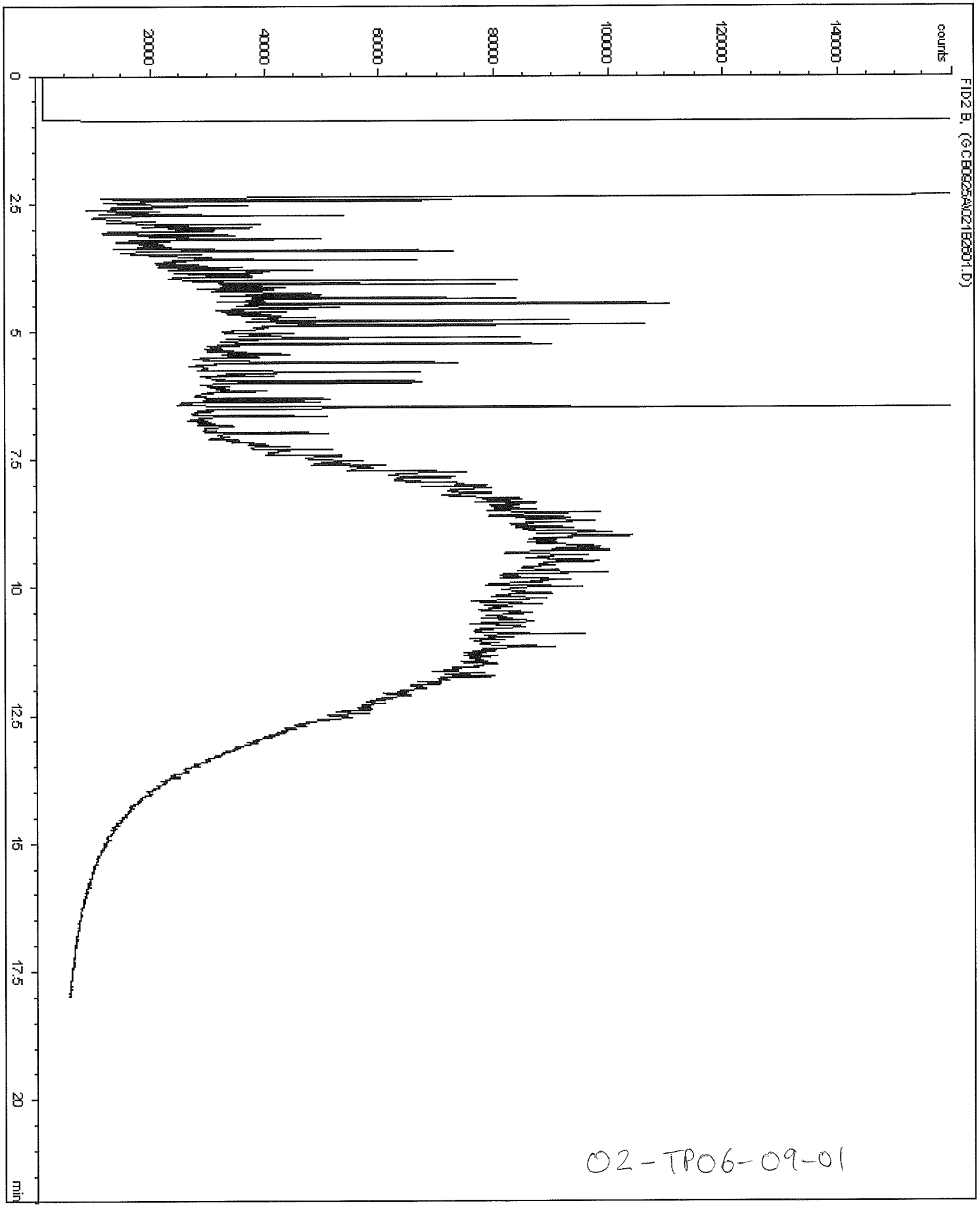
*** End of Report ***



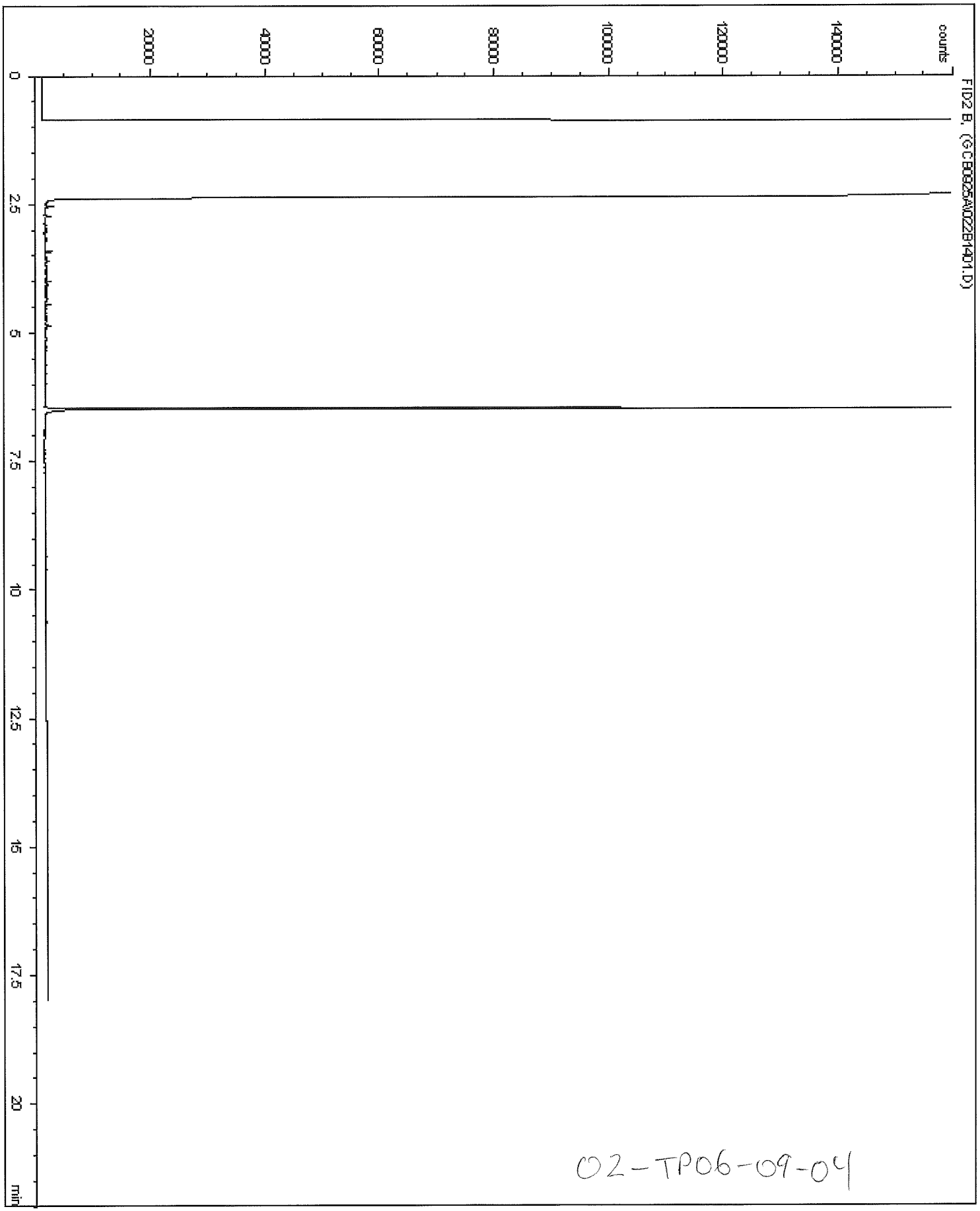
*** End of Report ***



*** End of Report ***

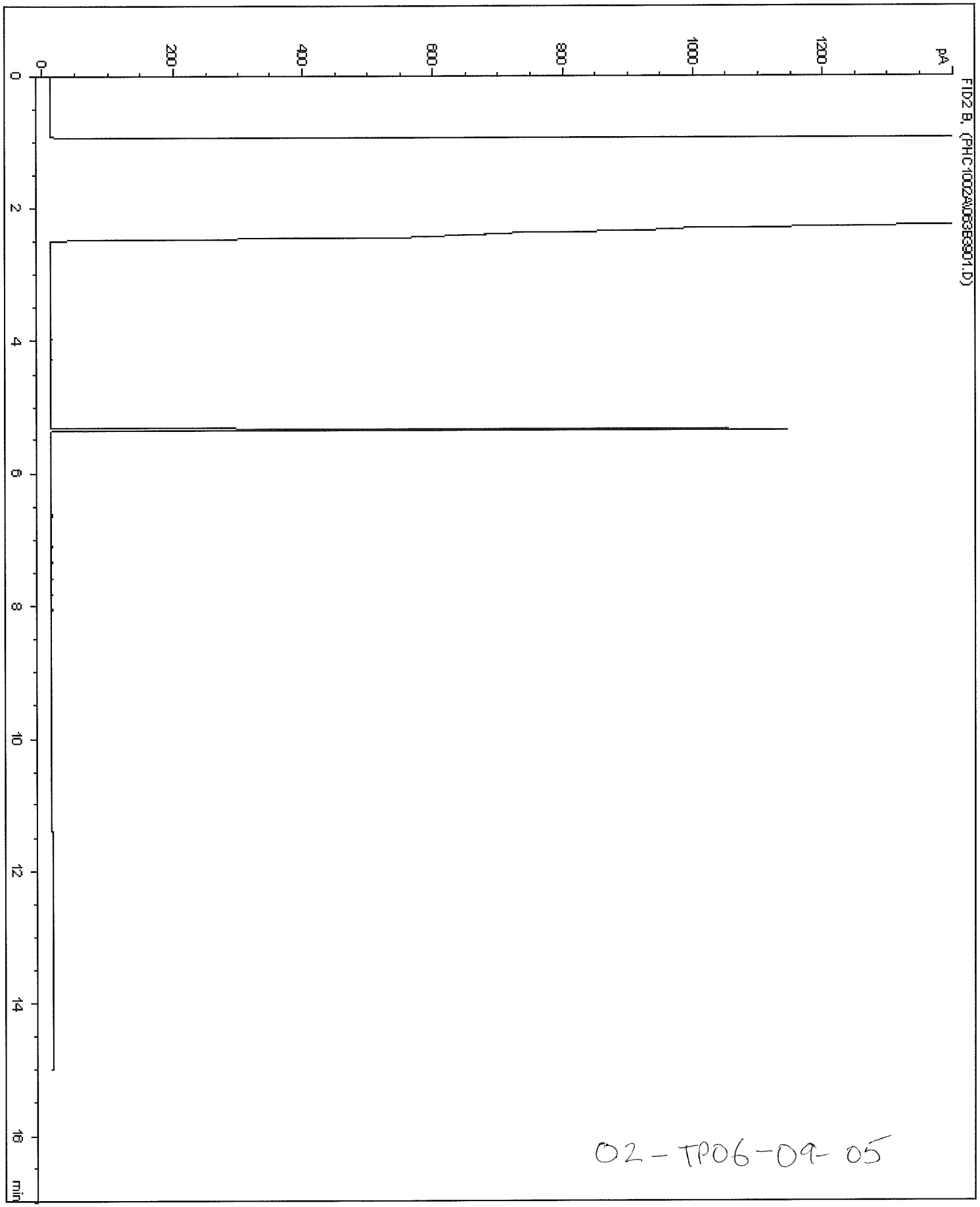


*** End of Report ***

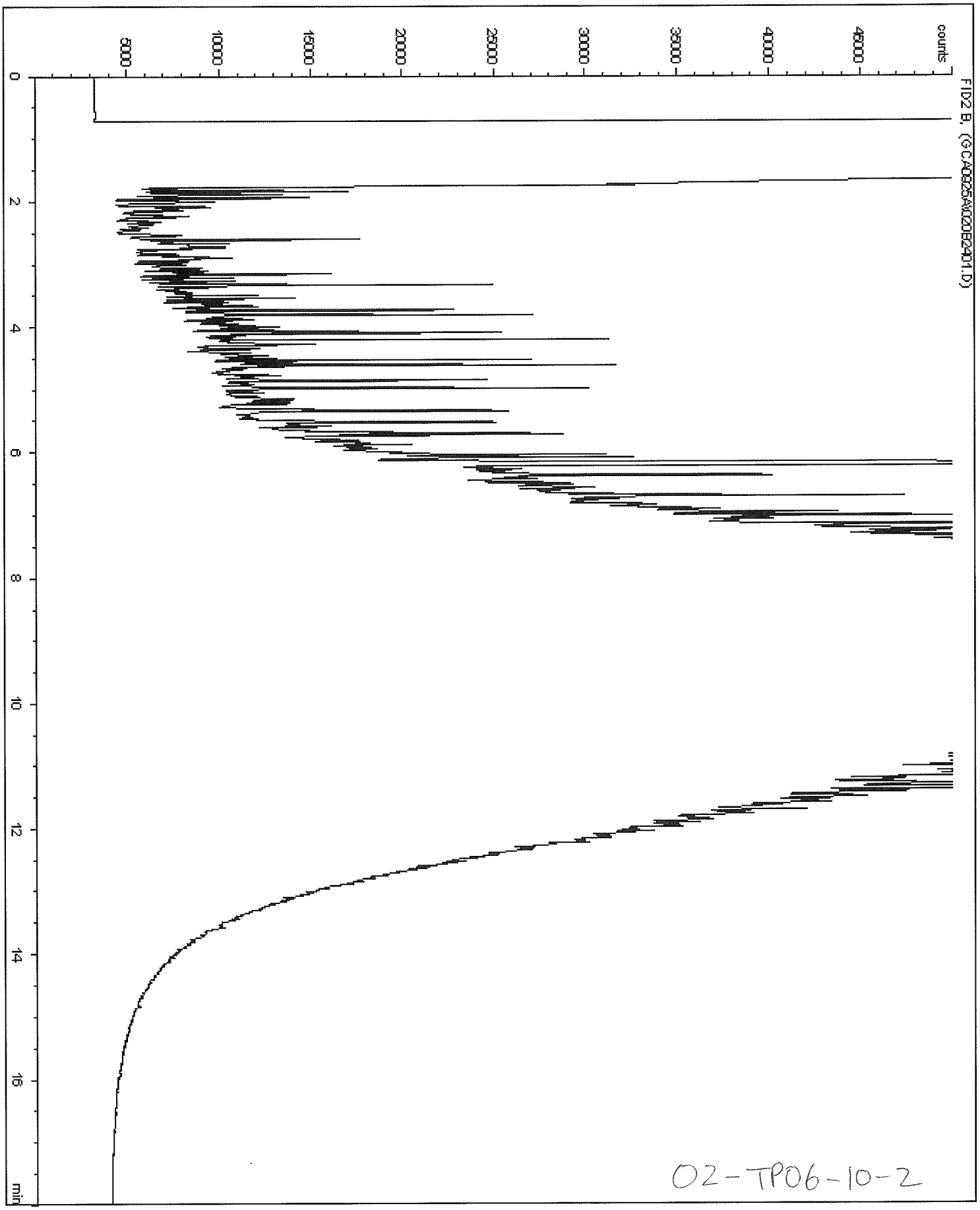


02-TP06-09-04

*** End of Report ***



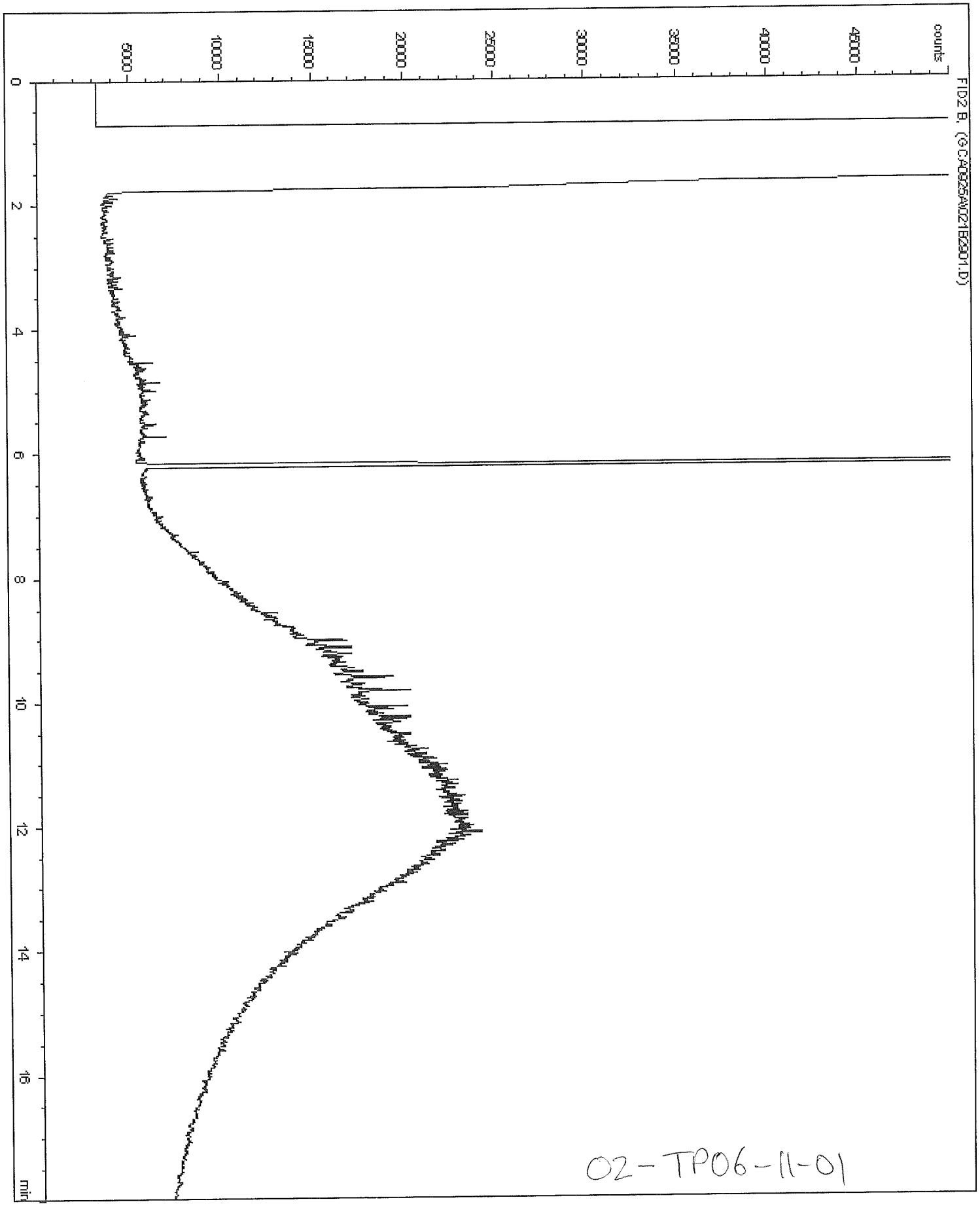
*** End of Report ***



*** End of Report ***

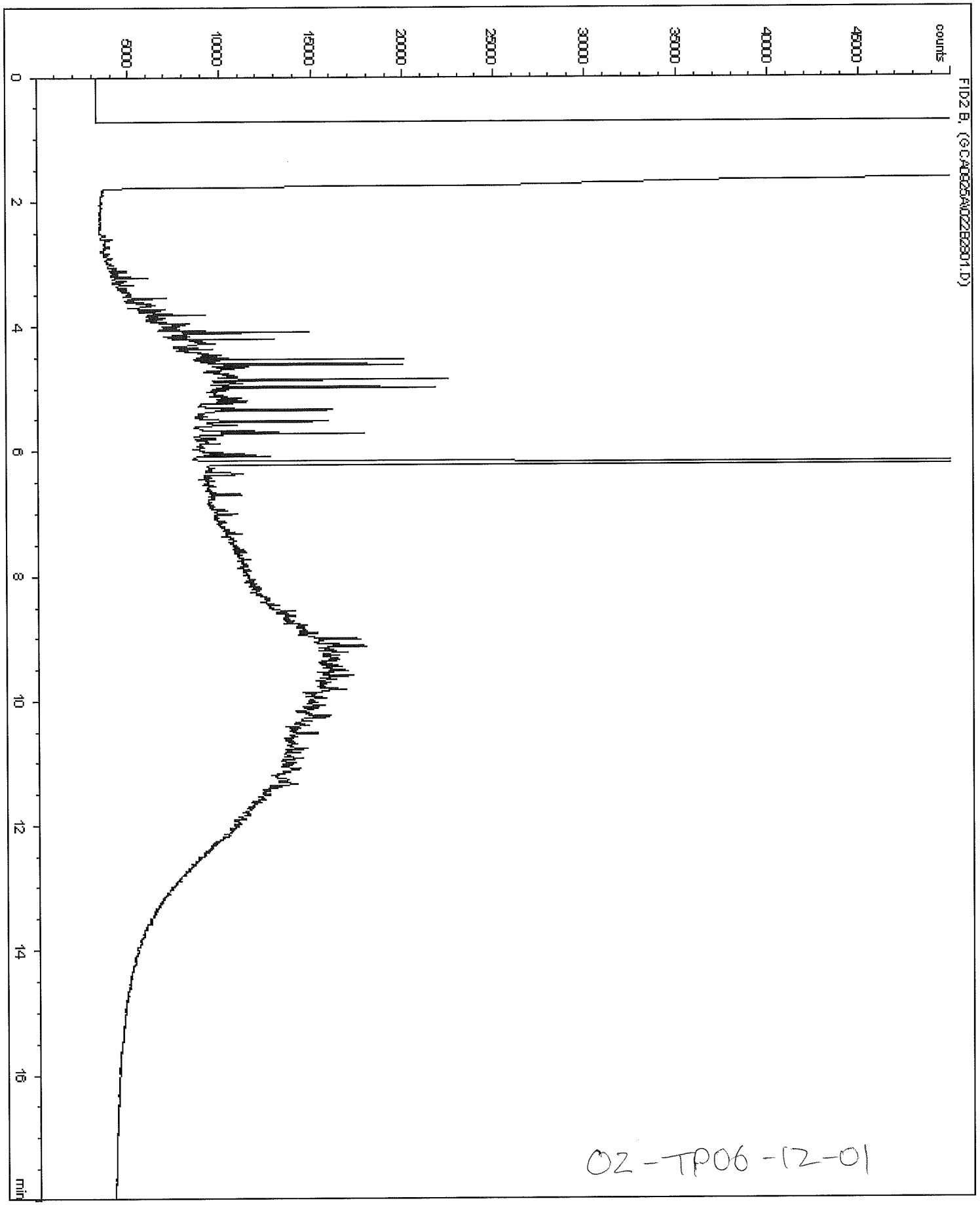
Data File D:\HPCHEM\1\DATA\GCA0925A\021B2901.D

Sample Name: C87538

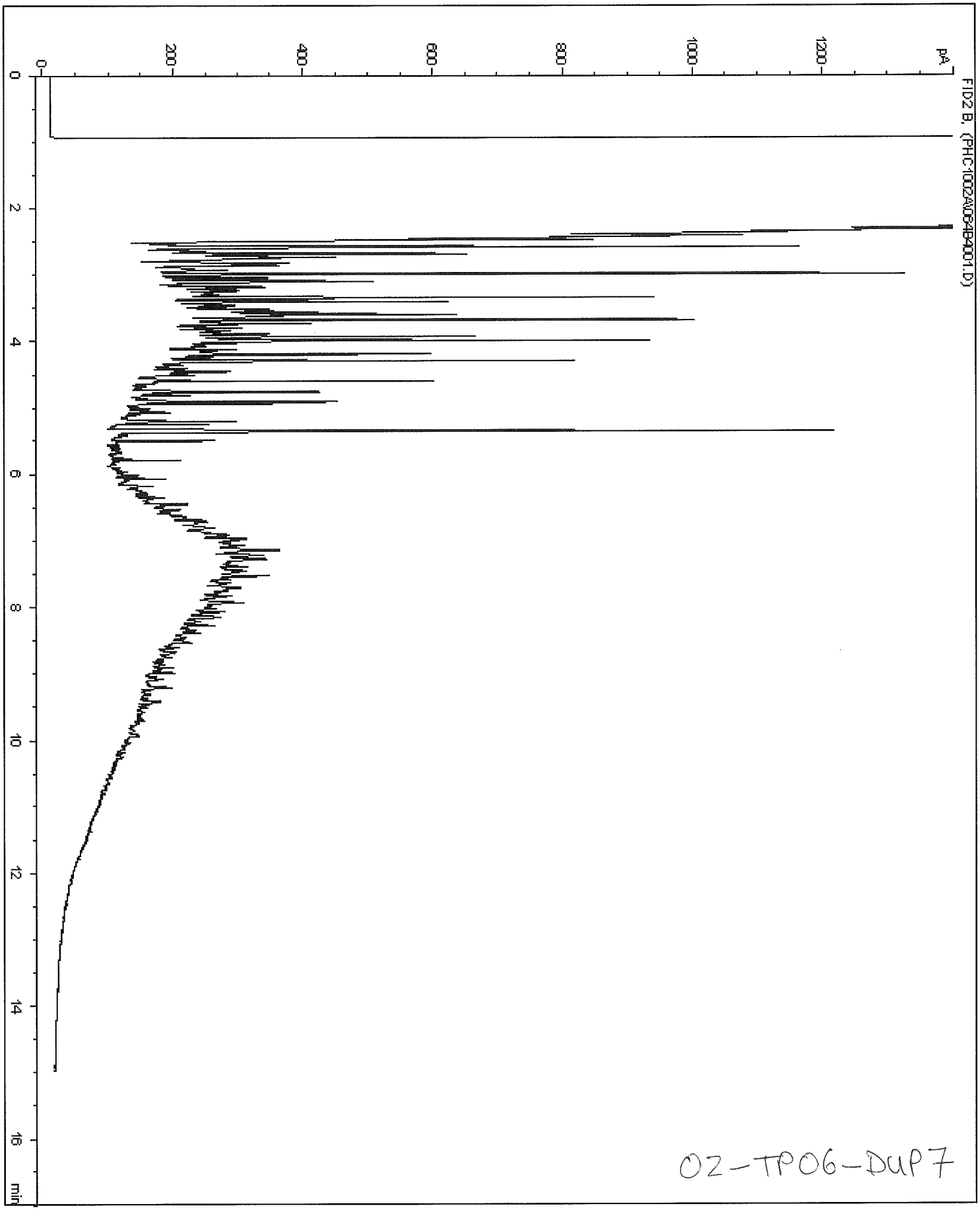


*** End of Report ***

Data File D:\HPCHEM\1\DATA\GCA0925A\022B2801.D Sample Name: C87551



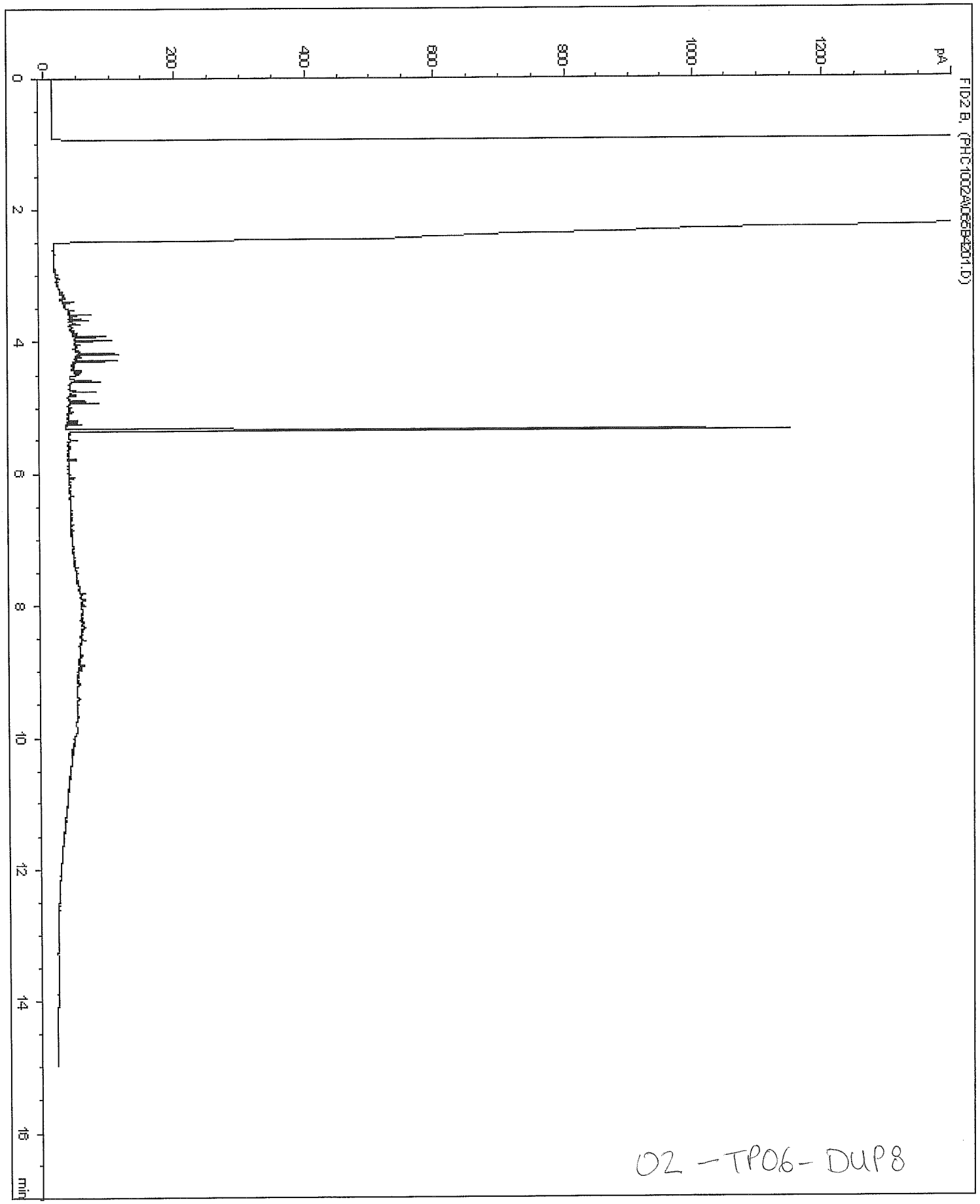
*** End of Report ***



*** End of Report ***

Data File C:\HPCHEM\1\DATA\PHC1002A\065B4201.D

Sample Name: C87553



*** End of Report ***

Maxxam Analytics Inc

Your Project #: 1256.0601 INUVIK
Your C.O.C. #: 115777, 115779, 115778

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
308-1080-MAINLAND STREET
VANCOUVER, BC
CANADA --- ---

Report Date: 2006/11/07

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A644354
Received: 2006/09/21, 10:20

Sample Matrix: Leachate
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury (Leachable) (1)	4	2006/10/14	2006/10/16	BRN SOP-00044 V1.0	Based on EPA 245.1
Metals - SWEP undigested (1)	4	2006/10/14	2006/10/16	BRN SOP-00051 V1.0	BC Reg 63/88

Sample Matrix: Soil
Samples Received: 21

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble)	8	N/A	2006/10/05	EENVSOP-00034 v1	Carter SSMA 12.2.2
BTEX by HS GC/MS (MeOH extract)	6	2006/09/23	2006/09/25	EENVSOP-00005 V.2	EPA 8260B/5021A
BTEX by HS GC/MS (MeOH extract)	4	2006/10/04	2006/10/05	EENVSOP-00005 V.2	EPA 8260B/5021A
Hexavalent Chromium (1)	8	2006/10/05	2006/10/05	EENVSOP-00067 v4	SM 3500-Cr B
F1-BTEX Soil Cal	6	2006/09/23	2006/09/23		
F1-BTEX Soil Cal	4	2006/10/05	2006/10/05		
CCME Hydrocarbons (F1; MeOH; HSGC)	6	2006/09/23	2006/09/25	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F1; MeOH; HSGC)	4	2006/10/04	2006/10/05	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F1; MeOH; HSGC)	2	2006/10/05	2006/10/05	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F2-F4 in soil)	6	2006/09/25	2006/09/25	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	5	2006/10/05	2006/10/05	EENVSOP-00007 v4	CWS PHCS Tier 1
Mercury in Soil by CVAA	8	N/A	2006/10/05	EENVSOP-00032 V.1	EPA SW846 7471B
Elements by ICP -Soils	1	N/A	2006/11/02	EENVSOP-00034 v1	EPA 6010C
Elements by ICPMS - Soils	8	N/A	2006/10/06	EENVSOP-00123 v2	EPA 6020A
Elements by ICPMS - Soils	1	N/A	2006/11/02	EENVSOP-00123 v2	EPA 6020A
Moisture	6	N/A	2006/09/23	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	14	N/A	2006/10/05	EENVWI-00023 v2	Carter SSMA 51.2
Moisture (2)	1	N/A	2006/10/27		
PAH in Soil by GC/MS (Extended)	1	2006/09/25	2006/09/26	EENVSOP-00010 v3	EPA 3510C/8270D
PAH in Soil by GC/MS (Extended)	5	2006/10/05	2006/10/06	EENVSOP-00010 v3	EPA 3510C/8270D
Polychlorinated Biphenyls (2)	3	N/A	2006/10/13	CAL SOP-00149	GC/ECD-EXTRACTION
Polychlorinated Biphenyls (2)	1	N/A	2006/10/27	CAL SOP-00149	GC/ECD-EXTRACTION
VOCs in Soil by P&T GC/MS (Std List)	3	N/A	2006/10/05	EENVSOP-00003 V.3	EPA SW843 8260 B

(1) This test was performed by Maxxam Vancouver

(2) This test was performed by Maxxam Calgary
(3) Results reported on a dry weight basis.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Jeremy Wakaruk
07 Nov 2006 09:12:07 -07:00

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5L2 Telephone(780) 465-1212 FAX(780) 450-4187

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

CCME METALS PACKAGE ON SOILS (SOIL)

Maxxam ID		C87522	C87523	C87526	C87527		
Sampling Date		2006/09/19	2006/09/19	2006/09/19	2006/09/18		
COC Number		115779	115779	115779	115778		
	Units	**10-TP06-01-01**	**10-TP06-01-02**	**10-TP06-02-03**	**10-TP06-02-04**	**RDL**	**QC Batch**
Elements							
Soluble (Hot water) Boron (B)	mg/kg	1.7	0.6	1.4	1.5	0.1	1297146
Hex. Chromium (Cr 6+)	mg/kg	<0.2	<0.2	<0.2	<0.2	0.2	1296442
Mercury (Hg)	mg/kg	<0.05	<0.05	<0.05	<0.05	0.05	1296878
Total Antimony (Sb)	mg/kg	<1	<1	<1	<1	1	1297777
Total Arsenic (As)	mg/kg	8	2	8	11	1	1297777
Total Barium (Ba)	mg/kg	114	69	90	76	10	1297777
Total Beryllium (Be)	mg/kg	0.7	0.8	0.5	0.6	0.4	1297777
Total Cadmium (Cd)	mg/kg	0.3	0.3	0.2	0.2	0.1	1297777
Total Chromium (Cr)	mg/kg	31	34	32	35	1	1297777
Total Cobalt (Co)	mg/kg	10	11	10	10	1	1297777
Total Copper (Cu)	mg/kg	22	10	20	23	5	1297777
Total Lead (Pb)	mg/kg	12	10	13	25	1	1297777
Total Molybdenum (Mo)	mg/kg	0.7	<0.4	0.7	1.3	0.4	1297777
Total Nickel (Ni)	mg/kg	24	28	24	25	1	1297777
Total Selenium (Se)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.5	1297777
Total Silver (Ag)	mg/kg	<1	<1	<1	<1	1	1297777
Total Thallium (Tl)	mg/kg	<0.3	<0.3	<0.3	<0.3	0.3	1297777
Total Tin (Sn)	mg/kg	<1	<1	<1	1	1	1297777
Total Vanadium (V)	mg/kg	17	12	16	14	1	1297777
Total Zinc (Zn)	mg/kg	52	56	45	49	10	1297777

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

CCME METALS PACKAGE ON SOILS (SOIL)

Maxxam ID		C87531	C87532	C87534	C87536		
Sampling Date		2006/09/18	2006/09/18	2006/09/18	2006/09/18		
COC Number		115778	115778	115778	115778		
	Units	**10-TP06-03-03**	**10-TP06-03-04**	**10-TP06-04-02**	**10-TP06-04-04**	**RDL**	**QC Batch**
Elements							
Soluble (Hot water) Boron (B)	mg/kg	0.7	0.6	0.4	0.3	0.1	1297146
Hex. Chromium (Cr 6+)	mg/kg	<0.2	<0.2	<0.2	<0.2	0.2	1296442
Mercury (Hg)	mg/kg	0.07	<0.05	<0.05	<0.05	0.05	1296878
Total Antimony (Sb)	mg/kg	<1	1	<1	<1	1	1297777
Total Arsenic (As)	mg/kg	13	6	5	4	1	1297777
Total Barium (Ba)	mg/kg	139	204	63	64	10	1297777
Total Beryllium (Be)	mg/kg	0.7	0.8	0.5	0.9	0.4	1297777
Total Cadmium (Cd)	mg/kg	0.2	1.3	0.2	0.2	0.1	1297777
Total Chromium (Cr)	mg/kg	31	36	24	33	1	1297777
Total Cobalt (Co)	mg/kg	11	11	7	12	1	1297777
Total Copper (Cu)	mg/kg	69	22	11	13	5	1297777
Total Lead (Pb)	mg/kg	20	918	31	13	1	1297777
Total Molybdenum (Mo)	mg/kg	1.6	0.8	0.8	<0.4	0.4	1297777
Total Nickel (Ni)	mg/kg	29	29	18	28	1	1297777
Total Selenium (Se)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.5	1297777
Total Silver (Ag)	mg/kg	<1	<1	<1	<1	1	1297777
Total Thallium (Tl)	mg/kg	<0.3	<0.3	<0.3	<0.3	0.3	1297777
Total Tin (Sn)	mg/kg	<1	<1	<1	<1	1	1297777
Total Vanadium (V)	mg/kg	22	20	10	13	1	1297777
Total Zinc (Zn)	mg/kg	62	449	39	57	10	1297777

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

CCMEHC MECHANCIAL EXTRACTION (SOIL)

Maxxam ID		C87504	C87507	C87512		
Sampling Date		2006/09/19	2006/09/19	2006/09/19		
COC Number		115777	115777	115777		
	Units	**02-TP06-13-02**	**02-TP06-14-02**	**02-TP06-15-02**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	20.3	5.4	10.6	0.3	1282388
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	<10	<10	<10	10	1282387
F1 (C06-C10) - BTEX	mg/kg	<10	<10	<10	10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	15	11	<10	10	1283128
F3 (C16-C34 Hydrocarbons)	mg/kg	75	129	<10	10	1283128
F4 (C34-C50 Hydrocarbons)	mg/kg	31	72	<10	10	1283128
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	1	1283128
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	<0.0050	0.0050	1282386
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	1282386
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	1282386
Xylenes (Total)	mg/kg	<0.020	<0.020	<0.020	0.020	1282386
m & p-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	1282386
o-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	1282386
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	87	87		1282387
O-TERPHENYL (sur.)	%	83	78	74		1283128
4-BROMOFLUOROBENZENE (sur.)	%	100	98	100		1282386
D10-ETHYLBENZENE (sur.)	%	120	117	120		1282386
D4-1,2-DICHLOROETHANE (sur.)	%	96	92	96		1282386
D8-TOLUENE (sur.)	%	101	99	100		1282386

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

CCMEHC MECHANCIAL EXTRACTION (SOIL)

Maxxam ID		C87515	C87516	C87521		
Sampling Date		2006/09/19	2006/09/19	2006/09/19		
COC Number		115779	115779	115779		
	Units	**02-TP06-16-01**	**02-TP06-17-01**	**02-TP06-18-05**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	6.2	7.6	12.7	0.3	1282388
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	<10	11	21	10	1282387
F1 (C06-C10) - BTEX	mg/kg	<10	11	21	10	1282424
F2 (C10-C16 Hydrocarbons)	mg/kg	588	602	<10	10	1283128
F3 (C16-C34 Hydrocarbons)	mg/kg	28500	14200	<10	10	1283128
F4 (C34-C50 Hydrocarbons)	mg/kg	3420	8660	<10	10	1283128
Reached Baseline at C50	mg/kg	No	No	Yes	1	1283128
Volatiles						
Benzene	mg/kg	<0.0050	<0.0050	0.0069	0.0050	1282386
Toluene	mg/kg	<0.020	<0.020	<0.020	0.020	1282386
Ethylbenzene	mg/kg	<0.010	<0.010	<0.010	0.010	1282386
Xylenes (Total)	mg/kg	<0.020	<0.020	0.037	0.020	1282386
m & p-Xylene	mg/kg	<0.020	<0.020	<0.020	0.020	1282386
o-Xylene	mg/kg	<0.020	<0.020	0.037	0.020	1282386
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	82	80	83		1282387
O-TERPHENYL (sur.)	%	110	107	78		1283128
4-BROMOFLUOROBENZENE (sur.)	%	97	98	104		1282386
D10-ETHYLBENZENE (sur.)	%	111	116	125		1282386
D4-1,2-DICHLOROETHANE (sur.)	%	97	96	90		1282386
D8-TOLUENE (sur.)	%	99	100	100		1282386

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

CCMEHC MECHANCIAL EXTRACTION (SOIL)

Maxxam ID		C87531	C87537		
Sampling Date		2006/09/18	2006/09/18		
COC Number		115778	115778		
	Units	**10-TP06-03-03**	**02-TP06-DUP-09**	**RDL**	**QC Batch**
Physical Properties					
Moisture	%	13.3	5.2	0.3	1296803
Ext. Pet. Hydrocarbon					
F1 (C06-C10)	mg/kg	<10	<10	10	1295900
F1 (C06-C10) - BTEX	mg/kg	<10	<10	10	1296445
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	564	10	1296619
F3 (C16-C34 Hydrocarbons)	mg/kg	15	31000	10	1296619
F4 (C34-C50 Hydrocarbons)	mg/kg	58	3630	10	1296619
Reached Baseline at C50	mg/kg	Yes	Yes	1	1296619
Volatiles					
Benzene	mg/kg	<0.0050	<0.0050	0.0050	1295794
Toluene	mg/kg	<0.020	<0.020	0.020	1295794
Ethylbenzene	mg/kg	<0.010	<0.010	0.010	1295794
Xylenes (Total)	mg/kg	<0.020	<0.020	0.020	1295794
m & p-Xylene	mg/kg	<0.020	<0.020	0.020	1295794
o-Xylene	mg/kg	<0.020	<0.020	0.020	1295794
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	89	103		1295900
O-TERPHENYL (sur.)	%	82	86		1296619
4-BROMOFLUOROBENZENE (sur.)	%	97	105		1295794
D10-ETHYLBENZENE (sur.)	%	105	100		1295794
D4-1,2-DICHLOROETHANE (sur.)	%	82	105		1295794
D8-TOLUENE (sur.)	%	101	104		1295794

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

EXTENDED METALS PACKAGE ON SOIL (SOIL)

Maxxam ID		C87515		
Sampling Date		2006/09/19		
COC Number		115779		
	Units	**02-TP06-16-01**	**RDL**	**QC Batch**
Elements				
Total Aluminum (Al)	mg/kg	10100	10	1332906
Total Antimony (Sb)	mg/kg	<1	1	1332769
Total Arsenic (As)	mg/kg	6	1	1332769
Total Barium (Ba)	mg/kg	84	10	1332769
Total Beryllium (Be)	mg/kg	1.0	0.4	1332769
Total Boron (B)	mg/kg	15	2	1332906
Total Cadmium (Cd)	mg/kg	0.3	0.1	1332769
Total Calcium (Ca)	mg/kg	82100	50	1332906
Total Chromium (Cr)	mg/kg	16	1	1332769
Total Cobalt (Co)	mg/kg	13	1	1332769
Total Copper (Cu)	mg/kg	16	5	1332769
Total Iron (Fe)	mg/kg	24200	10	1332906
Total Lead (Pb)	mg/kg	22	1	1332769
Total Lithium (Li)	mg/kg	24	10	1332906
Total Magnesium (Mg)	mg/kg	22900	20	1332906
Total Manganese (Mn)	mg/kg	381	10	1332906
Total Molybdenum (Mo)	mg/kg	1.4	0.4	1332769
Total Nickel (Ni)	mg/kg	27	1	1332769
Total Phosphorus (P)	mg/kg	725	20	1332906
Total Potassium (K)	mg/kg	2250	30	1332906
Total Selenium (Se)	mg/kg	<0.5	0.5	1332769
Total Silver (Ag)	mg/kg	<1	1	1332769
Total Sodium (Na)	mg/kg	119	50	1332906
Total Strontium (Sr)	mg/kg	87	10	1332906
Total Sulphur (S)	mg/kg	900	20	1332906
Total Thallium (Tl)	mg/kg	<0.3	0.3	1332769
Total Tin (Sn)	mg/kg	<1	1	1332769
Total Uranium (U)	mg/kg	<1	1	1332769
Total Vanadium (V)	mg/kg	17	1	1332769
Total Zinc (Zn)	mg/kg	178	10	1332769

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

PAHS SOIL CCME (SOIL)

Maxxam ID		C87515		C87523	C87525		
Sampling Date		2006/09/19		2006/09/19	2006/09/19		
COC Number		115779		115779	115779		
	Units	**02-TP06-16-01**	**QC Batch**	**10-TP06-01-02**	**10-TP06-02-02**	**RDL**	**QC Batch**
Polycyclic Aromatics							
Naphthalene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
2-Methylnaphthalene	mg/kg	0.21	1282944	<0.05	<0.05	0.05	1296592
Acenaphthylene	mg/kg	0.49	1282944	<0.05	<0.05	0.05	1296592
Acenaphthene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Fluorene	mg/kg	0.18	1282944	<0.05	<0.05	0.05	1296592
Phenanthrene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Anthracene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Fluoranthene	mg/kg	0.07	1282944	<0.05	<0.05	0.05	1296592
Pyrene	mg/kg	0.27	1282944	<0.05	<0.05	0.05	1296592
Benzo(a)anthracene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Chrysene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Benzo(b&j)fluoranthene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Benzo(k)fluoranthene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Benzo(a)pyrene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Dibenz(a,h)anthracene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Benzo(g,h,i)perylene	mg/kg	<0.05	1282944	<0.05	<0.05	0.05	1296592
Surrogate Recovery (%)							
D10-ANTHRACENE (sur.)	%	114	1282944	107	117		1296592
D12-BENZO(A)PYRENE (sur.)	%	80	1282944	98	89		1296592
D8-ACENAPHTHYLENE (sur.)	%	109	1282944	111	125		1296592
TERPHENYL-D14 (sur.)	%	121	1282944	116	102		1296592

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

PAHS SOIL CCME (SOIL)

Maxxam ID		C87532	C87535	C87537		
Sampling Date		2006/09/18	2006/09/18	2006/09/18		
COC Number		115778	115778	115778		
	Units	**10-TP06-03-04**	**10-TP06-04-03**	**02-TP06-DUP-09**	**RDL**	**QC Batch**
Polycyclic Aromatics						
Naphthalene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
2-Methylnaphthalene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Acenaphthylene	mg/kg	<0.05	<0.05	0.32	0.05	1296592
Acenaphthene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Fluorene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Phenanthrene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Anthracene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Fluoranthene	mg/kg	<0.05	<0.05	0.07	0.05	1296592
Pyrene	mg/kg	<0.05	<0.05	0.28	0.05	1296592
Benzo(a)anthracene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Chrysene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Benzo(b&j)fluoranthene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Dibenz(a,h)anthracene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	<0.05	0.05	1296592
Surrogate Recovery (%)						
D10-ANTHRACENE (sur.)	%	110	120	120		1296592
D12-BENZO(A)PYRENE (sur.)	%	100	99	92		1296592
D8-ACENAPHTHYLENE (sur.)	%	125	118	118		1296592
TERPHENYL-D14 (sur.)	%	125	116	111		1296592

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C87522	C87523	C87524	C87525		
Sampling Date		2006/09/19	2006/09/19	2006/09/19	2006/09/19		
COC Number		115779	115779	115779	115779		
	Units	**10-TP06-01-01**	**10-TP06-01-02**	**10-TP06-02-01**	**10-TP06-02-02**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	7.7	17.6	8.1	17.7	0.3	1296803
RDL = Reportable Detection Limit							

Maxxam ID		C87526	C87527	C87528	C87529		
Sampling Date		2006/09/19	2006/09/18	2006/09/18	2006/09/18		
COC Number		115779	115778	115778	115778		
	Units	**10-TP06-02-03**	**10-TP06-02-04**	**10-TP06-02-05**	**10-TP06-03-01**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	5.1	8.1	15.0	6.8	0.3	1296803
RDL = Reportable Detection Limit							

Maxxam ID		C87530		C87532	C87534	C87535		
Sampling Date		2006/09/18		2006/09/18	2006/09/18	2006/09/18		
COC Number		115778		115778	115778	115778		
	Units	**10-TP06-03-02**	**QC Batch**	**10-TP06-03-04**	**10-TP06-04-02**	**10-TP06-04-03**	**RDL**	**QC Batch**
Physical Properties								
Moisture	%	17.4	1324623	12.8	<0.3	9.9	0.3	1296803
RDL = Reportable Detection Limit								

Maxxam ID		C87536		
Sampling Date		2006/09/18		
COC Number		115778		
	Units	**10-TP06-04-04**	**RDL**	**QC Batch**
Physical Properties				
Moisture	%	18.4	0.3	1296803
RDL = Reportable Detection Limit				

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87523	C87524		C87528		
Sampling Date		2006/09/19	2006/09/19		2006/09/18		
COC Number		115779	115779		115778		
	Units	**10-TP06-01-02**	**10-TP06-02-01**	**QC Batch**	**10-TP06-02-05**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10)	mg/kg		<10	1296823	<10	10	1295900
F1 (C06-C10) - BTEX	mg/kg				<10	10	1296445
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	<10	1296619		10	
F3 (C16-C34 Hydrocarbons)	mg/kg	134	17	1296619		10	
F4 (C34-C50 Hydrocarbons)	mg/kg	389	43	1296619		10	
Reached Baseline at C50	mg/kg	Yes	Yes	1296619		1	
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%		102	1296823	105		1295900
O-TERPHENYL (sur.)	%	75	81	1296619			

RDL = Reportable Detection Limit

Maxxam ID		C87534		C87535		
Sampling Date		2006/09/18		2006/09/18		
COC Number		115778		115778		
	Units	**10-TP06-04-02**	**QC Batch**	**10-TP06-04-03**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	<10	1296823	<10	10	1295900
F1 (C06-C10) - BTEX	mg/kg			<10	10	1296445
F2 (C10-C16 Hydrocarbons)	mg/kg	<10	1296619		10	
F3 (C16-C34 Hydrocarbons)	mg/kg	39	1296619		10	
F4 (C34-C50 Hydrocarbons)	mg/kg	155	1296619		10	
Reached Baseline at C50	mg/kg	Yes	1296619		1	
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	81	1296823	104		1295900
O-TERPHENYL (sur.)	%	81	1296619			

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		C87522	C87528		C87530		
Sampling Date		2006/09/19	2006/09/18		2006/09/18		
COC Number		115779	115778		115778		
	Units	**10-TP06-01-01**	**10-TP06-02-05**	**QC Batch**	**10-TP06-03-02**	**RDL**	**QC Batch**
Polychlorinated Biphenyls							
Aroclor 1016	mg/kg	<0.01	<0.01	1305653	<0.01	0.01	1323829
Aroclor 1221	mg/kg	<0.01	<0.01	1305653	<0.01	0.01	1323829
Aroclor 1232	mg/kg	<0.01	<0.01	1305653	<0.01	0.01	1323829
Aroclor 1242	mg/kg	<0.01	<0.01	1305653	<0.01	0.01	1323829
Aroclor 1248	mg/kg	<0.01	<0.01	1305653	<0.01	0.01	1323829
Aroclor 1254	mg/kg	0.01	0.06	1305653	<0.01	0.01	1323829
Aroclor 1260	mg/kg	<0.01	0.03	1305653	<0.01	0.01	1323829
Aroclor 1262	mg/kg	<0.01	<0.01	1305653	<0.01	0.01	1323829
Aroclor 1268	mg/kg	<0.01	<0.01	1305653	<0.01	0.01	1323829
Total Aroclors	mg/kg	0.01	0.09	1305653	<0.01	0.01	1323829
Surrogate Recovery (%)							
NONACHLOROBIPHENYL (sur.)	%	89	92	1305653	90		1323829

RDL = Reportable Detection Limit

Maxxam ID		C87535		
Sampling Date		2006/09/18		
COC Number		115778		
	Units	**10-TP06-04-03**	**RDL**	**QC Batch**
Polychlorinated Biphenyls				
Aroclor 1016	mg/kg	<0.01	0.01	1305653
Aroclor 1221	mg/kg	<0.01	0.01	1305653
Aroclor 1232	mg/kg	<0.01	0.01	1305653
Aroclor 1242	mg/kg	<0.01	0.01	1305653
Aroclor 1248	mg/kg	<0.01	0.01	1305653
Aroclor 1254	mg/kg	0.01	0.01	1305653
Aroclor 1260	mg/kg	<0.01	0.01	1305653
Aroclor 1262	mg/kg	<0.01	0.01	1305653
Aroclor 1268	mg/kg	<0.01	0.01	1305653
Total Aroclors	mg/kg	0.01	0.01	1305653
Surrogate Recovery (%)				
NONACHLOROBIPHENYL (sur.)	%	87		1305653

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87526			C87528		
Sampling Date		2006/09/19			2006/09/18		
COC Number		115779			115778		
	Units	**10-TP06-02-03**	**RDL**	**QC Batch**	**10-TP06-02-05**	**RDL**	**QC Batch**
Volatiles							
Benzene	mg/kg	<0.005	0.005	1296631	<0.0050	0.0050	1295794
Bromodichloromethane	mg/kg	<0.03	0.03	1296631			
Toluene	mg/kg				<0.020	0.020	1295794
Bromoform	mg/kg	<0.05	0.05	1296631			
Ethylbenzene	mg/kg				<0.010	0.010	1295794
Bromomethane	mg/kg	<0.02	0.02	1296631			
Xylenes (Total)	mg/kg				<0.020	0.020	1295794
Carbon tetrachloride	mg/kg	<0.02	0.02	1296631			
m & p-Xylene	mg/kg				<0.020	0.020	1295794
Chlorobenzene	mg/kg	<0.02	0.02	1296631			
o-Xylene	mg/kg				<0.020	0.020	1295794
Chlorodibromomethane	mg/kg	<0.02	0.02	1296631			
Chloroethane	mg/kg	<0.02	0.02	1296631			
Chloroform	mg/kg	<0.02	0.02	1296631			
Chloromethane	mg/kg	<0.03	0.03	1296631			
1,2-dibromoethane	mg/kg	<0.02	0.02	1296631			
1,2-dichlorobenzene	mg/kg	<0.02	0.02	1296631			
1,3-dichlorobenzene	mg/kg	<0.02	0.02	1296631			
1,4-dichlorobenzene	mg/kg	<0.02	0.02	1296631			
1,1-dichloroethane	mg/kg	<0.02	0.02	1296631			
1,2-dichloroethane	mg/kg	<0.02	0.02	1296631			
1,1-dichloroethene	mg/kg	<0.02	0.02	1296631			
cis-1,2-dichloroethene	mg/kg	<0.02	0.02	1296631			
trans-1,2-dichloroethene	mg/kg	<0.02	0.02	1296631			
Dichloromethane	mg/kg	<0.1	0.1	1296631			
1,2-dichloropropane	mg/kg	<0.02	0.02	1296631			
cis-1,3-dichloropropene	mg/kg	<0.02	0.02	1296631			
trans-1,3-dichloropropene	mg/kg	<0.02	0.02	1296631			
Ethylbenzene	mg/kg	<0.01	0.01	1296631			
Styrene	mg/kg	<0.02	0.02	1296631			
1,1,1,2-tetrachloroethane	mg/kg	<0.1	0.1	1296631			
1,1,2,2-tetrachloroethane	mg/kg	<0.1	0.1	1296631			
Tetrachloroethene	mg/kg	<0.02	0.02	1296631			

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87526			C87528		
Sampling Date		2006/09/19			2006/09/18		
COC Number		115779			115778		
	Units	**10-TP06-02-03**	**RDL**	**QC Batch**	**10-TP06-02-05**	**RDL**	**QC Batch**
Toluene	mg/kg	<0.02	0.02	1296631			
1,1,1-trichloroethane	mg/kg	<0.02	0.02	1296631			
1,1,2-trichloroethane	mg/kg	<0.02	0.02	1296631			
Trichloroethene	mg/kg	<0.02	0.02	1296631			
Trichlorofluoromethane	mg/kg	<0.02	0.02	1296631			
Vinyl chloride	mg/kg	<0.02	0.02	1296631			
Xylenes (Total)	mg/kg	<0.04	0.04	1296631			
m & p-Xylene	mg/kg	<0.04	0.04	1296631			
o-Xylene	mg/kg	<0.02	0.02	1296631			
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	103		1296631	102		1295794
D10-ETHYLBENZENE (sur.)	%	98		1296631	106		1295794
D4-1,2-DICHLOROETHANE (sur.)	%	102		1296631	102		1295794
D8-TOLUENE (sur.)	%	100		1296631	104		1295794

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87529			C87535		
Sampling Date		2006/09/18			2006/09/18		
COC Number		115778			115778		
	Units	**10-TP06-03-01**	**RDL**	**QC Batch**	**10-TP06-04-03**	**RDL**	**QC Batch**
Volatiles							
Benzene	mg/kg	<0.005	0.005	1296631	<0.0050	0.0050	1295794
Bromodichloromethane	mg/kg	<0.03	0.03	1296631			
Toluene	mg/kg				<0.020	0.020	1295794
Bromoform	mg/kg	<0.05	0.05	1296631			
Ethylbenzene	mg/kg				<0.010	0.010	1295794
Bromomethane	mg/kg	<0.02	0.02	1296631			
Xylenes (Total)	mg/kg				<0.020	0.020	1295794
Carbon tetrachloride	mg/kg	<0.02	0.02	1296631			
m & p-Xylene	mg/kg				<0.020	0.020	1295794
Chlorobenzene	mg/kg	<0.02	0.02	1296631			
o-Xylene	mg/kg				<0.020	0.020	1295794
Chlorodibromomethane	mg/kg	<0.02	0.02	1296631			
Chloroethane	mg/kg	<0.02	0.02	1296631			
Chloroform	mg/kg	<0.02	0.02	1296631			
Chloromethane	mg/kg	<0.03	0.03	1296631			
1,2-dibromoethane	mg/kg	<0.02	0.02	1296631			
1,2-dichlorobenzene	mg/kg	<0.02	0.02	1296631			
1,3-dichlorobenzene	mg/kg	<0.02	0.02	1296631			
1,4-dichlorobenzene	mg/kg	<0.02	0.02	1296631			
1,1-dichloroethane	mg/kg	<0.02	0.02	1296631			
1,2-dichloroethane	mg/kg	<0.02	0.02	1296631			
1,1-dichloroethene	mg/kg	<0.02	0.02	1296631			
cis-1,2-dichloroethene	mg/kg	<0.02	0.02	1296631			
trans-1,2-dichloroethene	mg/kg	<0.02	0.02	1296631			
Dichloromethane	mg/kg	<0.1	0.1	1296631			
1,2-dichloropropane	mg/kg	<0.02	0.02	1296631			
cis-1,3-dichloropropene	mg/kg	<0.02	0.02	1296631			
trans-1,3-dichloropropene	mg/kg	<0.02	0.02	1296631			
Ethylbenzene	mg/kg	<0.01	0.01	1296631			
Styrene	mg/kg	<0.02	0.02	1296631			
1,1,1,2-tetrachloroethane	mg/kg	<0.1	0.1	1296631			
1,1,2,2-tetrachloroethane	mg/kg	<0.1	0.1	1296631			
Tetrachloroethene	mg/kg	<0.02	0.02	1296631			

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87529			C87535		
Sampling Date		2006/09/18			2006/09/18		
COC Number		115778			115778		
	Units	**10-TP06-03-01**	**RDL**	**QC Batch**	**10-TP06-04-03**	**RDL**	**QC Batch**
Toluene	mg/kg	<0.02	0.02	1296631			
1,1,1-trichloroethane	mg/kg	<0.02	0.02	1296631			
1,1,2-trichloroethane	mg/kg	<0.02	0.02	1296631			
Trichloroethene	mg/kg	<0.02	0.02	1296631			
Trichlorofluoromethane	mg/kg	<0.02	0.02	1296631			
Vinyl chloride	mg/kg	<0.02	0.02	1296631			
Xylenes (Total)	mg/kg	<0.04	0.04	1296631			
m & p-Xylene	mg/kg	<0.04	0.04	1296631			
o-Xylene	mg/kg	<0.02	0.02	1296631			
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	104		1296631	101		1295794
D10-ETHYLBENZENE (sur.)	%	102		1296631	105		1295794
D4-1,2-DICHLOROETHANE (sur.)	%	103		1296631	105		1295794
D8-TOLUENE (sur.)	%	101		1296631	103		1295794

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87536		
Sampling Date		2006/09/18		
COC Number		115778		
	Units	**10-TP06-04-04**	**RDL**	**QC Batch**
Volatiles				
Benzene	mg/kg	<0.005	0.005	1296631
Bromodichloromethane	mg/kg	<0.03	0.03	1296631
Bromoform	mg/kg	<0.05	0.05	1296631
Bromomethane	mg/kg	<0.02	0.02	1296631
Carbon tetrachloride	mg/kg	<0.02	0.02	1296631
Chlorobenzene	mg/kg	<0.02	0.02	1296631
Chlorodibromomethane	mg/kg	<0.02	0.02	1296631
Chloroethane	mg/kg	<0.02	0.02	1296631
Chloroform	mg/kg	<0.02	0.02	1296631
Chloromethane	mg/kg	<0.03	0.03	1296631
1,2-dibromoethane	mg/kg	<0.02	0.02	1296631
1,2-dichlorobenzene	mg/kg	<0.02	0.02	1296631
1,3-dichlorobenzene	mg/kg	<0.02	0.02	1296631
1,4-dichlorobenzene	mg/kg	<0.02	0.02	1296631
1,1-dichloroethane	mg/kg	<0.02	0.02	1296631
1,2-dichloroethane	mg/kg	<0.02	0.02	1296631
1,1-dichloroethene	mg/kg	<0.02	0.02	1296631
cis-1,2-dichloroethene	mg/kg	<0.02	0.02	1296631
trans-1,2-dichloroethene	mg/kg	<0.02	0.02	1296631
Dichloromethane	mg/kg	<0.1	0.1	1296631
1,2-dichloropropane	mg/kg	<0.02	0.02	1296631
cis-1,3-dichloropropene	mg/kg	<0.02	0.02	1296631
trans-1,3-dichloropropene	mg/kg	<0.02	0.02	1296631
Ethylbenzene	mg/kg	<0.01	0.01	1296631
Styrene	mg/kg	<0.02	0.02	1296631
1,1,1,2-tetrachloroethane	mg/kg	<0.1	0.1	1296631
1,1,2,2-tetrachloroethane	mg/kg	<0.1	0.1	1296631
Tetrachloroethene	mg/kg	<0.02	0.02	1296631
Toluene	mg/kg	<0.02	0.02	1296631
1,1,1-trichloroethane	mg/kg	<0.02	0.02	1296631
1,1,2-trichloroethane	mg/kg	<0.02	0.02	1296631
Trichloroethene	mg/kg	<0.02	0.02	1296631
Trichlorofluoromethane	mg/kg	<0.02	0.02	1296631

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87536		
Sampling Date		2006/09/18		
COC Number		115778		
	Units	**10-TP06-04-04**	**RDL**	**QC Batch**
Vinyl chloride	mg/kg	<0.02	0.02	1296631
Xylenes (Total)	mg/kg	<0.04	0.04	1296631
m & p-Xylene	mg/kg	<0.04	0.04	1296631
o-Xylene	mg/kg	<0.02	0.02	1296631
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	101		1296631
D10-ETHYLBENZENE (sur.)	%	107		1296631
D4-1,2-DICHLOROETHANE (sur.)	%	96		1296631
D8-TOLUENE (sur.)	%	100		1296631

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

SWEP METALS (LEACHATE)

Maxxam ID		C87522	C87527	C87531		
Sampling Date		2006/09/19	2006/09/18	2006/09/18		
COC Number		115779	115778	115778		
	Units	**10-TP06-01-01**	**10-TP06-02-04**	**10-TP06-03-03**	**RDL**	**QC Batch**
Elements						
Leachable Mercury (Hg)	ug/L	<0.05	<0.05	<0.05	0.05	1307826
Leachable Metals						
Leachable (SWEP) Arsenic (As)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Barium (Ba)	mg/L	0.6	0.5	1.1	0.1	1308845
Leachable (SWEP) Boron (B)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Cadmium (Cd)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Chromium (Cr)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Copper (Cu)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Lead (Pb)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Molybdenum (Mo)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Selenium (Se)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Silver (Ag)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Uranium (U)	mg/L	<0.1	<0.1	<0.1	0.1	1308845
Leachable (SWEP) Zinc (Zn)	mg/L	<0.1	0.1	<0.1	0.1	1308845

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

SWEP METALS (LEACHATE)

Maxxam ID		C87536		
Sampling Date		2006/09/18		
COC Number		115778		
	Units	**10-TP06-04-04**	**RDL**	**QC Batch**
Elements				
Leachable Mercury (Hg)	ug/L	<0.05	0.05	1307826
Leachable Metals				
Leachable (SWEP) Arsenic (As)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Barium (Ba)	mg/L	0.6	0.1	1308845
Leachable (SWEP) Boron (B)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Cadmium (Cd)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Chromium (Cr)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Copper (Cu)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Lead (Pb)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Molybdenum (Mo)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Selenium (Se)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Silver (Ag)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Uranium (U)	mg/L	<0.1	0.1	1308845
Leachable (SWEP) Zinc (Zn)	mg/L	<0.1	0.1	1308845

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644354
Report Date: 2006/11/07

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256.0601 INUVIK
Site Reference:
Sampler Initials: JP/

CCME METALS PACKAGE ON SOILS (SOIL) Comments

Sample C87532-01 Elements by ICPMS - Soils: Sample analyzed in duplicate to confirm high Pb result.

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256.0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: EA644354

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282386 HW4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		101	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		122	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		90	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		111	%	60 - 140
		Toluene	2006/09/25		104	%	60 - 140
		Ethylbenzene	2006/09/25		167 (1)	%	60 - 140
		m & p-Xylene	2006/09/25		130	%	60 - 140
		o-Xylene	2006/09/25		87	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		119	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		82	%	60 - 140
		Toluene	2006/09/25		94	%	60 - 140
		Ethylbenzene	2006/09/25		103	%	60 - 140
		m & p-Xylene	2006/09/25		102	%	60 - 140
		o-Xylene	2006/09/25		103	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		121	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		92	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		100	%	60 - 140
		Benzene	2006/09/25	<0.0050		mg/kg	
		Toluene	2006/09/25	<0.020		mg/kg	
		Ethylbenzene	2006/09/25	<0.010		mg/kg	
		Xylenes (Total)	2006/09/25	<0.020		mg/kg	
		m & p-Xylene	2006/09/25	<0.020		mg/kg	
		o-Xylene	2006/09/25	<0.020		mg/kg	
	RPD	Benzene	2006/09/25	6.4		%	50
		Toluene	2006/09/25	NC		%	50
		Ethylbenzene	2006/09/25	0.02		%	50
		Xylenes (Total)	2006/09/25	1.2		%	50
		m & p-Xylene	2006/09/25	0.2		%	50
		o-Xylene	2006/09/25	15.0		%	50
1282387 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		88	%	60 - 130
		F1 (C06-C10)	2006/09/25		99	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		89	%	60 - 130
		F1 (C06-C10)	2006/09/25		92	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		86	%	60 - 130
		F1 (C06-C10)	2006/09/25	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/09/25	7.3		%	50
1282388 SD7	BLANK	Moisture	2006/09/23	<0.3		%	
	RPD	Moisture	2006/09/23	1.1		%	20
1282944 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/09/26		129	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		117	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		121	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		127	%	30 - 130
		Naphthalene	2006/09/26		101	%	30 - 130
		2-Methylnaphthalene	2006/09/26		103	%	30 - 130
		Acenaphthylene	2006/09/26		107	%	30 - 130
		Acenaphthene	2006/09/26		97	%	30 - 130
		Fluorene	2006/09/26		100	%	30 - 130
		Phenanthrene	2006/09/26		100	%	30 - 130
		Anthracene	2006/09/26		98	%	30 - 130
		Fluoranthene	2006/09/26		101	%	30 - 130

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256.0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA644354

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282944 AK3	MATRIX SPIKE	Pyrene	2006/09/26		100	%	30 - 130
		Benzo(a)anthracene	2006/09/26		103	%	30 - 130
		Chrysene	2006/09/26		97	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/26		98	%	30 - 130
		Benzo(k)fluoranthene	2006/09/26		100	%	30 - 130
		Benzo(a)pyrene	2006/09/26		102	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/26		111	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/26		124	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/26		107	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/09/26		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		118	%	30 - 130
		Naphthalene	2006/09/26		105	%	30 - 130
		2-Methylnaphthalene	2006/09/26		104	%	30 - 130
		Acenaphthylene	2006/09/26		105	%	30 - 130
		Acenaphthene	2006/09/26		101	%	30 - 130
		Fluorene	2006/09/26		100	%	30 - 130
		Phenanthrene	2006/09/26		104	%	30 - 130
		Anthracene	2006/09/26		101	%	30 - 130
		Fluoranthene	2006/09/26		100	%	30 - 130
		Pyrene	2006/09/26		100	%	30 - 130
		Benzo(a)anthracene	2006/09/26		99	%	30 - 130
		Chrysene	2006/09/26		99	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/26		94	%	30 - 130
		Benzo(k)fluoranthene	2006/09/26		98	%	30 - 130
		Benzo(a)pyrene	2006/09/26		96	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/26		107	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/26		104	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/26		108	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/09/26		119	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		107	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		123	%	30 - 130
		Naphthalene	2006/09/26	<0.05		mg/kg	
		2-Methylnaphthalene	2006/09/26	<0.05		mg/kg	
		Acenaphthylene	2006/09/26	<0.05		mg/kg	
		Acenaphthene	2006/09/26	<0.05		mg/kg	
		Fluorene	2006/09/26	<0.05		mg/kg	
		Phenanthrene	2006/09/26	<0.05		mg/kg	
		Anthracene	2006/09/26	<0.05		mg/kg	
		Fluoranthene	2006/09/26	<0.05		mg/kg	
		Pyrene	2006/09/26	<0.05		mg/kg	
		Benzo(a)anthracene	2006/09/26	<0.05		mg/kg	
		Chrysene	2006/09/26	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/09/26	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/09/26	<0.05		mg/kg	
		Benzo(a)pyrene	2006/09/26	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/09/26	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/09/26	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/09/26	<0.05		mg/kg	
	RPD	Naphthalene	2006/09/26	NC		%	50
		2-Methylnaphthalene	2006/09/26	NC		%	50
		Acenaphthylene	2006/09/26	NC		%	50
		Acenaphthene	2006/09/26	NC		%	50

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256.0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA644354

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282944 AK3	RPD	Fluorene	2006/09/26	NC		%	50
		Phenanthrene	2006/09/26	NC		%	50
		Anthracene	2006/09/26	NC		%	50
		Fluoranthene	2006/09/26	NC		%	50
		Pyrene	2006/09/26	NC		%	50
		Benzo(a)anthracene	2006/09/26	NC		%	50
		Chrysene	2006/09/26	NC		%	50
		Benzo(b&j)fluoranthene	2006/09/26	NC		%	50
		Benzo(k)fluoranthene	2006/09/26	NC		%	50
		Benzo(a)pyrene	2006/09/26	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/09/26	NC		%	50
		Dibenz(a,h)anthracene	2006/09/26	NC		%	50
		Benzo(g,h,i)perylene	2006/09/26	NC		%	50
1283128 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/09/25		82	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/25		88	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/25		74	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/25		73	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/25		84	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/25		100	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/25		91	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/25		101	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/25		84	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/25	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/25	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/25	<10		mg/kg	
		Reached Baseline at C50	2006/09/25	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/25	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/25	6.1		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/25	NC		%	50
		Reached Baseline at C50	2006/09/25	NC		%	50
1295794 CD1	MATRIX SPIKE [C87531-01]	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		107	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		104	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		104	%	60 - 140
		Benzene	2006/10/05		97	%	60 - 140
		Toluene	2006/10/05		103	%	60 - 140
		Ethylbenzene	2006/10/05		100	%	60 - 140
		m & p-Xylene	2006/10/05		100	%	60 - 140
		o-Xylene	2006/10/05		100	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		105	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		100	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		103	%	60 - 140
		Benzene	2006/10/05		96	%	60 - 140
		Toluene	2006/10/05		100	%	60 - 140
		Ethylbenzene	2006/10/05		99	%	60 - 140
		m & p-Xylene	2006/10/05		100	%	60 - 140
		o-Xylene	2006/10/05		100	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		100	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		99	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		103	%	60 - 140
		Benzene	2006/10/05	<0.0050		mg/kg	
		Toluene	2006/10/05	<0.020		mg/kg	

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1295794 CD1	BLANK	Ethylbenzene	2006/10/05	<0.010		mg/kg	
		Xylenes (Total)	2006/10/05	<0.020		mg/kg	
		m & p-Xylene	2006/10/05	<0.020		mg/kg	
		o-Xylene	2006/10/05	<0.020		mg/kg	
	RPD [C87528-01]	Benzene	2006/10/05	NC		%	50
		Toluene	2006/10/05	NC		%	50
		Ethylbenzene	2006/10/05	NC		%	50
		Xylenes (Total)	2006/10/05	NC		%	50
		m & p-Xylene	2006/10/05	NC		%	50
		o-Xylene	2006/10/05	NC		%	50
1295900 KO	MATRIX SPIKE [C87531-01]	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		93	%	60 - 130
		F1 (C06-C10)	2006/10/05		81	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		103	%	60 - 130
		F1 (C06-C10)	2006/10/05		101	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		102	%	60 - 130
		F1 (C06-C10)	2006/10/05	<10		mg/kg	
	RPD [C87528-01]	F1 (C06-C10)	2006/10/05	NC		%	50
1296442 AL2	Calibration Check	Hex. Chromium (Cr 6+)	2006/10/05		96	%	75 - 125
	MATRIX SPIKE	Hex. Chromium (Cr 6+)	2006/10/05		91	%	75 - 125
	BLANK	Hex. Chromium (Cr 6+)	2006/10/05	<0.2		mg/kg	
	RPD	Hex. Chromium (Cr 6+)	2006/10/05	NC		%	35
1296592 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/10/06		110	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/06		121	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/06		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/06		113	%	30 - 130
		Naphthalene	2006/10/06		99	%	30 - 130
		2-Methylnaphthalene	2006/10/06		88	%	30 - 130
		Acenaphthylene	2006/10/06		116	%	30 - 130
		Acenaphthene	2006/10/06		105	%	30 - 130
		Fluorene	2006/10/06		103	%	30 - 130
		Phenanthrene	2006/10/06		100	%	30 - 130
		Anthracene	2006/10/06		104	%	30 - 130
		Fluoranthene	2006/10/06		107	%	30 - 130
		Pyrene	2006/10/06		106	%	30 - 130
		Benzo(a)anthracene	2006/10/06		108	%	30 - 130
		Chrysene	2006/10/06		106	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/06		108	%	30 - 130
		Benzo(k)fluoranthene	2006/10/06		109	%	30 - 130
		Benzo(a)pyrene	2006/10/06		109	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/06		107	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/06		104	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/06		105	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/10/06		109	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/06		107	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/06		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/06		99	%	30 - 130
		Naphthalene	2006/10/06		109	%	30 - 130
		2-Methylnaphthalene	2006/10/06		107	%	30 - 130
		Acenaphthylene	2006/10/06		109	%	30 - 130
		Acenaphthene	2006/10/06		105	%	30 - 130
		Fluorene	2006/10/06		104	%	30 - 130
		Phenanthrene	2006/10/06		108	%	30 - 130
		Anthracene	2006/10/06		107	%	30 - 130
		Fluoranthene	2006/10/06		106	%	30 - 130

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1296592 AK3	SPIKE	Pyrene	2006/10/06		105	%	30 - 130
		Benzo(a)anthracene	2006/10/06		105	%	30 - 130
		Chrysene	2006/10/06		107	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/06		102	%	30 - 130
		Benzo(k)fluoranthene	2006/10/06		106	%	30 - 130
		Benzo(a)pyrene	2006/10/06		106	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/06		115	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/06		106	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/06		111	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/10/06		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/06		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/06		122	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/06		111	%	30 - 130
		Naphthalene	2006/10/06	<0.05		mg/kg	
		2-Methylnaphthalene	2006/10/06	<0.05		mg/kg	
		Acenaphthylene	2006/10/06	<0.05		mg/kg	
		Acenaphthene	2006/10/06	<0.05		mg/kg	
		Fluorene	2006/10/06	<0.05		mg/kg	
		Phenanthrene	2006/10/06	<0.05		mg/kg	
		Anthracene	2006/10/06	<0.05		mg/kg	
		Fluoranthene	2006/10/06	<0.05		mg/kg	
		Pyrene	2006/10/06	<0.05		mg/kg	
		Benzo(a)anthracene	2006/10/06	<0.05		mg/kg	
		Chrysene	2006/10/06	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/10/06	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/10/06	<0.05		mg/kg	
		Benzo(a)pyrene	2006/10/06	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/10/06	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/10/06	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/10/06	<0.05		mg/kg	
	RPD	Naphthalene	2006/10/06	NC		%	50
		Benzo(a)pyrene	2006/10/06	NC		%	50
1296619 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/05		79	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/05		96	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/10/05		89	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/10/05		95	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/10/05		78	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/05		96	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/10/05		90	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/10/05		94	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/10/05		84	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/05	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/05	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/05	<10		mg/kg	
		Reached Baseline at C50	2006/10/05	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/05	12.7		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/05	61.0 (1)		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/05	NC		%	50
		Reached Baseline at C50	2006/10/05	NC		%	50
1296631 LM4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		107	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		103	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		97	%	60 - 140
		Benzene	2006/10/05		93	%	60 - 140
		Bromodichloromethane	2006/10/05		96	%	60 - 140

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1296631 LM4	MATRIX SPIKE	Bromoform	2006/10/05		88	%	60 - 140
		Bromomethane	2006/10/05		112	%	60 - 140
		Carbon tetrachloride	2006/10/05		90	%	60 - 140
		Chlorobenzene	2006/10/05		93	%	60 - 140
		Chlorodibromomethane	2006/10/05		89	%	60 - 140
		Chloroethane	2006/10/05		101	%	60 - 140
		Chloroform	2006/10/05		111	%	60 - 140
		Chloromethane	2006/10/05		95	%	60 - 140
		1,2-dibromoethane	2006/10/05		88	%	60 - 140
		1,2-dichlorobenzene	2006/10/05		89	%	60 - 140
		1,3-dichlorobenzene	2006/10/05		88	%	60 - 140
		1,4-dichlorobenzene	2006/10/05		95	%	60 - 140
		1,1-dichloroethane	2006/10/05		100	%	60 - 140
		1,2-dichloroethane	2006/10/05		97	%	60 - 140
		1,1-dichloroethene	2006/10/05		102	%	60 - 140
		cis-1,2-dichloroethene	2006/10/05		113	%	60 - 140
		trans-1,2-dichloroethene	2006/10/05		102	%	60 - 140
		Dichloromethane	2006/10/05		98	%	60 - 140
		1,2-dichloropropane	2006/10/05		95	%	60 - 140
		cis-1,3-dichloropropene	2006/10/05		90	%	60 - 140
		trans-1,3-dichloropropene	2006/10/05		93	%	60 - 140
		Ethylbenzene	2006/10/05		88	%	60 - 140
		Styrene	2006/10/05		75	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/10/05		87	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/10/05		97	%	60 - 140
		Tetrachloroethene	2006/10/05		88	%	60 - 140
		Toluene	2006/10/05		92	%	60 - 140
		1,1,1-trichloroethane	2006/10/05		98	%	60 - 140
		1,1,2-trichloroethane	2006/10/05		94	%	60 - 140
		Trichloroethene	2006/10/05		96	%	60 - 140
		Trichlorofluoromethane	2006/10/05		97	%	60 - 140
		Vinyl chloride	2006/10/05		77	%	60 - 140
		m & p-Xylene	2006/10/05		93	%	60 - 140
		o-Xylene	2006/10/05		97	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		94	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		98	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		97	%	60 - 140
		Benzene	2006/10/05		91	%	60 - 140
		Bromodichloromethane	2006/10/05		93	%	60 - 140
		Bromoform	2006/10/05		91	%	60 - 140
		Bromomethane	2006/10/05		107	%	60 - 140
		Carbon tetrachloride	2006/10/05		91	%	60 - 140
		Chlorobenzene	2006/10/05		90	%	60 - 140
		Chlorodibromomethane	2006/10/05		87	%	60 - 140
		Chloroethane	2006/10/05		99	%	60 - 140
		Chloroform	2006/10/05		95	%	60 - 140
		Chloromethane	2006/10/05		102	%	60 - 140
		1,2-dibromoethane	2006/10/05		88	%	60 - 140
		1,2-dichlorobenzene	2006/10/05		91	%	60 - 140
		1,3-dichlorobenzene	2006/10/05		88	%	60 - 140
		1,4-dichlorobenzene	2006/10/05		96	%	60 - 140
		1,1-dichloroethane	2006/10/05		98	%	60 - 140
		1,2-dichloroethane	2006/10/05		96	%	60 - 140
		1,1-dichloroethene	2006/10/05		101	%	60 - 140

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1296631 LM4	SPIKE	cis-1,2-dichloroethene	2006/10/05		98	%	60 - 140
		trans-1,2-dichloroethene	2006/10/05		97	%	60 - 140
		Dichloromethane	2006/10/05		95	%	60 - 140
		1,2-dichloropropane	2006/10/05		92	%	60 - 140
		cis-1,3-dichloropropene	2006/10/05		93	%	60 - 140
		trans-1,3-dichloropropene	2006/10/05		93	%	60 - 140
		Ethylbenzene	2006/10/05		88	%	60 - 140
		Styrene	2006/10/05		92	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/10/05		89	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/10/05		98	%	60 - 140
		Tetrachloroethene	2006/10/05		91	%	60 - 140
		Toluene	2006/10/05		93	%	60 - 140
		1,1,1-trichloroethane	2006/10/05		97	%	60 - 140
		1,1,2-trichloroethane	2006/10/05		90	%	60 - 140
		Trichloroethene	2006/10/05		94	%	60 - 140
		Trichlorofluoromethane	2006/10/05		98	%	60 - 140
		Vinyl chloride	2006/10/05		67	%	60 - 140
		m & p-Xylene	2006/10/05		95	%	60 - 140
		o-Xylene	2006/10/05		95	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		103	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		101	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		100	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		102	%	60 - 140
		Benzene	2006/10/05	<0.005		mg/kg	
		Bromodichloromethane	2006/10/05	<0.03		mg/kg	
		Bromoform	2006/10/05	<0.05		mg/kg	
		Bromomethane	2006/10/05	<0.02		mg/kg	
		Carbon tetrachloride	2006/10/05	<0.02		mg/kg	
		Chlorobenzene	2006/10/05	<0.02		mg/kg	
		Chlorodibromomethane	2006/10/05	<0.02		mg/kg	
		Chloroethane	2006/10/05	<0.02		mg/kg	
		Chloroform	2006/10/05	<0.02		mg/kg	
		Chloromethane	2006/10/05	<0.03		mg/kg	
		1,2-dibromoethane	2006/10/05	<0.02		mg/kg	
		1,2-dichlorobenzene	2006/10/05	<0.02		mg/kg	
		1,3-dichlorobenzene	2006/10/05	<0.02		mg/kg	
		1,4-dichlorobenzene	2006/10/05	<0.02		mg/kg	
		1,1-dichloroethane	2006/10/05	<0.02		mg/kg	
		1,2-dichloroethane	2006/10/05	<0.02		mg/kg	
		1,1-dichloroethene	2006/10/05	<0.02		mg/kg	
		cis-1,2-dichloroethene	2006/10/05	<0.02		mg/kg	
		trans-1,2-dichloroethene	2006/10/05	<0.02		mg/kg	
		Dichloromethane	2006/10/05	<0.1		mg/kg	
		1,2-dichloropropane	2006/10/05	<0.02		mg/kg	
		cis-1,3-dichloropropene	2006/10/05	<0.02		mg/kg	
		trans-1,3-dichloropropene	2006/10/05	<0.02		mg/kg	
		Ethylbenzene	2006/10/05	<0.01		mg/kg	
		Styrene	2006/10/05	<0.02		mg/kg	
		1,1,1,2-tetrachloroethane	2006/10/05	<0.1		mg/kg	
		1,1,2,2-tetrachloroethane	2006/10/05	<0.1		mg/kg	
		Tetrachloroethene	2006/10/05	<0.02		mg/kg	
		Toluene	2006/10/05	<0.02		mg/kg	
		1,1,1-trichloroethane	2006/10/05	<0.02		mg/kg	
		1,1,2-trichloroethane	2006/10/05	<0.02		mg/kg	
		Trichloroethene	2006/10/05	<0.02		mg/kg	

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1296631 LM4	BLANK	Trichlorofluoromethane	2006/10/05	<0.02		mg/kg	
		Vinyl chloride	2006/10/05	<0.02		mg/kg	
		Xylenes (Total)	2006/10/05	<0.04		mg/kg	
		m & p-Xylene	2006/10/05	<0.04		mg/kg	
		o-Xylene	2006/10/05	<0.02		mg/kg	
	RPD	Benzene	2006/10/05	NC		%	50
		Bromodichloromethane	2006/10/05	NC		%	50
		Bromoform	2006/10/05	NC		%	50
		Bromomethane	2006/10/05	NC		%	50
		Carbon tetrachloride	2006/10/05	NC		%	50
		Chlorobenzene	2006/10/05	NC		%	50
		Chlorodibromomethane	2006/10/05	NC		%	50
		Chloroethane	2006/10/05	NC		%	50
		Chloroform	2006/10/05	NC		%	50
		Chloromethane	2006/10/05	NC		%	50
		1,2-dibromoethane	2006/10/05	NC		%	50
		1,2-dichlorobenzene	2006/10/05	NC		%	50
		1,3-dichlorobenzene	2006/10/05	NC		%	50
		1,4-dichlorobenzene	2006/10/05	NC		%	50
		1,1-dichloroethane	2006/10/05	NC		%	50
		1,2-dichloroethane	2006/10/05	NC		%	50
		1,1-dichloroethene	2006/10/05	NC		%	50
		cis-1,2-dichloroethene	2006/10/05	NC		%	50
		trans-1,2-dichloroethene	2006/10/05	NC		%	50
		Dichloromethane	2006/10/05	NC		%	50
		1,2-dichloropropane	2006/10/05	NC		%	50
		cis-1,3-dichloropropene	2006/10/05	NC		%	50
		trans-1,3-dichloropropene	2006/10/05	NC		%	50
		Ethylbenzene	2006/10/05	NC		%	50
		Styrene	2006/10/05	NC		%	50
		1,1,1,2-tetrachloroethane	2006/10/05	NC		%	50
		1,1,2,2-tetrachloroethane	2006/10/05	NC		%	50
		Tetrachloroethene	2006/10/05	NC		%	50
		Toluene	2006/10/05	NC		%	50
		1,1,1-trichloroethane	2006/10/05	NC		%	50
		1,1,2-trichloroethane	2006/10/05	NC		%	50
		Trichloroethene	2006/10/05	NC		%	50
		Trichlorofluoromethane	2006/10/05	NC		%	50
		Vinyl chloride	2006/10/05	NC		%	50
		Xylenes (Total)	2006/10/05	NC		%	50
		m & p-Xylene	2006/10/05	NC		%	50
		o-Xylene	2006/10/05	NC		%	50
1296803 HL2	BLANK	Moisture	2006/10/05	<0.3		%	
	RPD	Moisture	2006/10/05	1.7		%	20
1296823 RI2	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		93	%	60 - 130
		F1 (C06-C10)	2006/10/05		99	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		94	%	60 - 130
		F1 (C06-C10)	2006/10/05		108	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		95	%	60 - 130
		F1 (C06-C10)	2006/10/05	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/10/05	NC		%	50
1296878 YY1	Calibration Check	Mercury (Hg)	2006/10/05		111	%	85 - 115
	QC STANDARD	Mercury (Hg)	2006/10/05		101	%	N/A
	BLANK	Mercury (Hg)	2006/10/05	<0.05		mg/kg	
	RPD [C87522-01]	Mercury (Hg)	2006/10/05	NC		%	35

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Maxxam Job Number: EA644354

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1297146 MC3	MATRIX SPIKE	Soluble (Hot water) Boron (B)	2006/10/05		105	%	80 - 120
	SPIKE	Soluble (Hot water) Boron (B)	2006/10/05		109	%	85 - 115
	BLANK	Soluble (Hot water) Boron (B)	2006/10/05	<0.1		mg/kg	
	RPD	Soluble (Hot water) Boron (B)	2006/10/05	NC		%	40
1297777 AC4	Calibration Check	Total Antimony (Sb)	2006/10/06		100	%	80 - 120
		Total Arsenic (As)	2006/10/06		100	%	80 - 120
		Total Barium (Ba)	2006/10/06		98	%	80 - 120
		Total Beryllium (Be)	2006/10/06		100	%	80 - 120
		Total Cadmium (Cd)	2006/10/06		97	%	80 - 120
		Total Chromium (Cr)	2006/10/06		98	%	80 - 120
		Total Cobalt (Co)	2006/10/06		100	%	80 - 120
		Total Copper (Cu)	2006/10/06		99	%	80 - 120
		Total Lead (Pb)	2006/10/06		101	%	80 - 120
		Total Molybdenum (Mo)	2006/10/06		100	%	80 - 120
		Total Nickel (Ni)	2006/10/06		100	%	80 - 120
		Total Selenium (Se)	2006/10/06		100	%	80 - 120
		Total Silver (Ag)	2006/10/06		103	%	80 - 120
		Total Thallium (Tl)	2006/10/06		98	%	80 - 120
		Total Tin (Sn)	2006/10/06		101	%	80 - 120
		Total Vanadium (V)	2006/10/06		99	%	80 - 120
		Total Zinc (Zn)	2006/10/06		99	%	80 - 120
	MATRIX SPIKE [C87522-01]	Total Arsenic (As)	2006/10/06		99	%	80 - 120
		Total Cadmium (Cd)	2006/10/06		101	%	N/A
		Total Lead (Pb)	2006/10/06		91	%	N/A
		Total Selenium (Se)	2006/10/06		107	%	80 - 120
		Total Thallium (Tl)	2006/10/06		100	%	80 - 120
	BLANK	Total Antimony (Sb)	2006/10/06	<1		mg/kg	
		Total Arsenic (As)	2006/10/06	<1		mg/kg	
		Total Barium (Ba)	2006/10/06	<10		mg/kg	
		Total Beryllium (Be)	2006/10/06	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/10/06	<0.1		mg/kg	
		Total Chromium (Cr)	2006/10/06	<1		mg/kg	
		Total Cobalt (Co)	2006/10/06	<1		mg/kg	
		Total Copper (Cu)	2006/10/06	<5		mg/kg	
		Total Lead (Pb)	2006/10/06	<1		mg/kg	
		Total Molybdenum (Mo)	2006/10/06	<0.4		mg/kg	
		Total Nickel (Ni)	2006/10/06	<1		mg/kg	
		Total Selenium (Se)	2006/10/06	<0.5		mg/kg	
		Total Silver (Ag)	2006/10/06	<1		mg/kg	
		Total Thallium (Tl)	2006/10/06	<0.3		mg/kg	
		Total Tin (Sn)	2006/10/06	<1		mg/kg	
		Total Vanadium (V)	2006/10/06	<1		mg/kg	
		Total Zinc (Zn)	2006/10/06	<10		mg/kg	
	RPD [C87522-01]	Total Antimony (Sb)	2006/10/06	NC		%	35
		Total Arsenic (As)	2006/10/06	7.5		%	35
		Total Barium (Ba)	2006/10/06	4.1		%	35
		Total Beryllium (Be)	2006/10/06	NC		%	35
		Total Cadmium (Cd)	2006/10/06	NC		%	35
		Total Chromium (Cr)	2006/10/06	2.4		%	35
		Total Cobalt (Co)	2006/10/06	5.6		%	35
		Total Copper (Cu)	2006/10/06	NC		%	35
		Total Lead (Pb)	2006/10/06	17.2		%	35
		Total Molybdenum (Mo)	2006/10/06	NC		%	35
		Total Nickel (Ni)	2006/10/06	2.6		%	35

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Maxxam Job Number: EA644354

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1297777 AC4	RPD [C87522-01]	Total Selenium (Se)	2006/10/06	NC		%	35
		Total Silver (Ag)	2006/10/06	NC		%	35
		Total Thallium (Tl)	2006/10/06	NC		%	35
		Total Tin (Sn)	2006/10/06	NC		%	35
		Total Vanadium (V)	2006/10/06	5.3		%	35
		Total Zinc (Zn)	2006/10/06	3.8		%	35
	RPD [C87532-01]	Total Antimony (Sb)	2006/10/06	NC		%	35
		Total Arsenic (As)	2006/10/06	19.1		%	35
		Total Barium (Ba)	2006/10/06	20.3		%	35
		Total Beryllium (Be)	2006/10/06	NC		%	35
		Total Cadmium (Cd)	2006/10/06	18.0		%	35
		Total Chromium (Cr)	2006/10/06	17.3		%	35
		Total Cobalt (Co)	2006/10/06	20.6		%	35
		Total Copper (Cu)	2006/10/06	NC		%	35
		Total Lead (Pb)	2006/10/06	19.6		%	35
		Total Molybdenum (Mo)	2006/10/06	NC		%	35
		Total Nickel (Ni)	2006/10/06	18.0		%	35
		Total Selenium (Se)	2006/10/06	NC		%	35
		Total Silver (Ag)	2006/10/06	NC		%	35
		Total Thallium (Tl)	2006/10/06	NC		%	35
		Total Tin (Sn)	2006/10/06	NC		%	35
		Total Vanadium (V)	2006/10/06	21.0		%	35
		Total Zinc (Zn)	2006/10/06	17.9		%	35
1305653 RTA	Calibration Check	NONACHLOROBIPHENYL (sur.)	2006/10/13		91	%	53 - 127
		Aroclor 1254	2006/10/13		94	%	80 - 132
		Aroclor 1260	2006/10/13		68	%	60 - 117
	SPIKE	NONACHLOROBIPHENYL (sur.)	2006/10/13		97	%	53 - 127
		Aroclor 1260	2006/10/13		80	%	64 - 128
	BLANK	NONACHLOROBIPHENYL (sur.)	2006/10/13		81	%	53 - 127
		Aroclor 1016	2006/10/13	<0.01		mg/kg	
		Aroclor 1221	2006/10/13	<0.01		mg/kg	
		Aroclor 1232	2006/10/13	<0.01		mg/kg	
		Aroclor 1242	2006/10/13	<0.01		mg/kg	
		Aroclor 1248	2006/10/13	<0.01		mg/kg	
		Aroclor 1254	2006/10/13	<0.01		mg/kg	
		Aroclor 1260	2006/10/13	<0.01		mg/kg	
		Aroclor 1262	2006/10/13	<0.01		mg/kg	
		Aroclor 1268	2006/10/13	<0.01		mg/kg	
		Total Aroclors	2006/10/13	<0.01		mg/kg	
	RPD	Aroclor 1016	2006/10/13	NC		%	N/A
		Aroclor 1221	2006/10/13	NC		%	N/A
		Aroclor 1232	2006/10/13	NC		%	N/A
		Aroclor 1242	2006/10/13	NC		%	N/A
		Aroclor 1248	2006/10/13	NC		%	N/A
		Aroclor 1254	2006/10/13	NC		%	N/A
		Aroclor 1260	2006/10/13	NC		%	N/A
		Aroclor 1262	2006/10/13	NC		%	N/A
		Aroclor 1268	2006/10/13	NC		%	N/A
		Total Aroclors	2006/10/13	NC		%	N/A
1307826 JT3	LEACHATE BLAN	Leachable Mercury (Hg)	2006/10/16	<0.05		ug/L	
	BLANK	Leachable Mercury (Hg)	2006/10/16	<0.05		ug/L	
	RPD [C87522-00]	Leachable Mercury (Hg)	2006/10/16	NC		%	35
1308845 DJ	BLANK	Leachable (SWEP) Arsenic (As)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Barium (Ba)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Boron (B)	2006/10/16	<0.1		mg/L	

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Maxxam Job Number: EA644354

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1308845 DJ	BLANK	Leachable (SWEP) Cadmium (Cd)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Chromium (Cr)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Copper (Cu)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Lead (Pb)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Molybdenum (Mo)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Selenium (Se)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Silver (Ag)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Uranium (U)	2006/10/16	<0.1		mg/L	
		Leachable (SWEP) Zinc (Zn)	2006/10/16	<0.1		mg/L	
	RPD [C87522-00]	Leachable (SWEP) Arsenic (As)	2006/10/16	NC		%	35
		Leachable (SWEP) Barium (Ba)	2006/10/16	1.4		%	35
		Leachable (SWEP) Boron (B)	2006/10/16	NC		%	35
		Leachable (SWEP) Cadmium (Cd)	2006/10/16	NC		%	35
		Leachable (SWEP) Chromium (Cr)	2006/10/16	NC		%	35
		Leachable (SWEP) Copper (Cu)	2006/10/16	NC		%	35
		Leachable (SWEP) Lead (Pb)	2006/10/16	NC		%	35
		Leachable (SWEP) Molybdenum (Mo)	2006/10/16	NC		%	35
		Leachable (SWEP) Selenium (Se)	2006/10/16	NC		%	35
		Leachable (SWEP) Silver (Ag)	2006/10/16	NC		%	35
		Leachable (SWEP) Uranium (U)	2006/10/16	NC		%	35
		Leachable (SWEP) Zinc (Zn)	2006/10/16	NC		%	35
1323829 RTA	Calibration Check	NONACHLOROBIPHENYL (sur.)	2006/10/27		96	%	53 - 127
		Aroclor 1254	2006/10/27		103	%	80 - 132
		Aroclor 1260	2006/10/27		83	%	60 - 117
	SPIKE	NONACHLOROBIPHENYL (sur.)	2006/10/27		86	%	53 - 127
		Aroclor 1260	2006/10/27		74	%	64 - 128
	BLANK	NONACHLOROBIPHENYL (sur.)	2006/10/27		92	%	53 - 127
		Aroclor 1016	2006/10/27	<0.01		mg/kg	
		Aroclor 1221	2006/10/27	<0.01		mg/kg	
		Aroclor 1232	2006/10/27	<0.01		mg/kg	
		Aroclor 1242	2006/10/27	<0.01		mg/kg	
		Aroclor 1248	2006/10/27	<0.01		mg/kg	
		Aroclor 1254	2006/10/27	<0.01		mg/kg	
		Aroclor 1260	2006/10/27	<0.01		mg/kg	
		Aroclor 1262	2006/10/27	<0.01		mg/kg	
		Aroclor 1268	2006/10/27	<0.01		mg/kg	
		Total Aroclors	2006/10/27	<0.01		mg/kg	
	RPD [C87530-02]	Aroclor 1016	2006/10/27	NC		%	N/A
		Aroclor 1221	2006/10/27	NC		%	N/A
		Aroclor 1232	2006/10/27	NC		%	N/A
		Aroclor 1242	2006/10/27	NC		%	N/A
		Aroclor 1248	2006/10/27	NC		%	N/A
		Aroclor 1254	2006/10/27	NC		%	N/A
		Aroclor 1260	2006/10/27	NC		%	N/A
		Aroclor 1262	2006/10/27	NC		%	N/A
		Aroclor 1268	2006/10/27	NC		%	N/A
		Total Aroclors	2006/10/27	NC		%	N/A
1324623 DR1	RPD	Moisture	2006/10/27	1.0		%	20
1332769 LL2	Calibration Check	Total Antimony (Sb)	2006/11/02		105	%	80 - 120
		Total Arsenic (As)	2006/11/02		103	%	80 - 120
		Total Barium (Ba)	2006/11/02		98	%	80 - 120
		Total Beryllium (Be)	2006/11/02		99	%	80 - 120
		Total Cadmium (Cd)	2006/11/02		98	%	80 - 120
		Total Chromium (Cr)	2006/11/02		99	%	80 - 120
		Total Cobalt (Co)	2006/11/02		101	%	80 - 120

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1332769 LL2	Calibration Check	Total Copper (Cu)	2006/11/02		103	%	80 - 120
		Total Lead (Pb)	2006/11/02		99	%	80 - 120
		Total Molybdenum (Mo)	2006/11/02		98	%	80 - 120
		Total Nickel (Ni)	2006/11/02		101	%	80 - 120
		Total Selenium (Se)	2006/11/02		102	%	80 - 120
		Total Silver (Ag)	2006/11/02		103	%	80 - 120
		Total Thallium (Tl)	2006/11/02		97	%	80 - 120
		Total Tin (Sn)	2006/11/02		100	%	80 - 120
		Total Uranium (U)	2006/11/02		104	%	80 - 120
		Total Vanadium (V)	2006/11/02		100	%	80 - 120
		Total Zinc (Zn)	2006/11/02		100	%	80 - 120
	MATRIX SPIKE [C87515-01]	Total Arsenic (As)	2006/11/02		97	%	75 - 125
		Total Cadmium (Cd)	2006/11/02		96	%	75 - 125
		Total Lead (Pb)	2006/11/02		82	%	75 - 125
		Total Selenium (Se)	2006/11/02		106	%	75 - 125
		Total Thallium (Tl)	2006/11/02		95	%	75 - 125
	BLANK	Total Antimony (Sb)	2006/11/02	<1		mg/kg	
		Total Arsenic (As)	2006/11/02	<1		mg/kg	
		Total Barium (Ba)	2006/11/02	<10		mg/kg	
		Total Beryllium (Be)	2006/11/02	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/11/02	<0.1		mg/kg	
		Total Chromium (Cr)	2006/11/02	<1		mg/kg	
		Total Cobalt (Co)	2006/11/02	<1		mg/kg	
		Total Copper (Cu)	2006/11/02	<5		mg/kg	
		Total Lead (Pb)	2006/11/02	<1		mg/kg	
		Total Molybdenum (Mo)	2006/11/02	<0.4		mg/kg	
		Total Nickel (Ni)	2006/11/02	<1		mg/kg	
		Total Selenium (Se)	2006/11/02	<0.5		mg/kg	
		Total Silver (Ag)	2006/11/02	<1		mg/kg	
		Total Thallium (Tl)	2006/11/02	<0.3		mg/kg	
		Total Tin (Sn)	2006/11/02	<1		mg/kg	
		Total Uranium (U)	2006/11/02	<1		mg/kg	
		Total Vanadium (V)	2006/11/02	<1		mg/kg	
		Total Zinc (Zn)	2006/11/02	<10		mg/kg	
	RPD [C87515-01]	Total Antimony (Sb)	2006/11/02	NC		%	35
		Total Arsenic (As)	2006/11/02	NC		%	35
		Total Barium (Ba)	2006/11/02	9.1		%	35
		Total Beryllium (Be)	2006/11/02	NC		%	35
		Total Cadmium (Cd)	2006/11/02	NC		%	35
		Total Chromium (Cr)	2006/11/02	6.4		%	35
		Total Cobalt (Co)	2006/11/02	1.9		%	35
		Total Copper (Cu)	2006/11/02	NC		%	35
		Total Lead (Pb)	2006/11/02	1.9		%	35
		Total Molybdenum (Mo)	2006/11/02	NC		%	35
		Total Nickel (Ni)	2006/11/02	3.2		%	35
		Total Selenium (Se)	2006/11/02	NC		%	35
		Total Silver (Ag)	2006/11/02	NC		%	35
		Total Thallium (Tl)	2006/11/02	NC		%	35
		Total Tin (Sn)	2006/11/02	NC		%	35
		Total Uranium (U)	2006/11/02	NC		%	35
		Total Vanadium (V)	2006/11/02	12.9		%	35
		Total Zinc (Zn)	2006/11/02	10.1		%	35
1332906 MC3	Calibration Check	Total Aluminum (Al)	2006/11/02		96	%	80 - 120
		Total Boron (B)	2006/11/02		97	%	80 - 120

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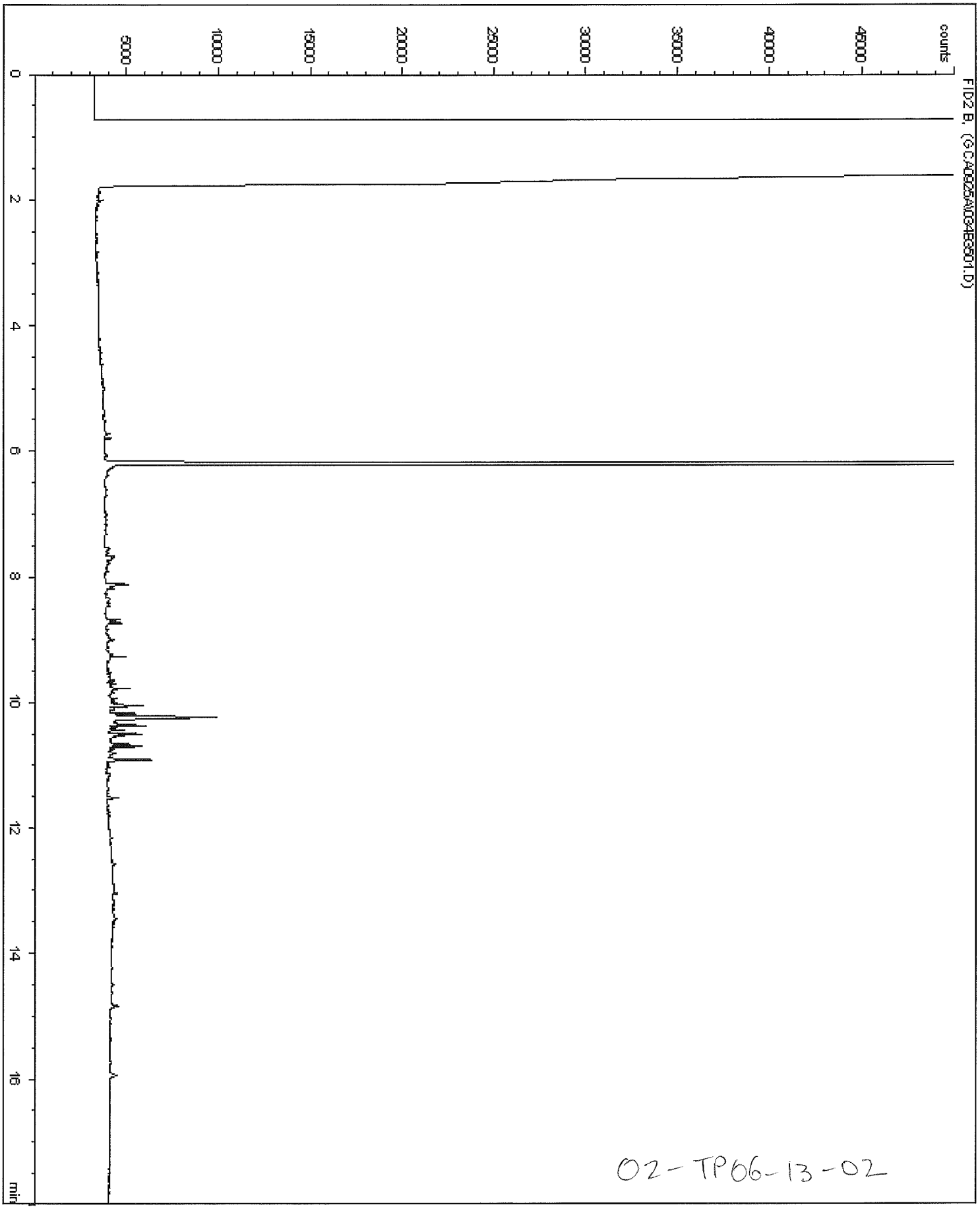
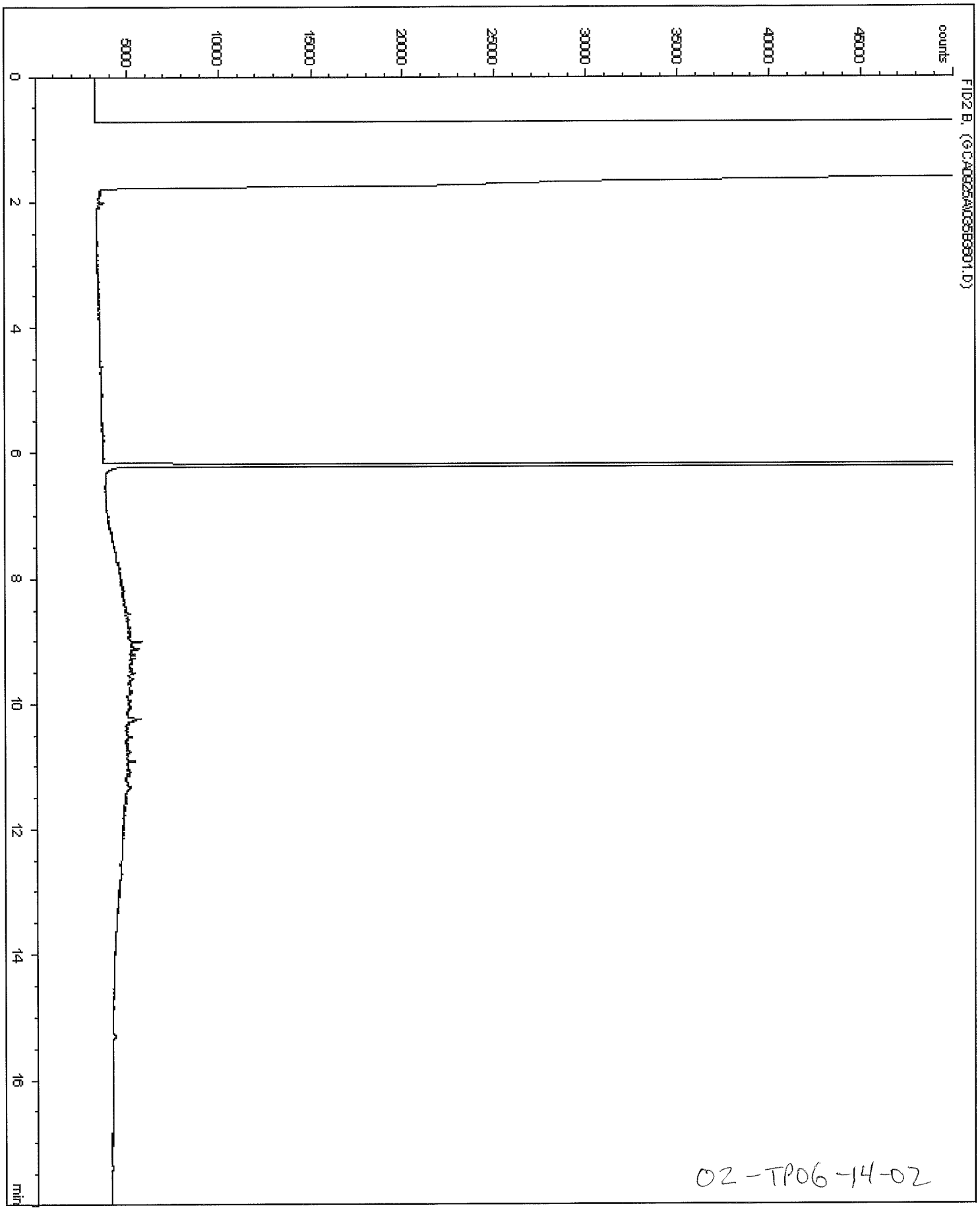
QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1332906 MC3	Calibration Check	Total Calcium (Ca)	2006/11/02		98	%	80 - 120
		Total Iron (Fe)	2006/11/02		95	%	80 - 120
		Total Lithium (Li)	2006/11/02		103	%	80 - 120
		Total Magnesium (Mg)	2006/11/02		97	%	80 - 120
		Total Manganese (Mn)	2006/11/02		94	%	80 - 120
		Total Phosphorus (P)	2006/11/02		98	%	80 - 120
		Total Potassium (K)	2006/11/02		101	%	80 - 120
		Total Sodium (Na)	2006/11/02		102	%	80 - 120
		Total Strontium (Sr)	2006/11/02		95	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/11/02		100	%	75 - 125
		Total Boron (B)	2006/11/02		104	%	80 - 120
		Total Calcium (Ca)	2006/11/02		87	%	75 - 125
		Total Iron (Fe)	2006/11/02		92	%	75 - 125
		Total Lithium (Li)	2006/11/02		103	%	75 - 125
		Total Magnesium (Mg)	2006/11/02		100	%	75 - 125
		Total Manganese (Mn)	2006/11/02		95	%	75 - 125
		Total Phosphorus (P)	2006/11/02		98	%	75 - 125
		Total Potassium (K)	2006/11/02		102	%	75 - 125
		Total Sodium (Na)	2006/11/02		108	%	75 - 125
		Total Strontium (Sr)	2006/11/02		95	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/11/02	<10		mg/kg	
		Total Boron (B)	2006/11/02	<2		mg/kg	
		Total Calcium (Ca)	2006/11/02	<50		mg/kg	
		Total Iron (Fe)	2006/11/02	<10		mg/kg	
		Total Lithium (Li)	2006/11/02	<10		mg/kg	
		Total Magnesium (Mg)	2006/11/02	<20		mg/kg	
		Total Manganese (Mn)	2006/11/02	<10		mg/kg	
		Total Phosphorus (P)	2006/11/02	<20		mg/kg	
		Total Potassium (K)	2006/11/02	<30		mg/kg	
		Total Sodium (Na)	2006/11/02	<50		mg/kg	
		Total Strontium (Sr)	2006/11/02	<10		mg/kg	
		Total Sulphur (S)	2006/11/02	<20		mg/kg	
	RPD [C87515-01]	Total Aluminum (Al)	2006/11/02	0.05		%	35
		Total Boron (B)	2006/11/02	2.2		%	35
		Total Calcium (Ca)	2006/11/02	0.3		%	35
		Total Iron (Fe)	2006/11/02	0.6		%	35
		Total Lithium (Li)	2006/11/02	NC		%	35
		Total Magnesium (Mg)	2006/11/02	0.2		%	35
		Total Manganese (Mn)	2006/11/02	0.2		%	35
		Total Phosphorus (P)	2006/11/02	1.3		%	35
		Total Potassium (K)	2006/11/02	0.1		%	35
		Total Sodium (Na)	2006/11/02	NC		%	35
		Total Strontium (Sr)	2006/11/02	0.4		%	35
		Total Sulphur (S)	2006/11/02	0.4		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference
(1) Please note that the recovery of some compounds are outside control limits however the overall quality control for this analysis meets our acceptability criteria.

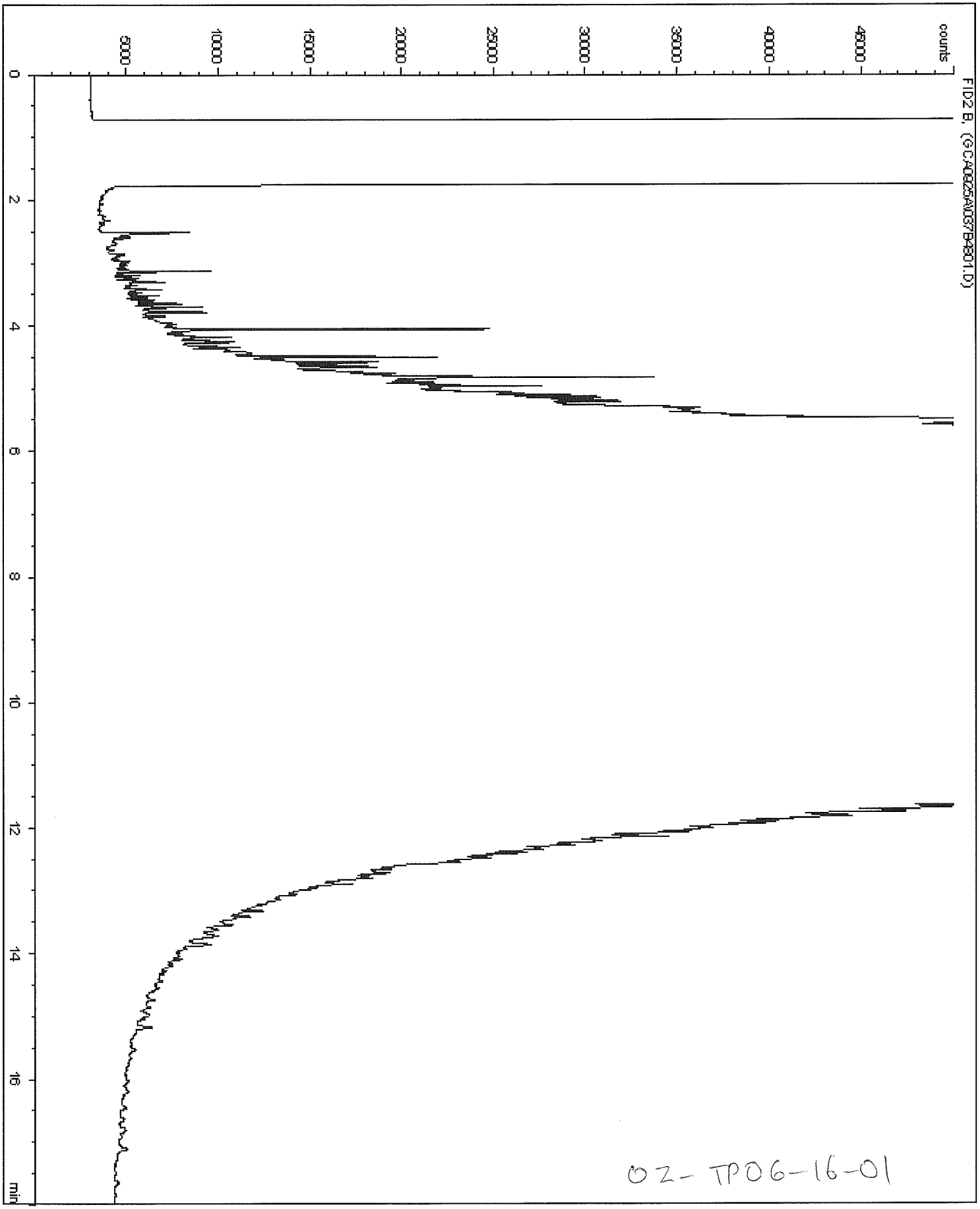
Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187



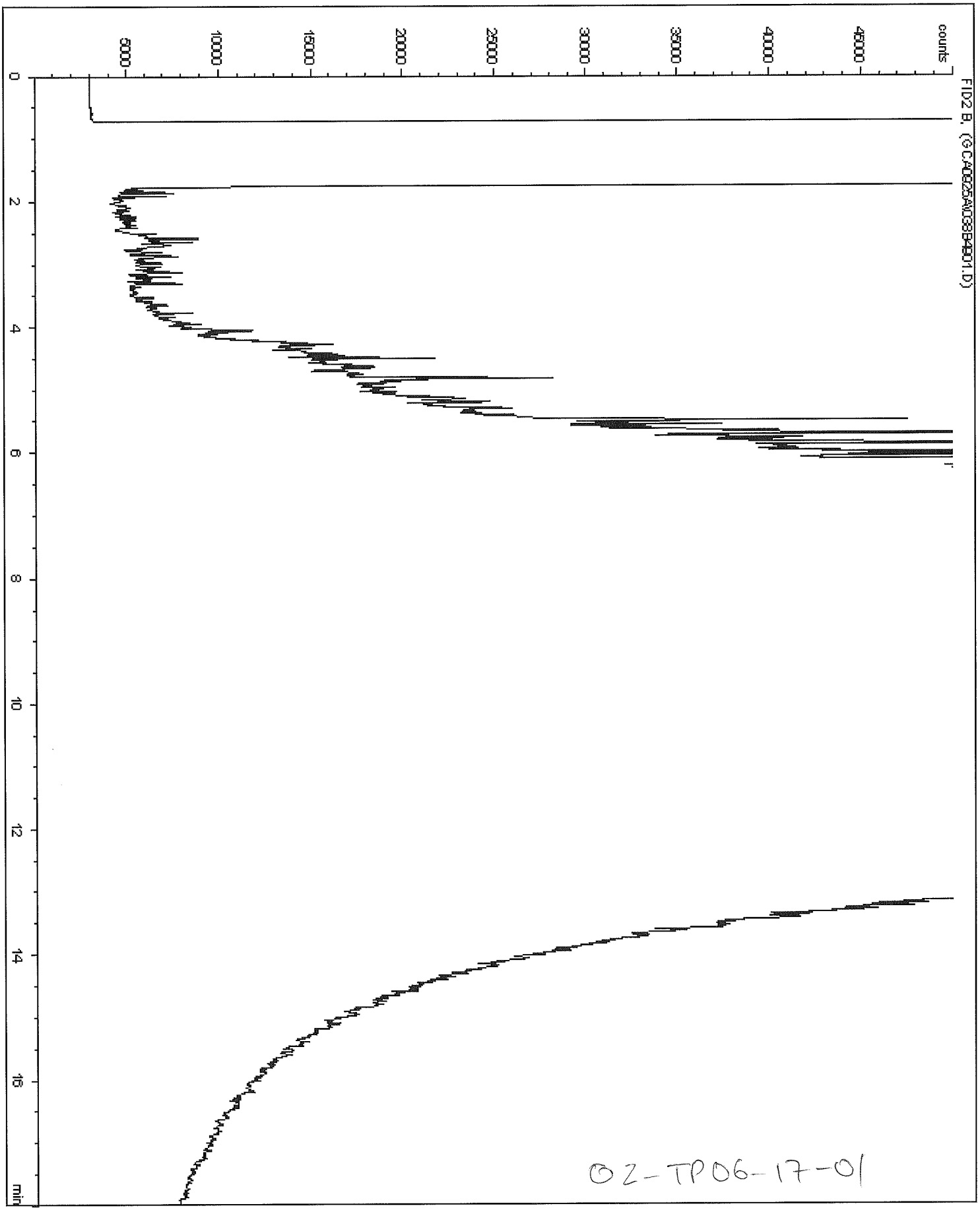
*** End of Report ***



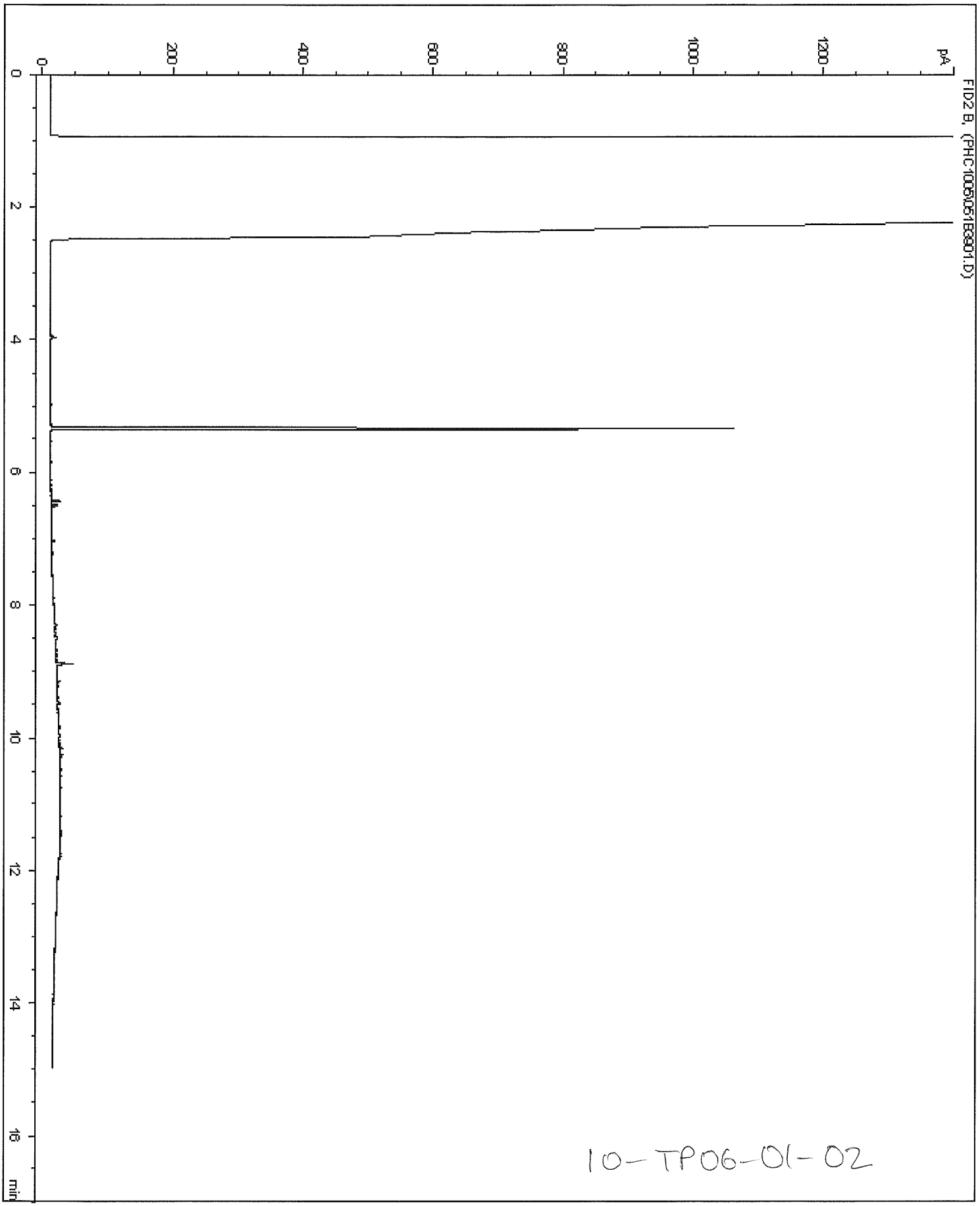
*** End of Report ***



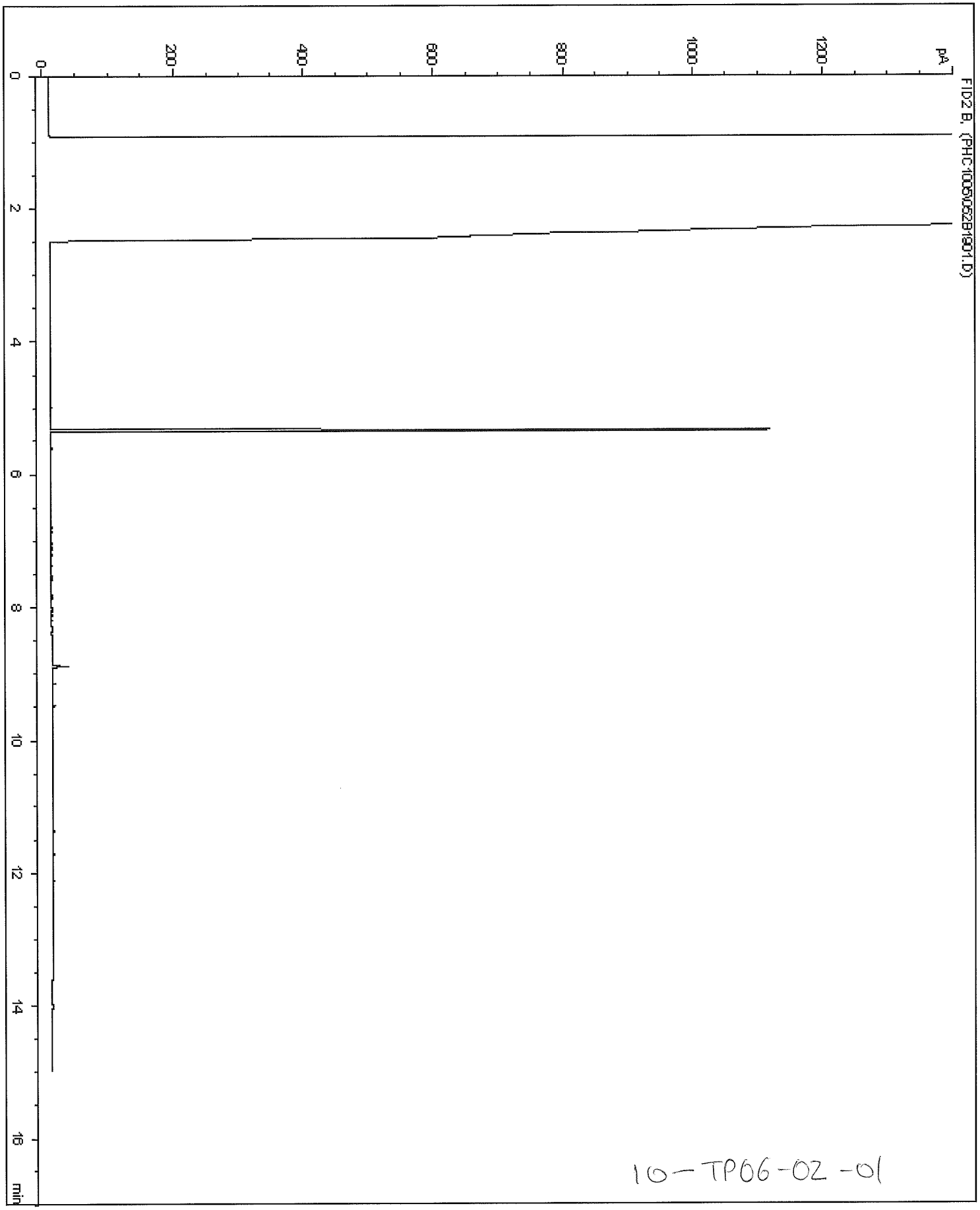
*** End of Report ***



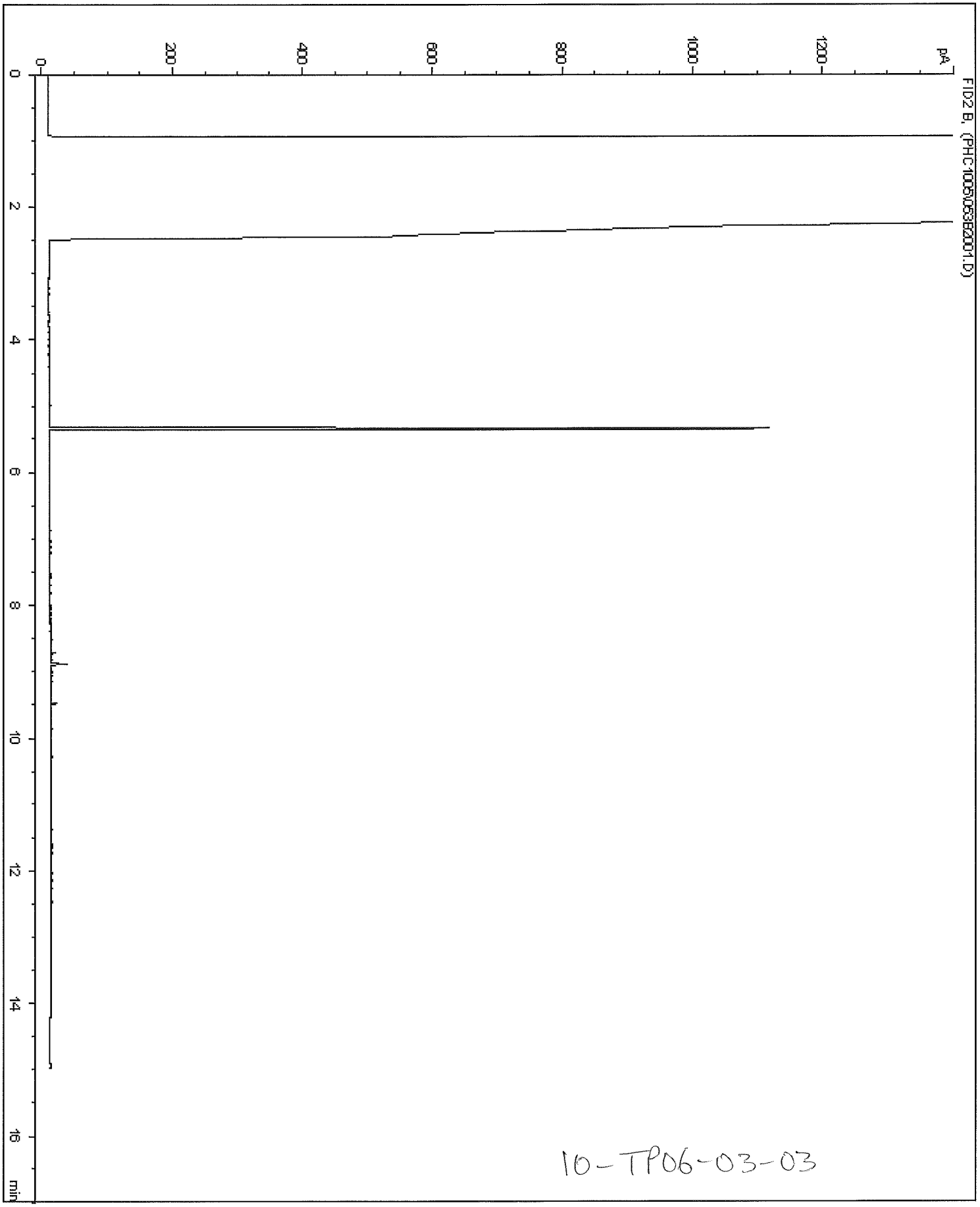
*** End of Report ***



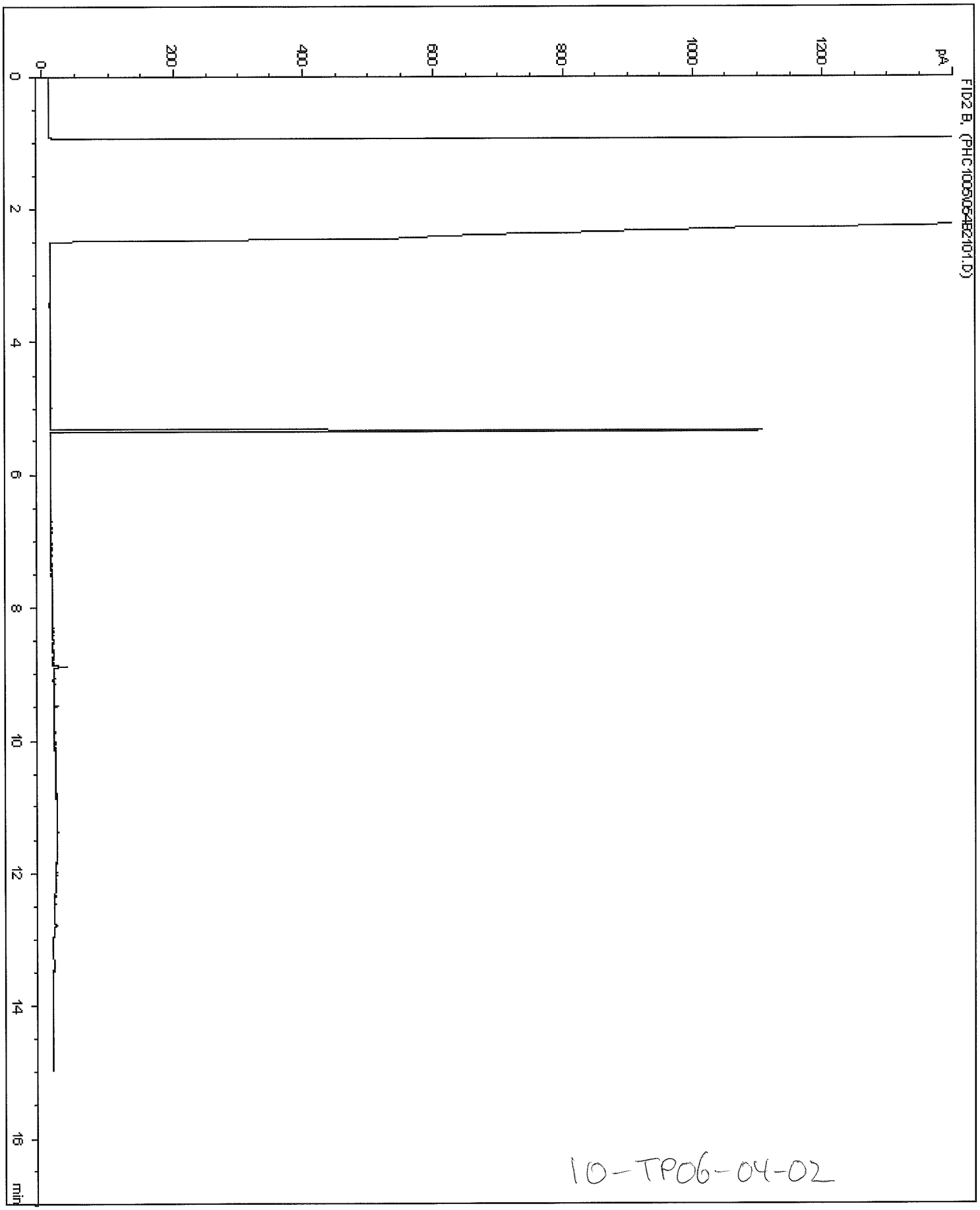
*** End of Report ***



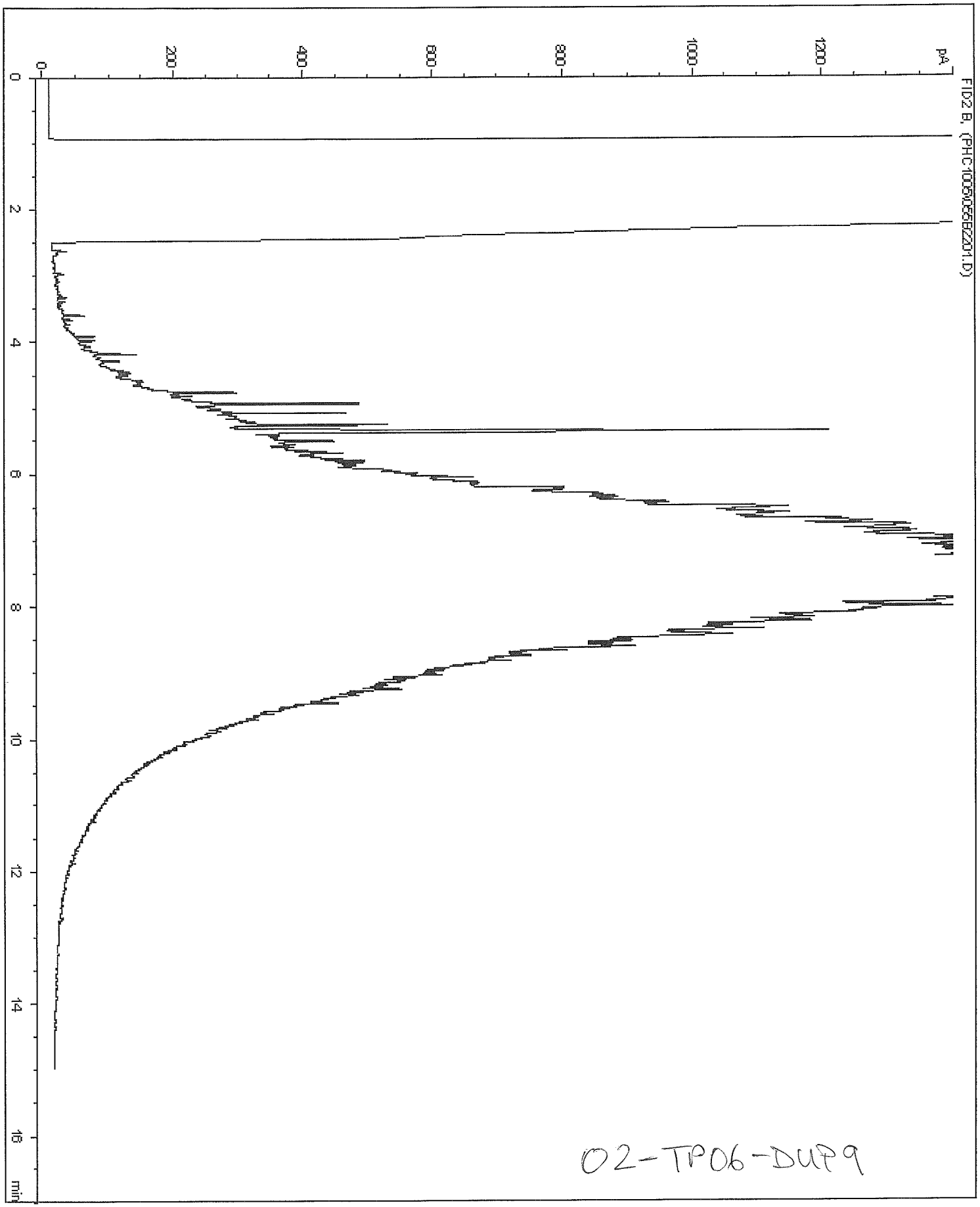
*** End of Report ***



*** End of Report ***



*** End of Report ***



*** End of Report ***

Maxxam Analytics Inc

Your Project #: 1256-0601
Site: INUVIK
Your C.O.C. #: 115785

Attention: MICHAEL MUTTERSBACH
FRANZ ENVIRONMENTAL INC.
FRANZENV-VAN
1080 MAINLAND STREET
308
VANCOUVER, BC
Canada V6B 2T4

Report Date: 2006/10/27

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A644374
Received: 2006/09/22, 14:30

Sample Matrix: Leachate
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury (Leachable) ⓪	2	2006/10/20	2006/10/20	BRN SOP-00044 V1.0	Based on EPA 245.1
Metals - SWEP undigested ⓪	2	2006/10/18	2006/10/19	BRN SOP-00051 V1.0	BC Reg 63/88

Sample Matrix: Soil
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Boron (Hot Water Soluble)	1	N/A	2006/09/25	EENVSOP-00034 v1	Carter SSMA 12.2.2
BTEX by HS GC/MS (MeOH extract)	4	2006/09/23	2006/09/25	EENVSOP-00005 V.2	EPA 8260B/5021A
BTEX by HS GC/MS (MeOH extract)	1	2006/09/23	2006/09/27	EENVSOP-00005 V.2	EPA 8260B/5021A
BTEX by HS GC/MS (MeOH extract)	1	2006/10/04	2006/10/05	EENVSOP-00005 V.2	EPA 8260B/5021A
Hexavalent Chromium ⓪	1	2006/09/26	2006/09/26	EENVSOP-00067 v4	SM 3500-Cr B
Hexavalent Chromium ⓪	2	2006/10/24	2006/10/24	EENVSOP-00067 v4	SM 3500-Cr B
F1-BTEX Soil Cal	5	2006/09/23	2006/09/23		
F1-BTEX Soil Cal	2	2006/10/05	2006/10/05		
CCME Hydrocarbons (F1; MeOH; HSGC)	9	2006/09/23	2006/09/25	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F1; MeOH; HSGC)	5	2006/10/05	2006/10/05	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F1; MeOH; HSGC)	1	2006/10/06	2006/10/07	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F2-F4 in soil)	9	2006/09/26	2006/09/26	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	3	2006/10/05	2006/10/05	EENVSOP-00007 v4	CWS PHCS Tier 1
CCME Hydrocarbons (F2-F4 in soil)	2	2006/10/10	2006/10/10	EENVSOP-00007 v4	CWS PHCS Tier 1
Mercury in Soil by CVAA	1	N/A	2006/09/26	EENVSOP-00032 V.1	EPA SW846 7471B
Elements by ICP -Soils	1	N/A	2006/10/10	EENVSOP-00034 v1	EPA 6010C
Elements by ICP -Soils	1	N/A	2006/10/26	EENVSOP-00034 v1	EPA 6010C
Elements by ICP -Soils	2	N/A	2006/10/27	EENVSOP-00034 v1	EPA 6010C
Elements by ICPMS - Soils	1	N/A	2006/09/26	EENVSOP-00123 v2	EPA 6020A
Elements by ICPMS - Soils	1	N/A	2006/10/10	EENVSOP-00123 v2	EPA 6020A
Elements by ICPMS - Soils	2	N/A	2006/10/26	EENVSOP-00123 v2	EPA 6020A
Moisture	4	N/A	2006/09/23	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	5	N/A	2006/09/25	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	5	N/A	2006/10/05	EENVWI-00023 v2	Carter SSMA 51.2
Moisture	2	N/A	2006/10/06	EENVWI-00023 v2	Carter SSMA 51.2
PAH in Soil by GC/MS (Extended)	3	2006/09/25	2006/09/26	EENVSOP-00010 v3	EPA 3510C/8270D
PAH in Soil by GC/MS (Extended)	2	2006/09/29	2006/10/02	EENVSOP-00010 v3	EPA 3510C/8270D
Polychlorinated Biphenyls ⓪	2	N/A	2006/10/13	CAL SOP-00149	GC/ECD-EXTRACTION
VOCs in Soil by P&T GC/MS (Std List)	2	N/A	2006/10/05	EENVSOP-00003 V.3	EPA SW843 8260 B

../2

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Maxxam Analytics Inc

Your Project #: 1256-0601
Site: INUVIK
Your C.O.C. #: 115785

Attention: MICHAEL MUTTERSBACH
FRANZ ENVIRONMENTAL INC.
FRANZENV-VAN
1080 MAINLAND STREET
308
VANCOUVER, BC
Canada V6B 2T4

Report Date: 2006/10/27

CERTIFICATE OF ANALYSIS

-2-

(1) This test was performed by Maxxam Vancouver
(2) This test was performed by Maxxam Calgary
(3) Results reported on a dry weight basis.

Encryption Key

Jeremy Wakaruk
27 Oct 2006 04:52:46 -06:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

ELEMENTS BY ATOMIC SPECTROSCOPY (LEACHATE)

Maxxam ID		C87833	C87836		
Sampling Date		2006/09/20	2006/09/20		
COC Number		115785	115785		
	Units	**09-TP06-01-03**	**09-TP06-02-01**	**RDL**	**QC Batch**
Elements					
Leachable Mercury (Hg)	ug/L	<0.05	<0.05	0.05	1315909
Leachable Metals					
Leachable (SWEP) Arsenic (As)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Barium (Ba)	mg/L	0.4	0.6	0.1	1314691
Leachable (SWEP) Boron (B)	mg/L	0.1	<0.1	0.1	1314691
Leachable (SWEP) Cadmium (Cd)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Chromium (Cr)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Copper (Cu)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Lead (Pb)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Molybdenum (Mo)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Selenium (Se)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Silver (Ag)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Uranium (U)	mg/L	<0.1	<0.1	0.1	1314691
Leachable (SWEP) Zinc (Zn)	mg/L	0.2	<0.1	0.1	1314691

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C87832	C87833	C87836	C87837		
Sampling Date		2006/09/20	2006/09/20	2006/09/20	2006/09/20		
COC Number		115785	115785	115785	115785		
	Units	**09-TP06-01-02**	**09-TP06-01-03**	**09-TP06-02-01**	**09-TP06-02-02**	**RDL**	**QC Batch**
Elements							
Hex. Chromium (Cr 6+)	mg/kg		<0.2	<0.2		0.2	1318988
Physical Properties							
Moisture	%	5.9	16.4	9.4	17.2	0.3	1296803

RDL = Reportable Detection Limit

Maxxam ID		C87839	C87842		C87847		
Sampling Date		2006/09/20	2006/09/20		2006/09/20		
COC Number		115785	115785		115785		
	Units	**08-TP06-01-01**	**08-TP06-02-01**	**QC Batch**	**08-TP06-03-01**	**RDL**	**QC Batch**
Elements							
Soluble (Hot water) Boron (B)	mg/kg			1283806	5.9	0.1	1283806
Hex. Chromium (Cr 6+)	mg/kg			1318988	<0.2	0.2	1285447
Mercury (Hg)	mg/kg				0.10	0.05	1284758
Physical Properties							
Moisture	%	12.9	14.8	1282388	26.5	0.3	1282388

RDL = Reportable Detection Limit

Maxxam ID		C87848		C87851	C87855		
Sampling Date		2006/09/20		2006/09/20	2006/09/20		
COC Number		115785		115785	115785		
	Units	**08-TP06-03-02**	**QC Batch**	**08-TP06-04-02**	**08-TP06-05-01**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	18.2	1298328	13.7	14.2	0.3	1282947

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C87858	C87861		C87864		
Sampling Date		2006/09/20	2006/09/20		2006/09/20		
COC Number		115785	115785		115785		
	Units	**08-TP06-06-01**	**08-TP06-07-01**	**QC Batch**	**08-TP06-07-04**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	18.5	19.9	1282947	17.0	0.3	1282388

RDL = Reportable Detection Limit

Maxxam ID		C87865		C87866		
Sampling Date		2006/09/20		2006/09/20		
COC Number		115785		115785		
	Units	**08-TP06-07-05**	**QC Batch**	**08-TP06-DUP-10**	**RDL**	**QC Batch**
Physical Properties						
Moisture	%	18.7	1298328	12.1	0.3	1296803

RDL = Reportable Detection Limit

Maxxam ID		C87867		
Sampling Date		2006/09/20		
COC Number		115785		
	Units	**08-GRAB06-01-01**	**RDL**	**QC Batch**
Physical Properties				
Moisture	%	5.4	0.3	1282947

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87832	C87833	C87836		
Sampling Date		2006/09/20	2006/09/20	2006/09/20		
COC Number		115785	115785	115785		
	Units	**09-TP06-01-02**	**09-TP06-01-03**	**09-TP06-02-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	<10	<10	<10	10	1296823
F1 (C06-C10) - BTEX	mg/kg	<10			10	1296645
F2 (C10-C16 Hydrocarbons)	mg/kg		<10	<10	10	1296502
F3 (C16-C34 Hydrocarbons)	mg/kg		132	<10	10	1296502
F4 (C34-C50 Hydrocarbons)	mg/kg		99	<10	10	1296502
Reached Baseline at C50	mg/kg		Yes	Yes	1	1296502
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	103	103		1296823
O-TERPHENYL (sur.)	%		78	79		1296502

RDL = Reportable Detection Limit

Maxxam ID		C87837		C87839	C87842		
Sampling Date		2006/09/20		2006/09/20	2006/09/20		
COC Number		115785		115785	115785		
	Units	**09-TP06-02-02**	**QC Batch**	**08-TP06-01-01**	**08-TP06-02-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon							
F1 (C06-C10)	mg/kg	<10	1296823	<10	<10	10	1282387
F1 (C06-C10) - BTEX	mg/kg	<10	1296645	<10	<10	10	1282425
F2 (C10-C16 Hydrocarbons)	mg/kg		1296502	15	14	10	1284284
F3 (C16-C34 Hydrocarbons)	mg/kg		1296502	173	95	10	1284284
F4 (C34-C50 Hydrocarbons)	mg/kg		1296502	277	65	10	1284284
Reached Baseline at C50	mg/kg		1296502	Yes	Yes	1	1284284
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	100	1296823	94	97		1282387
O-TERPHENYL (sur.)	%		1296502	82	84		1284284

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87847		C87848		
Sampling Date		2006/09/20		2006/09/20		
COC Number		115785		115785		
	Units	**08-TP06-03-01**	**QC Batch**	**08-TP06-03-02**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	278	1282387		10	1282387
F1 (C06-C10) - BTEX	mg/kg	278	1282425		10	1282425
F2 (C10-C16 Hydrocarbons)	mg/kg	423	1284284	19	10	1300135
F3 (C16-C34 Hydrocarbons)	mg/kg	12800	1284284	73	10	1300135
F4 (C34-C50 Hydrocarbons)	mg/kg	7090	1284284	26	10	1300135
Reached Baseline at C50	mg/kg	No	1284284	Yes	1	1300135
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	90	1282387			
O-TERPHENYL (sur.)	%	85	1284284	89		1300135

RDL = Reportable Detection Limit

Maxxam ID		C87851	C87855	C87858		
Sampling Date		2006/09/20	2006/09/20	2006/09/20		
COC Number		115785	115785	115785		
	Units	**08-TP06-04-02**	**08-TP06-05-01**	**08-TP06-06-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	16	<10	<10	10	1282166
F2 (C10-C16 Hydrocarbons)	mg/kg	17	12	<10	10	1284284
F3 (C16-C34 Hydrocarbons)	mg/kg	111	221	23	10	1284284
F4 (C34-C50 Hydrocarbons)	mg/kg	57	113	<10	10	1284284
Reached Baseline at C50	mg/kg	Yes	Yes	Yes	1	1284284
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	93	90	93		1282166
O-TERPHENYL (sur.)	%	84	94	95		1284284

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87861		C87864		
Sampling Date		2006/09/20		2006/09/20		
COC Number		115785		115785		
	Units	**08-TP06-07-01**	**QC Batch**	**08-TP06-07-04**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	85	1282166	901	10	1282387
F1 (C06-C10) - BTEX	mg/kg			900	10	1282425
F2 (C10-C16 Hydrocarbons)	mg/kg	1080	1284284	5020	10	1284284
F3 (C16-C34 Hydrocarbons)	mg/kg	298	1284284	841	10	1284284
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	1284284	<10	10	1284284
Reached Baseline at C50	mg/kg	Yes	1284284	Yes	1	1284284
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	91	1282166	89		1282387
O-TERPHENYL (sur.)	%	82	1284284	100		1284284

RDL = Reportable Detection Limit

Maxxam ID		C87865		C87866		
Sampling Date		2006/09/20		2006/09/20		
COC Number		115785		115785		
	Units	**08-TP06-07-05**	**QC Batch**	**08-TP06-DUP-10**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg	<10	1298327	<10	10	1296823
F2 (C10-C16 Hydrocarbons)	mg/kg	13	1300135	<10	10	1296502
F3 (C16-C34 Hydrocarbons)	mg/kg	19	1300135	150	10	1296502
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	1300135	75	10	1296502
Reached Baseline at C50	mg/kg	Yes	1300135	Yes	1	1296502
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	111	1298327	112		1296823
O-TERPHENYL (sur.)	%	91	1300135	78		1296502

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C87867		
Sampling Date		2006/09/20		
COC Number		115785		
	Units	**08-GRAB06-01-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon				
F1 (C06-C10)	mg/kg	<10	10	1282166
F1 (C06-C10) - BTEX	mg/kg	<10	10	1282425
F2 (C10-C16 Hydrocarbons)	mg/kg	12	10	1284284
F3 (C16-C34 Hydrocarbons)	mg/kg	199	10	1284284
F4 (C34-C50 Hydrocarbons)	mg/kg	<10	10	1284284
Reached Baseline at C50	mg/kg	Yes	1	1284284
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	94		1282166
O-TERPHENYL (sur.)	%	87		1284284

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		C87832	C87837		
Sampling Date		2006/09/20	2006/09/20		
COC Number		115785	115785		
	Units	**09-TP06-01-02**	**09-TP06-02-02**	**RDL**	**QC Batch**
Polychlorinated Biphenyls					
Aroclor 1016	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1221	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1232	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1242	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1248	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1254	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1260	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1262	mg/kg	<0.01	<0.01	0.01	1305653
Aroclor 1268	mg/kg	<0.01	<0.01	0.01	1305653
Total Aroclors	mg/kg	<0.01	<0.01	0.01	1305653
Surrogate Recovery (%)					
NONACHLOROBIPHENYL (sur.)	%	96	93		1305653

RDL = Reportable Detection Limit

Maxxam Analytics Inc
Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87832	C87837		C87847		
Sampling Date		2006/09/20	2006/09/20		2006/09/20		
COC Number		115785	115785		115785		
	Units	**09-TP06-01-02**	**09-TP06-02-02**	**QC Batch**	**08-TP06-03-01**	**RDL**	**QC Batch**
Polycyclic Aromatics							
Naphthalene	mg/kg	<0.05	<0.05	1289491	0.34	0.05	1282944
2-Methylnaphthalene	mg/kg	<0.05	<0.05	1289491	0.71	0.05	1282944
Acenaphthylene	mg/kg	<0.05	<0.05	1289491	0.05	0.05	1282944
Acenaphthene	mg/kg	<0.05	<0.05	1289491	<0.05	0.05	1282944
Fluorene	mg/kg	<0.05	<0.05	1289491	0.06	0.05	1282944
Phenanthrene	mg/kg	<0.05	<0.05	1289491	0.19	0.05	1282944
Anthracene	mg/kg	<0.05	<0.05	1289491	<0.05	0.05	1282944
Fluoranthene	mg/kg	<0.05	<0.05	1289491	0.14	0.05	1282944
Pyrene	mg/kg	<0.05	<0.05	1289491	0.35	0.05	1282944
Benzo(a)anthracene	mg/kg	<0.05	<0.05	1289491	0.08	0.05	1282944
Chrysene	mg/kg	<0.05	<0.05	1289491	0.12	0.05	1282944
Benzo(b&j)fluoranthene	mg/kg	<0.05	<0.05	1289491	<0.05	0.05	1282944
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	1289491	<0.05	0.05	1282944
Benzo(a)pyrene	mg/kg	<0.05	<0.05	1289491	0.06	0.05	1282944
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	<0.05	1289491	<0.05	0.05	1282944
Dibenz(a,h)anthracene	mg/kg	<0.05	<0.05	1289491	<0.05	0.05	1282944
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	1289491	<0.05	0.05	1282944
Surrogate Recovery (%)							
D10-ANTHRACENE (sur.)	%	91	119	1289491	123		1282944
D12-BENZO(A)PYRENE (sur.)	%	117	86	1289491	111		1282944
D8-ACENAPHTHYLENE (sur.)	%	121	123	1289491	122		1282944
TERPHENYL-D14 (sur.)	%	120	120	1289491	125		1282944

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87864	C87867		
Sampling Date		2006/09/20	2006/09/20		
COC Number		115785	115785		
	Units	**08-TP06-07-04**	**08-GRAB06-01-01**	**RDL**	**QC Batch**
Polycyclic Aromatics					
Naphthalene	mg/kg	<0.05	<0.05	0.05	1282944
2-Methylnaphthalene	mg/kg	2.2	0.06	0.05	1282944
Acenaphthylene	mg/kg	0.12	<0.05	0.05	1282944
Acenaphthene	mg/kg	0.17	<0.05	0.05	1282944
Fluorene	mg/kg	0.50	<0.05	0.05	1282944
Phenanthrene	mg/kg	0.60	0.16	0.05	1282944
Anthracene	mg/kg	<0.05	<0.05	0.05	1282944
Fluoranthene	mg/kg	<0.05	<0.05	0.05	1282944
Pyrene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(a)anthracene	mg/kg	<0.05	<0.05	0.05	1282944
Chrysene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(b&j)fluoranthene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.05	1282944
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	<0.05	0.05	1282944
Dibenz(a,h)anthracene	mg/kg	<0.05	<0.05	0.05	1282944
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	0.05	1282944
Surrogate Recovery (%)					
D10-ANTHRACENE (sur.)	%	121	123		1282944
D12-BENZO(A)PYRENE (sur.)	%	112	105		1282944
D8-ACENAPHTHYLENE (sur.)	%	117	122		1282944
TERPHENYL-D14 (sur.)	%	123	122		1282944

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		C87833	C87836		C87847		
Sampling Date		2006/09/20	2006/09/20		2006/09/20		
COC Number		115785	115785		115785		
	Units	**09-TP06-01-03**	**09-TP06-02-01**	**QC Batch**	**08-TP06-03-01**	**RDL**	**QC Batch**
Elements							
Total Aluminum (Al)	mg/kg	6920	4500	1324731	11000	10	1322914
Total Antimony (Sb)	mg/kg	<1	<1	1323123	2	1	1284161
Total Arsenic (As)	mg/kg	12	10	1323123	30	1	1284161
Total Barium (Ba)	mg/kg	164	143	1323123	216	10	1284161
Total Beryllium (Be)	mg/kg	0.8	0.6	1323123	0.7	0.4	1284161
Total Boron (B)	mg/kg	12	12	1324731	27	2	1322914
Total Cadmium (Cd)	mg/kg	0.9	0.4	1323123	4.1	0.1	1284161
Total Calcium (Ca)	mg/kg	79800	119000	1324731	45700	50	1322914
Total Chromium (Cr)	mg/kg	31	27	1323123	34	1	1284161
Total Cobalt (Co)	mg/kg	13	11	1323123	13	1	1284161
Total Copper (Cu)	mg/kg	31	25	1323123	65	5	1284161
Total Iron (Fe)	mg/kg	37500	17500	1324731	64000	10	1322914
Total Lead (Pb)	mg/kg	28	15	1323123	371	1	1284161
Total Lithium (Li)	mg/kg	11	<10	1324731	15	10	1322914
Total Magnesium (Mg)	mg/kg	37400	65400	1324731	15200	20	1322914
Total Manganese (Mn)	mg/kg	532	771	1324731	1930	10	1322914
Total Molybdenum (Mo)	mg/kg	1.4	0.7	1323123	3.2	0.4	1284161
Total Nickel (Ni)	mg/kg	26	22	1323123	30	1	1284161
Total Phosphorus (P)	mg/kg	517	598	1324731	3000	20	1322914
Total Potassium (K)	mg/kg	793	819	1324731	1400	30	1322914
Total Selenium (Se)	mg/kg	0.7	<0.5	1323123	0.6	0.5	1284161
Total Silver (Ag)	mg/kg	<1	<1	1323123	<1	1	1284161
Total Sodium (Na)	mg/kg	157	158	1324731	225	50	1322914
Total Strontium (Sr)	mg/kg	48	52	1324731	94	10	1322914
Total Sulphur (S)	mg/kg	1480	1260	1324731	3890	20	1322914
Total Thallium (Tl)	mg/kg	<0.3	<0.3	1323123	<0.3	0.3	1284161
Total Tin (Sn)	mg/kg	<1	<1	1323123	6	1	1284161
Total Vanadium (V)	mg/kg	22	15	1323123	31	1	1284161
Total Zinc (Zn)	mg/kg	120	56	1323123	643	10	1284161

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		C87848		
Sampling Date		2006/09/20		
COC Number		115785		
	Units	**08-TP06-03-02**	**RDL**	**QC Batch**
Elements				
Total Aluminum (Al)	mg/kg	9650	10	1300559
Total Antimony (Sb)	mg/kg	<1	1	1300593
Total Arsenic (As)	mg/kg	23	1	1300593
Total Barium (Ba)	mg/kg	327	10	1300593
Total Beryllium (Be)	mg/kg	0.8	0.4	1300593
Total Boron (B)	mg/kg	6	2	1300559
Total Cadmium (Cd)	mg/kg	0.4	0.1	1300593
Total Calcium (Ca)	mg/kg	7600	50	1300559
Total Chromium (Cr)	mg/kg	57	1	1300593
Total Cobalt (Co)	mg/kg	16	1	1300593
Total Copper (Cu)	mg/kg	30	5	1300593
Total Iron (Fe)	mg/kg	30100	10	1300559
Total Lead (Pb)	mg/kg	20	1	1300593
Total Lithium (Li)	mg/kg	21	10	1300559
Total Magnesium (Mg)	mg/kg	3630	20	1300559
Total Manganese (Mn)	mg/kg	298	10	1300559
Total Molybdenum (Mo)	mg/kg	1.2	0.4	1300593
Total Nickel (Ni)	mg/kg	43	1	1300593
Total Phosphorus (P)	mg/kg	2630	20	1300559
Total Potassium (K)	mg/kg	726	30	1300559
Total Selenium (Se)	mg/kg	1.1	0.5	1300593
Total Silver (Ag)	mg/kg	<1	1	1300593
Total Sodium (Na)	mg/kg	132	50	1300559
Total Strontium (Sr)	mg/kg	65	10	1300559
Total Sulphur (S)	mg/kg	241	20	1300559
Total Thallium (Tl)	mg/kg	<0.3	0.3	1300593
Total Tin (Sn)	mg/kg	<1	1	1300593
Total Vanadium (V)	mg/kg	53	1	1300593
Total Zinc (Zn)	mg/kg	144	10	1300593

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87832	C87837		
Sampling Date		2006/09/20	2006/09/20		
COC Number		115785	115785		
	Units	**09-TP06-01-02**	**09-TP06-02-02**	**RDL**	**QC Batch**
Volatiles					
Benzene	mg/kg	<0.005	<0.005	0.005	1296631
Bromodichloromethane	mg/kg	<0.03	<0.03	0.03	1296631
Bromoform	mg/kg	<0.05	<0.05	0.05	1296631
Bromomethane	mg/kg	<0.02	<0.02	0.02	1296631
Carbon tetrachloride	mg/kg	<0.02	<0.02	0.02	1296631
Chlorobenzene	mg/kg	<0.02	<0.02	0.02	1296631
Chlorodibromomethane	mg/kg	<0.02	<0.02	0.02	1296631
Chloroethane	mg/kg	<0.02	<0.02	0.02	1296631
Chloroform	mg/kg	<0.02	<0.02	0.02	1296631
Chloromethane	mg/kg	<0.03	<0.03	0.03	1296631
1,2-dibromoethane	mg/kg	<0.02	<0.02	0.02	1296631
1,2-dichlorobenzene	mg/kg	<0.02	<0.02	0.02	1296631
1,3-dichlorobenzene	mg/kg	<0.02	<0.02	0.02	1296631
1,4-dichlorobenzene	mg/kg	<0.02	<0.02	0.02	1296631
1,1-dichloroethane	mg/kg	<0.02	<0.02	0.02	1296631
1,2-dichloroethane	mg/kg	<0.02	<0.02	0.02	1296631
1,1-dichloroethene	mg/kg	<0.02	<0.02	0.02	1296631
cis-1,2-dichloroethene	mg/kg	<0.02	<0.02	0.02	1296631
trans-1,2-dichloroethene	mg/kg	<0.02	<0.02	0.02	1296631
Dichloromethane	mg/kg	<0.1	<0.1	0.1	1296631
1,2-dichloropropane	mg/kg	<0.02	<0.02	0.02	1296631
cis-1,3-dichloropropene	mg/kg	<0.02	<0.02	0.02	1296631
trans-1,3-dichloropropene	mg/kg	<0.02	<0.02	0.02	1296631
Ethylbenzene	mg/kg	<0.01	<0.01	0.01	1296631
Styrene	mg/kg	<0.02	<0.02	0.02	1296631
1,1,1,2-tetrachloroethane	mg/kg	<0.1	<0.1	0.1	1296631
1,1,2,2-tetrachloroethane	mg/kg	<0.1	<0.1	0.1	1296631
Tetrachloroethene	mg/kg	<0.02	<0.02	0.02	1296631
Toluene	mg/kg	<0.02	<0.02	0.02	1296631
1,1,1-trichloroethane	mg/kg	<0.02	<0.02	0.02	1296631
1,1,2-trichloroethane	mg/kg	<0.02	<0.02	0.02	1296631
Trichloroethene	mg/kg	<0.02	<0.02	0.02	1296631
Trichlorofluoromethane	mg/kg	<0.02	<0.02	0.02	1296631

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87832	C87837		
Sampling Date		2006/09/20	2006/09/20		
COC Number		115785	115785		
	Units	**09-TP06-01-02**	**09-TP06-02-02**	**RDL**	**QC Batch**
Vinyl chloride	mg/kg	<0.02	<0.02	0.02	1296631
Xylenes (Total)	mg/kg	<0.04	<0.04	0.04	1296631
m & p-Xylene	mg/kg	<0.04	<0.04	0.04	1296631
o-Xylene	mg/kg	<0.02	<0.02	0.02	1296631
Surrogate Recovery (%)					
4-BROMOFLUOROBENZENE (sur.)	%	102	102		1296631
D10-ETHYLBENZENE (sur.)	%	100	110		1296631
D4-1,2-DICHLOROETHANE (sur.)	%	97	100		1296631
D8-TOLUENE (sur.)	%	101	102		1296631

RDL = Reportable Detection Limit

Maxxam ID		C87839	C87842	C87847		
Sampling Date		2006/09/20	2006/09/20	2006/09/20		
COC Number		115785	115785	115785		
	Units	**08-TP06-01-01**	**08-TP06-02-01**	**08-TP06-03-01**	**RDL**	**QC Batch**
Volatiles						
Benzene	mg/kg	<0.0050	0.025	0.026	0.0050	1282386
Toluene	mg/kg	<0.020	0.25	0.19	0.020	1282386
Ethylbenzene	mg/kg	<0.010	0.034	0.028	0.010	1282386
Xylenes (Total)	mg/kg	<0.020	0.34	<0.020	0.020	1282386
m & p-Xylene	mg/kg	<0.020	0.26	<0.020	0.020	1282386
o-Xylene	mg/kg	<0.020	0.079	<0.020	0.020	1282386
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	96	96	107		1282386
D10-ETHYLBENZENE (sur.)	%	117	119	130		1282386
D4-1,2-DICHLOROETHANE (sur.)	%	96	90	97		1282386
D8-TOLUENE (sur.)	%	99	98	100		1282386

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C87864		C87866		
Sampling Date		2006/09/20		2006/09/20		
COC Number		115785		115785		
	Units	**08-TP06-07-04**	**QC Batch**	**08-TP06-DUP-10**	**RDL**	**QC Batch**
Volatiles						
Benzene	mg/kg	<0.0050	1282386	<0.0050	0.0050	1295794
Toluene	mg/kg	0.074	1282386	<0.020	0.020	1295794
Ethylbenzene	mg/kg	0.069	1282386	<0.010	0.010	1295794
Xylenes (Total)	mg/kg	0.49	1282386	<0.020	0.020	1295794
m & p-Xylene	mg/kg	0.31	1282386	<0.020	0.020	1295794
o-Xylene	mg/kg	0.18	1282386	<0.020	0.020	1295794
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%	104	1282386	101		1295794
D10-ETHYLBENZENE (sur.)	%	130	1282386	103		1295794
D4-1,2-DICHLOROETHANE (sur.)	%	96	1282386	103		1295794
D8-TOLUENE (sur.)	%	100	1282386	101		1295794

RDL = Reportable Detection Limit

Maxxam ID		C87867		
Sampling Date		2006/09/20		
COC Number		115785		
	Units	**08-GRAB06-01-01**	**RDL**	**QC Batch**
Volatiles				
Benzene	mg/kg	<0.0050	0.0050	1282163
Toluene	mg/kg	0.16	0.020	1282163
Ethylbenzene	mg/kg	<0.010	0.010	1282163
Xylenes (Total)	mg/kg	<0.020	0.020	1282163
m & p-Xylene	mg/kg	<0.020	0.020	1282163
o-Xylene	mg/kg	<0.020	0.020	1282163
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	100		1282163
D10-ETHYLBENZENE (sur.)	%	111		1282163
D4-1,2-DICHLOROETHANE (sur.)	%	111		1282163
D8-TOLUENE (sur.)	%	101		1282163

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644374
Report Date: 2006/10/27

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

General Comments

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report

Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282163 LM4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/27		97	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/27		101	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/27		111	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/27		100	%	60 - 140
		Benzene	2006/09/27		77	%	60 - 140
		Toluene	2006/09/27		65	%	60 - 140
		Ethylbenzene	2006/09/27		95	%	60 - 140
		m & p-Xylene	2006/09/27		77	%	60 - 140
		o-Xylene	2006/09/27		60	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/27		101	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/27		91	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/27		118	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/27		127	%	60 - 140
		Benzene	2006/09/27		88	%	60 - 140
		Toluene	2006/09/27		98	%	60 - 140
		Ethylbenzene	2006/09/27		83	%	60 - 140
		m & p-Xylene	2006/09/27		89	%	60 - 140
		o-Xylene	2006/09/27		85	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/27		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/27		76	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/27		116	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/27		104	%	60 - 140
		Benzene	2006/09/27	<0.0050		mg/kg	
		Toluene	2006/09/27	<0.020		mg/kg	
		Ethylbenzene	2006/09/27	<0.010		mg/kg	
		Xylenes (Total)	2006/09/27	<0.020		mg/kg	
		m & p-Xylene	2006/09/27	<0.020		mg/kg	
		o-Xylene	2006/09/27	<0.020		mg/kg	
	RPD	Benzene	2006/09/27	14.3		%	50
		Toluene	2006/09/27	3.2		%	50
		Ethylbenzene	2006/09/27	26.8		%	50
		Xylenes (Total)	2006/09/27	35.2		%	50
		m & p-Xylene	2006/09/27	35.7		%	50
		o-Xylene	2006/09/27	32.9		%	50
1282166 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		87	%	60 - 130
		F1 (C06-C10)	2006/09/25		90	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		94	%	60 - 130
		F1 (C06-C10)	2006/09/25		91	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		92	%	60 - 130
		F1 (C06-C10)	2006/09/25	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/09/25	26.6		%	50
1282386 HW4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		101	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		122	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		90	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		111	%	60 - 140
		Toluene	2006/09/25		104	%	60 - 140
		Ethylbenzene	2006/09/25		167 (1)	%	60 - 140
		m & p-Xylene	2006/09/25		130	%	60 - 140
		o-Xylene	2006/09/25		87	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		119	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		96	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		101	%	60 - 140
		Benzene	2006/09/25		82	%	60 - 140

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282386 HW4	SPIKE	Toluene	2006/09/25		94	%	60 - 140
		Ethylbenzene	2006/09/25		103	%	60 - 140
		m & p-Xylene	2006/09/25		102	%	60 - 140
		o-Xylene	2006/09/25		103	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/09/25		121	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/25		92	%	60 - 140
		D8-TOLUENE (sur.)	2006/09/25		100	%	60 - 140
		Benzene	2006/09/25	<0.0050		mg/kg	
		Toluene	2006/09/25	<0.020		mg/kg	
		Ethylbenzene	2006/09/25	<0.010		mg/kg	
		Xylenes (Total)	2006/09/25	<0.020		mg/kg	
		m & p-Xylene	2006/09/25	<0.020		mg/kg	
		o-Xylene	2006/09/25	<0.020		mg/kg	
	RPD	Benzene	2006/09/25	6.4		%	50
		Toluene	2006/09/25	NC		%	50
		Ethylbenzene	2006/09/25	0.02		%	50
		Xylenes (Total)	2006/09/25	1.2		%	50
		m & p-Xylene	2006/09/25	0.2		%	50
		o-Xylene	2006/09/25	15.0		%	50
1282387 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		88	%	60 - 130
		F1 (C06-C10)	2006/09/25		99	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		89	%	60 - 130
		F1 (C06-C10)	2006/09/25		92	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/25		86	%	60 - 130
		F1 (C06-C10)	2006/09/25	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/09/25	7.3		%	50
1282388 SD7	BLANK	Moisture	2006/09/23	<0.3		%	
	RPD	Moisture	2006/09/23	1.1		%	20
1282944 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/09/26		129	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		117	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		121	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		127	%	30 - 130
		Naphthalene	2006/09/26		101	%	30 - 130
		2-Methylnaphthalene	2006/09/26		103	%	30 - 130
		Acenaphthylene	2006/09/26		107	%	30 - 130
		Acenaphthene	2006/09/26		97	%	30 - 130
		Fluorene	2006/09/26		100	%	30 - 130
		Phenanthrene	2006/09/26		100	%	30 - 130
		Anthracene	2006/09/26		98	%	30 - 130
		Fluoranthene	2006/09/26		101	%	30 - 130
		Pyrene	2006/09/26		100	%	30 - 130
		Benzo(a)anthracene	2006/09/26		103	%	30 - 130
		Chrysene	2006/09/26		97	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/26		98	%	30 - 130
		Benzo(k)fluoranthene	2006/09/26		100	%	30 - 130
		Benzo(a)pyrene	2006/09/26		102	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/26		111	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/26		124	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/26		107	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/09/26		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		118	%	30 - 130
		Naphthalene	2006/09/26		105	%	30 - 130

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282944 AK3	SPIKE	2-Methylnaphthalene	2006/09/26		104	%	30 - 130
		Acenaphthylene	2006/09/26		105	%	30 - 130
		Acenaphthene	2006/09/26		101	%	30 - 130
		Fluorene	2006/09/26		100	%	30 - 130
		Phenanthrene	2006/09/26		104	%	30 - 130
		Anthracene	2006/09/26		101	%	30 - 130
		Fluoranthene	2006/09/26		100	%	30 - 130
		Pyrene	2006/09/26		100	%	30 - 130
		Benzo(a)anthracene	2006/09/26		99	%	30 - 130
		Chrysene	2006/09/26		99	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/26		94	%	30 - 130
		Benzo(k)fluoranthene	2006/09/26		98	%	30 - 130
		Benzo(a)pyrene	2006/09/26		96	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/26		107	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/26		104	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/26		108	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/09/26		119	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/26		107	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/26		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/26		123	%	30 - 130
		Naphthalene	2006/09/26	<0.05		mg/kg	
		2-Methylnaphthalene	2006/09/26	<0.05		mg/kg	
		Acenaphthylene	2006/09/26	<0.05		mg/kg	
		Acenaphthene	2006/09/26	<0.05		mg/kg	
		Fluorene	2006/09/26	<0.05		mg/kg	
		Phenanthrene	2006/09/26	<0.05		mg/kg	
		Anthracene	2006/09/26	<0.05		mg/kg	
		Fluoranthene	2006/09/26	<0.05		mg/kg	
		Pyrene	2006/09/26	<0.05		mg/kg	
		Benzo(a)anthracene	2006/09/26	<0.05		mg/kg	
		Chrysene	2006/09/26	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/09/26	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/09/26	<0.05		mg/kg	
		Benzo(a)pyrene	2006/09/26	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/09/26	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/09/26	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/09/26	<0.05		mg/kg	
	RPD	Naphthalene	2006/09/26	NC		%	50
		2-Methylnaphthalene	2006/09/26	NC		%	50
		Acenaphthylene	2006/09/26	NC		%	50
		Acenaphthene	2006/09/26	NC		%	50
		Fluorene	2006/09/26	NC		%	50
		Phenanthrene	2006/09/26	NC		%	50
		Anthracene	2006/09/26	NC		%	50
		Fluoranthene	2006/09/26	NC		%	50
		Pyrene	2006/09/26	NC		%	50
		Benzo(a)anthracene	2006/09/26	NC		%	50
		Chrysene	2006/09/26	NC		%	50
		Benzo(b&j)fluoranthene	2006/09/26	NC		%	50
		Benzo(k)fluoranthene	2006/09/26	NC		%	50
		Benzo(a)pyrene	2006/09/26	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/09/26	NC		%	50
		Dibenz(a,h)anthracene	2006/09/26	NC		%	50
		Benzo(g,h,i)perylene	2006/09/26	NC		%	50
1282947 HL2	BLANK	Moisture	2006/09/25	<0.3		%	

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1282947 HL2	RPD	Moisture	2006/09/25	0.7		%	20
1283806 MC3	MATRIX SPIKE	Soluble (Hot water) Boron (B)	2006/09/25		99	%	80 - 120
	SPIKE	Soluble (Hot water) Boron (B)	2006/09/25		106	%	85 - 115
	BLANK	Soluble (Hot water) Boron (B)	2006/09/25	<0.1		mg/kg	
	RPD	Soluble (Hot water) Boron (B)	2006/09/25	NC		%	40
1284161 AC4	Calibration Check	Total Antimony (Sb)	2006/09/26		103	%	80 - 120
		Total Arsenic (As)	2006/09/26		104	%	80 - 120
		Total Barium (Ba)	2006/09/26		101	%	80 - 120
		Total Beryllium (Be)	2006/09/26		106	%	80 - 120
		Total Cadmium (Cd)	2006/09/26		101	%	80 - 120
		Total Chromium (Cr)	2006/09/26		100	%	80 - 120
		Total Cobalt (Co)	2006/09/26		105	%	80 - 120
		Total Copper (Cu)	2006/09/26		104	%	80 - 120
		Total Lead (Pb)	2006/09/26		104	%	80 - 120
		Total Molybdenum (Mo)	2006/09/26		103	%	80 - 120
		Total Nickel (Ni)	2006/09/26		105	%	80 - 120
		Total Selenium (Se)	2006/09/26		104	%	80 - 120
		Total Silver (Ag)	2006/09/26		104	%	80 - 120
		Total Thallium (Tl)	2006/09/26		103	%	80 - 120
		Total Tin (Sn)	2006/09/26		104	%	80 - 120
		Total Vanadium (V)	2006/09/26		103	%	80 - 120
		Total Zinc (Zn)	2006/09/26		104	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/09/26		99	%	80 - 120
		Total Cadmium (Cd)	2006/09/26		93	%	N/A
		Total Selenium (Se)	2006/09/26		104	%	80 - 120
		Total Thallium (Tl)	2006/09/26		94	%	80 - 120
	BLANK	Total Antimony (Sb)	2006/09/26	<1		mg/kg	
		Total Arsenic (As)	2006/09/26	<1		mg/kg	
		Total Barium (Ba)	2006/09/26	<10		mg/kg	
		Total Beryllium (Be)	2006/09/26	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/09/26	<0.1		mg/kg	
		Total Chromium (Cr)	2006/09/26	<1		mg/kg	
		Total Cobalt (Co)	2006/09/26	<1		mg/kg	
		Total Copper (Cu)	2006/09/26	<5		mg/kg	
		Total Lead (Pb)	2006/09/26	<1		mg/kg	
		Total Molybdenum (Mo)	2006/09/26	<0.4		mg/kg	
		Total Nickel (Ni)	2006/09/26	<1		mg/kg	
		Total Selenium (Se)	2006/09/26	<0.5		mg/kg	
		Total Silver (Ag)	2006/09/26	<1		mg/kg	
		Total Thallium (Tl)	2006/09/26	<0.3		mg/kg	
		Total Tin (Sn)	2006/09/26	<1		mg/kg	
		Total Vanadium (V)	2006/09/26	<1		mg/kg	
		Total Zinc (Zn)	2006/09/26	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/09/26	NC		%	35
		Total Arsenic (As)	2006/09/26	NC		%	35
		Total Barium (Ba)	2006/09/26	10.2		%	35
		Total Beryllium (Be)	2006/09/26	NC		%	35
		Total Cadmium (Cd)	2006/09/26	10.1		%	35
		Total Chromium (Cr)	2006/09/26	11.1		%	35
		Total Cobalt (Co)	2006/09/26	7.2		%	35
		Total Copper (Cu)	2006/09/26	NC		%	35
		Total Lead (Pb)	2006/09/26	9.4		%	35
		Total Molybdenum (Mo)	2006/09/26	NC		%	35
		Total Nickel (Ni)	2006/09/26	8.3		%	35
		Total Selenium (Se)	2006/09/26	NC		%	35

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1284161 AC4	RPD	Total Silver (Ag)	2006/09/26	NC		%	35
		Total Thallium (Tl)	2006/09/26	NC		%	35
		Total Tin (Sn)	2006/09/26	NC		%	35
		Total Vanadium (V)	2006/09/26	7.0		%	35
		Total Zinc (Zn)	2006/09/26	8.2		%	35
1284284 AN1	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/09/26		90	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/26		101	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/26		87	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/26		82	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/26		85	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/26		96	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/09/26		80	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/09/26		80	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/26		87	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/26	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/09/26	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/09/26	<10		mg/kg	
		Reached Baseline at C50	2006/09/26	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/26	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/09/26	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2006/09/26	NC		%	50
		Reached Baseline at C50	2006/09/26	NC		%	50
1284758 YY1	Calibration Check	Mercury (Hg)	2006/09/26		106	%	85 - 115
	QC STANDARD	Mercury (Hg)	2006/09/26		123	%	N/A
	BLANK	Mercury (Hg)	2006/09/26	<0.05		mg/kg	
	RPD	Mercury (Hg)	2006/09/26	NC		%	35
1285447 DD1	Calibration Check	Hex. Chromium (Cr 6+)	2006/09/26		101	%	75 - 125
	MATRIX SPIKE	Hex. Chromium (Cr 6+)	2006/09/26		69 (1)	%	75 - 125
	BLANK	Hex. Chromium (Cr 6+)	2006/09/26	<0.2		mg/kg	
	RPD	Hex. Chromium (Cr 6+)	2006/09/26	NC		%	35
1289491 AK3	MATRIX SPIKE	D10-ANTHRACENE (sur.)	2006/10/02		125	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		117	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		118	%	30 - 130
		Naphthalene	2006/10/02		105	%	30 - 130
		2-Methylnaphthalene	2006/10/02		100	%	30 - 130
		Acenaphthylene	2006/10/02		102	%	30 - 130
		Acenaphthene	2006/10/02		98	%	30 - 130
		Fluorene	2006/10/02		94	%	30 - 130
		Phenanthrene	2006/10/02		101	%	30 - 130
		Anthracene	2006/10/02		97	%	30 - 130
		Fluoranthene	2006/10/02		97	%	30 - 130
		Pyrene	2006/10/02		97	%	30 - 130
		Benzo(a)anthracene	2006/10/02		96	%	30 - 130
		Chrysene	2006/10/02		98	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/02		98	%	30 - 130
		Benzo(k)fluoranthene	2006/10/02		104	%	30 - 130
		Benzo(a)pyrene	2006/10/02		103	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/02		102	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/02		122	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/02		99	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/10/02		122	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		103	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		118	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		118	%	30 - 130

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1289491 AK3	SPIKE	Naphthalene	2006/10/02		105	%	30 - 130
		2-Methylnaphthalene	2006/10/02		104	%	30 - 130
		Acenaphthylene	2006/10/02		105	%	30 - 130
		Acenaphthene	2006/10/02		101	%	30 - 130
		Fluorene	2006/10/02		100	%	30 - 130
		Phenanthrene	2006/10/02		104	%	30 - 130
		Anthracene	2006/10/02		101	%	30 - 130
		Fluoranthene	2006/10/02		100	%	30 - 130
		Pyrene	2006/10/02		100	%	30 - 130
		Benzo(a)anthracene	2006/10/02		99	%	30 - 130
		Chrysene	2006/10/02		99	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/02		94	%	30 - 130
		Benzo(k)fluoranthene	2006/10/02		98	%	30 - 130
		Benzo(a)pyrene	2006/10/02		96	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/02		107	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/02		124	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/02		108	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/10/02		119	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/02		107	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/02		124	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/02		123	%	30 - 130
		Naphthalene	2006/10/02	<0.05		mg/kg	
		2-Methylnaphthalene	2006/10/02	<0.05		mg/kg	
		Acenaphthylene	2006/10/02	<0.05		mg/kg	
		Acenaphthene	2006/10/02	<0.05		mg/kg	
		Fluorene	2006/10/02	<0.05		mg/kg	
		Phenanthrene	2006/10/02	<0.05		mg/kg	
		Anthracene	2006/10/02	<0.05		mg/kg	
		Fluoranthene	2006/10/02	<0.05		mg/kg	
		Pyrene	2006/10/02	<0.05		mg/kg	
		Benzo(a)anthracene	2006/10/02	<0.05		mg/kg	
		Chrysene	2006/10/02	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/10/02	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/10/02	<0.05		mg/kg	
		Benzo(a)pyrene	2006/10/02	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/10/02	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/10/02	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/10/02	<0.05		mg/kg	
	RPD	Naphthalene	2006/10/02	NC		%	50
		2-Methylnaphthalene	2006/10/02	NC		%	50
		Acenaphthylene	2006/10/02	NC		%	50
		Acenaphthene	2006/10/02	NC		%	50
		Fluorene	2006/10/02	NC		%	50
		Phenanthrene	2006/10/02	NC		%	50
		Anthracene	2006/10/02	NC		%	50
		Fluoranthene	2006/10/02	NC		%	50
		Pyrene	2006/10/02	NC		%	50
		Benzo(a)anthracene	2006/10/02	NC		%	50
		Chrysene	2006/10/02	NC		%	50
		Benzo(b&j)fluoranthene	2006/10/02	NC		%	50
		Benzo(k)fluoranthene	2006/10/02	NC		%	50
		Benzo(a)pyrene	2006/10/02	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/10/02	NC		%	50
		Dibenz(a,h)anthracene	2006/10/02	NC		%	50
		Benzo(g,h,i)perylene	2006/10/02	NC		%	50

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FRANZ ENVIRONMENTAL INC.
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Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1295794 CD1	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		102	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		107	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		104	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		104	%	60 - 140
		Benzene	2006/10/05		97	%	60 - 140
		Toluene	2006/10/05		103	%	60 - 140
		Ethylbenzene	2006/10/05		100	%	60 - 140
		m & p-Xylene	2006/10/05		100	%	60 - 140
		o-Xylene	2006/10/05		100	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		105	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		100	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		103	%	60 - 140
		Benzene	2006/10/05		96	%	60 - 140
		Toluene	2006/10/05		100	%	60 - 140
		Ethylbenzene	2006/10/05		99	%	60 - 140
		m & p-Xylene	2006/10/05		100	%	60 - 140
		o-Xylene	2006/10/05		100	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		100	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		99	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		103	%	60 - 140
		Benzene	2006/10/05	<0.0050		mg/kg	
		Toluene	2006/10/05	<0.020		mg/kg	
		Ethylbenzene	2006/10/05	<0.010		mg/kg	
		Xylenes (Total)	2006/10/05	<0.020		mg/kg	
		m & p-Xylene	2006/10/05	<0.020		mg/kg	
		o-Xylene	2006/10/05	<0.020		mg/kg	
	RPD	Benzene	2006/10/05	NC		%	50
		Toluene	2006/10/05	NC		%	50
		Ethylbenzene	2006/10/05	NC		%	50
		Xylenes (Total)	2006/10/05	NC		%	50
		m & p-Xylene	2006/10/05	NC		%	50
		o-Xylene	2006/10/05	NC		%	50
1296502 KB4	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/05		80	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/05		101	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/10/05		96	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/10/05		105	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/10/05		80	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/05		101	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/10/05		102	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/10/05		113	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/10/05		83	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/05	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/05	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/05	<10		mg/kg	
		Reached Baseline at C50	2006/10/05	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/05	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/05	NC		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/05	NC		%	50
		Reached Baseline at C50	2006/10/05	NC		%	50
1296631 LM4	MATRIX SPIKE [C87837-01]	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		100	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		107	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		103	%	60 - 140

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Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1296631 LM4	MATRIX SPIKE						
	[C87837-01]	D8-TOLUENE (sur.)	2006/10/05		97	%	60 - 140
		Benzene	2006/10/05		93	%	60 - 140
		Bromodichloromethane	2006/10/05		96	%	60 - 140
		Bromoform	2006/10/05		88	%	60 - 140
		Bromomethane	2006/10/05		112	%	60 - 140
		Carbon tetrachloride	2006/10/05		90	%	60 - 140
		Chlorobenzene	2006/10/05		93	%	60 - 140
		Chlorodibromomethane	2006/10/05		89	%	60 - 140
		Chloroethane	2006/10/05		101	%	60 - 140
		Chloroform	2006/10/05		111	%	60 - 140
		Chloromethane	2006/10/05		95	%	60 - 140
		1,2-dibromoethane	2006/10/05		88	%	60 - 140
		1,2-dichlorobenzene	2006/10/05		89	%	60 - 140
		1,3-dichlorobenzene	2006/10/05		88	%	60 - 140
		1,4-dichlorobenzene	2006/10/05		95	%	60 - 140
		1,1-dichloroethane	2006/10/05		100	%	60 - 140
		1,2-dichloroethane	2006/10/05		97	%	60 - 140
		1,1-dichloroethene	2006/10/05		102	%	60 - 140
		cis-1,2-dichloroethene	2006/10/05		113	%	60 - 140
		trans-1,2-dichloroethene	2006/10/05		102	%	60 - 140
		Dichloromethane	2006/10/05		98	%	60 - 140
		1,2-dichloropropane	2006/10/05		95	%	60 - 140
		cis-1,3-dichloropropene	2006/10/05		90	%	60 - 140
		trans-1,3-dichloropropene	2006/10/05		93	%	60 - 140
		Ethylbenzene	2006/10/05		88	%	60 - 140
		Styrene	2006/10/05		75	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/10/05		87	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/10/05		97	%	60 - 140
		Tetrachloroethene	2006/10/05		88	%	60 - 140
		Toluene	2006/10/05		92	%	60 - 140
		1,1,1-trichloroethane	2006/10/05		98	%	60 - 140
		1,1,2-trichloroethane	2006/10/05		94	%	60 - 140
		Trichloroethene	2006/10/05		96	%	60 - 140
		Trichlorofluoromethane	2006/10/05		97	%	60 - 140
		Vinyl chloride	2006/10/05		77	%	60 - 140
		m & p-Xylene	2006/10/05		93	%	60 - 140
		o-Xylene	2006/10/05		97	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		99	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		94	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		98	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		97	%	60 - 140
		Benzene	2006/10/05		91	%	60 - 140
		Bromodichloromethane	2006/10/05		93	%	60 - 140
		Bromoform	2006/10/05		91	%	60 - 140
		Bromomethane	2006/10/05		107	%	60 - 140
		Carbon tetrachloride	2006/10/05		91	%	60 - 140
		Chlorobenzene	2006/10/05		90	%	60 - 140
		Chlorodibromomethane	2006/10/05		87	%	60 - 140
		Chloroethane	2006/10/05		99	%	60 - 140
		Chloroform	2006/10/05		95	%	60 - 140
		Chloromethane	2006/10/05		102	%	60 - 140
		1,2-dibromoethane	2006/10/05		88	%	60 - 140
		1,2-dichlorobenzene	2006/10/05		91	%	60 - 140
		1,3-dichlorobenzene	2006/10/05		88	%	60 - 140

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Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1296631 LM4	SPIKE	1,4-dichlorobenzene	2006/10/05		96	%	60 - 140
		1,1-dichloroethane	2006/10/05		98	%	60 - 140
		1,2-dichloroethane	2006/10/05		96	%	60 - 140
		1,1-dichloroethene	2006/10/05		101	%	60 - 140
		cis-1,2-dichloroethene	2006/10/05		98	%	60 - 140
		trans-1,2-dichloroethene	2006/10/05		97	%	60 - 140
		Dichloromethane	2006/10/05		95	%	60 - 140
		1,2-dichloropropane	2006/10/05		92	%	60 - 140
		cis-1,3-dichloropropene	2006/10/05		93	%	60 - 140
		trans-1,3-dichloropropene	2006/10/05		93	%	60 - 140
		Ethylbenzene	2006/10/05		88	%	60 - 140
		Styrene	2006/10/05		92	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/10/05		89	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/10/05		98	%	60 - 140
		Tetrachloroethene	2006/10/05		91	%	60 - 140
		Toluene	2006/10/05		93	%	60 - 140
		1,1,1-trichloroethane	2006/10/05		97	%	60 - 140
		1,1,2-trichloroethane	2006/10/05		90	%	60 - 140
		Trichloroethene	2006/10/05		94	%	60 - 140
		Trichlorofluoromethane	2006/10/05		98	%	60 - 140
		Vinyl chloride	2006/10/05		67	%	60 - 140
		m & p-Xylene	2006/10/05		95	%	60 - 140
		o-Xylene	2006/10/05		95	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		103	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/05		101	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/05		100	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/05		102	%	60 - 140
		Benzene	2006/10/05	<0.005		mg/kg	
		Bromodichloromethane	2006/10/05	<0.03		mg/kg	
		Bromoform	2006/10/05	<0.05		mg/kg	
		Bromomethane	2006/10/05	<0.02		mg/kg	
		Carbon tetrachloride	2006/10/05	<0.02		mg/kg	
		Chlorobenzene	2006/10/05	<0.02		mg/kg	
		Chlorodibromomethane	2006/10/05	<0.02		mg/kg	
		Chloroethane	2006/10/05	<0.02		mg/kg	
		Chloroform	2006/10/05	<0.02		mg/kg	
		Chloromethane	2006/10/05	<0.03		mg/kg	
		1,2-dibromoethane	2006/10/05	<0.02		mg/kg	
		1,2-dichlorobenzene	2006/10/05	<0.02		mg/kg	
		1,3-dichlorobenzene	2006/10/05	<0.02		mg/kg	
		1,4-dichlorobenzene	2006/10/05	<0.02		mg/kg	
		1,1-dichloroethane	2006/10/05	<0.02		mg/kg	
		1,2-dichloroethane	2006/10/05	<0.02		mg/kg	
		1,1-dichloroethene	2006/10/05	<0.02		mg/kg	
		cis-1,2-dichloroethene	2006/10/05	<0.02		mg/kg	
		trans-1,2-dichloroethene	2006/10/05	<0.02		mg/kg	
		Dichloromethane	2006/10/05	<0.1		mg/kg	
		1,2-dichloropropane	2006/10/05	<0.02		mg/kg	
		cis-1,3-dichloropropene	2006/10/05	<0.02		mg/kg	
		trans-1,3-dichloropropene	2006/10/05	<0.02		mg/kg	
		Ethylbenzene	2006/10/05	<0.01		mg/kg	
		Styrene	2006/10/05	<0.02		mg/kg	
		1,1,1,2-tetrachloroethane	2006/10/05	<0.1		mg/kg	
		1,1,2,2-tetrachloroethane	2006/10/05	<0.1		mg/kg	
		Tetrachloroethene	2006/10/05	<0.02		mg/kg	

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1296631 LM4	BLANK	Toluene	2006/10/05	<0.02		mg/kg	
		1,1,1-trichloroethane	2006/10/05	<0.02		mg/kg	
		1,1,2-trichloroethane	2006/10/05	<0.02		mg/kg	
		Trichloroethene	2006/10/05	<0.02		mg/kg	
		Trichlorofluoromethane	2006/10/05	<0.02		mg/kg	
		Vinyl chloride	2006/10/05	<0.02		mg/kg	
		Xylenes (Total)	2006/10/05	<0.04		mg/kg	
		m & p-Xylene	2006/10/05	<0.04		mg/kg	
		o-Xylene	2006/10/05	<0.02		mg/kg	
	RPD [C87837-01]	Benzene	2006/10/05	NC		%	50
		Bromodichloromethane	2006/10/05	NC		%	50
		Bromoform	2006/10/05	NC		%	50
		Bromomethane	2006/10/05	NC		%	50
		Carbon tetrachloride	2006/10/05	NC		%	50
		Chlorobenzene	2006/10/05	NC		%	50
		Chlorodibromomethane	2006/10/05	NC		%	50
		Chloroethane	2006/10/05	NC		%	50
		Chloroform	2006/10/05	NC		%	50
		Chloromethane	2006/10/05	NC		%	50
		1,2-dibromoethane	2006/10/05	NC		%	50
		1,2-dichlorobenzene	2006/10/05	NC		%	50
		1,3-dichlorobenzene	2006/10/05	NC		%	50
		1,4-dichlorobenzene	2006/10/05	NC		%	50
		1,1-dichloroethane	2006/10/05	NC		%	50
		1,2-dichloroethane	2006/10/05	NC		%	50
		1,1-dichloroethene	2006/10/05	NC		%	50
		cis-1,2-dichloroethene	2006/10/05	NC		%	50
		trans-1,2-dichloroethene	2006/10/05	NC		%	50
		Dichloromethane	2006/10/05	NC		%	50
		1,2-dichloropropane	2006/10/05	NC		%	50
		cis-1,3-dichloropropene	2006/10/05	NC		%	50
		trans-1,3-dichloropropene	2006/10/05	NC		%	50
		Ethylbenzene	2006/10/05	NC		%	50
		Styrene	2006/10/05	NC		%	50
		1,1,1,2-tetrachloroethane	2006/10/05	NC		%	50
		1,1,2,2-tetrachloroethane	2006/10/05	NC		%	50
		Tetrachloroethene	2006/10/05	NC		%	50
		Toluene	2006/10/05	NC		%	50
		1,1,1-trichloroethane	2006/10/05	NC		%	50
		1,1,2-trichloroethane	2006/10/05	NC		%	50
		Trichloroethene	2006/10/05	NC		%	50
		Trichlorofluoromethane	2006/10/05	NC		%	50
		Vinyl chloride	2006/10/05	NC		%	50
		Xylenes (Total)	2006/10/05	NC		%	50
		m & p-Xylene	2006/10/05	NC		%	50
		o-Xylene	2006/10/05	NC		%	50
1296803 HL2	BLANK	Moisture	2006/10/05	<0.3		%	
	RPD [C87837-01]	Moisture	2006/10/05	1.7		%	20
1296823 RI2	MATRIX SPIKE						
	[C87837-01]	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		93	%	60 - 130
		F1 (C06-C10)	2006/10/05		99	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		94	%	60 - 130
		F1 (C06-C10)	2006/10/05		108	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/05		95	%	60 - 130
		F1 (C06-C10)	2006/10/05	<10		mg/kg	

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1296823 RI2	RPD [C87837-01]	F1 (C06-C10)	2006/10/05	NC		%	50
1298327 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/07		80	%	60 - 130
		F1 (C06-C10)	2006/10/07		87	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/07		96	%	60 - 130
		F1 (C06-C10)	2006/10/07		100	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/07		116	%	60 - 130
		F1 (C06-C10)	2006/10/07	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/10/07	NC		%	50
1298328 MD1	BLANK	Moisture	2006/10/06	<0.3		%	
	RPD	Moisture	2006/10/06	0		%	20
1300135 AN1	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/10		77	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/10		84	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/10/10		94	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/10/10		78	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/10/10		86	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/10		104	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/10/10		103	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/10/10		103	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/10/10		83	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/10	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/10	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/10	<10		mg/kg	
		Reached Baseline at C50	2006/10/10	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/10	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/10	60.1 (1)		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/10	62.1 (1)		%	50
		Reached Baseline at C50	2006/10/10	NC		%	50
1300559 MC3	Calibration Check	Total Aluminum (Al)	2006/10/10		103	%	80 - 120
		Total Boron (B)	2006/10/10		97	%	80 - 120
		Total Calcium (Ca)	2006/10/10		99	%	80 - 120
		Total Iron (Fe)	2006/10/10		101	%	80 - 120
		Total Lithium (Li)	2006/10/10		95	%	80 - 120
		Total Magnesium (Mg)	2006/10/10		102	%	80 - 120
		Total Manganese (Mn)	2006/10/10		99	%	80 - 120
		Total Phosphorus (P)	2006/10/10		98	%	80 - 120
		Total Potassium (K)	2006/10/10		99	%	80 - 120
		Total Sodium (Na)	2006/10/10		103	%	80 - 120
		Total Strontium (Sr)	2006/10/10		95	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/10/10		111	%	75 - 125
		Total Boron (B)	2006/10/10		108	%	80 - 120
		Total Calcium (Ca)	2006/10/10		102	%	75 - 125
		Total Iron (Fe)	2006/10/10		106	%	75 - 125
		Total Lithium (Li)	2006/10/10		101	%	75 - 125
		Total Magnesium (Mg)	2006/10/10		110	%	75 - 125
		Total Manganese (Mn)	2006/10/10		105	%	75 - 125
		Total Phosphorus (P)	2006/10/10		104	%	75 - 125
		Total Potassium (K)	2006/10/10		104	%	75 - 125
		Total Sodium (Na)	2006/10/10		115	%	75 - 125
		Total Strontium (Sr)	2006/10/10		100	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/10/10	<10		mg/kg	
		Total Boron (B)	2006/10/10	<2		mg/kg	
		Total Calcium (Ca)	2006/10/10	<50		mg/kg	
		Total Iron (Fe)	2006/10/10	<10		mg/kg	
		Total Lithium (Li)	2006/10/10	<10		mg/kg	
		Total Magnesium (Mg)	2006/10/10	<20		mg/kg	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1300559 MC3	BLANK	Total Manganese (Mn)	2006/10/10	<10		mg/kg	
		Total Phosphorus (P)	2006/10/10	<20		mg/kg	
		Total Potassium (K)	2006/10/10	<30		mg/kg	
		Total Sodium (Na)	2006/10/10	<50		mg/kg	
		Total Strontium (Sr)	2006/10/10	<10		mg/kg	
		Total Sulphur (S)	2006/10/10	<20		mg/kg	
	RPD [C87848-01]	Total Aluminum (Al)	2006/10/10	0.1		%	35
		Total Boron (B)	2006/10/10	NC		%	35
		Total Calcium (Ca)	2006/10/10	0.2		%	35
		Total Iron (Fe)	2006/10/10	0.3		%	35
		Total Lithium (Li)	2006/10/10	NC		%	35
		Total Magnesium (Mg)	2006/10/10	0.3		%	35
		Total Manganese (Mn)	2006/10/10	0.3		%	35
		Total Phosphorus (P)	2006/10/10	0.2		%	35
		Total Potassium (K)	2006/10/10	0.5		%	35
		Total Sodium (Na)	2006/10/10	NC		%	35
		Total Strontium (Sr)	2006/10/10	0.09		%	35
		Total Sulphur (S)	2006/10/10	0.9		%	35
1300593 AC4	Calibration Check	Total Antimony (Sb)	2006/10/10		99	%	80 - 120
		Total Arsenic (As)	2006/10/10		104	%	80 - 120
		Total Barium (Ba)	2006/10/10		102	%	80 - 120
		Total Beryllium (Be)	2006/10/10		106	%	80 - 120
		Total Cadmium (Cd)	2006/10/10		100	%	80 - 120
		Total Chromium (Cr)	2006/10/10		99	%	80 - 120
		Total Cobalt (Co)	2006/10/10		103	%	80 - 120
		Total Copper (Cu)	2006/10/10		102	%	80 - 120
		Total Lead (Pb)	2006/10/10		104	%	80 - 120
		Total Molybdenum (Mo)	2006/10/10		101	%	80 - 120
		Total Nickel (Ni)	2006/10/10		102	%	80 - 120
		Total Selenium (Se)	2006/10/10		102	%	80 - 120
		Total Silver (Ag)	2006/10/10		103	%	80 - 120
		Total Thallium (Tl)	2006/10/10		101	%	80 - 120
		Total Tin (Sn)	2006/10/10		101	%	80 - 120
		Total Vanadium (V)	2006/10/10		102	%	80 - 120
		Total Zinc (Zn)	2006/10/10		101	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/10/10		101	%	80 - 120
		Total Cadmium (Cd)	2006/10/10		102	%	N/A
		Total Lead (Pb)	2006/10/10		96	%	N/A
		Total Selenium (Se)	2006/10/10		109	%	80 - 120
		Total Thallium (Tl)	2006/10/10		103	%	80 - 120
	BLANK	Total Antimony (Sb)	2006/10/10	<1		mg/kg	
		Total Arsenic (As)	2006/10/10	<1		mg/kg	
		Total Barium (Ba)	2006/10/10	<10		mg/kg	
		Total Beryllium (Be)	2006/10/10	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/10/10	<0.1		mg/kg	
		Total Chromium (Cr)	2006/10/10	<1		mg/kg	
		Total Cobalt (Co)	2006/10/10	<1		mg/kg	
		Total Copper (Cu)	2006/10/10	<5		mg/kg	
		Total Lead (Pb)	2006/10/10	<1		mg/kg	
		Total Molybdenum (Mo)	2006/10/10	<0.4		mg/kg	
		Total Nickel (Ni)	2006/10/10	<1		mg/kg	
		Total Selenium (Se)	2006/10/10	<0.5		mg/kg	
		Total Silver (Ag)	2006/10/10	<1		mg/kg	
		Total Thallium (Tl)	2006/10/10	<0.3		mg/kg	
		Total Tin (Sn)	2006/10/10	<1		mg/kg	

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FRANZ ENVIRONMENTAL INC.
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Client Project #: 1256-0601
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Quality Assurance Report (Continued)

Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1300593 AC4	BLANK	Total Vanadium (V)	2006/10/10	<1		mg/kg	
		Total Zinc (Zn)	2006/10/10	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/10/10	NC		%	35
		Total Arsenic (As)	2006/10/10	18.9		%	35
		Total Barium (Ba)	2006/10/10	25.9		%	35
		Total Beryllium (Be)	2006/10/10	NC		%	35
		Total Cadmium (Cd)	2006/10/10	NC		%	35
		Total Chromium (Cr)	2006/10/10	17.6		%	35
		Total Cobalt (Co)	2006/10/10	14.4		%	35
		Total Copper (Cu)	2006/10/10	NC		%	35
		Total Lead (Pb)	2006/10/10	14.0		%	35
		Total Molybdenum (Mo)	2006/10/10	NC		%	35
		Total Nickel (Ni)	2006/10/10	14.0		%	35
		Total Selenium (Se)	2006/10/10	NC		%	35
		Total Silver (Ag)	2006/10/10	NC		%	35
		Total Thallium (Tl)	2006/10/10	NC		%	35
		Total Tin (Sn)	2006/10/10	NC		%	35
		Total Vanadium (V)	2006/10/10	34.4		%	35
		Total Zinc (Zn)	2006/10/10	13.9		%	35
1305653 RTA	Calibration Check	NONACHLOROBIPHENYL (sur.)	2006/10/13		91	%	53 - 127
		Aroclor 1254	2006/10/13		94	%	80 - 132
		Aroclor 1260	2006/10/13		68	%	60 - 117
	SPIKE	NONACHLOROBIPHENYL (sur.)	2006/10/13		97	%	53 - 127
		Aroclor 1260	2006/10/13		80	%	64 - 128
	BLANK	NONACHLOROBIPHENYL (sur.)	2006/10/13		81	%	53 - 127
		Aroclor 1016	2006/10/13	<0.01		mg/kg	
		Aroclor 1221	2006/10/13	<0.01		mg/kg	
		Aroclor 1232	2006/10/13	<0.01		mg/kg	
		Aroclor 1242	2006/10/13	<0.01		mg/kg	
		Aroclor 1248	2006/10/13	<0.01		mg/kg	
		Aroclor 1254	2006/10/13	<0.01		mg/kg	
		Aroclor 1260	2006/10/13	<0.01		mg/kg	
		Aroclor 1262	2006/10/13	<0.01		mg/kg	
		Aroclor 1268	2006/10/13	<0.01		mg/kg	
		Total Aroclors	2006/10/13	<0.01		mg/kg	
	RPD	Aroclor 1016	2006/10/13	NC		%	N/A
		Aroclor 1221	2006/10/13	NC		%	N/A
		Aroclor 1232	2006/10/13	NC		%	N/A
		Aroclor 1242	2006/10/13	NC		%	N/A
		Aroclor 1248	2006/10/13	NC		%	N/A
		Aroclor 1254	2006/10/13	NC		%	N/A
		Aroclor 1260	2006/10/13	NC		%	N/A
		Aroclor 1262	2006/10/13	NC		%	N/A
		Aroclor 1268	2006/10/13	NC		%	N/A
		Total Aroclors	2006/10/13	NC		%	N/A
1314691 DJ	BLANK	Leachable (SWEP) Arsenic (As)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Barium (Ba)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Boron (B)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Cadmium (Cd)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Chromium (Cr)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Copper (Cu)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Lead (Pb)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Molybdenum (Mo)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Selenium (Se)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Silver (Ag)	2006/10/19	<0.1		mg/L	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
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Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1314691 DJ	BLANK	Leachable (SWEP) Uranium (U)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Zinc (Zn)	2006/10/19	<0.1		mg/L	
	RPD	Leachable (SWEP) Arsenic (As)	2006/10/19	NC		%	35
		Leachable (SWEP) Barium (Ba)	2006/10/19	NC		%	35
		Leachable (SWEP) Boron (B)	2006/10/19	NC		%	35
		Leachable (SWEP) Cadmium (Cd)	2006/10/19	NC		%	35
		Leachable (SWEP) Chromium (Cr)	2006/10/19	NC		%	35
		Leachable (SWEP) Copper (Cu)	2006/10/19	NC		%	35
		Leachable (SWEP) Lead (Pb)	2006/10/19	NC		%	35
		Leachable (SWEP) Molybdenum (Mo)	2006/10/19	NC		%	35
		Leachable (SWEP) Selenium (Se)	2006/10/19	NC		%	35
		Leachable (SWEP) Silver (Ag)	2006/10/19	NC		%	35
		Leachable (SWEP) Uranium (U)	2006/10/19	NC		%	35
		Leachable (SWEP) Zinc (Zn)	2006/10/19	NC		%	35
1315909 JT3	BLANK	Leachable Mercury (Hg)	2006/10/20	<0.05		ug/L	
	RPD	Leachable Mercury (Hg)	2006/10/20	NC		%	35
1318988 AL2	Calibration Check	Hex. Chromium (Cr 6+)	2006/10/24		98	%	75 - 125
	MATRIX SPIKE	Hex. Chromium (Cr 6+)	2006/10/24		98	%	75 - 125
	BLANK	Hex. Chromium (Cr 6+)	2006/10/24	<0.2		mg/kg	
	RPD	Hex. Chromium (Cr 6+)	2006/10/24	NC		%	35
1322914 MC3	Calibration Check	Total Aluminum (Al)	2006/10/26		104	%	80 - 120
		Total Boron (B)	2006/10/26		100	%	80 - 120
		Total Calcium (Ca)	2006/10/26		95	%	80 - 120
		Total Iron (Fe)	2006/10/26		97	%	80 - 120
		Total Lithium (Li)	2006/10/26		102	%	80 - 120
		Total Magnesium (Mg)	2006/10/26		99	%	80 - 120
		Total Manganese (Mn)	2006/10/26		100	%	80 - 120
		Total Phosphorus (P)	2006/10/26		97	%	80 - 120
		Total Potassium (K)	2006/10/26		103	%	80 - 120
		Total Sodium (Na)	2006/10/26		106	%	80 - 120
		Total Strontium (Sr)	2006/10/26		97	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/10/26		107	%	75 - 125
		Total Boron (B)	2006/10/26		102	%	80 - 120
		Total Calcium (Ca)	2006/10/26		98	%	75 - 125
		Total Iron (Fe)	2006/10/26		99	%	75 - 125
		Total Lithium (Li)	2006/10/26		102	%	75 - 125
		Total Magnesium (Mg)	2006/10/26		103	%	75 - 125
		Total Manganese (Mn)	2006/10/26		104	%	75 - 125
		Total Phosphorus (P)	2006/10/26		101	%	75 - 125
		Total Potassium (K)	2006/10/26		103	%	75 - 125
		Total Sodium (Na)	2006/10/26		110	%	75 - 125
		Total Strontium (Sr)	2006/10/26		98	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/10/26	<10		mg/kg	
		Total Boron (B)	2006/10/26	<2		mg/kg	
		Total Calcium (Ca)	2006/10/26	<50		mg/kg	
		Total Iron (Fe)	2006/10/26	<10		mg/kg	
		Total Lithium (Li)	2006/10/26	<10		mg/kg	
		Total Magnesium (Mg)	2006/10/26	<20		mg/kg	
		Total Manganese (Mn)	2006/10/26	<10		mg/kg	
		Total Phosphorus (P)	2006/10/26	<20		mg/kg	
		Total Potassium (K)	2006/10/26	<30		mg/kg	
		Total Sodium (Na)	2006/10/26	<50		mg/kg	
		Total Strontium (Sr)	2006/10/26	<10		mg/kg	
		Total Sulphur (S)	2006/10/26	<20		mg/kg	
	RPD	Total Aluminum (Al)	2006/10/26	0.7		%	35

Maxxam Analytics Inc

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Quality Assurance Report (Continued)

Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1322914 MC3	RPD	Total Boron (B)	2006/10/26	2.4		%	35
		Total Calcium (Ca)	2006/10/26	1.3		%	35
		Total Iron (Fe)	2006/10/26	1.4		%	35
		Total Lithium (Li)	2006/10/26	NC		%	35
		Total Magnesium (Mg)	2006/10/26	0.6		%	35
		Total Manganese (Mn)	2006/10/26	1.4		%	35
		Total Phosphorus (P)	2006/10/26	0.7		%	35
		Total Potassium (K)	2006/10/26	0.5		%	35
		Total Sodium (Na)	2006/10/26	NC		%	35
		Total Strontium (Sr)	2006/10/26	0.1		%	35
		Total Sulphur (S)	2006/10/26	0.5		%	35
1323123 AC4	Calibration Check	Total Antimony (Sb)	2006/10/26		110	%	80 - 120
		Total Arsenic (As)	2006/10/26		103	%	80 - 120
		Total Barium (Ba)	2006/10/26		100	%	80 - 120
		Total Beryllium (Be)	2006/10/26		106	%	80 - 120
		Total Cadmium (Cd)	2006/10/26		98	%	80 - 120
		Total Chromium (Cr)	2006/10/26		101	%	80 - 120
		Total Cobalt (Co)	2006/10/26		102	%	80 - 120
		Total Copper (Cu)	2006/10/26		105	%	80 - 120
		Total Lead (Pb)	2006/10/26		98	%	80 - 120
		Total Molybdenum (Mo)	2006/10/26		101	%	80 - 120
		Total Nickel (Ni)	2006/10/26		104	%	80 - 120
		Total Selenium (Se)	2006/10/26		106	%	80 - 120
		Total Silver (Ag)	2006/10/26		101	%	80 - 120
		Total Thallium (Tl)	2006/10/26		98	%	80 - 120
		Total Tin (Sn)	2006/10/26		103	%	80 - 120
		Total Vanadium (V)	2006/10/26		105	%	80 - 120
		Total Zinc (Zn)	2006/10/26		101	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/10/26		93	%	75 - 125
		Total Cadmium (Cd)	2006/10/26		94	%	75 - 125
		Total Lead (Pb)	2006/10/26		79	%	75 - 125
		Total Selenium (Se)	2006/10/26		104	%	75 - 125
		Total Thallium (Tl)	2006/10/26		93	%	75 - 125
	BLANK	Total Antimony (Sb)	2006/10/26	<1		mg/kg	
		Total Arsenic (As)	2006/10/26	<1		mg/kg	
		Total Barium (Ba)	2006/10/26	<10		mg/kg	
		Total Beryllium (Be)	2006/10/26	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/10/26	<0.1		mg/kg	
		Total Chromium (Cr)	2006/10/26	<1		mg/kg	
		Total Cobalt (Co)	2006/10/26	<1		mg/kg	
		Total Copper (Cu)	2006/10/26	<5		mg/kg	
		Total Lead (Pb)	2006/10/26	<1		mg/kg	
		Total Molybdenum (Mo)	2006/10/26	<0.4		mg/kg	
		Total Nickel (Ni)	2006/10/26	<1		mg/kg	
		Total Selenium (Se)	2006/10/26	<0.5		mg/kg	
		Total Silver (Ag)	2006/10/26	<1		mg/kg	
		Total Thallium (Tl)	2006/10/26	<0.3		mg/kg	
		Total Tin (Sn)	2006/10/26	<1		mg/kg	
		Total Vanadium (V)	2006/10/26	<1		mg/kg	
		Total Zinc (Zn)	2006/10/26	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/10/26	NC		%	35
		Total Arsenic (As)	2006/10/26	11.6		%	35
		Total Barium (Ba)	2006/10/26	9.4		%	35
		Total Beryllium (Be)	2006/10/26	NC		%	35
		Total Cadmium (Cd)	2006/10/26	NC		%	35

Maxxam Analytics Inc

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Quality Assurance Report (Continued)

Maxxam Job Number: EA644374

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1323123 AC4	RPD	Total Chromium (Cr)	2006/10/26	19.0		%	35
		Total Cobalt (Co)	2006/10/26	2.8		%	35
		Total Copper (Cu)	2006/10/26	NC		%	35
		Total Lead (Pb)	2006/10/26	10.7		%	35
		Total Molybdenum (Mo)	2006/10/26	NC		%	35
		Total Nickel (Ni)	2006/10/26	6.1		%	35
		Total Selenium (Se)	2006/10/26	NC		%	35
		Total Silver (Ag)	2006/10/26	NC		%	35
		Total Thallium (Tl)	2006/10/26	NC		%	35
		Total Tin (Sn)	2006/10/26	NC		%	35
		Total Vanadium (V)	2006/10/26	30.8		%	35
		Total Zinc (Zn)	2006/10/26	10.5		%	35
1324731 MC3	Calibration Check	Total Aluminum (Al)	2006/10/27		105	%	80 - 120
		Total Boron (B)	2006/10/27		100	%	80 - 120
		Total Calcium (Ca)	2006/10/27		92	%	80 - 120
		Total Iron (Fe)	2006/10/27		93	%	80 - 120
		Total Lithium (Li)	2006/10/27		104	%	80 - 120
		Total Magnesium (Mg)	2006/10/27		101	%	80 - 120
		Total Manganese (Mn)	2006/10/27		99	%	80 - 120
		Total Phosphorus (P)	2006/10/27		99	%	80 - 120
		Total Potassium (K)	2006/10/27		104	%	80 - 120
		Total Sodium (Na)	2006/10/27		106	%	80 - 120
		Total Strontium (Sr)	2006/10/27		98	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/10/27		108	%	75 - 125
		Total Boron (B)	2006/10/27		102	%	80 - 120
		Total Calcium (Ca)	2006/10/27		93	%	75 - 125
		Total Iron (Fe)	2006/10/27		93	%	75 - 125
		Total Lithium (Li)	2006/10/27		106	%	75 - 125
		Total Magnesium (Mg)	2006/10/27		106	%	75 - 125
		Total Manganese (Mn)	2006/10/27		100	%	75 - 125
		Total Phosphorus (P)	2006/10/27		101	%	75 - 125
		Total Potassium (K)	2006/10/27		105	%	75 - 125
		Total Sodium (Na)	2006/10/27		111	%	75 - 125
		Total Strontium (Sr)	2006/10/27		99	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/10/27	<10		mg/kg	
		Total Boron (B)	2006/10/27	<2		mg/kg	
		Total Calcium (Ca)	2006/10/27	<50		mg/kg	
		Total Iron (Fe)	2006/10/27	<10		mg/kg	
		Total Lithium (Li)	2006/10/27	<10		mg/kg	
		Total Magnesium (Mg)	2006/10/27	<20		mg/kg	
		Total Manganese (Mn)	2006/10/27	<10		mg/kg	
		Total Phosphorus (P)	2006/10/27	<20		mg/kg	
		Total Potassium (K)	2006/10/27	<30		mg/kg	
		Total Sodium (Na)	2006/10/27	<50		mg/kg	
		Total Strontium (Sr)	2006/10/27	<10		mg/kg	
		Total Sulphur (S)	2006/10/27	<20		mg/kg	
	RPD [C87833-01]	Total Aluminum (Al)	2006/10/27	0.1		%	35
		Total Boron (B)	2006/10/27	0.2		%	35
		Total Calcium (Ca)	2006/10/27	0.3		%	35
		Total Iron (Fe)	2006/10/27	0.007		%	35
		Total Lithium (Li)	2006/10/27	NC		%	35
		Total Magnesium (Mg)	2006/10/27	0.4		%	35
		Total Manganese (Mn)	2006/10/27	0.3		%	35
		Total Phosphorus (P)	2006/10/27	0.5		%	35
		Total Potassium (K)	2006/10/27	0.4		%	35

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: MICHAEL MUTTERSBACH
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA644374

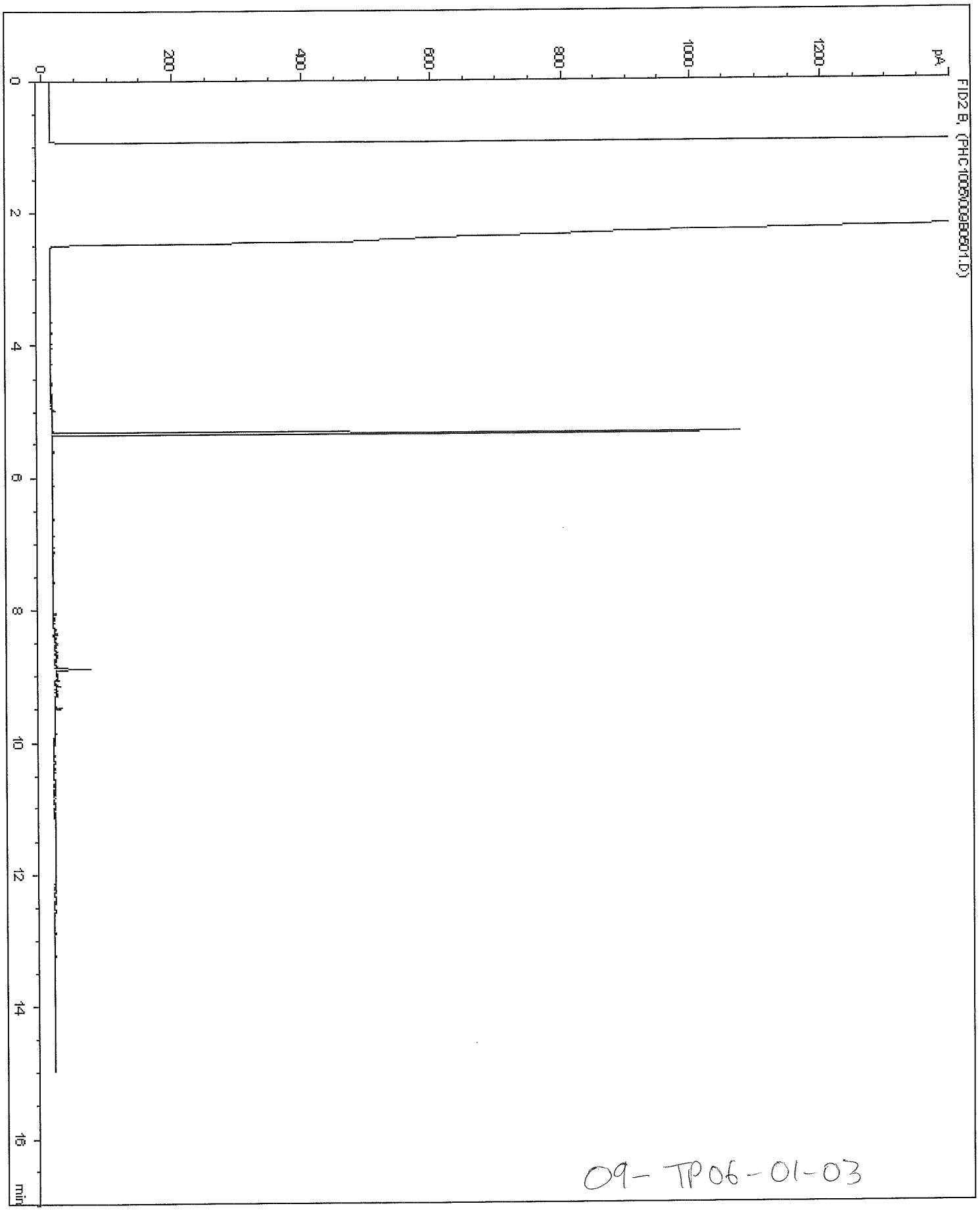
QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1324731 MC3	RPD [C87833-01]	Total Sodium (Na)	2006/10/27	NC		%	35
		Total Strontium (Sr)	2006/10/27	NC		%	35
		Total Sulphur (S)	2006/10/27	0.04		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference
(1) Please note that the recovery of some compounds are outside control limits however the overall quality control for this analysis meets our acceptability criteria.

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

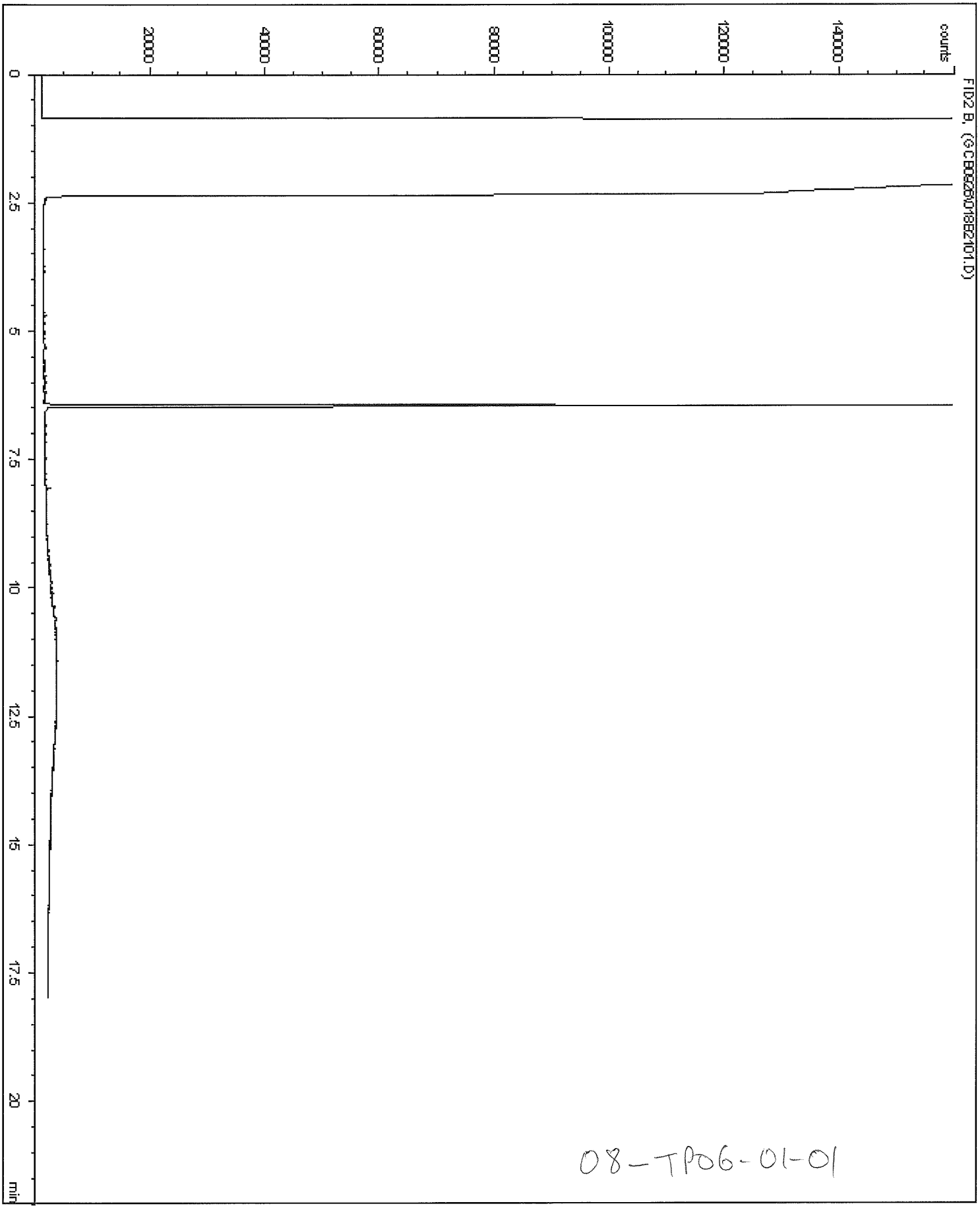
Data File C:\HPCHEM\1\DATA\PHC1005\009B0501.D

Sample Name: C87833

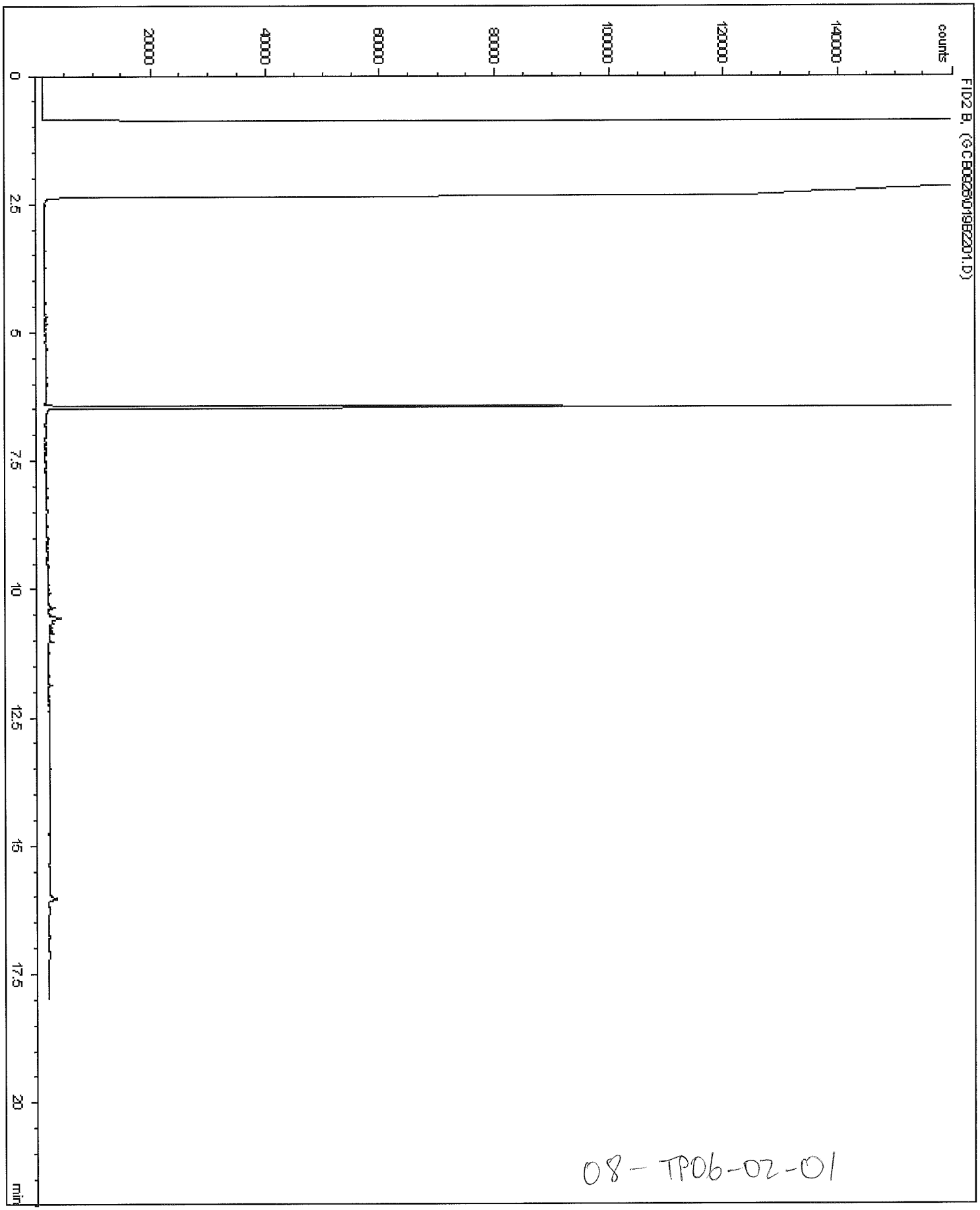


09-TP06-01-03

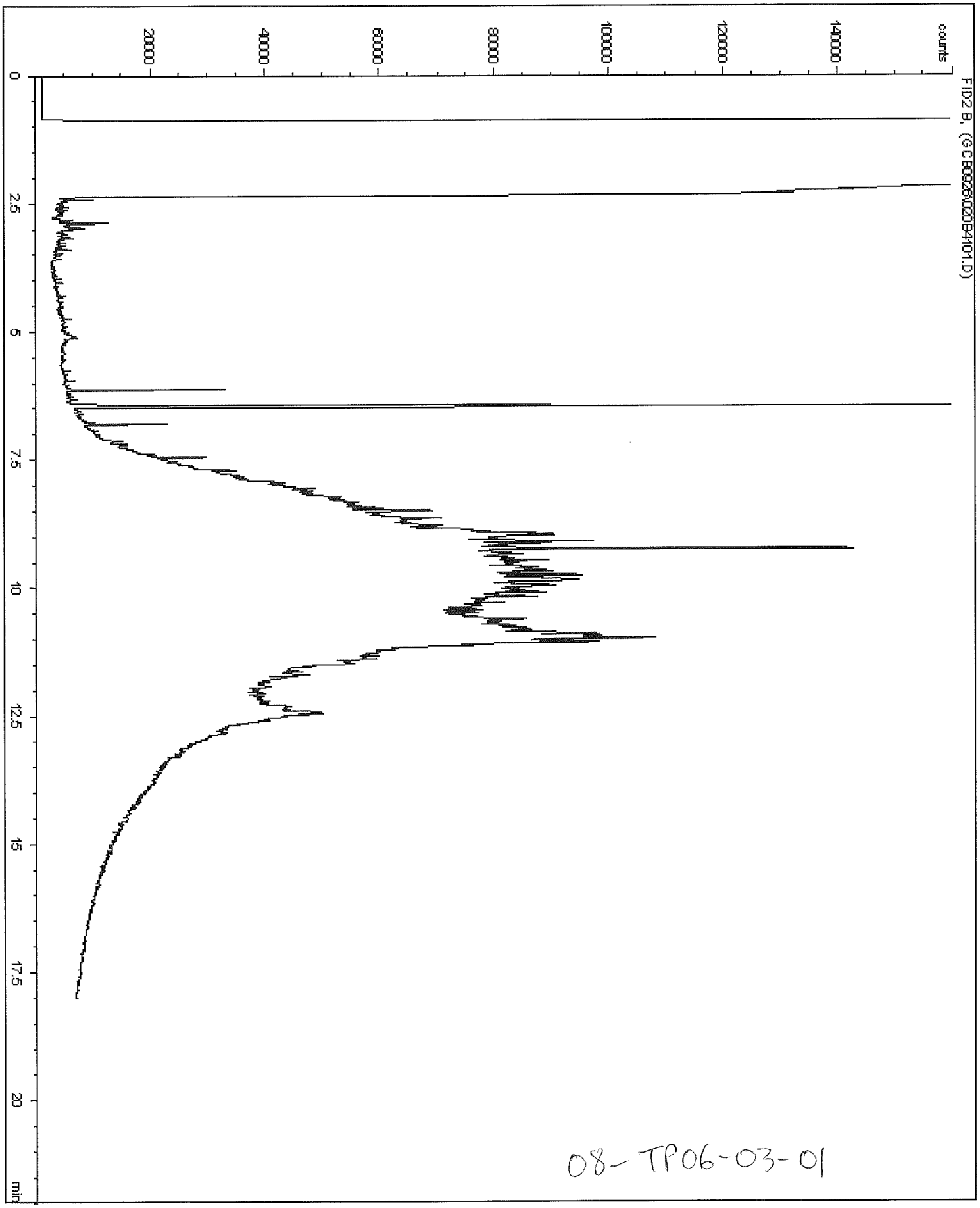
*** End of Report ***



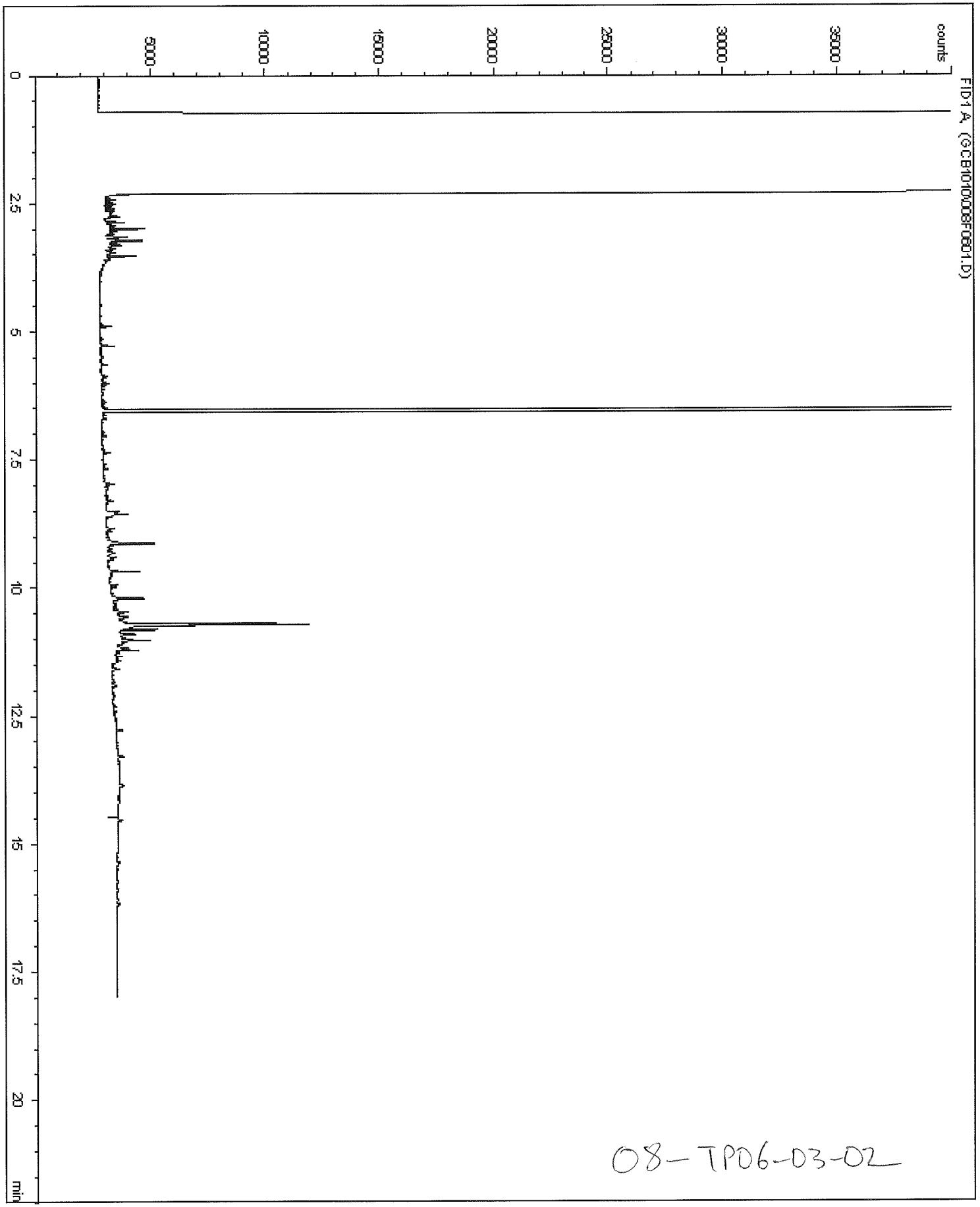
*** End of Report ***



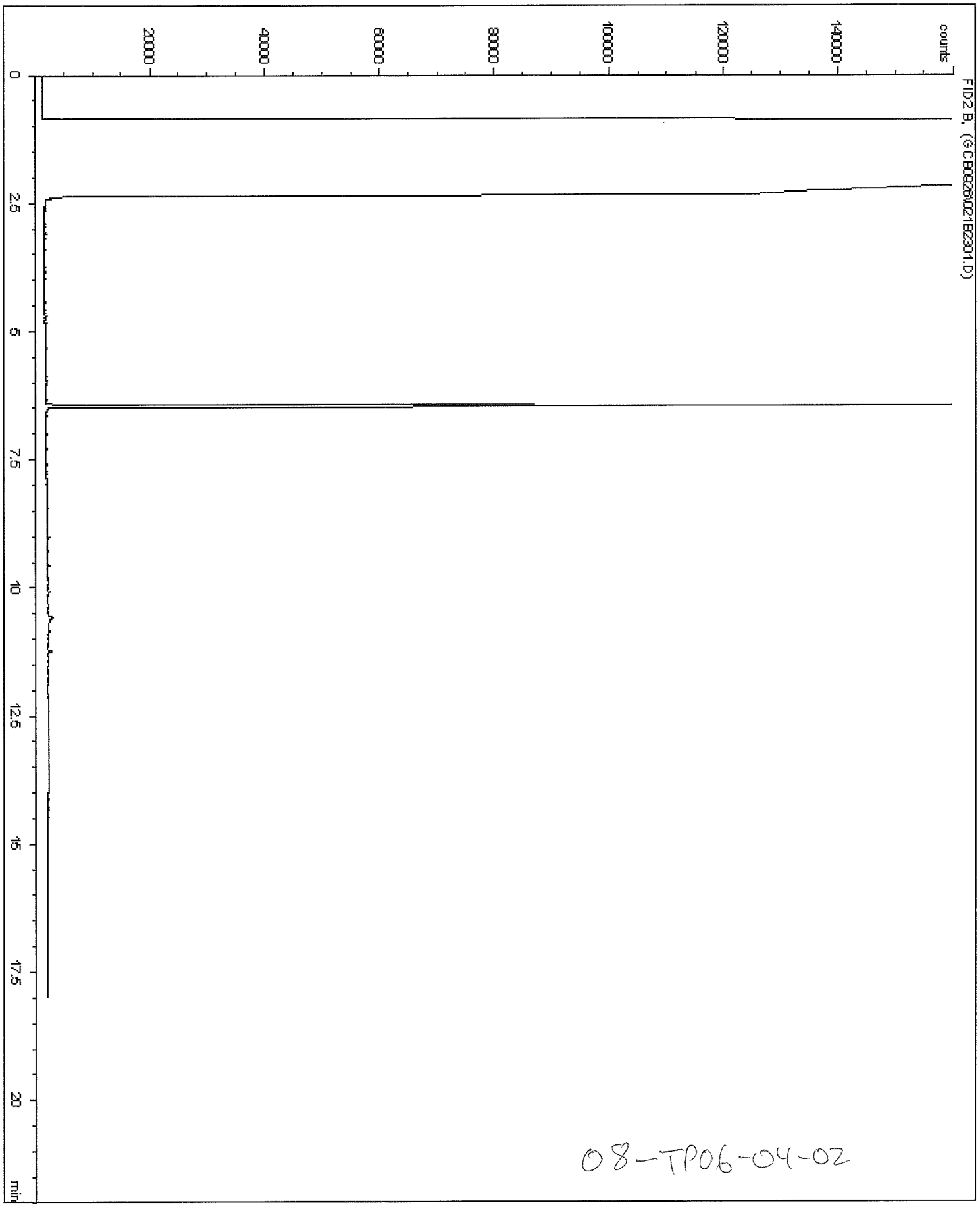
*** End of Report ***



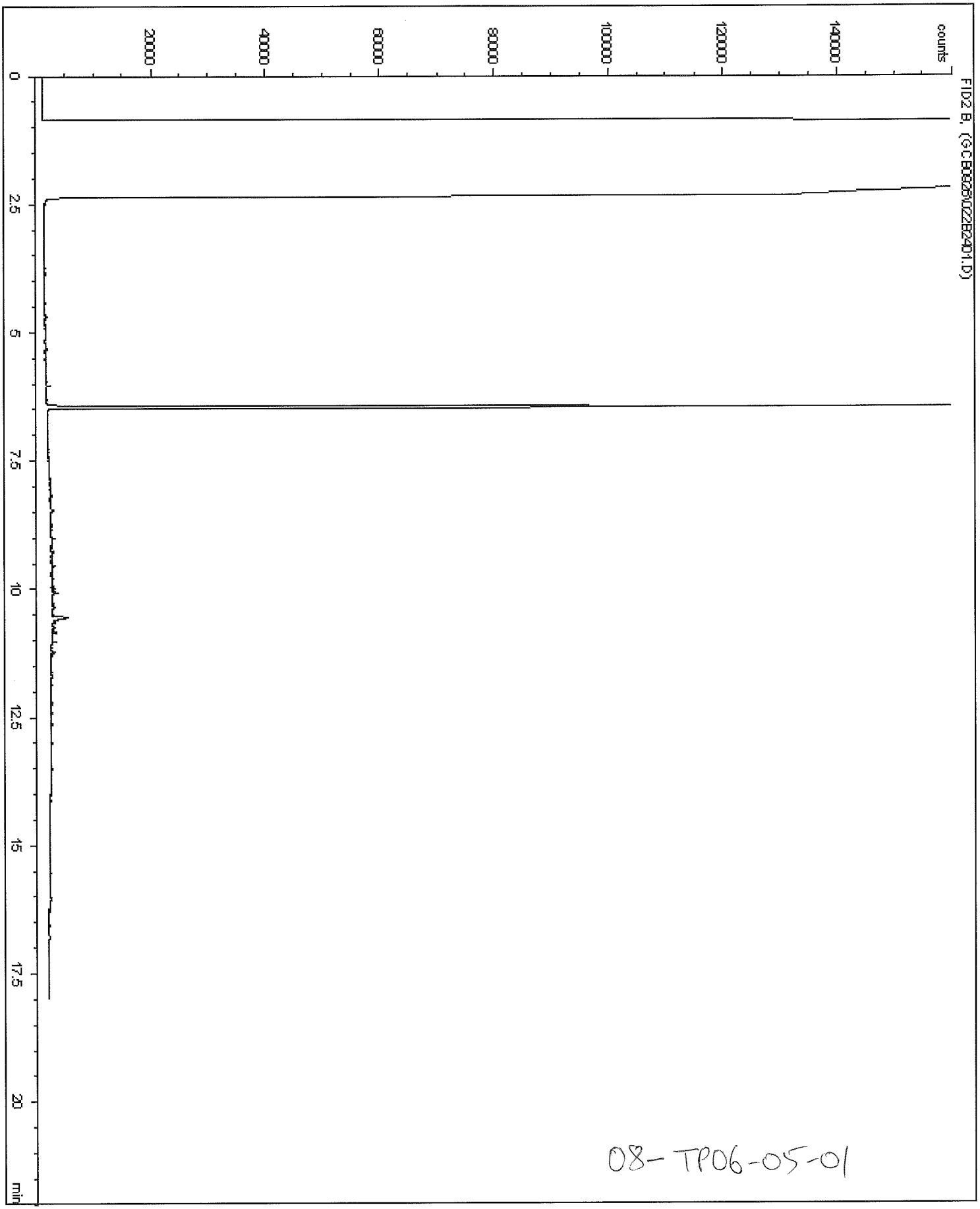
*** End of Report ***



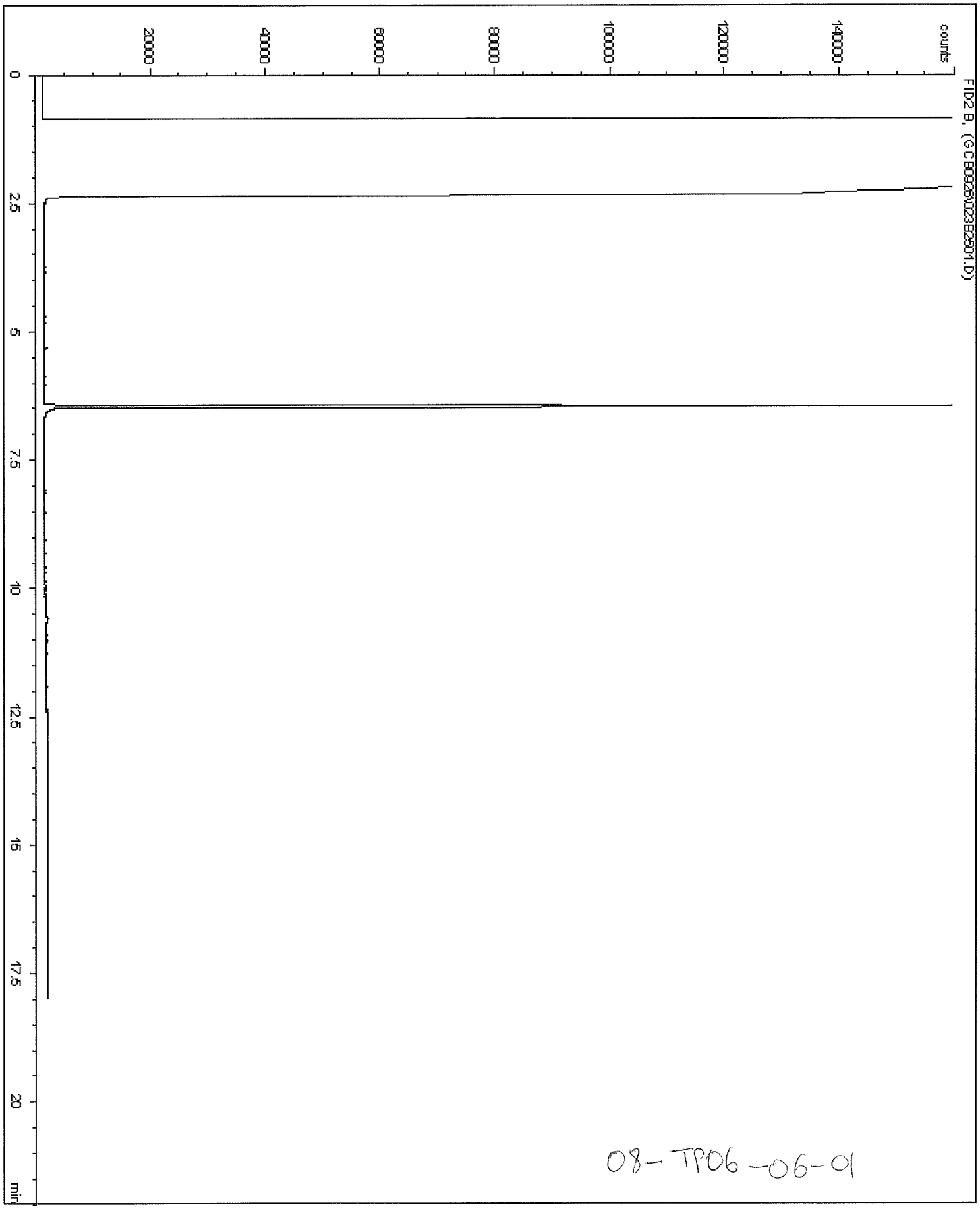
*** End of Report ***



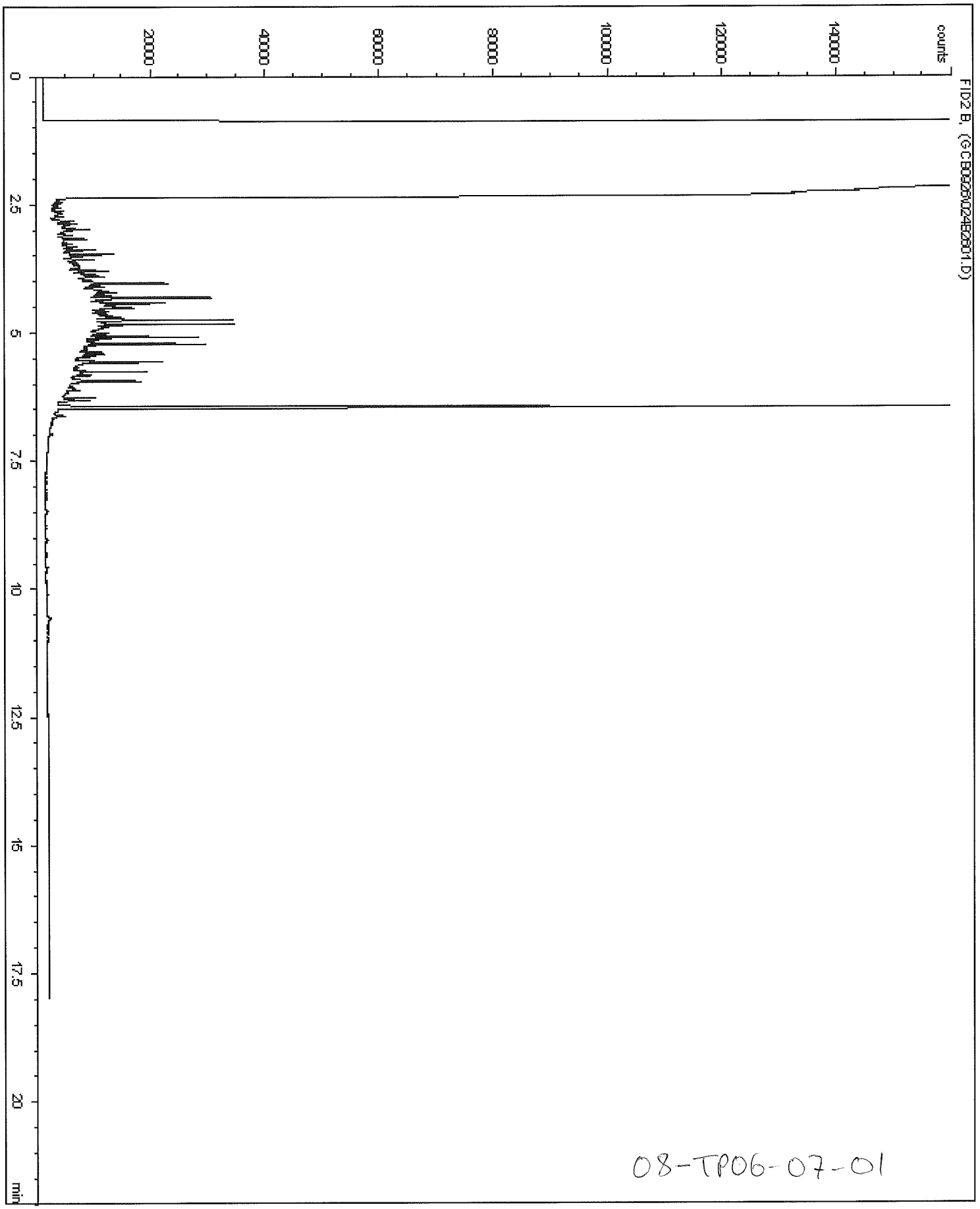
*** End of Report ***



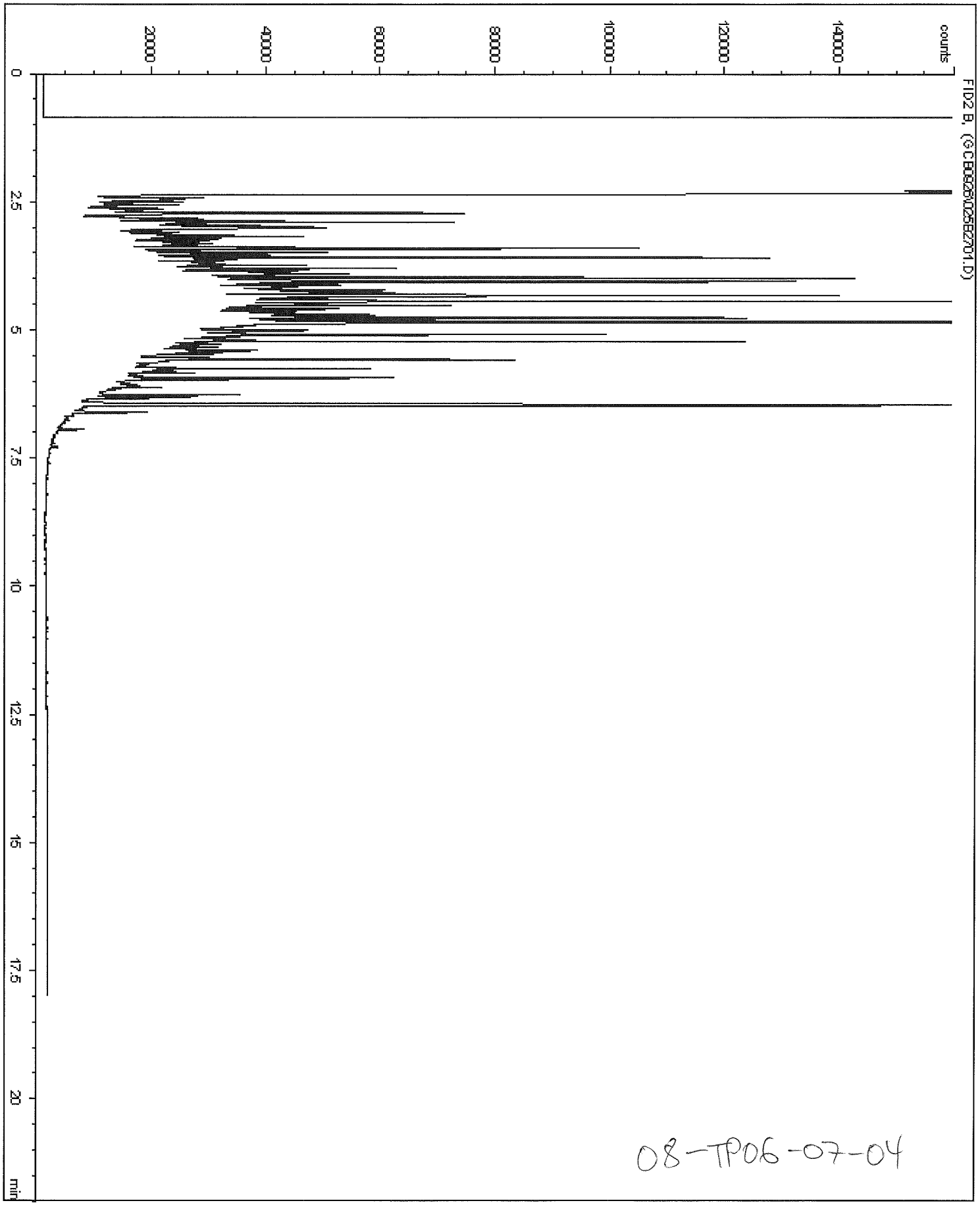
*** End of Report ***



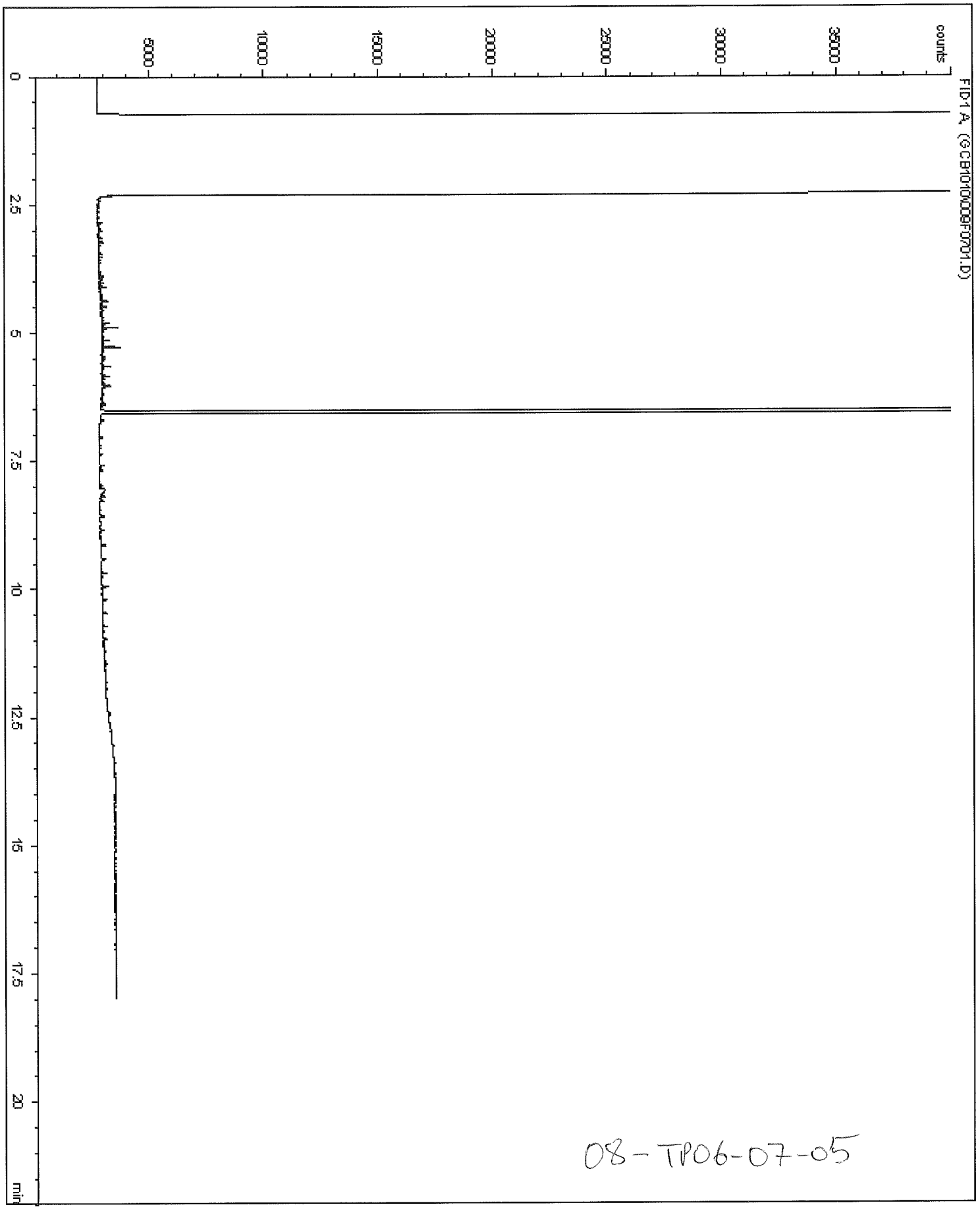
*** End of Report ***



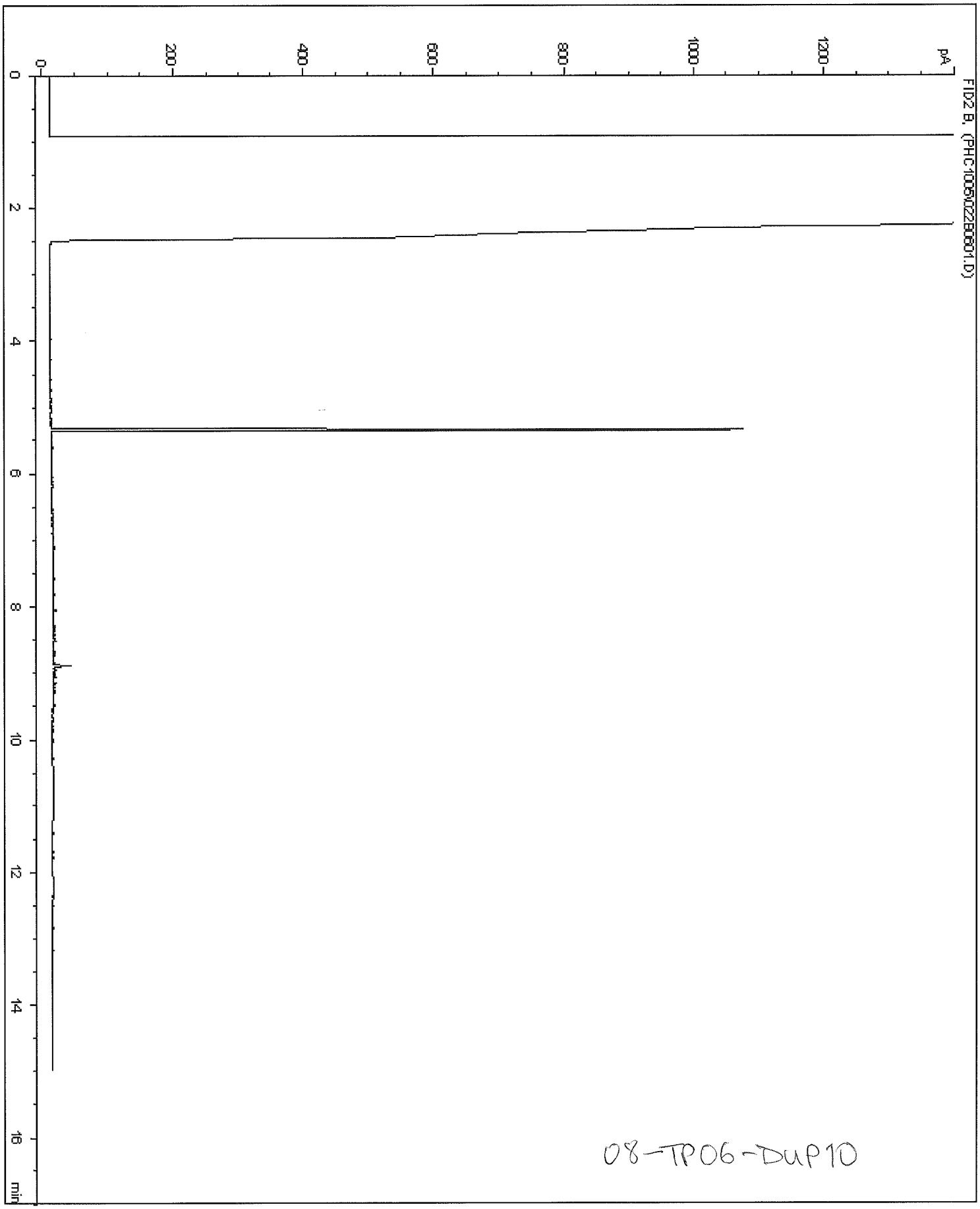
*** End of Report ***



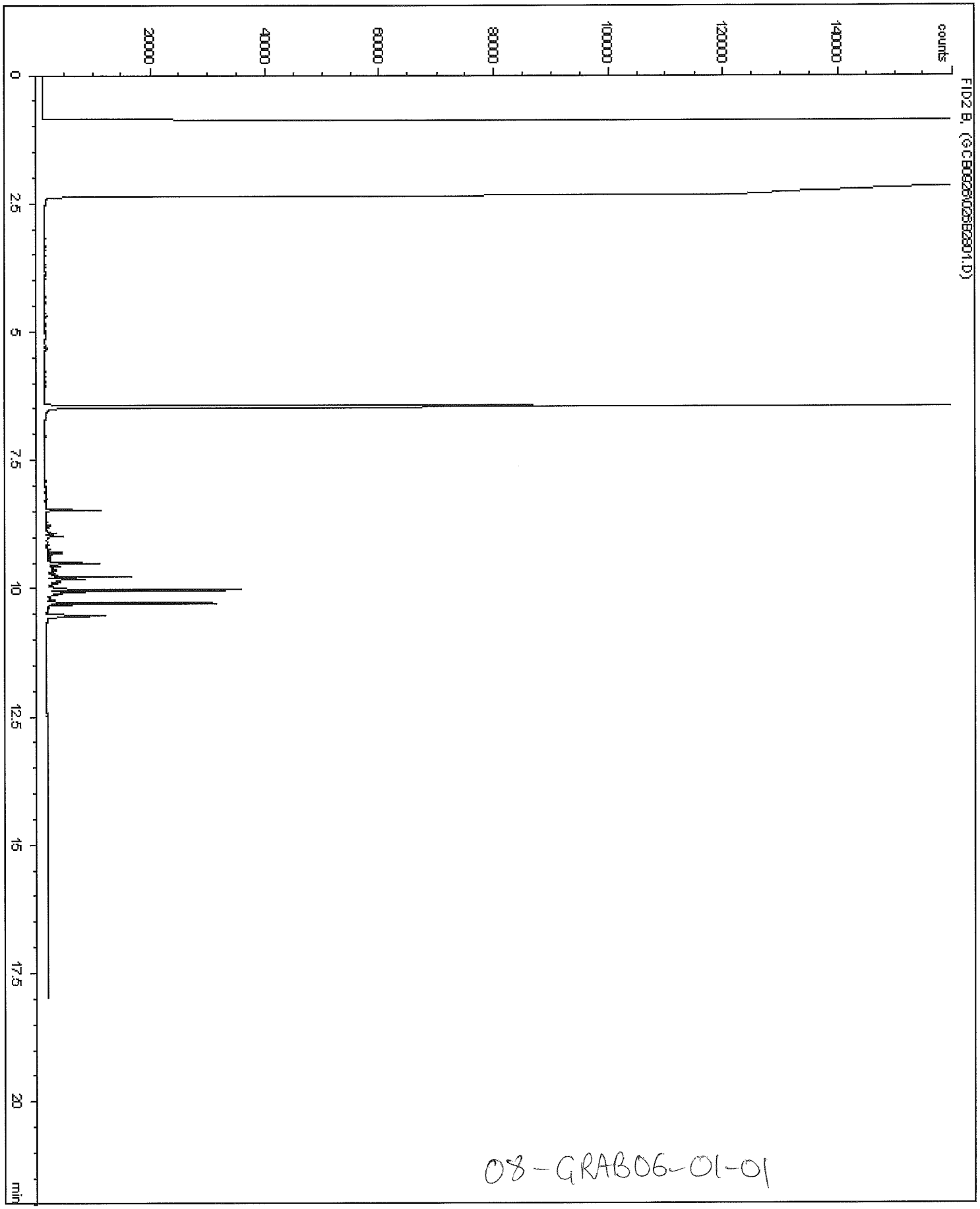
*** End of Report ***



*** End of Report ***



*** End of Report ***



08-GRAB06-01-01

*** End of Report ***

Maxxam Analytics Inc

Your Project #: 1256-0601 INUVIK
Your C.O.C. #: 115786

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
308-1080-MAINLAND STREET
VANCOUVER, BC
CANADA --- ---

Report Date: 2006/10/20

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A644756
Received: 2006/09/23, 15:00

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX in Water by HS GC/MS	1	2006/09/28	2006/09/28	EENVSOP-00004 V.2	EPA SW 846 8260 B
F1-BTEX Water Calc	1	2006/09/26	2006/09/26		
CCME Hydrocarbons (F1; HSGC/MS)	1	2006/09/26	2006/09/26	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F2-F4 in water)	1	2006/10/19	2006/10/20	EENVSOP-00009 v5	EPA 8015D SW846
CCME Hydrocarbons in Water (F2; C10-C16)	1	2006/09/27	2006/09/27	EENVSOP-00009 v5	EPA 8015D SW846
Elements by ICP - Dissolved	1	N/A	2006/09/26	EENVSOP-00034 v1	EPA 6010C
Elements by ICPMS - Dissolved	1	N/A	2006/09/27	EENVSOP-00123 v2	EPA 6020A
PAH in Water by GC/MS (Extended)	1	2006/09/26	2006/09/27	EENVSOP-00010 v3	EPA 3510C/8270D

Encryption Key Jeremy Wakaruk
20 Oct 2006 04:11:18 -06:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 468-3500 Ext:223

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Total cover pages: 1

Maxxam Job #: A644756
Report Date: 2006/10/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		C90102		
Sampling Date		2006/09/20		
COC Number		115786		
	Units	**08-TP06-03**	**RDL**	**QC Batch**
Hydrocarbons				
F1 (C06-C10) - BTEX	ug/L	<100	100	1284175

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644756
Report Date: 2006/10/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C90102		
Sampling Date		2006/09/20		
COC Number		115786		
	Units	**08-TP06-03**	**RDL**	**QC Batch**
Extractable Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	mg/L	0.4	0.1	1314892
F3 (C16-C34 Hydrocarbons)	mg/L	0.2	0.1	1314892
F4 (C34-C50 Hydrocarbons)	mg/L	<0.1	0.1	1314892
Reached Baseline at C50	mg/L	Yes	1	1314892
Hydrocarbons				
F1 (C06-C10)	ug/L	<100	100	1285169
F2 (C10-C16 Hydrocarbons)	mg/L	0.2	0.1	1286398
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	105		1314892
4-BROMOFLUOROBENZENE (sur.)	%	83		1285169
O-TERPHENYL (sur.)	%	113		1286398

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644756
Report Date: 2006/10/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

SEMIVOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		C90102		
Sampling Date		2006/09/20		
COC Number		115786		
	Units	**08-TP06-03**	**RDL**	**QC Batch**
Polycyclic Aromatics				
Naphthalene	ug/L	<1	1	1284304
Quinoline	ug/L	<0.1	0.1	1284304
Acenaphthylene	ug/L	<0.1	0.1	1284304
Acenaphthene	ug/L	<0.1	0.1	1284304
Fluorene	ug/L	<0.1	0.1	1284304
Phenanthrene	ug/L	<0.3	0.3	1284304
Anthracene	ug/L	<0.1	0.1	1284304
Acridine	ug/L	<0.1	0.1	1284304
Fluoranthene	ug/L	<0.1	0.1	1284304
Pyrene	ug/L	<0.1	0.1	1284304
Benzo(a)anthracene	ug/L	<0.1	0.1	1284304
Chrysene	ug/L	<0.1	0.1	1284304
Benzo(b&j)fluoranthene	ug/L	<0.1	0.1	1284304
Benzo(k)fluoranthene	ug/L	<0.1	0.1	1284304
Benzo(a)pyrene	ug/L	<0.01	0.01	1284304
Indeno(1,2,3-cd)pyrene	ug/L	<0.1	0.1	1284304
Dibenz(a,h)anthracene	ug/L	<0.1	0.1	1284304
Benzo(g,h,i)perylene	ug/L	<0.1	0.1	1284304
Surrogate Recovery (%)				
D10-ANTHRACENE (sur.)	%	38		1284304
D12-BENZO(A)PYRENE (sur.)	%	40		1284304
D8-ACENAPHTHYLENE (sur.)	%	37		1284304
TERPHENYL-D14 (sur.)	%	37		1284304

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644756
Report Date: 2006/10/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		C90102		
Sampling Date		2006/09/20		
COC Number		115786		
	Units	**08-TP06-03**	**RDL**	**QC Batch**
Elements				
Dissolved Aluminum (Al)	mg/L	<0.04	0.04	1284364
Dissolved Antimony (Sb)	mg/L	0.0008	0.0002	1286408
Dissolved Arsenic (As)	mg/L	0.003	0.001	1286408
Dissolved Barium (Ba)	mg/L	0.09	0.01	1284364
Dissolved Beryllium (Be)	mg/L	<0.001	0.001	1286408
Dissolved Boron (B)	mg/L	0.22	0.02	1284364
Dissolved Cadmium (Cd)	mg/L	<0.0002	0.0002	1286408
Dissolved Calcium (Ca)	mg/L	321	0.3	1284364
Dissolved Chromium (Cr)	mg/L	<0.01	0.01	1284364
Dissolved Cobalt (Co)	mg/L	0.0078	0.0003	1286408
Dissolved Copper (Cu)	mg/L	0.0015	0.0002	1286408
Dissolved Iron (Fe)	mg/L	2.47	0.06	1284364
Dissolved Lead (Pb)	mg/L	0.0022	0.0002	1286408
Dissolved Lithium (Li)	mg/L	0.02	0.02	1284364
Dissolved Magnesium (Mg)	mg/L	84.1	0.2	1284364
Dissolved Manganese (Mn)	mg/L	8.89	0.004	1284364
Dissolved Molybdenum (Mo)	mg/L	0.0025	0.0002	1286408
Dissolved Nickel (Ni)	mg/L	0.0185	0.0005	1286408
Dissolved Phosphorus (P)	mg/L	0.2	0.1	1284364
Dissolved Potassium (K)	mg/L	5.2	0.3	1284364
Dissolved Selenium (Se)	mg/L	0.002	0.001	1286408
Dissolved Silicon (Si)	mg/L	7.8	0.1	1284364
Dissolved Silver (Ag)	mg/L	<0.0001	0.0001	1286408
Dissolved Sodium (Na)	mg/L	32.6	0.5	1284364
Dissolved Strontium (Sr)	mg/L	0.78	0.02	1284364
Dissolved Sulphur (S)	mg/L	140	0.2	1284364
Dissolved Thallium (Tl)	mg/L	<0.0002	0.0002	1286408
Dissolved Tin (Sn)	mg/L	<0.001	0.001	1286408
Dissolved Titanium (Ti)	mg/L	0.007	0.001	1286408
Dissolved Uranium (U)	mg/L	0.0021	0.0001	1286408
Dissolved Vanadium (V)	mg/L	0.038	0.001	1286408
Dissolved Zinc (Zn)	mg/L	0.025	0.003	1286408

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644756
Report Date: 2006/10/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		C90102		
Sampling Date		2006/09/20		
COC Number		115786		
	Units	**08-TP06-03**	**RDL**	**QC Batch**
Volatiles				
Benzene	ug/L	<0.5	0.5	1287542
Toluene	ug/L	<0.5	0.5	1287542
Ethylbenzene	ug/L	<0.5	0.5	1287542
o-Xylene	ug/L	<0.5	0.5	1287542
m & p-Xylene	ug/L	<1	1	1287542
Xylenes (Total)	ug/L	<1	1	1287542
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	92		1287542
D4-1,2-DICHLOROETHANE (sur.)	%	84		1287542
D8-TOLUENE (sur.)	%	103		1287542

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A644756
Report Date: 2006/10/20

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601 INUVIK
Site Reference:
Sampler Initials:

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER) Comments

Sample C90102-02 Elements by ICP - Dissolved: Sample filtered and preserved in lab for dissolved metals - 2006/09/23

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report

Maxxam Job Number: EA644756

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1284304 AK3	SPIKE	D10-ANTHRACENE (sur.)	2006/09/27		89	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/27		93	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/27		88	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/27		95	%	30 - 130
		Naphthalene	2006/09/27		81	%	30 - 130
		Quinoline	2006/09/27		69	%	30 - 130
		Acenaphthylene	2006/09/27		83	%	30 - 130
		Acenaphthene	2006/09/27		79	%	30 - 130
		Fluorene	2006/09/27		80	%	30 - 130
		Phenanthrene	2006/09/27		83	%	30 - 130
		Anthracene	2006/09/27		83	%	30 - 130
		Acridine	2006/09/27		82	%	30 - 130
		Fluoranthene	2006/09/27		84	%	30 - 130
		Pyrene	2006/09/27		83	%	30 - 130
		Benzo(a)anthracene	2006/09/27		87	%	30 - 130
		Chrysene	2006/09/27		80	%	30 - 130
		Benzo(b&j)fluoranthene	2006/09/27		81	%	30 - 130
		Benzo(k)fluoranthene	2006/09/27		86	%	30 - 130
		Benzo(a)pyrene	2006/09/27		84	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/09/27		90	%	30 - 130
		Dibenz(a,h)anthracene	2006/09/27		84	%	30 - 130
		Benzo(g,h,i)perylene	2006/09/27		87	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/09/27		88	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/09/27		89	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/09/27		91	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/09/27		96	%	30 - 130
		Naphthalene	2006/09/27	<1		ug/L	
		Quinoline	2006/09/27	<0.1		ug/L	
		Acenaphthylene	2006/09/27	<0.1		ug/L	
		Acenaphthene	2006/09/27	<0.1		ug/L	
		Fluorene	2006/09/27	<0.1		ug/L	
		Phenanthrene	2006/09/27	<0.3		ug/L	
		Anthracene	2006/09/27	<0.1		ug/L	
		Acridine	2006/09/27	<0.1		ug/L	
		Fluoranthene	2006/09/27	<0.1		ug/L	
		Pyrene	2006/09/27	<0.1		ug/L	
		Benzo(a)anthracene	2006/09/27	<0.1		ug/L	
		Chrysene	2006/09/27	<0.1		ug/L	
		Benzo(b&j)fluoranthene	2006/09/27	<0.1		ug/L	
		Benzo(k)fluoranthene	2006/09/27	<0.1		ug/L	
		Benzo(a)pyrene	2006/09/27	<0.01		ug/L	
		Indeno(1,2,3-cd)pyrene	2006/09/27	<0.1		ug/L	
		Dibenz(a,h)anthracene	2006/09/27	<0.1		ug/L	
		Benzo(g,h,i)perylene	2006/09/27	<0.1		ug/L	
1284364 MC3	Calibration Check	Dissolved Aluminum (Al)	2006/09/26		103	%	90 - 110
		Dissolved Barium (Ba)	2006/09/26		97	%	90 - 110
		Dissolved Boron (B)	2006/09/26		99	%	90 - 110
		Dissolved Calcium (Ca)	2006/09/26		98	%	90 - 110
		Dissolved Chromium (Cr)	2006/09/26		96	%	90 - 110
		Dissolved Iron (Fe)	2006/09/26		92	%	90 - 110
		Dissolved Lithium (Li)	2006/09/26		103	%	90 - 110
		Dissolved Magnesium (Mg)	2006/09/26		102	%	90 - 110
		Dissolved Manganese (Mn)	2006/09/26		98	%	90 - 110
		Dissolved Phosphorus (P)	2006/09/26		101	%	90 - 110
		Dissolved Potassium (K)	2006/09/26		101	%	90 - 110

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA644756

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1284364 MC3	Calibration Check	Dissolved Silicon (Si)	2006/09/26		99	%	N/A
		Dissolved Sodium (Na)	2006/09/26		98	%	90 - 110
		Dissolved Strontium (Sr)	2006/09/26		97	%	90 - 110
		Dissolved Sulphur (S)	2006/09/26		0.00000	%	N/A
	MATRIX SPIKE	Dissolved Barium (Ba)	2006/09/26		102	%	80 - 120
		Dissolved Boron (B)	2006/09/26		116	%	80 - 120
		Dissolved Chromium (Cr)	2006/09/26		101	%	80 - 120
		Dissolved Lithium (Li)	2006/09/26		111	%	80 - 120
		Dissolved Manganese (Mn)	2006/09/26		103	%	80 - 120
		Dissolved Silicon (Si)	2006/09/26		99	%	N/A
		Dissolved Strontium (Sr)	2006/09/26		101	%	80 - 120
	BLANK	Dissolved Aluminum (Al)	2006/09/26	<0.04		mg/L	
		Dissolved Barium (Ba)	2006/09/26	<0.01		mg/L	
		Dissolved Boron (B)	2006/09/26	<0.02		mg/L	
		Dissolved Calcium (Ca)	2006/09/26	<0.3		mg/L	
		Dissolved Chromium (Cr)	2006/09/26	<0.01		mg/L	
		Dissolved Iron (Fe)	2006/09/26	<0.06		mg/L	
		Dissolved Lithium (Li)	2006/09/26	<0.02		mg/L	
		Dissolved Magnesium (Mg)	2006/09/26	<0.2		mg/L	
		Dissolved Manganese (Mn)	2006/09/26	<0.004		mg/L	
		Dissolved Phosphorus (P)	2006/09/26	<0.1		mg/L	
		Dissolved Potassium (K)	2006/09/26	<0.3		mg/L	
		Dissolved Silicon (Si)	2006/09/26	<0.1		mg/L	
		Dissolved Sodium (Na)	2006/09/26	<0.5		mg/L	
		Dissolved Strontium (Sr)	2006/09/26	<0.02		mg/L	
		Dissolved Sulphur (S)	2006/09/26	<0.2		mg/L	
	RPD	Dissolved Barium (Ba)	2006/09/26	NC		%	20
		Dissolved Chromium (Cr)	2006/09/26	NC		%	20
1285169 RI2	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/26		75	%	70 - 130
		F1 (C06-C10)	2006/09/26		70	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/26		94	%	70 - 130
		F1 (C06-C10)	2006/09/26		89	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/26		95	%	70 - 130
		F1 (C06-C10)	2006/09/26	<100		ug/L	
	RPD	F1 (C06-C10)	2006/09/26	NC		%	40
1286398 JM5	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/09/27		101	%	70 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/27		84	%	70 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/09/27		102	%	70 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/27		86	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/09/27		103	%	70 - 130
		F2 (C10-C16 Hydrocarbons)	2006/09/27	<0.1		mg/L	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/27	NC		%	40
1286408 MS2	Calibration Check	Dissolved Antimony (Sb)	2006/09/27		99	%	65 - 117
		Dissolved Arsenic (As)	2006/09/27		101	%	77 - 113
		Dissolved Beryllium (Be)	2006/09/27		103	%	80 - 116
		Dissolved Cadmium (Cd)	2006/09/27		102	%	84 - 110
		Dissolved Cobalt (Co)	2006/09/27		101	%	83 - 110
		Dissolved Copper (Cu)	2006/09/27		101	%	83 - 113
		Dissolved Lead (Pb)	2006/09/27		103	%	82 - 107
		Dissolved Molybdenum (Mo)	2006/09/27		100	%	85 - 109
		Dissolved Nickel (Ni)	2006/09/27		100	%	81 - 111
		Dissolved Selenium (Se)	2006/09/27		102	%	74 - 119
		Dissolved Silver (Ag)	2006/09/27		109	%	85 - 109
		Dissolved Thallium (Tl)	2006/09/27		104	%	84 - 109
		Dissolved Tin (Sn)	2006/09/27		102	%	79 - 110

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA644756

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1286408 MS2	Calibration Check	Dissolved Titanium (Ti)	2006/09/27		98	%	84 - 114
		Dissolved Uranium (U)	2006/09/27		102	%	82 - 110
		Dissolved Vanadium (V)	2006/09/27		102	%	85 - 111
		Dissolved Zinc (Zn)	2006/09/27		99	%	80 - 117
	MATRIX SPIKE	Dissolved Arsenic (As)	2006/09/27		101	%	80 - 120
		Dissolved Cadmium (Cd)	2006/09/27		110	%	80 - 120
		Dissolved Lead (Pb)	2006/09/27		107	%	80 - 120
		Dissolved Selenium (Se)	2006/09/27		103	%	80 - 120
		Dissolved Thallium (Tl)	2006/09/27		108	%	80 - 120
	BLANK	Dissolved Antimony (Sb)	2006/09/27	<0.0002		mg/L	
		Dissolved Arsenic (As)	2006/09/27	0.002, RDL=0.001		mg/L	
		Dissolved Beryllium (Be)	2006/09/27	<0.001		mg/L	
		Dissolved Cadmium (Cd)	2006/09/27	<0.0002		mg/L	
		Dissolved Cobalt (Co)	2006/09/27	<0.0003		mg/L	
		Dissolved Copper (Cu)	2006/09/27	<0.0002		mg/L	
		Dissolved Lead (Pb)	2006/09/27	<0.0002		mg/L	
		Dissolved Molybdenum (Mo)	2006/09/27	<0.0002		mg/L	
		Dissolved Nickel (Ni)	2006/09/27	<0.0005		mg/L	
		Dissolved Selenium (Se)	2006/09/27	<0.001		mg/L	
		Dissolved Silver (Ag)	2006/09/27	<0.0001		mg/L	
		Dissolved Thallium (Tl)	2006/09/27	<0.0002		mg/L	
		Dissolved Tin (Sn)	2006/09/27	<0.001		mg/L	
		Dissolved Titanium (Ti)	2006/09/27	<0.001		mg/L	
		Dissolved Uranium (U)	2006/09/27	<0.0001		mg/L	
		Dissolved Vanadium (V)	2006/09/27	<0.001		mg/L	
		Dissolved Zinc (Zn)	2006/09/27	<0.003		mg/L	
	RPD	Dissolved Antimony (Sb)	2006/09/27	NC		%	20
		Dissolved Arsenic (As)	2006/09/27	NC		%	20
		Dissolved Beryllium (Be)	2006/09/27	NC		%	20
		Dissolved Cadmium (Cd)	2006/09/27	NC		%	20
		Dissolved Cobalt (Co)	2006/09/27	NC		%	20
		Dissolved Copper (Cu)	2006/09/27	2.6		%	20
		Dissolved Lead (Pb)	2006/09/27	NC		%	20
		Dissolved Molybdenum (Mo)	2006/09/27	NC		%	20
		Dissolved Nickel (Ni)	2006/09/27	NC		%	20
		Dissolved Selenium (Se)	2006/09/27	NC		%	20
		Dissolved Silver (Ag)	2006/09/27	NC		%	20
		Dissolved Thallium (Tl)	2006/09/27	NC		%	20
		Dissolved Tin (Sn)	2006/09/27	NC		%	20
		Dissolved Titanium (Ti)	2006/09/27	9.5		%	20
		Dissolved Uranium (U)	2006/09/27	1.6		%	20
		Dissolved Vanadium (V)	2006/09/27	NC		%	20
		Dissolved Zinc (Zn)	2006/09/27	NC		%	20
1287542 MC1	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/28		101	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/28		92	%	70 - 130
		D8-TOLUENE (sur.)	2006/09/28		98	%	70 - 130
		Benzene	2006/09/28		94	%	70 - 130
		Toluene	2006/09/28		99	%	70 - 130
		Ethylbenzene	2006/09/28		85	%	70 - 130
		o-Xylene	2006/09/28		93	%	70 - 130
		m & p-Xylene	2006/09/28		92	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/28		101	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/28		82	%	70 - 130
		D8-TOLUENE (sur.)	2006/09/28		100	%	70 - 130
		Benzene	2006/09/28		89	%	70 - 130

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601 INUVIK
P.O. #:
Site Reference:

Quality Assurance Report (Continued)

Maxxam Job Number: EA644756

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1287542 MC1	SPIKE	Toluene	2006/09/28		97	%	70 - 130
		Ethylbenzene	2006/09/28		91	%	70 - 130
		o-Xylene	2006/09/28		99	%	70 - 130
		m & p-Xylene	2006/09/28		96	%	70 - 130
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/28		100	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/28		86	%	70 - 130
		D8-TOLUENE (sur.)	2006/09/28		99	%	70 - 130
		Benzene	2006/09/28	<0.4		ug/L	
		Toluene	2006/09/28	<0.4		ug/L	
		Ethylbenzene	2006/09/28	<0.4		ug/L	
		o-Xylene	2006/09/28	<0.4		ug/L	
		m & p-Xylene	2006/09/28	<0.8		ug/L	
		Xylenes (Total)	2006/09/28	<0.8		ug/L	
	RPD	Benzene	2006/09/28	NC		%	40
		Toluene	2006/09/28	NC		%	40
		Ethylbenzene	2006/09/28	NC		%	40
		o-Xylene	2006/09/28	NC		%	40
		m & p-Xylene	2006/09/28	NC		%	40
		Xylenes (Total)	2006/09/28	NC		%	40
1314892 JM5	SPIKE	F2 (C10-C16 Hydrocarbons)	2006/10/20		99	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2006/10/20		86	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2006/10/20		93	%	85 - 115
		O-TERPHENYL (sur.)	2006/10/20		98	%	70 - 130
	BLANK	F2 (C10-C16 Hydrocarbons)	2006/10/20	<0.1		mg/L	
		F3 (C16-C34 Hydrocarbons)	2006/10/20	<0.1		mg/L	
		F4 (C34-C50 Hydrocarbons)	2006/10/20	<0.1		mg/L	
		O-TERPHENYL (sur.)	2006/10/20		99	%	70 - 130
		Reached Baseline at C50	2006/10/20	YES, RDL=1		mg/L	

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

Maxxam Analytics Inc.

☐ Calgary: 2021 – 41st Ave. NE, T2E 6P2 Ph: (403) 291-3077 Fax: (403) 291-9468 Toll-free: (800) 386-7247
☒ Edmonton: 9619 – 42 Ave., T6E 5R2 Ph: (780) 465-1212 Fax: (780) 450-4187 Toll-free: (877) 465-8899
www.maxxamanalytics.com

ANALYTICAL REQUEST FORM

Page: 1 of 1

Invoice To: Require Report? Yes ☒ No ☐

Company Name: FRANZ ENVIRONMENTAL
Contact Name: JOHANNE PARADIS / MICHAEL MUTERSBACH
Address: 308-1080 Mainland Street
Vancouver PC:
Phone / Fax #: Ph: 604-632-9941 Fax: 604-632-9942

Report To:
Ph: Fax: PC:

PO # / AFE #:
Quotation #:
Project #: 1256-0601
Project Name: INUVIK
Location:
Sampler's Initials:

REGULATORY REQUIREMENTS:
☐ AT1 - Soil Contamination ☐ PST
☒ CCME ☐ CDWQG
☐ CCME FWAL ☐ G50
☐ Regulatory Limits to appear on Final report
☒ GNWT

SERVICE REQUESTED:
☐ RUSH (Please ensure you contact the lab)
Date Required:
☒ REGULAR Turnaround

REPORT DISTRIBUTION:
☐ Mail ☐ Fax
☒ PDF ☒ Excel ☐ Other:
☒ Email:

METALS: (WATERS):
☒ Total ☐ Extractable ☐ Dissolved

ANALYSIS REQUESTED

	Sample Identification	Matrix	Date/Time Sampled	Sample Type Grab/Comp	Hold > 60 Days	Sample Container #	~~CS-PCBs~~	PAHs	$F_1 - F_4$	BTEX	Metals total	
1	08-TP06-03	Water	20 Sept 06			7		X	X	X	X	→ Metals: not filtered and not preserved on site. PLEASE FILTER AND PRESERVE AT LAB.
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

**For water samples, please indicate if sample container has been preserved (P) and/or filtered (F).

Relinquished By: Johanne Paradis
Signature: Johanne Paradis
Date/Time: 22 Sept 2006 AM.

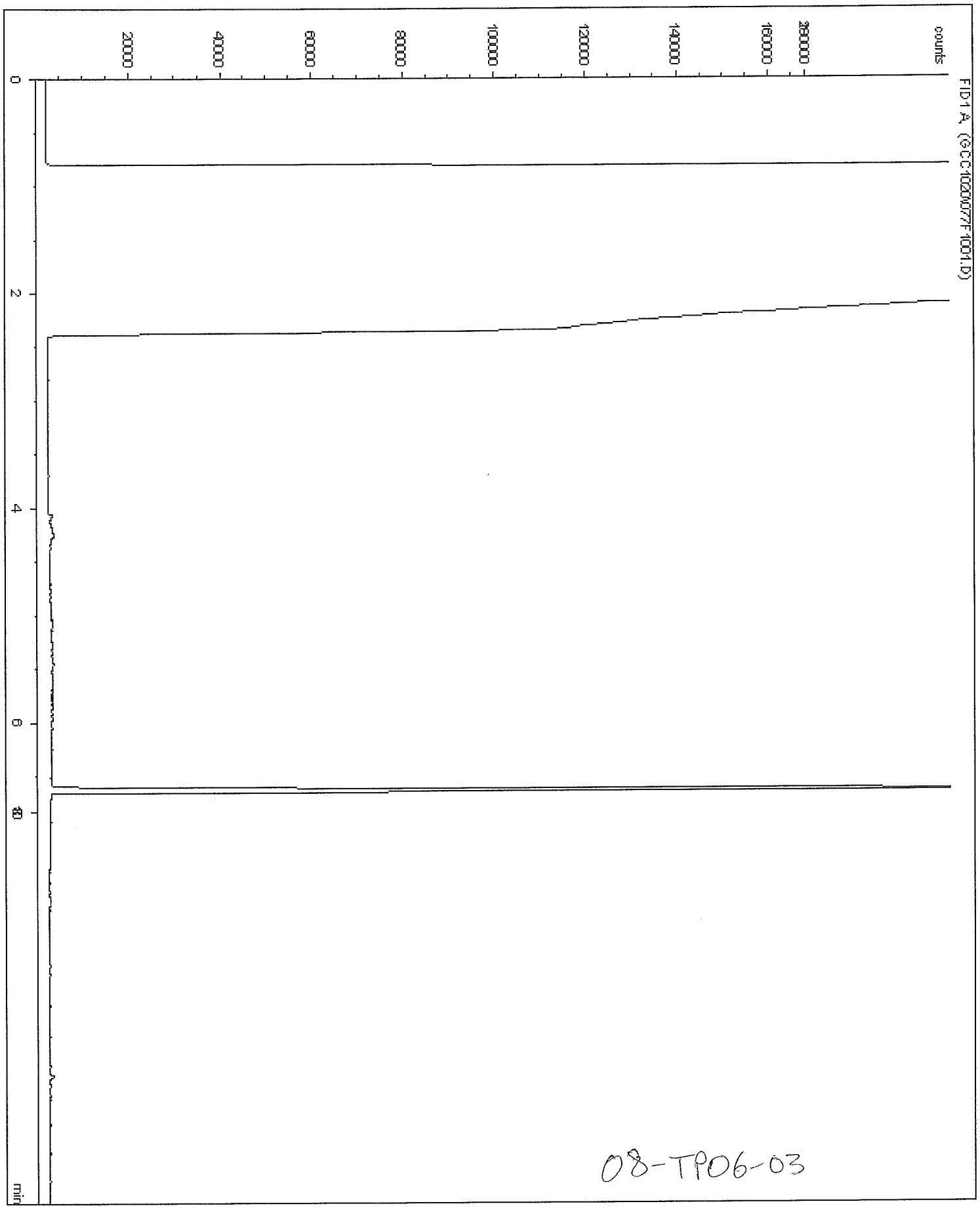
Received: 23 Sept 2006 3:00 AM

Temperature: 4°, 4°, 3°

COMMENTS/SPECIAL INSTRUCTIONS:

C of C # 11578

ARFSQUESTFORMH-05/06



*** End of Report ***

Maxxam Analytics Inc

Your Project #: 1256-0601
Site: INUVIK
Your C.O.C. #: 115790

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
308-1080-MAINLAND STREET
VANCOUVER, BC
CANADA --- ---

Report Date: 2007/01/03

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A645218
Received: 2006/09/26, 11:00

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
CCME Hydrocarbons (F1; HSGC/MS)	1	2006/09/28	2006/09/29		
CCME Hydrocarbons (F2-F4 in water)	1	2006/09/29	2006/09/30		
Elements by ICP - Dissolved	1	N/A	2006/09/28	CAL SOP# 0068	ICP
Elements by ICPMS - Dissolved	1	N/A	2006/09/28	CAL SOP# 0068	ICP-MS
PAH in Water by GC/MS (Extended)	1	2006/10/02	2006/10/03		
VOCs in Water by P&T GC/MS (Std List)	1	N/A	2006/09/28		

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key Jeremy Wakaruk
Jeremy Wakaruk
03 Jan 2007 08:48:55 -07:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Total cover pages: 1

Maxxam Analytics Inc

Maxxam Job #: A645218
Report Date: 2007/01/03

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C93139		
Sampling Date		2006/09/23		
COC Number		115790		
	Units	**OI-CULVERT**	**RDL**	**QC Batch**
Extractable Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	mg/L	<0.1	0.1	1290014
F3 (C16-C34 Hydrocarbons)	mg/L	<0.1	0.1	1290014
F4 (C34-C50 Hydrocarbons)	mg/L	<0.1	0.1	1290014
Reached Baseline at C50	mg/L	Yes	1	1290014
Hydrocarbons				
F1 (C06-C10)	ug/L	<100	100	1287646
Surrogate Recovery (%)				
O-TERPHENYL (sur.)	%	106		1290014
4-BROMOFLUOROBENZENE (sur.)	%	115		1287646

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645218
Report Date: 2007/01/03

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

SEMIVOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		C93139		
Sampling Date		2006/09/23		
COC Number		115790		
	Units	**OI-CULVERT**	**RDL**	**QC Batch**
Polycyclic Aromatics				
Naphthalene	ug/L	<1	1	1291387
Quinoline	ug/L	<0.1	0.1	1291387
2-Methylnaphthalene	ug/L	0.0096	N/A	1291387
Acenaphthylene	ug/L	<0.1	0.1	1291387
Acenaphthene	ug/L	<0.1	0.1	1291387
Fluorene	ug/L	<0.1	0.1	1291387
Phenanthrene	ug/L	<0.3	0.3	1291387
Anthracene	ug/L	<0.01	0.01	1291387
Acridine	ug/L	<0.1	0.1	1291387
Fluoranthene	ug/L	<0.04	0.04	1291387
Pyrene	ug/L	<0.02	0.02	1291387
Benzo(c)phenanthrene	ug/L	0	N/A	1291387
Benzo(a)anthracene	ug/L	<0.01	0.01	1291387
Chrysene	ug/L	<0.1	0.1	1291387
Benzo(b&j)fluoranthene	ug/L	<0.1	0.1	1291387
7,12-Dimethylbenz(a)anthracene	ug/L	0	N/A	1291387
Benzo(k)fluoranthene	ug/L	<0.1	0.1	1291387
Benzo(a)pyrene	ug/L	<0.01	0.01	1291387
Indeno(1,2,3-cd)pyrene	ug/L	<0.1	0.1	1291387
Dibenz(a,h)anthracene	ug/L	<0.1	0.1	1291387
Benzo(g,h,i)perylene	ug/L	<0.1	0.1	1291387
Dibenzo(a,h)pyrene	ug/L	0	N/A	1291387
Dibenzo(a,i)pyrene	ug/L	0	N/A	1291387
Dibenzo(a,l)pyrene	ug/L	0	N/A	1291387
Surrogate Recovery (%)				
D10-ANTHRACENE (sur.)	%	76		1291387
D12-BENZO(A)PYRENE (sur.)	%	68		1291387
D8-ACENAPHTHYLENE (sur.)	%	90		1291387
TERPHENYL-D14 (sur.)	%	70		1291387

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645218
Report Date: 2007/01/03

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		C93139		
Sampling Date		2006/09/23		
COC Number		115790		
	Units	**OI-CULVERT**	**RDL**	**QC Batch**
Elements				
Dissolved Aluminum (Al)	mg/L	<0.04	0.04	1287649
Dissolved Antimony (Sb)	mg/L	0.0005	0.0002	1288439
Dissolved Arsenic (As)	mg/L	<0.001	0.001	1288439
Dissolved Barium (Ba)	mg/L	0.03	0.01	1287649
Dissolved Beryllium (Be)	mg/L	<0.001	0.001	1288439
Dissolved Boron (B)	mg/L	0.22	0.02	1287649
Dissolved Cadmium (Cd)	mg/L	<0.0002	0.0002	1288439
Dissolved Calcium (Ca)	mg/L	55.4	0.3	1287649
Dissolved Chromium (Cr)	mg/L	<0.01	0.01	1287649
Dissolved Cobalt (Co)	mg/L	0.0007	0.0003	1288439
Dissolved Copper (Cu)	mg/L	0.0008	0.0002	1288439
Dissolved Iron (Fe)	mg/L	<0.06	0.06	1287649
Dissolved Lead (Pb)	mg/L	0.0005	0.0002	1288439
Dissolved Lithium (Li)	mg/L	<0.02	0.02	1287649
Dissolved Magnesium (Mg)	mg/L	25.1	0.2	1287649
Dissolved Manganese (Mn)	mg/L	0.032	0.004	1287649
Dissolved Molybdenum (Mo)	mg/L	0.0006	0.0002	1288439
Dissolved Nickel (Ni)	mg/L	0.0044	0.0005	1288439
Dissolved Phosphorus (P)	mg/L	<0.1	0.1	1287649
Dissolved Potassium (K)	mg/L	3.8	0.3	1287649
Dissolved Selenium (Se)	mg/L	<0.001	0.001	1288439
Dissolved Silicon (Si)	mg/L	1.0	0.1	1287649
Dissolved Silver (Ag)	mg/L	<0.0001	0.0001	1288439
Dissolved Sodium (Na)	mg/L	6.8	0.5	1287649
Dissolved Strontium (Sr)	mg/L	0.33	0.02	1287649
Dissolved Sulphur (S)	mg/L	49.8	0.2	1287649
Dissolved Thallium (Tl)	mg/L	<0.0002	0.0002	1288439
Dissolved Tin (Sn)	mg/L	<0.001	0.001	1288439
Dissolved Titanium (Ti)	mg/L	0.003	0.001	1288439
Dissolved Uranium (U)	mg/L	0.0007	0.0001	1288439
Dissolved Vanadium (V)	mg/L	<0.001	0.001	1288439
Dissolved Zinc (Zn)	mg/L	2.96	0.003	1288439

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645218
Report Date: 2007/01/03

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		C93139		
Sampling Date		2006/09/23		
COC Number		115790		
	Units	**OI-CULVERT**	**RDL**	**QC Batch**
Volatiles				
Benzene	ug/L	<0.4	0.4	1287630
Bromodichloromethane	ug/L	<0.5	0.5	1287630
Bromoform	ug/L	<0.5	0.5	1287630
Bromomethane	ug/L	<2	2	1287630
Carbon tetrachloride	ug/L	<0.5	0.5	1287630
Chlorobenzene	ug/L	<0.5	0.5	1287630
Chlorodibromomethane	ug/L	<1	1	1287630
Chloroethane	ug/L	<1	1	1287630
Chloroform	ug/L	<0.5	0.5	1287630
Chloromethane	ug/L	<2	2	1287630
1,2-dibromoethane	ug/L	<0.5	0.5	1287630
1,2-dichlorobenzene	ug/L	<0.5	0.5	1287630
1,3-dichlorobenzene	ug/L	<0.5	0.5	1287630
1,4-dichlorobenzene	ug/L	<0.5	0.5	1287630
1,1-dichloroethane	ug/L	<0.5	0.5	1287630
1,2-dichloroethane	ug/L	<0.5	0.5	1287630
1,1-dichloroethene	ug/L	<0.5	0.5	1287630
cis-1,2-dichloroethene	ug/L	<0.5	0.5	1287630
trans-1,2-dichloroethene	ug/L	<0.5	0.5	1287630
Dichloromethane	ug/L	<2	2	1287630
1,2-dichloropropane	ug/L	<0.5	0.5	1287630
cis-1,3-dichloropropene	ug/L	<0.5	0.5	1287630
trans-1,3-dichloropropene	ug/L	<0.5	0.5	1287630
Ethylbenzene	ug/L	<0.4	0.4	1287630
Styrene	ug/L	<0.5	0.5	1287630
1,1,1,2-tetrachloroethane	ug/L	<2	2	1287630
1,1,2,2-tetrachloroethane	ug/L	<2	2	1287630
Tetrachloroethene	ug/L	<0.5	0.5	1287630
Toluene	ug/L	<0.4	0.4	1287630
1,1,1-trichloroethane	ug/L	<0.5	0.5	1287630
1,1,2-trichloroethane	ug/L	<0.5	0.5	1287630
Trichloroethene	ug/L	<0.5	0.5	1287630
Trichlorofluoromethane	ug/L	<0.5	0.5	1287630

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645218
Report Date: 2007/01/03

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

VOLATILE ORGANICS BY GC-MS (WATER)

Maxxam ID		C93139		
Sampling Date		2006/09/23		
COC Number		115790		
	Units	**OI-CULVERT**	**RDL**	**QC Batch**
Vinyl chloride	ug/L	<0.5	0.5	1287630
Xylenes (Total)	ug/L	<0.8	0.8	1287630
m & p-Xylene	ug/L	<0.8	0.8	1287630
o-Xylene	ug/L	<0.4	0.4	1287630
Total Trihalomethanes	ug/L	<0.5	0.5	1287630
Surrogate Recovery (%)				
4-BROMOFLUOROBENZENE (sur.)	%	101		1287630
D4-1,2-DICHLOROETHANE (sur.)	%	118		1287630
D8-TOLUENE (sur.)	%	103		1287630

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645218
Report Date: 2007/01/03

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL

General Comments

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report

Maxxam Job Number: EA645218

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1287630 LM4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/28		97	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/28		120	%	70 - 130
		D8-TOLUENE (sur.)	2006/09/28		101	%	70 - 130
		Benzene	2006/09/28		86	%	70 - 130
		Bromodichloromethane	2006/09/28		100	%	70 - 130
		Bromoform	2006/09/28		106	%	70 - 130
		Bromomethane	2006/09/28		83	%	70 - 130
		Carbon tetrachloride	2006/09/28		112	%	70 - 130
		Chlorobenzene	2006/09/28		93	%	70 - 130
		Chlorodibromomethane	2006/09/28		113	%	70 - 130
		Chloroethane	2006/09/28		84	%	70 - 130
		Chloroform	2006/09/28		91	%	70 - 130
		Chloromethane	2006/09/28		74	%	70 - 130
		1,2-dibromoethane	2006/09/28		100	%	70 - 130
		1,2-dichlorobenzene	2006/09/28		94	%	70 - 130
		1,3-dichlorobenzene	2006/09/28		91	%	70 - 130
		1,4-dichlorobenzene	2006/09/28		91	%	70 - 130
		1,1-dichloroethane	2006/09/28		89	%	70 - 130
		1,2-dichloroethane	2006/09/28		111	%	70 - 130
		1,1-dichloroethene	2006/09/28		84	%	70 - 130
		cis-1,2-dichloroethene	2006/09/28		86	%	70 - 130
		trans-1,2-dichloroethene	2006/09/28		85	%	70 - 130
		Dichloromethane	2006/09/28		76	%	70 - 130
		1,2-dichloropropane	2006/09/28		92	%	70 - 130
		cis-1,3-dichloropropene	2006/09/28		91	%	70 - 130
		trans-1,3-dichloropropene	2006/09/28		100	%	70 - 130
		Ethylbenzene	2006/09/28		91	%	70 - 130
		Styrene	2006/09/28		92	%	70 - 130
		1,1,1,2-tetrachloroethane	2006/09/28		107	%	70 - 130
		1,1,2,2-tetrachloroethane	2006/09/28		103	%	70 - 130
		Tetrachloroethene	2006/09/28		98	%	70 - 130
		Toluene	2006/09/28		90	%	70 - 130
		1,1,1-trichloroethane	2006/09/28		112	%	70 - 130
		1,1,2-trichloroethane	2006/09/28		97	%	70 - 130
		Trichloroethene	2006/09/28		94	%	70 - 130
		Trichlorofluoromethane	2006/09/28		99	%	70 - 130
		Vinyl chloride	2006/09/28		95	%	70 - 130
		m & p-Xylene	2006/09/28		93	%	70 - 130
		o-Xylene	2006/09/28		93	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/28		99	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/28		111	%	70 - 130
		D8-TOLUENE (sur.)	2006/09/28		106	%	70 - 130
		Benzene	2006/09/28		82	%	70 - 130
		Bromodichloromethane	2006/09/28		94	%	70 - 130
		Bromoform	2006/09/28		103	%	70 - 130
		Bromomethane	2006/09/28		81	%	70 - 130
		Carbon tetrachloride	2006/09/28		109	%	70 - 130
		Chlorobenzene	2006/09/28		92	%	70 - 130
		Chlorodibromomethane	2006/09/28		111	%	70 - 130
		Chloroethane	2006/09/28		84	%	70 - 130
		Chloroform	2006/09/28		89	%	70 - 130
		Chloromethane	2006/09/28		82	%	70 - 130
		1,2-dibromoethane	2006/09/28		95	%	70 - 130
		1,2-dichlorobenzene	2006/09/28		90	%	70 - 130
		1,3-dichlorobenzene	2006/09/28		91	%	70 - 130

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645218

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1287630 LM4	SPIKE	1,4-dichlorobenzene	2006/09/28		88	%	70 - 130
		1,1-dichloroethane	2006/09/28		89	%	70 - 130
		1,2-dichloroethane	2006/09/28		100	%	70 - 130
		1,1-dichloroethene	2006/09/28		84	%	70 - 130
		cis-1,2-dichloroethene	2006/09/28		89	%	70 - 130
		trans-1,2-dichloroethene	2006/09/28		85	%	70 - 130
		Dichloromethane	2006/09/28		78	%	70 - 130
		1,2-dichloropropane	2006/09/28		88	%	70 - 130
		cis-1,3-dichloropropene	2006/09/28		91	%	70 - 130
		trans-1,3-dichloropropene	2006/09/28		101	%	70 - 130
		Ethylbenzene	2006/09/28		92	%	70 - 130
		Styrene	2006/09/28		93	%	70 - 130
		1,1,1,2-tetrachloroethane	2006/09/28		107	%	70 - 130
		1,1,2,2-tetrachloroethane	2006/09/28		93	%	70 - 130
		Tetrachloroethene	2006/09/28		97	%	70 - 130
		Toluene	2006/09/28		90	%	70 - 130
		1,1,1-trichloroethane	2006/09/28		99	%	70 - 130
		1,1,2-trichloroethane	2006/09/28		94	%	70 - 130
		Trichloroethene	2006/09/28		88	%	70 - 130
		Trichlorofluoromethane	2006/09/28		94	%	70 - 130
		Vinyl chloride	2006/09/28		97	%	70 - 130
		m & p-Xylene	2006/09/28		93	%	70 - 130
		o-Xylene	2006/09/28		94	%	70 - 130
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/28		104	%	70 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/09/28		112	%	70 - 130
		D8-TOLUENE (sur.)	2006/09/28		104	%	70 - 130
		Benzene	2006/09/28	<0.4		ug/L	
		Bromodichloromethane	2006/09/28	<0.5		ug/L	
		Bromoform	2006/09/28	<0.5		ug/L	
		Bromomethane	2006/09/28	<2		ug/L	
		Carbon tetrachloride	2006/09/28	<0.5		ug/L	
		Chlorobenzene	2006/09/28	<0.5		ug/L	
		Chlorodibromomethane	2006/09/28	<1		ug/L	
		Chloroethane	2006/09/28	<1		ug/L	
		Chloroform	2006/09/28	<0.5		ug/L	
		Chloromethane	2006/09/28	<2		ug/L	
		1,2-dibromoethane	2006/09/28	<0.5		ug/L	
		1,2-dichlorobenzene	2006/09/28	<0.5		ug/L	
		1,3-dichlorobenzene	2006/09/28	<0.5		ug/L	
		1,4-dichlorobenzene	2006/09/28	<0.5		ug/L	
		1,1-dichloroethane	2006/09/28	<0.5		ug/L	
		1,2-dichloroethane	2006/09/28	<0.5		ug/L	
		1,1-dichloroethene	2006/09/28	<0.5		ug/L	
		cis-1,2-dichloroethene	2006/09/28	<0.5		ug/L	
		trans-1,2-dichloroethene	2006/09/28	<0.5		ug/L	
		Dichloromethane	2006/09/28	<2		ug/L	
		1,2-dichloropropane	2006/09/28	<0.5		ug/L	
		cis-1,3-dichloropropene	2006/09/28	<0.5		ug/L	
		trans-1,3-dichloropropene	2006/09/28	<0.5		ug/L	
		Ethylbenzene	2006/09/28	<0.4		ug/L	
		Styrene	2006/09/28	<0.5		ug/L	
		1,1,1,2-tetrachloroethane	2006/09/28	<2		ug/L	
		1,1,2,2-tetrachloroethane	2006/09/28	<2		ug/L	
		Tetrachloroethene	2006/09/28	<0.5		ug/L	
		Toluene	2006/09/28	<0.4		ug/L	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645218

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1287630 LM4	BLANK	1,1,1-trichloroethane	2006/09/28	<0.5		ug/L	
		1,1,2-trichloroethane	2006/09/28	<0.5		ug/L	
		Trichloroethene	2006/09/28	<0.5		ug/L	
		Trichlorofluoromethane	2006/09/28	<0.5		ug/L	
		Vinyl chloride	2006/09/28	<0.5		ug/L	
		Xylenes (Total)	2006/09/28	<0.8		ug/L	
		m & p-Xylene	2006/09/28	<0.8		ug/L	
		o-Xylene	2006/09/28	<0.4		ug/L	
	RPD	Vinyl chloride	2006/09/28	NC		%	40
1287646 MA	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		87	%	70 - 130
		F1 (C06-C10)	2006/09/29		80	%	70 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		106	%	70 - 130
		F1 (C06-C10)	2006/09/29		96	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/09/29		109	%	70 - 130
		F1 (C06-C10)	2006/09/29	<100		ug/L	
	RPD	F1 (C06-C10)	2006/09/29	NC		%	40
1287649 MC6	Calibration Check	Dissolved Aluminum (Al)	2006/09/28		107	%	90 - 110
		Dissolved Barium (Ba)	2006/09/28		100	%	90 - 110
		Dissolved Boron (B)	2006/09/28		101	%	90 - 110
		Dissolved Calcium (Ca)	2006/09/28		96	%	90 - 110
		Dissolved Chromium (Cr)	2006/09/28		98	%	90 - 110
		Dissolved Iron (Fe)	2006/09/28		99	%	90 - 110
		Dissolved Lithium (Li)	2006/09/28		100	%	90 - 110
		Dissolved Magnesium (Mg)	2006/09/28		105	%	90 - 110
		Dissolved Manganese (Mn)	2006/09/28		101	%	90 - 110
		Dissolved Phosphorus (P)	2006/09/28		100	%	90 - 110
		Dissolved Potassium (K)	2006/09/28		100	%	90 - 110
		Dissolved Silicon (Si)	2006/09/28		101	%	N/A
		Dissolved Sodium (Na)	2006/09/28		101	%	90 - 110
		Dissolved Strontium (Sr)	2006/09/28		100	%	90 - 110
	MATRIX SPIKE	Dissolved Barium (Ba)	2006/09/28		98	%	80 - 120
		Dissolved Boron (B)	2006/09/28		101	%	80 - 120
		Dissolved Chromium (Cr)	2006/09/28		109	%	80 - 120
		Dissolved Lithium (Li)	2006/09/28		96	%	80 - 120
		Dissolved Manganese (Mn)	2006/09/28		110	%	80 - 120
		Dissolved Silicon (Si)	2006/09/28		101	%	N/A
		Dissolved Strontium (Sr)	2006/09/28		110	%	80 - 120
	BLANK	Dissolved Aluminum (Al)	2006/09/28	<0.04		mg/L	
		Dissolved Barium (Ba)	2006/09/28	<0.01		mg/L	
		Dissolved Boron (B)	2006/09/28	<0.02		mg/L	
		Dissolved Calcium (Ca)	2006/09/28	<0.3		mg/L	
		Dissolved Chromium (Cr)	2006/09/28	<0.01		mg/L	
		Dissolved Iron (Fe)	2006/09/28	<0.06		mg/L	
		Dissolved Lithium (Li)	2006/09/28	<0.02		mg/L	
		Dissolved Magnesium (Mg)	2006/09/28	<0.2		mg/L	
		Dissolved Manganese (Mn)	2006/09/28	<0.004		mg/L	
		Dissolved Phosphorus (P)	2006/09/28	<0.1		mg/L	
		Dissolved Potassium (K)	2006/09/28	<0.3		mg/L	
		Dissolved Silicon (Si)	2006/09/28	<0.1		mg/L	
		Dissolved Sodium (Na)	2006/09/28	<0.5		mg/L	
		Dissolved Strontium (Sr)	2006/09/28	<0.02		mg/L	
		Dissolved Sulphur (S)	2006/09/28	<0.2		mg/L	
	RPD	Dissolved Calcium (Ca)	2006/09/28	0.07		%	20
		Dissolved Iron (Fe)	2006/09/28	1.4		%	20
		Dissolved Magnesium (Mg)	2006/09/28	1.4		%	20

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645218

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1287649 MC6	RPD	Dissolved Manganese (Mn)	2006/09/28	0.7		%	20
		Dissolved Potassium (K)	2006/09/28	1.6		%	20
		Dissolved Sodium (Na)	2006/09/28	0.2		%	20
1288439 MS2	Calibration Check	Dissolved Antimony (Sb)	2006/09/28		101	%	85 - 115
		Dissolved Arsenic (As)	2006/09/28		99	%	85 - 115
		Dissolved Beryllium (Be)	2006/09/28		101	%	85 - 115
		Dissolved Cadmium (Cd)	2006/09/28		98	%	85 - 115
		Dissolved Cobalt (Co)	2006/09/28		98	%	85 - 115
		Dissolved Copper (Cu)	2006/09/28		95	%	85 - 115
		Dissolved Lead (Pb)	2006/09/28		106	%	85 - 115
		Dissolved Molybdenum (Mo)	2006/09/28		102	%	85 - 115
		Dissolved Nickel (Ni)	2006/09/28		97	%	85 - 115
		Dissolved Selenium (Se)	2006/09/28		99	%	85 - 115
		Dissolved Silver (Ag)	2006/09/28		105	%	85 - 115
		Dissolved Thallium (Tl)	2006/09/28		103	%	85 - 115
		Dissolved Tin (Sn)	2006/09/28		102	%	85 - 115
		Dissolved Uranium (U)	2006/09/28		103	%	85 - 115
		Dissolved Vanadium (V)	2006/09/28		99	%	85 - 115
		Dissolved Zinc (Zn)	2006/09/28		97	%	85 - 115
	MATRIX SPIKE [C93139-02]	Dissolved Arsenic (As)	2006/09/28		98	%	80 - 120
		Dissolved Cadmium (Cd)	2006/09/28		98	%	80 - 120
		Dissolved Lead (Pb)	2006/09/28		103	%	80 - 120
		Dissolved Selenium (Se)	2006/09/28		101	%	80 - 120
		Dissolved Thallium (Tl)	2006/09/28		104	%	80 - 120
	BLANK	Dissolved Antimony (Sb)	2006/09/28	<0.0002		mg/L	
		Dissolved Arsenic (As)	2006/09/28	<0.001		mg/L	
		Dissolved Beryllium (Be)	2006/09/28	<0.001		mg/L	
		Dissolved Cadmium (Cd)	2006/09/28	<0.0002		mg/L	
		Dissolved Cobalt (Co)	2006/09/28	<0.0003		mg/L	
		Dissolved Copper (Cu)	2006/09/28	<0.0002		mg/L	
		Dissolved Lead (Pb)	2006/09/28	<0.0002		mg/L	
		Dissolved Molybdenum (Mo)	2006/09/28	<0.0002		mg/L	
		Dissolved Nickel (Ni)	2006/09/28	<0.0005		mg/L	
		Dissolved Selenium (Se)	2006/09/28	<0.001		mg/L	
		Dissolved Silver (Ag)	2006/09/28	<0.0001		mg/L	
		Dissolved Thallium (Tl)	2006/09/28	<0.0002		mg/L	
		Dissolved Tin (Sn)	2006/09/28	<0.001		mg/L	
		Dissolved Titanium (Ti)	2006/09/28	<0.001		mg/L	
		Dissolved Uranium (U)	2006/09/28	<0.0001		mg/L	
		Dissolved Vanadium (V)	2006/09/28	<0.001		mg/L	
		Dissolved Zinc (Zn)	2006/09/28	<0.003		mg/L	
	RPD [C93139-02]	Dissolved Antimony (Sb)	2006/09/28	NC		%	20
		Dissolved Arsenic (As)	2006/09/28	NC		%	20
		Dissolved Beryllium (Be)	2006/09/28	NC		%	20
		Dissolved Cadmium (Cd)	2006/09/28	NC		%	20
		Dissolved Cobalt (Co)	2006/09/28	NC		%	20
		Dissolved Copper (Cu)	2006/09/28	NC		%	20
		Dissolved Lead (Pb)	2006/09/28	NC		%	20
		Dissolved Molybdenum (Mo)	2006/09/28	NC		%	20
		Dissolved Nickel (Ni)	2006/09/28	10.8		%	20
		Dissolved Selenium (Se)	2006/09/28	NC		%	20
		Dissolved Silver (Ag)	2006/09/28	NC		%	20
		Dissolved Thallium (Tl)	2006/09/28	NC		%	20
		Dissolved Tin (Sn)	2006/09/28	NC		%	20

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645218

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1288439 MS2	RPD [C93139-02]	Dissolved Titanium (Ti)	2006/09/28	NC		%	20
		Dissolved Uranium (U)	2006/09/28	1.5		%	20
		Dissolved Vanadium (V)	2006/09/28	NC		%	20
		Dissolved Zinc (Zn)	2006/09/28	1.0		%	20
1290014 JM5	MATRIX SPIKE	F2 (C10-C16 Hydrocarbons)	2006/09/30		111	%	70 - 130
		F3 (C16-C34 Hydrocarbons)	2006/09/30		98	%	70 - 130
		F4 (C34-C50 Hydrocarbons)	2006/09/30		133	%	70 - 130
		O-TERPHENYL (sur.)	2006/09/30		97	%	70 - 130
	SPIKE	F2 (C10-C16 Hydrocarbons)	2006/09/30		93	%	85 - 115
		F3 (C16-C34 Hydrocarbons)	2006/09/30		80	%	85 - 115
		F4 (C34-C50 Hydrocarbons)	2006/09/30		80	%	85 - 115
		O-TERPHENYL (sur.)	2006/09/30		105	%	70 - 130
	BLANK	F2 (C10-C16 Hydrocarbons)	2006/09/30	<0.1		mg/L	
		F3 (C16-C34 Hydrocarbons)	2006/09/30	<0.1		mg/L	
		F4 (C34-C50 Hydrocarbons)	2006/09/30	<0.1		mg/L	
		O-TERPHENYL (sur.)	2006/09/30		105	%	70 - 130
		Reached Baseline at C50	2006/09/30	YES, RDL=1		mg/L	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/09/30	NC		%	40
		F3 (C16-C34 Hydrocarbons)	2006/09/30	NC		%	40
		F4 (C34-C50 Hydrocarbons)	2006/09/30	NC		%	40
		Reached Baseline at C50	2006/09/30	NC		%	40
1291387 AK3	SPIKE	D10-ANTHRACENE (sur.)	2006/10/03		77	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/03		70	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/03		61	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/03		78	%	30 - 130
		Naphthalene	2006/10/03		59	%	30 - 130
		Quinoline	2006/10/03		62	%	30 - 130
		Acenaphthylene	2006/10/03		61	%	30 - 130
		Acenaphthene	2006/10/03		58	%	30 - 130
		Fluorene	2006/10/03		59	%	30 - 130
		Phenanthrene	2006/10/03		63	%	30 - 130
		Anthracene	2006/10/03		63	%	30 - 130
		Acridine	2006/10/03		62	%	30 - 130
		Fluoranthene	2006/10/03		62	%	30 - 130
		Pyrene	2006/10/03		61	%	30 - 130
		Benzo(a)anthracene	2006/10/03		63	%	30 - 130
		Chrysene	2006/10/03		64	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/03		64	%	30 - 130
		Benzo(k)fluoranthene	2006/10/03		69	%	30 - 130
		Benzo(a)pyrene	2006/10/03		69	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/03		71	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/03		106	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/03		68	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/10/03		69	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/03		77	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/03		68	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/03		70	%	30 - 130
		Naphthalene	2006/10/03	<1		ug/L	
		Quinoline	2006/10/03	<0.1		ug/L	
		2-Methylnaphthalene	2006/10/03	0.0077		ug/L	
		Acenaphthylene	2006/10/03	<0.1		ug/L	
		Acenaphthene	2006/10/03	<0.1		ug/L	
		Fluorene	2006/10/03	<0.1		ug/L	
		Phenanthrene	2006/10/03	<0.3		ug/L	
		Anthracene	2006/10/03	<0.01		ug/L	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645218

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1291387 AK3	BLANK	Acridine	2006/10/03	<0.1		ug/L	
		Fluoranthene	2006/10/03	<0.04		ug/L	
		Pyrene	2006/10/03	<0.02		ug/L	
		Benzo(c)phenanthrene	2006/10/03	0		ug/L	
		Benzo(a)anthracene	2006/10/03	<0.01		ug/L	
		Chrysene	2006/10/03	<0.1		ug/L	
		Benzo(b&j)fluoranthene	2006/10/03	<0.1		ug/L	
		7,12-Dimethylbenz(a)anthracene	2006/10/03	0		ug/L	
		Benzo(k)fluoranthene	2006/10/03	<0.1		ug/L	
		Benzo(a)pyrene	2006/10/03	<0.01		ug/L	
		Indeno(1,2,3-cd)pyrene	2006/10/03	<0.1		ug/L	
		Dibenz(a,h)anthracene	2006/10/03	<0.1		ug/L	
		Benzo(g,h,i)perylene	2006/10/03	<0.1		ug/L	
		Dibenzo(a,h)pyrene	2006/10/03	0		ug/L	
		Dibenzo(a,i)pyrene	2006/10/03	0		ug/L	
		Dibenzo(a,l)pyrene	2006/10/03	0		ug/L	

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference

Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

Maxxam Analytics Inc

Your Project #: 1256-0601
Site: INUVIK
Your C.O.C. #: 115788

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
FRANZENV-VAN
1080 MAINLAND STREET
308
VANCOUVER, BC
Canada V6B 2T4

Report Date: 2006/10/24

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A645233
Received: 2006/09/26, 11:00

Sample Matrix: Leachate
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Mercury (Leachable) (1)	1	2006/10/20	2006/10/20	ING143 Rev 6.2	Based on EPA 245.1
Metals - SWEP undigested (1)	1	2006/10/18	2006/10/19	BRN SOP-00051	BC Reg 63/88

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
BTEX by HS GC/MS (MeOH extract)	1	2006/10/06	2006/10/06	EENVSOP-00005 V.2	EPA 8260B/5021A
CCME Hydrocarbons (F1; MeOH; HSGC)	1	2006/10/06	2006/10/07	EENVSOP-00002 v8	CCME CWS for PHC
CCME Hydrocarbons (F2-F4 in soil)	2	2006/10/10	2006/10/10	EENVSOP-00007 v4	CWS PHCS Tier 1
Elements by ICP -Soils	1	N/A	2006/10/10	EENVSOP-00034 v1	EPA 6010C
Elements by ICPMS - Soils	1	N/A	2006/10/10	EENVSOP-00123 v2	EPA 6020A
Moisture	5	N/A	2006/10/06	EENVWI-00023 v2	Carter SSMA 51.2
PAH in Soil by GC/MS (Extended)	2	2006/10/10	2006/10/11	EENVSOP-00010 v3	EPA 3510C/8270D
Polychlorinated Biphenyls (2)	1	N/A	2006/10/10	CAL SOP-00149	GC/ECD-EXTRACTION
VOCs in Soil by P&T GC/MS (Std List)	1	N/A	2006/10/10	EENVSOP-00003 V.3	EPA SW843 8260 B

(1) This test was performed by Maxxam Vancouver
(2) This test was performed by Maxxam Calgary

../2

Maxxam Analytics Inc

Your Project #: 1256-0601
Site: INUVIK
Your C.O.C. #: 115788

Attention: JOHANNE PARADIS
FRANZ ENVIRONMENTAL INC.
FRANZENV-VAN
1080 MAINLAND STREET
308
VANCOUVER, BC
Canada V6B 2T4

Report Date: 2006/10/24

CERTIFICATE OF ANALYSIS

Encryption Key

Jeremy Wakaruk
24 Oct 2006 11:21:29 -06:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JEREMY WAKARUK, BSc., Senior Project Manager
Email: jwakaruk@maxxamanalytics.com
Phone# (780) 577-7105

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CAEAL have approved this reporting process and electronic report format.

Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

ELEMENTS BY ATOMIC SPECTROSCOPY (LEACHATE)

Maxxam ID		C93206		
Sampling Date		2006/09/22		
COC Number		115788		
	Units	**10-TP06-06-01**	**RDL**	**QC Batch**
Elements				
Leachable Mercury (Hg)	ug/L	<0.05	0.05	1315909
Leachable Metals				
Leachable (SWEP) Arsenic (As)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Barium (Ba)	mg/L	0.2	0.1	1314691
Leachable (SWEP) Boron (B)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Cadmium (Cd)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Chromium (Cr)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Copper (Cu)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Lead (Pb)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Molybdenum (Mo)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Selenium (Se)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Silver (Ag)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Uranium (U)	mg/L	<0.1	0.1	1314691
Leachable (SWEP) Zinc (Zn)	mg/L	<0.1	0.1	1314691

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

RESULTS OF CHEMICAL ANALYSES OF SOIL

Maxxam ID		C93205	C93206	C93207	C93208		
Sampling Date		2006/09/22	2006/09/22	2006/09/22	2006/09/22		
COC Number		115788	115788	115788	115788		
	Units	**10-TP06-05-02**	**10-TP06-06-01**	**10-TP06-07-01**	**10-TP06-08-01**	**RDL**	**QC Batch**
Physical Properties							
Moisture	%	69.7	21.0	24.1	19.4	0.3	1298328

RDL = Reportable Detection Limit

Maxxam ID		C93209		
Sampling Date		2006/09/22		
COC Number		115788		
	Units	**10-TP06-09-01**	**RDL**	**QC Batch**
Physical Properties				
Moisture	%	17.9	0.3	1298328

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

PETROLEUM HYDROCARBONS (CCME)

Maxxam ID		C93206	C93207	C93209		
Sampling Date		2006/09/22	2006/09/22	2006/09/22		
COC Number		115788	115788	115788		
	Units	**10-TP06-06-01**	**10-TP06-07-01**	**10-TP06-09-01**	**RDL**	**QC Batch**
Ext. Pet. Hydrocarbon						
F1 (C06-C10)	mg/kg		<10		10	1298327
F2 (C10-C16 Hydrocarbons)	mg/kg	11		15	10	1300135
F3 (C16-C34 Hydrocarbons)	mg/kg	19		104	10	1300135
F4 (C34-C50 Hydrocarbons)	mg/kg	14		128	10	1300135
Reached Baseline at C50	mg/kg	Yes		Yes	1	1300135
Surrogate Recovery (%)						
4-BROMOFLUOROBENZENE (sur.)	%		99			1298327
O-TERPHENYL (sur.)	%	84		79		1300135

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

POLYCHLORINATED BIPHENYLS BY GC-ECD (SOIL)

Maxxam ID		C93208		
Sampling Date		2006/09/22		
COC Number		115788		
	Units	**10-TP06-08-01**	**RDL**	**QC Batch**
Polychlorinated Biphenyls				
Aroclor 1016	mg/kg	<0.01	0.01	1300887
Aroclor 1221	mg/kg	<0.01	0.01	1300887
Aroclor 1232	mg/kg	<0.01	0.01	1300887
Aroclor 1242	mg/kg	<0.01	0.01	1300887
Aroclor 1248	mg/kg	<0.01	0.01	1300887
Aroclor 1254	mg/kg	<0.01	0.01	1300887
Aroclor 1260	mg/kg	<0.01	0.01	1300887
Aroclor 1262	mg/kg	<0.01	0.01	1300887
Aroclor 1268	mg/kg	<0.01	0.01	1300887
Total Aroclors	mg/kg	<0.01	0.01	1300887
Surrogate Recovery (%)				
NONACHLOROBIPHENYL (sur.)	%	92		1300887

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

SEMIVOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C93205	C93207		
Sampling Date		2006/09/22	2006/09/22		
COC Number		115788	115788		
	Units	**10-TP06-05-02**	**10-TP06-07-01**	**RDL**	**QC Batch**
Polycyclic Aromatics					
Naphthalene	mg/kg	<0.05	<0.05	0.05	1300249
2-Methylnaphthalene	mg/kg	<0.05	<0.05	0.05	1300249
Acenaphthylene	mg/kg	<0.05	<0.05	0.05	1300249
Acenaphthene	mg/kg	<0.05	<0.05	0.05	1300249
Fluorene	mg/kg	<0.05	<0.05	0.05	1300249
Phenanthrene	mg/kg	<0.05	<0.05	0.05	1300249
Anthracene	mg/kg	<0.05	<0.05	0.05	1300249
Fluoranthene	mg/kg	<0.05	<0.05	0.05	1300249
Pyrene	mg/kg	<0.05	<0.05	0.05	1300249
Benzo(a)anthracene	mg/kg	<0.05	<0.05	0.05	1300249
Chrysene	mg/kg	<0.05	<0.05	0.05	1300249
Benzo(b&j)fluoranthene	mg/kg	<0.05	<0.05	0.05	1300249
Benzo(k)fluoranthene	mg/kg	<0.05	<0.05	0.05	1300249
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.05	1300249
Indeno(1,2,3-cd)pyrene	mg/kg	<0.05	<0.05	0.05	1300249
Dibenz(a,h)anthracene	mg/kg	<0.05	<0.05	0.05	1300249
Benzo(g,h,i)perylene	mg/kg	<0.05	<0.05	0.05	1300249
Surrogate Recovery (%)					
D10-ANTHRACENE (sur.)	%	124	116		1300249
D12-BENZO(A)PYRENE (sur.)	%	105	100		1300249
D8-ACENAPHTHYLENE (sur.)	%	112	107		1300249
TERPHENYL-D14 (sur.)	%	113	109		1300249

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Maxxam ID		C93209		
Sampling Date		2006/09/22		
COC Number		115788		
	Units	**10-TP06-09-01**	**RDL**	**QC Batch**
Elements				
Total Aluminum (Al)	mg/kg	15000	10	1300559
Total Antimony (Sb)	mg/kg	<1	1	1300593
Total Arsenic (As)	mg/kg	19	1	1300593
Total Barium (Ba)	mg/kg	306	10	1300593
Total Beryllium (Be)	mg/kg	0.8	0.4	1300593
Total Boron (B)	mg/kg	15	2	1300559
Total Cadmium (Cd)	mg/kg	0.4	0.1	1300593
Total Calcium (Ca)	mg/kg	23200	50	1300559
Total Chromium (Cr)	mg/kg	70	1	1300593
Total Cobalt (Co)	mg/kg	17	1	1300593
Total Copper (Cu)	mg/kg	36	5	1300593
Total Iron (Fe)	mg/kg	40500	10	1300559
Total Lead (Pb)	mg/kg	21	1	1300593
Total Lithium (Li)	mg/kg	29	10	1300559
Total Magnesium (Mg)	mg/kg	11900	20	1300559
Total Manganese (Mn)	mg/kg	458	10	1300559
Total Molybdenum (Mo)	mg/kg	1.5	0.4	1300593
Total Nickel (Ni)	mg/kg	46	1	1300593
Total Phosphorus (P)	mg/kg	2240	20	1300559
Total Potassium (K)	mg/kg	1050	30	1300559
Total Selenium (Se)	mg/kg	1.5	0.5	1300593
Total Silver (Ag)	mg/kg	<1	1	1300593
Total Sodium (Na)	mg/kg	306	50	1300559
Total Strontium (Sr)	mg/kg	87	10	1300559
Total Sulphur (S)	mg/kg	888	20	1300559
Total Thallium (Tl)	mg/kg	<0.3	0.3	1300593
Total Tin (Sn)	mg/kg	<1	1	1300593
Total Vanadium (V)	mg/kg	105	1	1300593
Total Zinc (Zn)	mg/kg	121	10	1300593

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C93205			C93208		
Sampling Date		2006/09/22			2006/09/22		
COC Number		115788			115788		
	Units	**10-TP06-05-02**	**RDL**	**QC Batch**	**10-TP06-08-01**	**RDL**	**QC Batch**
Volatiles							
Benzene	mg/kg	<0.005	0.005	1298958	<0.0050	0.0050	1298325
Bromodichloromethane	mg/kg	<0.03	0.03	1298958			
Toluene	mg/kg				<0.020	0.020	1298325
Bromoform	mg/kg	<0.05	0.05	1298958			
Ethylbenzene	mg/kg				<0.010	0.010	1298325
Bromomethane	mg/kg	<0.02	0.02	1298958			
Xylenes (Total)	mg/kg				<0.020	0.020	1298325
Carbon tetrachloride	mg/kg	<0.02	0.02	1298958			
m & p-Xylene	mg/kg				<0.020	0.020	1298325
Chlorobenzene	mg/kg	<0.02	0.02	1298958			
o-Xylene	mg/kg				<0.020	0.020	1298325
Chlorodibromomethane	mg/kg	<0.02	0.02	1298958			
Chloroethane	mg/kg	<0.02	0.02	1298958			
Chloroform	mg/kg	<0.02	0.02	1298958			
Chloromethane	mg/kg	<0.03	0.03	1298958			
1,2-dibromoethane	mg/kg	<0.02	0.02	1298958			
1,2-dichlorobenzene	mg/kg	<0.02	0.02	1298958			
1,3-dichlorobenzene	mg/kg	<0.02	0.02	1298958			
1,4-dichlorobenzene	mg/kg	<0.02	0.02	1298958			
1,1-dichloroethane	mg/kg	<0.02	0.02	1298958			
1,2-dichloroethane	mg/kg	<0.02	0.02	1298958			
1,1-dichloroethene	mg/kg	<0.02	0.02	1298958			
cis-1,2-dichloroethene	mg/kg	<0.02	0.02	1298958			
trans-1,2-dichloroethene	mg/kg	<0.02	0.02	1298958			
Dichloromethane	mg/kg	<0.1	0.1	1298958			
1,2-dichloropropane	mg/kg	<0.02	0.02	1298958			
cis-1,3-dichloropropene	mg/kg	<0.02	0.02	1298958			
trans-1,3-dichloropropene	mg/kg	<0.02	0.02	1298958			
Ethylbenzene	mg/kg	<0.01	0.01	1298958			
Styrene	mg/kg	<0.02	0.02	1298958			
1,1,1,2-tetrachloroethane	mg/kg	<0.1	0.1	1298958			
1,1,2,2-tetrachloroethane	mg/kg	<0.1	0.1	1298958			
Tetrachloroethene	mg/kg	<0.02	0.02	1298958			

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

VOLATILE ORGANICS BY GC-MS (SOIL)

Maxxam ID		C93205			C93208		
Sampling Date		2006/09/22			2006/09/22		
COC Number		115788			115788		
	Units	**10-TP06-05-02**	**RDL**	**QC Batch**	**10-TP06-08-01**	**RDL**	**QC Batch**
Toluene	mg/kg	<0.02	0.02	1298958			
1,1,1-trichloroethane	mg/kg	<0.02	0.02	1298958			
1,1,2-trichloroethane	mg/kg	<0.02	0.02	1298958			
Trichloroethene	mg/kg	<0.02	0.02	1298958			
Trichlorofluoromethane	mg/kg	<0.02	0.02	1298958			
Vinyl chloride	mg/kg	<0.02	0.02	1298958			
Xylenes (Total)	mg/kg	<0.04	0.04	1298958			
m & p-Xylene	mg/kg	<0.04	0.04	1298958			
o-Xylene	mg/kg	<0.02	0.02	1298958			
Surrogate Recovery (%)							
4-BROMOFLUOROBENZENE (sur.)	%	107		1298958	92		1298325
D10-ETHYLBENZENE (sur.)	%	89		1298958	103		1298325
D4-1,2-DICHLOROETHANE (sur.)	%	102		1298958	91		1298325
D8-TOLUENE (sur.)	%	98		1298958	98		1298325

RDL = Reportable Detection Limit

Maxxam Analytics Inc

Maxxam Job #: A645233
Report Date: 2006/10/24

FRANZ ENVIRONMENTAL INC.
Client Project #: 1256-0601
Site Reference: INUVIK
Sampler Initials: AL/

VOLATILE ORGANICS BY GC-MS (SOIL) Comments

Sample C93205-01 VOCs in Soil by P&T GC/MS (Std List): Matrix spike outside acceptance criteria for styrene due to matrix interference.

Results relate only to the items tested.

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report

Maxxam Job Number: EA645233

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1298325 HW4	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/06		94	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/06		104	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/06		93	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/06		98	%	60 - 140
		Benzene	2006/10/06		86	%	60 - 140
		Toluene	2006/10/06		93	%	60 - 140
		Ethylbenzene	2006/10/06		94	%	60 - 140
		m & p-Xylene	2006/10/06		92	%	60 - 140
		o-Xylene	2006/10/06		92	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/06		95	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/06		103	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/06		97	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/06		99	%	60 - 140
		Benzene	2006/10/06		85	%	60 - 140
		Toluene	2006/10/06		92	%	60 - 140
		Ethylbenzene	2006/10/06		95	%	60 - 140
		m & p-Xylene	2006/10/06		92	%	60 - 140
		o-Xylene	2006/10/06		91	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/06		93	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/06		101	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/06		95	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/06		98	%	60 - 140
		Benzene	2006/10/06	<0.0050		mg/kg	
		Toluene	2006/10/06	<0.020		mg/kg	
		Ethylbenzene	2006/10/06	<0.010		mg/kg	
		Xylenes (Total)	2006/10/06	<0.020		mg/kg	
		m & p-Xylene	2006/10/06	<0.020		mg/kg	
		o-Xylene	2006/10/06	<0.020		mg/kg	
	RPD	Benzene	2006/10/06	NC		%	50
		Toluene	2006/10/06	NC		%	50
		Ethylbenzene	2006/10/06	NC		%	50
		Xylenes (Total)	2006/10/06	NC		%	50
		m & p-Xylene	2006/10/06	NC		%	50
		o-Xylene	2006/10/06	NC		%	50
1298327 KO	MATRIX SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/07		80	%	60 - 130
		F1 (C06-C10)	2006/10/07		87	%	60 - 130
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/07		96	%	60 - 130
		F1 (C06-C10)	2006/10/07		100	%	80 - 120
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/07		116	%	60 - 130
		F1 (C06-C10)	2006/10/07	<10		mg/kg	
	RPD	F1 (C06-C10)	2006/10/07	NC		%	50
1298328 MD1	BLANK	Moisture	2006/10/06	<0.3		%	
	RPD	Moisture	2006/10/06	0		%	20
1298958 LM4	MATRIX SPIKE [C93205-01]	4-BROMOFLUOROBENZENE (sur.)	2006/10/10		104	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/10		90	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/10		101	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/10		96	%	60 - 140
		Benzene	2006/10/10		93	%	60 - 140
		Bromodichloromethane	2006/10/10		103	%	60 - 140
		Bromoform	2006/10/10		93	%	60 - 140
		Bromomethane	2006/10/10		96	%	60 - 140
		Carbon tetrachloride	2006/10/10		86	%	60 - 140
		Chlorobenzene	2006/10/10		93	%	60 - 140
		Chlorodibromomethane	2006/10/10		94	%	60 - 140

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1298958 LM4	MATRIX SPIKE						
	[C93205-01]	Chloroethane	2006/10/10		98	%	60 - 140
		Chloroform	2006/10/10		119	%	60 - 140
		Chloromethane	2006/10/10		104	%	60 - 140
		1,2-dibromoethane	2006/10/10		94	%	60 - 140
		1,2-dichlorobenzene	2006/10/10		71	%	60 - 140
		1,3-dichlorobenzene	2006/10/10		68	%	60 - 140
		1,4-dichlorobenzene	2006/10/10		80	%	60 - 140
		1,1-dichloroethane	2006/10/10		104	%	60 - 140
		1,2-dichloroethane	2006/10/10		104	%	60 - 140
		1,1-dichloroethene	2006/10/10		94	%	60 - 140
		cis-1,2-dichloroethene	2006/10/10		131	%	60 - 140
		trans-1,2-dichloroethene	2006/10/10		102	%	60 - 140
		Dichloromethane	2006/10/10		110	%	60 - 140
		1,2-dichloropropane	2006/10/10		104	%	60 - 140
		cis-1,3-dichloropropene	2006/10/10		77	%	60 - 140
		trans-1,3-dichloropropene	2006/10/10		100	%	60 - 140
		Ethylbenzene	2006/10/10		81	%	60 - 140
		Styrene	2006/10/10		39 (1)	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/10/10		92	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/10/10		104	%	60 - 140
		Tetrachloroethene	2006/10/10		80	%	60 - 140
		Toluene	2006/10/10		96	%	60 - 140
		1,1,1-trichloroethane	2006/10/10		98	%	60 - 140
		1,1,2-trichloroethane	2006/10/10		104	%	60 - 140
		Trichloroethene	2006/10/10		94	%	60 - 140
		Trichlorofluoromethane	2006/10/10		83	%	60 - 140
		Vinyl chloride	2006/10/10		82	%	60 - 140
		m & p-Xylene	2006/10/10		82	%	60 - 140
		o-Xylene	2006/10/10		75	%	60 - 140
	SPIKE	4-BROMOFLUOROBENZENE (sur.)	2006/10/10		98	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/10		105	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/10		99	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/10		94	%	60 - 140
		Benzene	2006/10/10		103	%	60 - 140
		Bromodichloromethane	2006/10/10		103	%	60 - 140
		Bromoform	2006/10/10		105	%	60 - 140
		Bromomethane	2006/10/10		125	%	60 - 140
		Carbon tetrachloride	2006/10/10		101	%	60 - 140
		Chlorobenzene	2006/10/10		102	%	60 - 140
		Chlorodibromomethane	2006/10/10		102	%	60 - 140
		Chloroethane	2006/10/10		109	%	60 - 140
		Chloroform	2006/10/10		121	%	60 - 140
		Chloromethane	2006/10/10		117	%	60 - 140
		1,2-dibromoethane	2006/10/10		101	%	60 - 140
		1,2-dichlorobenzene	2006/10/10		103	%	60 - 140
		1,3-dichlorobenzene	2006/10/10		104	%	60 - 140
		1,4-dichlorobenzene	2006/10/10		107	%	60 - 140
		1,1-dichloroethane	2006/10/10		108	%	60 - 140
		1,2-dichloroethane	2006/10/10		101	%	60 - 140
		1,1-dichloroethene	2006/10/10		115	%	60 - 140
		cis-1,2-dichloroethene	2006/10/10		111	%	60 - 140
		trans-1,2-dichloroethene	2006/10/10		111	%	60 - 140
		Dichloromethane	2006/10/10		108	%	60 - 140
		1,2-dichloropropane	2006/10/10		101	%	60 - 140

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1298958 LM4	SPIKE	cis-1,3-dichloropropene	2006/10/10		109	%	60 - 140
		trans-1,3-dichloropropene	2006/10/10		104	%	60 - 140
		Ethylbenzene	2006/10/10		102	%	60 - 140
		Styrene	2006/10/10		102	%	60 - 140
		1,1,1,2-tetrachloroethane	2006/10/10		102	%	60 - 140
		1,1,2,2-tetrachloroethane	2006/10/10		102	%	60 - 140
		Tetrachloroethene	2006/10/10		106	%	60 - 140
		Toluene	2006/10/10		102	%	60 - 140
		1,1,1-trichloroethane	2006/10/10		109	%	60 - 140
		1,1,2-trichloroethane	2006/10/10		101	%	60 - 140
		Trichloroethene	2006/10/10		109	%	60 - 140
		Trichlorofluoromethane	2006/10/10		109	%	60 - 140
		Vinyl chloride	2006/10/10		77	%	60 - 140
		m & p-Xylene	2006/10/10		106	%	60 - 140
		o-Xylene	2006/10/10		108	%	60 - 140
	BLANK	4-BROMOFLUOROBENZENE (sur.)	2006/10/10		106	%	60 - 140
		D10-ETHYLBENZENE (sur.)	2006/10/10		119	%	60 - 130
		D4-1,2-DICHLOROETHANE (sur.)	2006/10/10		103	%	60 - 140
		D8-TOLUENE (sur.)	2006/10/10		99	%	60 - 140
		Benzene	2006/10/10	<0.005		mg/kg	
		Bromodichloromethane	2006/10/10	<0.03		mg/kg	
		Bromoform	2006/10/10	<0.05		mg/kg	
		Bromomethane	2006/10/10	<0.02		mg/kg	
		Carbon tetrachloride	2006/10/10	<0.02		mg/kg	
		Chlorobenzene	2006/10/10	<0.02		mg/kg	
		Chlorodibromomethane	2006/10/10	<0.02		mg/kg	
		Chloroethane	2006/10/10	<0.02		mg/kg	
		Chloroform	2006/10/10	<0.02		mg/kg	
		Chloromethane	2006/10/10	<0.03		mg/kg	
		1,2-dibromoethane	2006/10/10	<0.02		mg/kg	
		1,2-dichlorobenzene	2006/10/10	<0.02		mg/kg	
		1,3-dichlorobenzene	2006/10/10	<0.02		mg/kg	
		1,4-dichlorobenzene	2006/10/10	<0.02		mg/kg	
		1,1-dichloroethane	2006/10/10	<0.02		mg/kg	
		1,2-dichloroethane	2006/10/10	<0.02		mg/kg	
		1,1-dichloroethene	2006/10/10	<0.02		mg/kg	
		cis-1,2-dichloroethene	2006/10/10	<0.02		mg/kg	
		trans-1,2-dichloroethene	2006/10/10	<0.02		mg/kg	
		Dichloromethane	2006/10/10	<0.1		mg/kg	
		1,2-dichloropropane	2006/10/10	<0.02		mg/kg	
		cis-1,3-dichloropropene	2006/10/10	<0.02		mg/kg	
		trans-1,3-dichloropropene	2006/10/10	<0.02		mg/kg	
		Ethylbenzene	2006/10/10	<0.01		mg/kg	
		Styrene	2006/10/10	<0.02		mg/kg	
		1,1,1,2-tetrachloroethane	2006/10/10	<0.1		mg/kg	
		1,1,2,2-tetrachloroethane	2006/10/10	<0.1		mg/kg	
		Tetrachloroethene	2006/10/10	<0.02		mg/kg	
		Toluene	2006/10/10	<0.02		mg/kg	
		1,1,1-trichloroethane	2006/10/10	<0.02		mg/kg	
		1,1,2-trichloroethane	2006/10/10	<0.02		mg/kg	
		Trichloroethene	2006/10/10	<0.02		mg/kg	
		Trichlorofluoromethane	2006/10/10	<0.02		mg/kg	
		Vinyl chloride	2006/10/10	<0.02		mg/kg	
		Xylenes (Total)	2006/10/10	<0.04		mg/kg	
		m & p-Xylene	2006/10/10	<0.04		mg/kg	

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1298958 LM4	BLANK	o-Xylene	2006/10/10	<0.02		mg/kg	
	RPD [C93205-01]	Benzene	2006/10/10	NC		%	50
		Bromodichloromethane	2006/10/10	NC		%	50
		Bromoform	2006/10/10	NC		%	50
		Bromomethane	2006/10/10	NC		%	50
		Carbon tetrachloride	2006/10/10	NC		%	50
		Chlorobenzene	2006/10/10	NC		%	50
		Chlorodibromomethane	2006/10/10	NC		%	50
		Chloroethane	2006/10/10	NC		%	50
		Chloroform	2006/10/10	NC		%	50
		Chloromethane	2006/10/10	NC		%	50
		1,2-dibromoethane	2006/10/10	NC		%	50
		1,2-dichlorobenzene	2006/10/10	NC		%	50
		1,3-dichlorobenzene	2006/10/10	NC		%	50
		1,4-dichlorobenzene	2006/10/10	NC		%	50
		1,1-dichloroethane	2006/10/10	NC		%	50
		1,2-dichloroethane	2006/10/10	NC		%	50
		1,1-dichloroethene	2006/10/10	NC		%	50
		cis-1,2-dichloroethene	2006/10/10	NC		%	50
		trans-1,2-dichloroethene	2006/10/10	NC		%	50
		Dichloromethane	2006/10/10	NC		%	50
		1,2-dichloropropane	2006/10/10	NC		%	50
		cis-1,3-dichloropropene	2006/10/10	NC		%	50
		trans-1,3-dichloropropene	2006/10/10	NC		%	50
		Ethylbenzene	2006/10/10	NC		%	50
		Styrene	2006/10/10	NC		%	50
		1,1,1,2-tetrachloroethane	2006/10/10	NC		%	50
		1,1,2,2-tetrachloroethane	2006/10/10	NC		%	50
		Tetrachloroethene	2006/10/10	NC		%	50
		Toluene	2006/10/10	NC		%	50
		1,1,1-trichloroethane	2006/10/10	NC		%	50
		1,1,2-trichloroethane	2006/10/10	NC		%	50
		Trichloroethene	2006/10/10	NC		%	50
		Trichlorofluoromethane	2006/10/10	NC		%	50
		Vinyl chloride	2006/10/10	NC		%	50
		Xylenes (Total)	2006/10/10	NC		%	50
		m & p-Xylene	2006/10/10	NC		%	50
		o-Xylene	2006/10/10	NC		%	50
1300135 AN1	MATRIX SPIKE	O-TERPHENYL (sur.)	2006/10/10		77	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/10		84	%	50 - 130
		F3 (C16-C34 Hydrocarbons)	2006/10/10		94	%	50 - 130
		F4 (C34-C50 Hydrocarbons)	2006/10/10		78	%	50 - 130
	SPIKE	O-TERPHENYL (sur.)	2006/10/10		86	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/10		104	%	80 - 120
		F3 (C16-C34 Hydrocarbons)	2006/10/10		103	%	80 - 120
		F4 (C34-C50 Hydrocarbons)	2006/10/10		103	%	80 - 120
	BLANK	O-TERPHENYL (sur.)	2006/10/10		83	%	30 - 130
		F2 (C10-C16 Hydrocarbons)	2006/10/10	<10		mg/kg	
		F3 (C16-C34 Hydrocarbons)	2006/10/10	<10		mg/kg	
		F4 (C34-C50 Hydrocarbons)	2006/10/10	<10		mg/kg	
		Reached Baseline at C50	2006/10/10	YES, RDL=1		mg/kg	
	RPD	F2 (C10-C16 Hydrocarbons)	2006/10/10	NC		%	50
		F3 (C16-C34 Hydrocarbons)	2006/10/10	60.1 (1)		%	50
		F4 (C34-C50 Hydrocarbons)	2006/10/10	62.1 (1)		%	50
		Reached Baseline at C50	2006/10/10	NC		%	50

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1300249 AK3	MATRIX SPIKE						
	[C93207-01]	D10-ANTHRACENE (sur.)	2006/10/11		109	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/11		116	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/11		122	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/11		112	%	30 - 130
		Naphthalene	2006/10/11		112	%	30 - 130
		2-Methylnaphthalene	2006/10/11		110	%	30 - 130
		Acenaphthylene	2006/10/11		112	%	30 - 130
		Acenaphthene	2006/10/11		110	%	30 - 130
		Fluorene	2006/10/11		109	%	30 - 130
		Phenanthrene	2006/10/11		113	%	30 - 130
		Anthracene	2006/10/11		110	%	30 - 130
		Fluoranthene	2006/10/11		110	%	30 - 130
		Pyrene	2006/10/11		109	%	30 - 130
		Benzo(a)anthracene	2006/10/11		107	%	30 - 130
		Chrysene	2006/10/11		112	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/11		110	%	30 - 130
		Benzo(k)fluoranthene	2006/10/11		113	%	30 - 130
		Benzo(a)pyrene	2006/10/11		113	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/11		104	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/11		109	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/11		102	%	30 - 130
	SPIKE	D10-ANTHRACENE (sur.)	2006/10/11		116	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/11		105	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/11		107	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/11		105	%	30 - 130
		Naphthalene	2006/10/11		114	%	30 - 130
		2-Methylnaphthalene	2006/10/11		110	%	30 - 130
		Acenaphthylene	2006/10/11		111	%	30 - 130
		Acenaphthene	2006/10/11		109	%	30 - 130
		Fluorene	2006/10/11		106	%	30 - 130
		Phenanthrene	2006/10/11		112	%	30 - 130
		Anthracene	2006/10/11		110	%	30 - 130
		Fluoranthene	2006/10/11		108	%	30 - 130
		Pyrene	2006/10/11		108	%	30 - 130
		Benzo(a)anthracene	2006/10/11		106	%	30 - 130
		Chrysene	2006/10/11		109	%	30 - 130
		Benzo(b&j)fluoranthene	2006/10/11		104	%	30 - 130
		Benzo(k)fluoranthene	2006/10/11		109	%	30 - 130
		Benzo(a)pyrene	2006/10/11		109	%	30 - 130
		Indeno(1,2,3-cd)pyrene	2006/10/11		103	%	30 - 130
		Dibenz(a,h)anthracene	2006/10/11		121	%	30 - 130
		Benzo(g,h,i)perylene	2006/10/11		100	%	30 - 130
	BLANK	D10-ANTHRACENE (sur.)	2006/10/11		116	%	30 - 130
		D12-BENZO(A)PYRENE (sur.)	2006/10/11		98	%	30 - 130
		D8-ACENAPHTHYLENE (sur.)	2006/10/11		106	%	30 - 130
		TERPHENYL-D14 (sur.)	2006/10/11		108	%	30 - 130
		Naphthalene	2006/10/11	<0.05		mg/kg	
		2-Methylnaphthalene	2006/10/11	<0.05		mg/kg	
		Acenaphthylene	2006/10/11	<0.05		mg/kg	
		Acenaphthene	2006/10/11	<0.05		mg/kg	
		Fluorene	2006/10/11	<0.05		mg/kg	
		Phenanthrene	2006/10/11	<0.05		mg/kg	
		Anthracene	2006/10/11	<0.05		mg/kg	
		Fluoranthene	2006/10/11	<0.05		mg/kg	

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QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1300249 AK3	BLANK	Pyrene	2006/10/11	<0.05		mg/kg	
		Benzo(a)anthracene	2006/10/11	<0.05		mg/kg	
		Chrysene	2006/10/11	<0.05		mg/kg	
		Benzo(b&j)fluoranthene	2006/10/11	<0.05		mg/kg	
		Benzo(k)fluoranthene	2006/10/11	<0.05		mg/kg	
		Benzo(a)pyrene	2006/10/11	<0.05		mg/kg	
		Indeno(1,2,3-cd)pyrene	2006/10/11	<0.05		mg/kg	
		Dibenz(a,h)anthracene	2006/10/11	<0.05		mg/kg	
		Benzo(g,h,i)perylene	2006/10/11	<0.05		mg/kg	
	RPD [C93205-01]	Naphthalene	2006/10/11	NC		%	50
		2-Methylnaphthalene	2006/10/11	NC		%	50
		Acenaphthylene	2006/10/11	NC		%	50
		Acenaphthene	2006/10/11	NC		%	50
		Fluorene	2006/10/11	NC		%	50
		Phenanthrene	2006/10/11	NC		%	50
		Anthracene	2006/10/11	NC		%	50
		Fluoranthene	2006/10/11	NC		%	50
		Pyrene	2006/10/11	NC		%	50
		Benzo(a)anthracene	2006/10/11	NC		%	50
		Chrysene	2006/10/11	NC		%	50
		Benzo(b&j)fluoranthene	2006/10/11	NC		%	50
		Benzo(k)fluoranthene	2006/10/11	NC		%	50
		Benzo(a)pyrene	2006/10/11	NC		%	50
		Indeno(1,2,3-cd)pyrene	2006/10/11	NC		%	50
		Dibenz(a,h)anthracene	2006/10/11	NC		%	50
		Benzo(g,h,i)perylene	2006/10/11	NC		%	50
1300559 MC3	Calibration Check	Total Aluminum (Al)	2006/10/10		103	%	80 - 120
		Total Boron (B)	2006/10/10		97	%	80 - 120
		Total Calcium (Ca)	2006/10/10		99	%	80 - 120
		Total Iron (Fe)	2006/10/10		101	%	80 - 120
		Total Lithium (Li)	2006/10/10		95	%	80 - 120
		Total Magnesium (Mg)	2006/10/10		102	%	80 - 120
		Total Manganese (Mn)	2006/10/10		99	%	80 - 120
		Total Phosphorus (P)	2006/10/10		98	%	80 - 120
		Total Potassium (K)	2006/10/10		99	%	80 - 120
		Total Sodium (Na)	2006/10/10		103	%	80 - 120
		Total Strontium (Sr)	2006/10/10		95	%	80 - 120
	SPIKE	Total Aluminum (Al)	2006/10/10		111	%	75 - 125
		Total Boron (B)	2006/10/10		108	%	80 - 120
		Total Calcium (Ca)	2006/10/10		102	%	75 - 125
		Total Iron (Fe)	2006/10/10		106	%	75 - 125
		Total Lithium (Li)	2006/10/10		101	%	75 - 125
		Total Magnesium (Mg)	2006/10/10		110	%	75 - 125
		Total Manganese (Mn)	2006/10/10		105	%	75 - 125
		Total Phosphorus (P)	2006/10/10		104	%	75 - 125
		Total Potassium (K)	2006/10/10		104	%	75 - 125
		Total Sodium (Na)	2006/10/10		115	%	75 - 125
		Total Strontium (Sr)	2006/10/10		100	%	75 - 125
	BLANK	Total Aluminum (Al)	2006/10/10	<10		mg/kg	
		Total Boron (B)	2006/10/10	<2		mg/kg	
		Total Calcium (Ca)	2006/10/10	<50		mg/kg	
		Total Iron (Fe)	2006/10/10	<10		mg/kg	
		Total Lithium (Li)	2006/10/10	<10		mg/kg	
		Total Magnesium (Mg)	2006/10/10	<20		mg/kg	
		Total Manganese (Mn)	2006/10/10	<10		mg/kg	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645233

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1300559 MC3	BLANK	Total Phosphorus (P)	2006/10/10	<20		mg/kg	
		Total Potassium (K)	2006/10/10	<30		mg/kg	
		Total Sodium (Na)	2006/10/10	<50		mg/kg	
		Total Strontium (Sr)	2006/10/10	<10		mg/kg	
		Total Sulphur (S)	2006/10/10	<20		mg/kg	
	RPD	Total Aluminum (Al)	2006/10/10	0.1		%	35
		Total Boron (B)	2006/10/10	NC		%	35
		Total Calcium (Ca)	2006/10/10	0.2		%	35
		Total Iron (Fe)	2006/10/10	0.3		%	35
		Total Lithium (Li)	2006/10/10	NC		%	35
		Total Magnesium (Mg)	2006/10/10	0.3		%	35
		Total Manganese (Mn)	2006/10/10	0.3		%	35
		Total Phosphorus (P)	2006/10/10	0.2		%	35
		Total Potassium (K)	2006/10/10	0.5		%	35
		Total Sodium (Na)	2006/10/10	NC		%	35
		Total Strontium (Sr)	2006/10/10	0.09		%	35
		Total Sulphur (S)	2006/10/10	0.9		%	35
1300593 AC4	Calibration Check	Total Antimony (Sb)	2006/10/10		99	%	80 - 120
		Total Arsenic (As)	2006/10/10		104	%	80 - 120
		Total Barium (Ba)	2006/10/10		102	%	80 - 120
		Total Beryllium (Be)	2006/10/10		106	%	80 - 120
		Total Cadmium (Cd)	2006/10/10		100	%	80 - 120
		Total Chromium (Cr)	2006/10/10		99	%	80 - 120
		Total Cobalt (Co)	2006/10/10		103	%	80 - 120
		Total Copper (Cu)	2006/10/10		102	%	80 - 120
		Total Lead (Pb)	2006/10/10		104	%	80 - 120
		Total Molybdenum (Mo)	2006/10/10		101	%	80 - 120
		Total Nickel (Ni)	2006/10/10		102	%	80 - 120
		Total Selenium (Se)	2006/10/10		102	%	80 - 120
		Total Silver (Ag)	2006/10/10		103	%	80 - 120
		Total Thallium (Tl)	2006/10/10		101	%	80 - 120
		Total Tin (Sn)	2006/10/10		101	%	80 - 120
		Total Vanadium (V)	2006/10/10		102	%	80 - 120
		Total Zinc (Zn)	2006/10/10		101	%	80 - 120
	MATRIX SPIKE	Total Arsenic (As)	2006/10/10		101	%	80 - 120
		Total Cadmium (Cd)	2006/10/10		102	%	N/A
		Total Lead (Pb)	2006/10/10		96	%	N/A
		Total Selenium (Se)	2006/10/10		109	%	80 - 120
		Total Thallium (Tl)	2006/10/10		103	%	80 - 120
	BLANK	Total Antimony (Sb)	2006/10/10	<1		mg/kg	
		Total Arsenic (As)	2006/10/10	<1		mg/kg	
		Total Barium (Ba)	2006/10/10	<10		mg/kg	
		Total Beryllium (Be)	2006/10/10	<0.4		mg/kg	
		Total Cadmium (Cd)	2006/10/10	<0.1		mg/kg	
		Total Chromium (Cr)	2006/10/10	<1		mg/kg	
		Total Cobalt (Co)	2006/10/10	<1		mg/kg	
		Total Copper (Cu)	2006/10/10	<5		mg/kg	
		Total Lead (Pb)	2006/10/10	<1		mg/kg	
		Total Molybdenum (Mo)	2006/10/10	<0.4		mg/kg	
		Total Nickel (Ni)	2006/10/10	<1		mg/kg	
		Total Selenium (Se)	2006/10/10	<0.5		mg/kg	
		Total Silver (Ag)	2006/10/10	<1		mg/kg	
		Total Thallium (Tl)	2006/10/10	<0.3		mg/kg	
		Total Tin (Sn)	2006/10/10	<1		mg/kg	
		Total Vanadium (V)	2006/10/10	<1		mg/kg	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645233

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1300593 AC4	BLANK	Total Zinc (Zn)	2006/10/10	<10		mg/kg	
	RPD	Total Antimony (Sb)	2006/10/10	NC		%	35
		Total Arsenic (As)	2006/10/10	18.9		%	35
		Total Barium (Ba)	2006/10/10	25.9		%	35
		Total Beryllium (Be)	2006/10/10	NC		%	35
		Total Cadmium (Cd)	2006/10/10	NC		%	35
		Total Chromium (Cr)	2006/10/10	17.6		%	35
		Total Cobalt (Co)	2006/10/10	14.4		%	35
		Total Copper (Cu)	2006/10/10	NC		%	35
		Total Lead (Pb)	2006/10/10	14.0		%	35
		Total Molybdenum (Mo)	2006/10/10	NC		%	35
		Total Nickel (Ni)	2006/10/10	14.0		%	35
		Total Selenium (Se)	2006/10/10	NC		%	35
		Total Silver (Ag)	2006/10/10	NC		%	35
		Total Thallium (Tl)	2006/10/10	NC		%	35
		Total Tin (Sn)	2006/10/10	NC		%	35
		Total Vanadium (V)	2006/10/10	34.4		%	35
		Total Zinc (Zn)	2006/10/10	13.9		%	35
1300887 RTA	Calibration Check	NONACHLOROBIPHENYL (sur.)	2006/10/10		94	%	53 - 127
		Aroclor 1254	2006/10/10		115	%	80 - 132
		Aroclor 1260	2006/10/10		85	%	60 - 117
	SPIKE	NONACHLOROBIPHENYL (sur.)	2006/10/10		109	%	53 - 127
		Aroclor 1260	2006/10/10		89	%	64 - 128
	BLANK	NONACHLOROBIPHENYL (sur.)	2006/10/10		98	%	53 - 127
		Aroclor 1016	2006/10/10	<0.01		mg/kg	
		Aroclor 1221	2006/10/10	<0.01		mg/kg	
		Aroclor 1232	2006/10/10	<0.01		mg/kg	
		Aroclor 1242	2006/10/10	<0.01		mg/kg	
		Aroclor 1248	2006/10/10	<0.01		mg/kg	
		Aroclor 1254	2006/10/10	<0.01		mg/kg	
		Aroclor 1260	2006/10/10	<0.01		mg/kg	
		Aroclor 1262	2006/10/10	<0.01		mg/kg	
		Aroclor 1268	2006/10/10	<0.01		mg/kg	
		Total Aroclors	2006/10/10	<0.01		mg/kg	
	RPD	Aroclor 1016	2006/10/10	NC		%	N/A
		Aroclor 1221	2006/10/10	NC		%	N/A
		Aroclor 1232	2006/10/10	NC		%	N/A
		Aroclor 1242	2006/10/10	NC		%	N/A
		Aroclor 1248	2006/10/10	NC		%	N/A
		Aroclor 1254	2006/10/10	NC		%	N/A
		Aroclor 1260	2006/10/10	NC		%	N/A
		Aroclor 1262	2006/10/10	NC		%	N/A
		Aroclor 1268	2006/10/10	NC		%	N/A
		Total Aroclors	2006/10/10	NC		%	N/A
1314691 DJ	BLANK	Leachable (SWEP) Arsenic (As)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Barium (Ba)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Boron (B)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Cadmium (Cd)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Chromium (Cr)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Copper (Cu)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Lead (Pb)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Molybdenum (Mo)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Selenium (Se)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Silver (Ag)	2006/10/19	<0.1		mg/L	
		Leachable (SWEP) Uranium (U)	2006/10/19	<0.1		mg/L	

Maxxam Analytics Inc

FRANZ ENVIRONMENTAL INC.
Attention: JOHANNE PARADIS
Client Project #: 1256-0601
P.O. #:
Site Reference: INUVIK

Quality Assurance Report (Continued)

Maxxam Job Number: EA645233

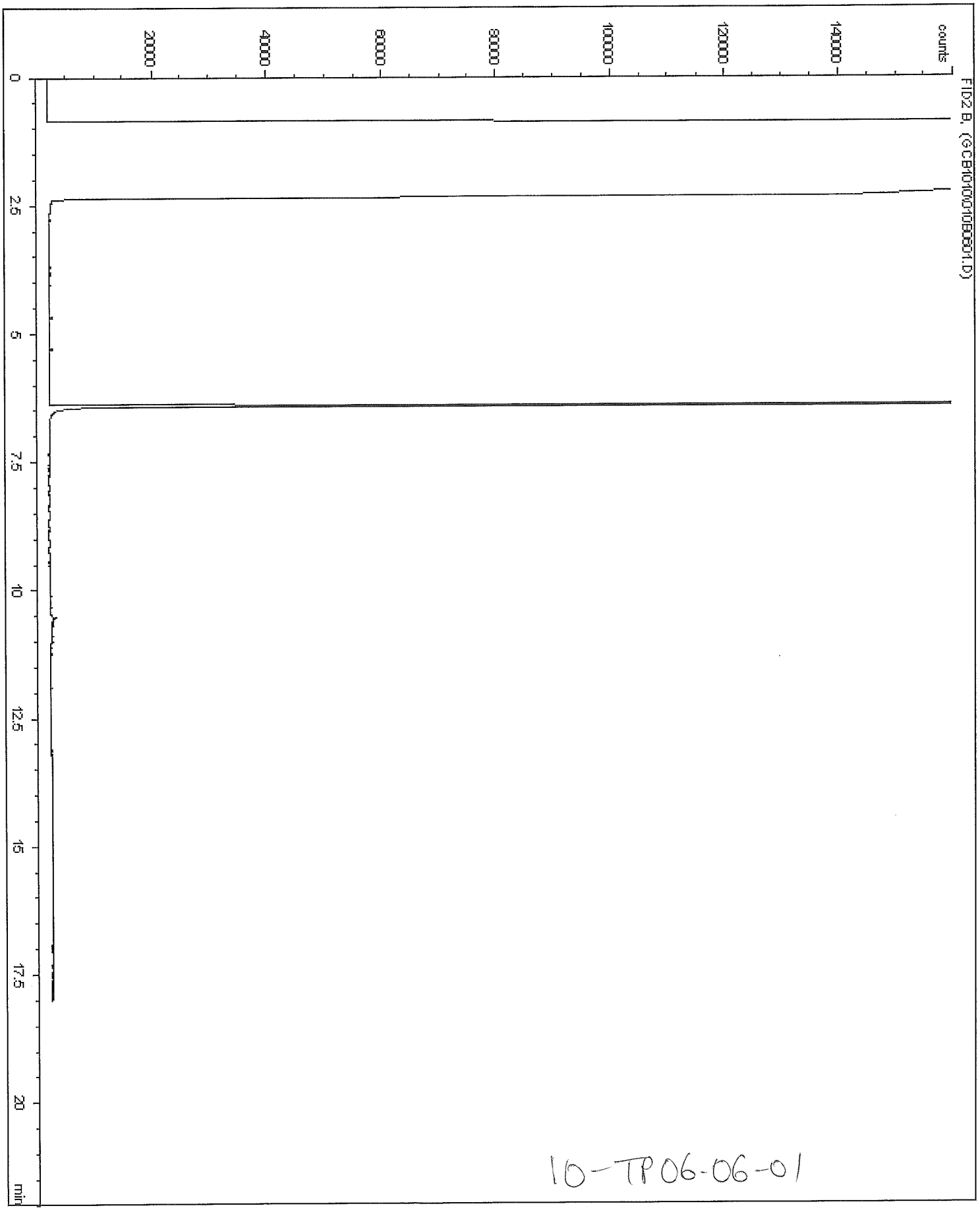
QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units	QC Limits
1314691 DJ	BLANK	Leachable (SWEP) Zinc (Zn)	2006/10/19	<0.1		mg/L	
	RPD [C93206-00]	Leachable (SWEP) Arsenic (As)	2006/10/19	NC		%	35
		Leachable (SWEP) Barium (Ba)	2006/10/19	NC		%	35
		Leachable (SWEP) Boron (B)	2006/10/19	NC		%	35
		Leachable (SWEP) Cadmium (Cd)	2006/10/19	NC		%	35
		Leachable (SWEP) Chromium (Cr)	2006/10/19	NC		%	35
		Leachable (SWEP) Copper (Cu)	2006/10/19	NC		%	35
		Leachable (SWEP) Lead (Pb)	2006/10/19	NC		%	35
		Leachable (SWEP) Molybdenum (Mo)	2006/10/19	NC		%	35
		Leachable (SWEP) Selenium (Se)	2006/10/19	NC		%	35
		Leachable (SWEP) Silver (Ag)	2006/10/19	NC		%	35
		Leachable (SWEP) Uranium (U)	2006/10/19	NC		%	35
		Leachable (SWEP) Zinc (Zn)	2006/10/19	NC		%	35
1315909 JT3	BLANK	Leachable Mercury (Hg)	2006/10/20	<0.05		ug/L	
	RPD [C93206-00]	Leachable Mercury (Hg)	2006/10/20	NC		%	35

N/A = Not Applicable
NC = Non-calculable
RPD = Relative Percent Difference
(1) Please note that the recovery of some compounds are outside control limits however the overall quality control for this analysis meets our acceptability criteria.

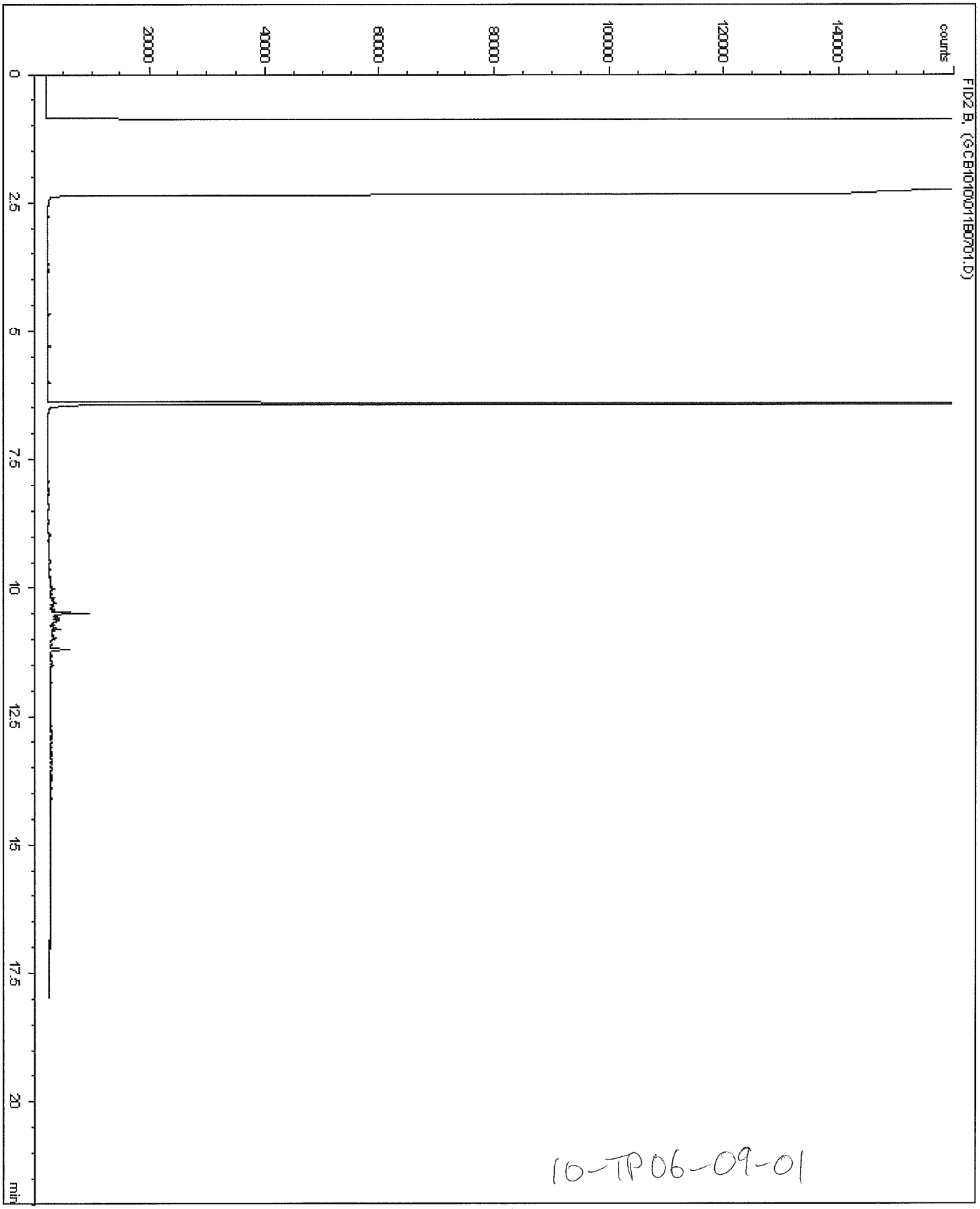
Edmonton: 9331 - 48th Street T6B 2R4 Telephone(780) 468-3500 FAX(780) 466-3332
Edmonton: 9619 - 42 Avenue T6E 5R2 Telephone(780) 465-1212 FAX(780) 450-4187

Data File C:\HPCHEM\1\DATA\GCB1010\010B0601.D

Sample Name: C93206



*** End of Report ***



*** End of Report ***

APPENDIX D

FCSAP-NCS Site Score Forms

I. Contaminant Characteristics (max. 33) Complete A, B, C, and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
A. Degree of Hazard (max. 14)				
High concern contaminants - high concentrations	14			
High concern contaminants - low concentrations	11			
Medium concern contaminants - high concentrations	8			
Medium concern contaminants - low concentrations	5			Contaminants: petroleum hydrocarbons - gross parameters (EPH F1 to F4) - medium concern. High concentrations: >2x CCME industrial standard / CWS.
Low concern contaminants (high or low concentrations)	3			
A. Site Score		8	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
B. Contaminant Quantity (max. 10)				
>10 ha or 5000 m^3	10			
2 to 10 ha or 1000 to 5000 m^3	6			
<2 ha or 1000 m^3	2			Approximate maximum volume of 3920 m3.
B. Site Score		6	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
C. Physical State (max. 9)				Petroleum liquid was applied directly and ignited during firefighter training exercises. No petroleum liquid has been identified during investigations. Contamination present as sorbed phase to soil particles. EPH F1 to F4 are moderately mobile in groundwater. Groundwater presence is limited to non-existent at Site, reducing mobility. F1 is potentially mobile in vapour phase at Site (highly permeable crushed rock) though likely constrained due to the permafrost below contamination that would tend to prevent migration. Soils in active zone of surrounding area are finer and less permeable than the crushed rock fill at Site, again restricting migration.
Highly mobile contaminants or high potential for mobility by erosion	9			
Moderately mobile contaminants	7			
Low to immobile contaminants or low potential for mobility by erosion	3			
C. Site Score		7	Data	Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 6)	-6 to +6	0		

Score Based on Data	21
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Contaminant Characteristics	21

II. Exposure Pathways A. Groundwater (max. 11) Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination and operable groundwater pathway within and/or beyond the property boundary (max. 11)				
For potable groundwater environments, 1) groundwater concentrations exceed background concentrations and the CCME Canadian Drinking Water Guidelines (CDWG) by 2X or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts.				
For nonpotable environments (typically urban environments with municipal services), 1) groundwater concentrations exceed 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway) or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts.	11			
For potable water environments, groundwater concentrations exceed background concentrations and the CDWG 1 to 2X.				
For nonpotable environments, groundwater concentrations exceed by 1 to 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway).	6			
Meets CDWG for potable environments; meets nonpotable criteria or modified generic (excludes ingestion of drinking water pathway) for nonpotable environments, or Absence of groundwater exposure pathway.	0			No aquifer present; minimal groundwater observed. This is a permafrost area with an active zone of less than 2 m that is frozen for much of the year. Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
A1. Site Score		0		
2. Potential for Groundwater Contamination. Complete a, b, c, d, and e.				
2a. Engineered Subsurface Containment (max. 4)				
No containment	4			
Partial containment	2			
Full containment or direct, monitored evidence of natural attenuation processes	0			
A2a. Site Score				
2b. Thickness of confining layer over aquifer of concern or groundwater exposure pathway (max. 1.5)				
3 m or less including no or discontinuous confining layer or unknown	1.5			
3 to 10 m	1			
>10 m	0			
A2b. Site Score				
2c. Hydraulic conductivity of confining layer (max. 1.5)				
$>10^{-4}$ cm/s or no confining layer or unknown	1.5			
10^{-4} to 10^{-6} cm/sec	1			
$<10^{-6}$ cm/sec	0.5			
A2c. Site Score				
2d. Annual precipitation (max. 1)				
>1000 mm and moderately to highly permeable surface material	1			
600 mm and moderately to highly permeable surface material	0.6			
400 mm and low to moderately permeable surface material	0.4			
200 mm and low permeability surface material	0.2			
A2d. Site Score				
2e. Hydraulic conductivity of aquifer of concern (max. 3)				

II. Exposure Pathways

A. Groundwater (max. 11) **Complete 1 (Known) or 2 (Potential), and Special Considerations.**	**Scoring Guideline**	**Site Score**	**Information Source**	**Document relevant site information, the source of that information, and the rationale for selecting the site score.**
$>10^{-2}$ cm/sec	3			
10^{-2} to 10^{-4} cm/sec	1.5			
$<10^{-4}$ cm/sec	0.5			
A2e. Site Score				
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	0
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Groundwater	0

II. Exposure Pathways B. Surface Water (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Observed or measured contamination, above background conditions of surface water/effluent near the site which is considered an operable exposure pathway (max. 11)				
Known concentrations of surface water:				
1) Concentrations exceed background concentrations and exceed CCME CWQG - Protection of Aquatic Life Guidelines by 2X; or 2) There is known contact of contaminants with surface water based on physical evidence; or 3) In the absence of CWQG, chemicals have been proven to be toxic based on site specific testing (e.g. toxicity testing, bioassay testing or other indicator testing of exposure).	11			
Known concentrations of surface water which are above background and between 1 and 2X CWQG.	6			
Meets CWQG or absence of surface water exposure pathway	0			
B1. Site Score				
2. Potential for Surface Water Contamination. Complete a, b, c, d, and e.				
2a. Surface Containment (max. 5)				
No containment	5			
Partial containment	3			
Full containment	0.5			No surface containment.
B2a. Site Score		5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2b. Distance to Perennial Surface Water (max. 3)				
0 to <100 m	3			
100 to 300 m	2			
>300 m	0.5			Dolomite Lake located approx. 475 m to south.
B2b. Site Score		0.5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2c. Topography (max. 1.5)				
Contaminants above ground level and slope is steep	1.5			
Contaminants at or below ground level and slope is steep	1.2			
Contaminants above ground level and slope is flat	0.8			Contaminants at ground surface and below. Flat-lying area along top of ridge with slight slope down to north beyond contaminated Site area.
Contaminants at or below ground level and slope is flat	0			
B2c. Site Score		0.6	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2d. Run-off Potential (max. 1)				
>1000 mm precipitation and low permeability surface material	1			Environment Canada climate normals (www.climate.weatheroffice.ec.gc.ca/ climate_normals/index_e.html): 248.4 mm precipitation annually. Highly permeable surface material (crushed rock).
500 - 1000 mm precipitation and moderately permeable surface material	0.6			
<500 mm precipitation and highly permeable surface material	0.2			
B2d. Site Score		0.2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2e. Flood Potential (max. 0.5)				
1 in 2 years	0.5			
1 in 10 years	0.3			
1 in 50 years	0.1			Site located on ridge - no flood potential.
B2e. Site Score		0	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 4)	-4 to +4			
Score Based on Data		6.3		
Score Based on Speculation		0		
Score from Special Considerations		0		
Total Site Score for Exposure Pathways/ Surface Water		6.3		

II. Exposure Pathways C. Direct Contact (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination of media by direct contact (max. 11)				
Known contamination of media (soil, sediments and air): 1) Concentrations exceed background concentrations and exceed 2X applicable environmental quality criteria (EQC) for the appropriate land use on/near the site; or 2) There is known contact of contaminants with media based on physical evidence; or 3) There is known vapour migration into indoor air environment (building).	11			
Known contamination of media (soil, sediments, and air) with concentrations exceeding background and exceeding by 1 to 2 X applicable EQC for the appropriate land use on/near the site.	6			
No exceedance of applicable EQC for appropriate land use on/near the site; or no physical evidence of contamination of the media; or absence of direct contact exposure pathway.	0			Concentration of contaminants in soil >2x CCME industrial standard / CWS. Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
C1. Site Score		11		
2. Potential for Direct Human and/or Animal Contact. Complete a, b, and c.				
2a. Vapour Emissions (gases, subsurface and surface generated vapours, contaminated dust; max. 5)				
Suspected vapour migration with a potential for exposure to impact on an indoor air environment (building on-site or near site).	5			
Evidence of significant dust generated and impacting on-site and off-site potential or known receptors.	3			
No vapour emissions and/or no dust generated	0			
C2a. Site Score				
2b. Accessibility of Site (ability to contact materials; max. 4)				
Limited barriers to prevent site access; contamination not covered	4			
Moderate access or no intervening barriers; contaminants are covered; remote locations in which contaminants are not covered	3			
Controlled access or remote location and contaminants are covered	0			
C2b. Site Score				
2c. Hazardous Soil Gas Migration and Explosive Potential from the Site (max. 2)				
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard; soil permeability is high	2			
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard. Soil permeability is low and/or groundwater is <2 m from surface.	1			
Contaminants are neither volatile nor mobile in the gas/vapour phase. No risk of explosive hazard.	0			
C2c. Site Score				
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	11
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Direct Contact	11

III. Receptors A. Human and Animal Uses (max. 18). Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known adverse impact on humans or animals (domestic or documented traditional food source) as a result of the contaminated site (max. 18)				
Documented adverse impact or high quantified exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	18			
Suspected adverse impact or moderately high exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	15			
No quantified or suspected exposures/impacts in humans or animals	0			
A1. Site Score				
2. Potential for impacts on humans and animals Complete a, b, and c.				
a) Drinking water supply (max. 9). Complete i (Known) or ii (Potential).				
i) Known impact on drinking water supply (max. 9)				
Known contamination of drinking water supply (groundwater or surface water) with (1) concentrations above background and CDWG, or (2) there is physical evidence of drinking water contamination.	9			
Measurable concentrations of contaminants in the drinking water supply (groundwater or surface water) but concentrations are less than the CDWG or there is a significant potential for CDWG exceedances of the water supply in the near future	7			
Drinking water supply is known not to be contaminated	0			
A2ai. Site Score		0		
ii) Potential for impact on drinking water supply (max. 9) Complete both sections.				
Proximity to drinking water supply (max. 6)				
0 to <100 m	6			
100 to <300 m	5			Seasonal and permanent residences located around Dolomite Lake may use Lake for domestic water supply.
300 m to <1 km	4			
1 to 5 km	3			Dolomite Lake located approx. 475 m to south, as measured along the creek flow path.
A2aii(Part1). Site Score		4	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Availability of alternative drinking water supply (max. 3)				
Alternative drinking water supply is not available	3			
Alternative drinking water supply difficult to obtain	2			
Alternative drinking water supply available	0.5			
A2aii(Part2). Site Score		2	Data	Inconvenient to carry water in to residences - no road access (boat or overland only).
2a. Site Score Based on Data		6		
2a. Site Score Based on Speculation		0		
2a. Site Score		6		
b) Other water resources (max. 4). Complete i (Known) or ii (Potential)				
i) Water resources (i.e. recreational, commercial, livestock, irrigation or other food chain uses) known to be adversely affected as a result of site contamination (max. 4)				

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
Known contamination of water resource (1) to concentrations above background and above the appropriate environmental quality criteria (EQC) as required based on the water resources usage or (2) there is physical evidence of water resources contamination	4			
Chemical concentrations are currently below the appropriate EQC as required based on the water resources usage but strongly suspect potential for future EQC exceedances	3			
Water resource is not known to be contaminated	0			
A2bi. Site Score		0		

ii) Potential for impact on water resources (max. 4). **Complete both sections.**

Proximity to water resources (max. 2)

0 to <100 m	2			
100 to <300 m	1.5			
300 m to <1 km	1			
1 to 5 km	0.5			Dolomite Lake located approx. 475 m to south, as measured along the creek flow path.
A2bii(Part1). Site Score		1	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.

Use of water resources (max. 2). If multiple uses, give the highest score automatically (use following table)

Water Use	**Frequent Use**	**Occasional Use**
Recreational (swimming, fishing, etc.)	2	1
Commercial food preparation	1.5	0.8
Livestock watering	1	0.5
Irrigation	1	0.5
Other domestic or food chain uses	0.5	0.3
Not currently used but likely future use	0.5	0.2
A2bii(Part2). Site Score	2	Data

Fishing for food reportedly takes place in Dolomite Lake.

2b. Site Score Based on Data	3
2b. Site Score Based on Speculation	0
2b. Site Score	3

c) Direct human exposure (max. 5). **Complete i (Known) or ii (Potential)**

i) Known contamination of land used by humans (max. 5)

Known contamination of land used for agricultural (AG) or residential/parkland/school purposes (R/P) above AG or R/P CCME Environmental Quality Criteria (EQC).	5	
Known contamination of land used for commercial or industrial (C/I) purposes above C/I CCME EQC.		
Land is known not to be contaminated above background concentrations	0	
A2ci. Site Score		

ii) Potential human exposure through land use (give highest score to worst case scenario; max. 5)

Determine use(s) of land at and surrounding site and assign score using following table:

Land Use	**Distance from Site**		
	0-<300 m	300 m-<1 km	1-5 km

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

			Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
residential	5	4.5	3			
agricultural	5	4	2.5			
parkland/school	4	3	1.5			Site formerly used as fire fighter training area - potential for renewed use of site for Comm/Ind. purposes in future remains. Residential areas on far side of Dolmite Lake (<2km).
commercial/industrial	3	1	0.5			
		A2cii. Site Score		3	Data	
		2c. Site Score Based on Data		3		
		2c. Site Score Based on Speculation		0		
		2c. Site Score		3		
Special Considerations (max. 5)			-5 to +5			
		Score Based on Data		12		
		Score Based on Speculation		0		
		Score from Special Considerations		0		
		Total Site Score for Receptors/ Human and Animal Uses		12		

III. Receptors B. Environmental Receptors (max. 16) Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known impacts on the environment as a result of the contaminated site (max. 16)				
Known adverse effect on environmental receptors including fish habitat	16			
Visual physical evidence of stress on aquatic species or vegetative stress on trees, crops or plant life located on the site or off-site with impacts related to the contaminated site	12			
No known environmental receptors within 1 km of contaminated site and no known adverse effects.	0			
B1. Site Score				
2. Potential for Impact on Environmental Receptors. Complete a and b.				
a) Distance from the site to the nearest environmental receptor (max. 10)				
0 to <300 m	10			
300 m to <1 km	6			
1 km to <5 km	2			**Dolomite Lake located approx. 475 m to south.**
>5 km	0.5			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2a. Site Score		6	Data	
b) Distance to an important or susceptible groundwater or surface water resource (max. 6)				
0 to <300 m	6			
300 m to <1 km	4			
1 km to <5 km	2			**Dolomite Lake located approx. 475 m to south.**
>5 km	1			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2b. Site Score		4	Data	
Special Considerations (max. 5)	-5 to +5			
Score Based on Data		10		
Score Based on Speculation		0		
Score from Special Considerations		0		
Total Site Score for Receptors/ Environmental Receptors		10		

FCSAP(NCS) Evaluation completed for APEC 02, FFTA, Inuvik Airport
Final Score Sheet

Factor Categories	Known and Potential Scores Based on Data	Potential Scores Based on Speculation	Scores from Special Considerations	Total Category Scores
I. Contaminant Characteristics (max. 33)	21	0	0	21
II. Exposure Pathways (max. 33)				
A. Groundwater (max. 11)	0	0	0	0
B. Surface Water (max. 11)	6.3	0	0	6.3
C. Direct Contact (max. 11)	11	0	0	11
III. Receptors (max. 34)				
A. Human and Animal (max. 18)	12	0	0	12
B. Environment (max. 16)	10	0	0	10
Total Scores for the Site	60.3	0	0	60.3

Site Classification Class 2 - Action Likely Required

Class 1 (Score 70 to 100): Action Required

Class 2 (Score 50 to 69.9): Action Likely Required

Class 3 (Score 37 to 49.9): Action May Be Required

Class N (Score <37): Action Not Likely Required

Class I (Speculation Score ≥15): Insufficient Information

Note: This worksheet can be copied for inclusion in site reports or other documents.

I. Contaminant Characteristics (max. 33) Complete A, B, C, and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
A. Degree of Hazard (max. 14)				
High concern contaminants - high concentrations	14			
High concern contaminants - low concentrations	11			
Medium concern contaminants - high concentrations	8			Contaminants: petroleum hydrocarbons - gross parameters (EPH F1 to F4), arsenic, lead, zinc. F1, arsenic, and lead are high concern parameters. High concentrations: F1 and arsenic >2x CCME industrial standard / CWS.
Medium concern contaminants - low concentrations	5			
Low concern contaminants (high or low concentrations)	3			
A. Site Score		14	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
B. Contaminant Quantity (max. 10)				
>10 ha or 5000 m^3	10			
2 to 10 ha or 1000 to 5000 m^3	6			
<2 ha or 1000 m^3	2			Approximate volume of impacted soil: 260 m3 (Phase II assessment only to date).
B. Site Score		2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
C. Physical State (max. 9)				F1 and F2 at ASTs are sorbed to soil; soil headspace vapours low in screened samples and minimal groundwater is present (low mobility).
Highly mobile contaminants or high potential for mobility by erosion	9			
Moderately mobile contaminants	7			F2, F3, and metals detected in groundwater at concrete pad and sheen observed: high mobility.
Low to immobile contaminants or low potential for mobility by erosion	3			
C. Site Score		9	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 6)	-6 to +6	0		

Score Based on Data	25
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Contaminant Characteristics	25

II. Exposure Pathways A. Groundwater (max. 11) Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination and operable groundwater pathway within and/or beyond the property boundary (max. 11)				
For potable groundwater environments, 1) groundwater concentrations exceed background concentrations and the CCME Canadian Drinking Water Guidelines (CDWG) by 2X or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts.				
For nonpotable environments (typically urban environments with municipal services), 1) groundwater concentrations exceed 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway) or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts.	11			
For potable water environments, groundwater concentrations exceed background concentrations and the CDWG 1 to 2X.				
For nonpotable environments, groundwater concentrations exceed by 1 to 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway).	6			
Meets CDWG for potable environments; meets nonpotable criteria or modified generic (excludes ingestion of drinking water pathway) for nonpotable environments, or Absence of groundwater exposure pathway.	0			PHC F1 and F2 detected in groundwater. Elevated iron concentration detected in groundwater.
A1. Site Score		11		Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2. Potential for Groundwater Contamination. Complete a, b, c, d, and e.				
2a. Engineered Subsurface Containment (max. 4)				
No containment	4			
Partial containment	2			
Full containment or direct, monitored evidence of natural attenuation processes	0			
A2a. Site Score				
2b. Thickness of confining layer over aquifer of concern or groundwater exposure pathway (max. 1.5)				
3 m or less including no or discontinuous confining layer or unknown	1.5			
3 to 10 m	1			
>10 m	0			
A2b. Site Score				
2c. Hydraulic conductivity of confining layer (max. 1.5)				
$>10^{-4}$ cm/s or no confining layer or unknown	1.5			
10^{-4} to 10^{-6} cm/sec	1			
$<10^{-6}$ cm/sec	0.5			
A2c. Site Score				
2d. Annual precipitation (max. 1)				
>1000 mm and moderately to highly permeable surface material	1			
600 mm and moderately to highly permeable surface material	0.6			
400 mm and low to moderately permeable surface material	0.4			
200 mm and low permeability surface material	0.2			
A2d. Site Score				
2e. Hydraulic conductivity of aquifer of concern (max. 3)				

II. Exposure Pathways

A. Groundwater (max. 11) **Complete 1 (Known) or 2 (Potential), and Special Considerations.**	**Scoring Guideline**	**Site Score**	**Information Source**	**Document relevant site information, the source of that information, and the rationale for selecting the site score.**
$>10^{-2}$ cm/sec	3			
10^{-2} to 10^{-4} cm/sec	1.5			
$<10^{-4}$ cm/sec	0.5			
A2e. Site Score				
Special Considerations (max. 4)	-4 to +4	-4		Permafrost acts as partial containment below contaminated zone. Active layer frozen through much of the year. No significant groundwater observed. No aquifer identified.

Score Based on Data	11
Score Based on Speculation	0
Score from Special Considerations	-4
Total Site Score for Exposure Pathways/ Groundwater	7

II. Exposure Pathways B. Surface Water (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Observed or measured contamination, above background conditions of surface water/effluent near the site which is considered an operable exposure pathway (max. 11)				
Known concentrations of surface water:				
1) Concentrations exceed background concentrations and exceed CCME CWQG - Protection of Aquatic Life Guidelines by 2X; or 2) There is known contact of contaminants with surface water based on physical evidence; or 3) In the absence of CWQG, chemicals have been proven to be toxic based on site specific testing (e.g. toxicity testing, bioassay testing or other indicator testing of exposure).	11			
Known concentrations of surface water which are above background and between 1 and 2X CWQG.	6			
Meets CWQG or absence of surface water exposure pathway	0			
B1. Site Score				
2. Potential for Surface Water Contamination. Complete a, b, c, d, and e.				
2a. Surface Containment (max. 5)				
No containment	5			
Partial containment	3			
Full containment	0.5			No surface containment.
B2a. Site Score		5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2b. Distance to Perennial Surface Water (max. 3)				
0 to <100 m	3			
100 to 300 m	2			
>300 m	0.5			Shell Lake located adjacent to site.
B2b. Site Score		3	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2c. Topography (max. 1.5)				
Contaminants above ground level and slope is steep	1.5			
Contaminants at or below ground level and slope is steep	1.2			
Contaminants above ground level and slope is flat	0.8			Contaminants below surface where slope is moderate (near ASTs); at surface where slope is flat (surface stain at concrete pad).
Contaminants at or below ground level and slope is flat	0			
B2c. Site Score		0.6	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2d. Run-off Potential (max. 1)				
>1000 mm precipitation and low permeability surface material	1			Environment Canada climate normals (www.climate.weatheroffice.ec.gc.ca/climate_normals/index_e.html): 248.4 mm precipitation annually.
500 - 1000 mm precipitation and moderately permeable surface material	0.6			
<500 mm precipitation and highly permeable surface material	0.2			Highly permeable surface material (gravelly fill).
B2d. Site Score		0.2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2e. Flood Potential (max. 0.5)				
1 in 2 years	0.5			
1 in 10 years	0.3			
1 in 50 years	0.1			Contamination is present in soil adjacent to lake and barely above lake level. Speculate that flooding of contaminated area is relatively frequent.
B2e. Site Score		0.5	Speculation	
Special Considerations (max. 4)	-4 to +4			
Score Based on Data		8.8		
Score Based on Speculation		0.5		
Score from Special Considerations		0		
Total Site Score for Exposure Pathways/ Surface Water		9.3		

II. Exposure Pathways C. Direct Contact (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination of media by direct contact (max. 11)				
Known contamination of media (soil, sediments and air): 1) Concentrations exceed background concentrations and exceed 2X applicable environmental quality criteria (EQC) for the appropriate land use on/near the site; or 2) There is known contact of contaminants with media based on physical evidence; or 3) There is known vapour migration into indoor air environment (building).	11			
Known contamination of media (soil, sediments, and air) with concentrations exceeding background and exceeding by 1 to 2 X applicable EQC for the appropriate land use on/near the site.	6			
No exceedance of applicable EQC for appropriate land use on/near the site; or no physical evidence of contamination of the media; or absence of direct contact exposure pathway.	0			Concentration of contaminants in soil >2x CCME industrial standard / CWS. Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
C1. Site Score		11		
2. Potential for Direct Human and/or Animal Contact. Complete a, b, and c.				
2a. Vapour Emissions (gases, subsurface and surface generated vapours, contaminated dust; max. 5)				
Suspected vapour migration with a potential for exposure to impact on an indoor air environment (building on-site or near site).	5			
Evidence of significant dust generated and impacting on-site and off-site potential or known receptors.	3			
No vapour emissions and/or no dust generated	0			
C2a. Site Score				
2b. Accessibility of Site (ability to contact materials; max. 4)				
Limited barriers to prevent site access; contamination not covered	4			
Moderate access or no intervening barriers; contaminants are covered; remote locations in which contaminants are not covered	3			
Controlled access or remote location and contaminants are covered	0			
C2b. Site Score				
2c. Hazardous Soil Gas Migration and Explosive Potential from the Site (max. 2)				
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard; soil permeability is high	2			
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard. Soil permeability is low and/or groundwater is <2 m from surface.	1			
Contaminants are neither volatile nor mobile in the gas/vapour phase. No risk of explosive hazard.	0			
C2c. Site Score				
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	11
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Direct Contact	11

III. Receptors A. Human and Animal Uses (max. 18). Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known adverse impact on humans or animals (domestic or documented traditional food source) as a result of the contaminated site (max. 18)				
Documented adverse impact or high quantified exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	18			
Suspected adverse impact or moderately high exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	15			
No quantified or suspected exposures/impacts in humans or animals	0			
A1. Site Score				
2. Potential for impacts on humans and animals Complete a, b, and c.				
a) Drinking water supply (max. 9). Complete i (Known) or ii (Potential).				
i) Known impact on drinking water supply (max. 9)				
Known contamination of drinking water supply (groundwater or surface water) with (1) concentrations above background and CDWG, or (2) there is physical evidence of drinking water contamination.	9			
Measurable concentrations of contaminants in the drinking water supply (groundwater or surface water) but concentrations are less than the CDWG or there is a significant potential for CDWG exceedances of the water supply in the near future	7			
Drinking water supply is known not to be contaminated	0			Drinking water supply in trucked-in to sites in floatplane base area. No municipal piped supply to this area.
A2ai. Site Score		0		
ii) Potential for impact on drinking water supply (max. 9) Complete both sections.				
Proximity to drinking water supply (max. 6)				
0 to <100 m	6			
100 to <300 m	5			
300 m to <1 km	4			
1 to 5 km	3			Shell Lake adjacent to Site. Potential exists for Shell Lake to be used for domestic water supply by facilities in floatplane base area.
A2aii(Part1). Site Score		6	Speculation	
Availability of alternative drinking water supply (max. 3)				
Alternative drinking water supply is not available	3			
Alternative drinking water supply difficult to obtain	2			
Alternative drinking water supply available	0.5			Drinking water supply in trucked-in to sites in floatplane base area. No municipal piped supply to this area.
A2aii(Part2). Site Score		0.5	Data	
2a. Site Score Based on Data		0.5		
2a. Site Score Based on Speculation		6		
2a. Site Score		6.5		
b) Other water resources (max. 4). Complete i (Known) or ii (Potential)				
i) Water resources (i.e. recreational, commercial, livestock, irrigation or other food chain uses) known to be adversely affected as a result of site contamination (max. 4)				

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
Known contamination of water resource (1) to concentrations above background and above the appropriate environmental quality criteria (EQC) as required based on the water resources usage or (2) there is physical evidence of water resources contamination	4			
Chemical concentrations are currently below the appropriate EQC as required based on the water resources usage but strongly suspect potential for future EQC exceedances	3			
Water resource is not known to be contaminated	0			
A2bi. Site Score		0		

ii) Potential for impact on water resources (max. 4). **Complete both sections.**

Proximity to water resources (max. 2)				
0 to <100 m	2			
100 to <300 m	1.5			
300 m to <1 km	1			
1 to 5 km	0.5			Shell Lake adjacent to Site.
A2bii(Part1). Site Score		2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.

Use of water resources (max. 2). If multiple uses, give the highest score automatically (use following table)

Water Use	**Frequent Use**	**Occasional Use**
Recreational (swimming, fishing, etc.)	2	1
Commercial food preparation	1.5	0.8
Livestock watering	1	0.5
Irrigation	1	0.5
Other domestic or food chain uses	0.5	0.3
Not currently used but likely future use	0.5	0.2

A2bii(Part2). Site Score		2	Speculation	Potential exisits for recreational use of Shell Lake.
2b. Site Score Based on Data		2		
2b. Site Score Based on Speculation		2		
2b. Site Score		4		

c) Direct human exposure (max. 5). **Complete i (Known) or ii (Potential)**

i) Known contamination of land used by humans (max. 5)

Known contamination of land used for agricultural (AG) or residential/parkland/school purposes (R/P) above AG or R/P CCME Environmental Quality Criteria (EQC).	5			
Known contamination of land used for commercial or industrial (C/I) purposes above C/I CCME EQC.				Contaminants present at > CCME industrial standard / CWS: petroleum hydrocarbons - gross parameters (EPH F1 to F4), arsenic, lead, zinc. F1, arsenic, and lead are high concern parameters.
Land is known not to be contaminated above background concentrations	0			
A2ci. Site Score		5		Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.

ii) Potential human exposure through land use (give highest score to worst case scenario; max. 5)

Determine use(s) of land at and surrounding site and assign score using following table:

Land Use	**Distance from Site**		
	0-<300 m	300 m-<1 km	1-5 km

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

			Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
residential	5	4.5	3			
agricultural	5	4	2.5			
parkland/school	4	3	1.5			
commercial/industrial	3	1	0.5			
		A2cii. Site Score				
		2c. Site Score Based on Data		5		
		2c. Site Score Based on Speculation		0		
		2c. Site Score		5		
Special Considerations (max. 5)			-5 to +5	0		
		Score Based on Data		7.5		
		Score Based on Speculation		8		
		Score from Special Considerations		0		
		Total Site Score for Receptors/ Human and Animal Uses		15.5		

III. Receptors B. Environmental Receptors (max. 16) Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known impacts on the environment as a result of the contaminated site (max. 16)				
Known adverse effect on environmental receptors including fish habitat	16			
Visual physical evidence of stress on aquatic species or vegetative stress on trees, crops or plant life located on the site or off-site with impacts related to the contaminated site	12			
No known environmental receptors within 1 km of contaminated site and no known adverse effects.	0			
B1. Site Score				
2. Potential for Impact on Environmental Receptors. Complete a and b.				
a) Distance from the site to the nearest environmental receptor (max. 10)				
0 to <300 m	10			
300 m to <1 km	6			
1 km to <5 km	2			**Shell Lake located adjacent to the site.**
>5 km	0.5			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2a. Site Score		10	Data	
b) Distance to an important or susceptible groundwater or surface water resource (max. 6)				
0 to <300 m	6			
300 m to <1 km	4			
1 km to <5 km	2			**Shell Lake located adjacent to the site.**
>5 km	1			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2b. Site Score		6	Data	
Special Considerations (max. 5)	-5 to +5			
Score Based on Data		16		
Score Based on Speculation		0		
Score from Special Considerations		0		
Total Site Score for Receptors/ Environmental Receptors		16		

FCSAP(NCS) Evaluation completed for APEC 08, Shell Lake, Inuvik Airport
Final Score Sheet

Factor Categories	Known and Potential Scores Based on Data	Potential Scores Based on Speculation	Scores from Special Considerations	Total Category Scores
I. Contaminant Characteristics (max. 33)	25	0	0	25
II. Exposure Pathways (max. 33)				
A. Groundwater (max. 11)	11	0	-4	7
B. Surface Water (max. 11)	8.8	0.5	0	9.3
C. Direct Contact (max. 11)	11	0	0	11
III. Receptors (max. 34)				
A. Human and Animal (max. 18)	7.5	8	0	15.5
B. Environment (max. 16)	16	0	0	16
Total Scores for the Site	79.3	8.5	-4	83.8

Site Classification Class 1 - Action Required

Class 1 (Score 70 to 100): Action Required

Class 2 (Score 50 to 69.9): Action Likely Required

Class 3 (Score 37 to 49.9): Action May Be Required

Class N (Score <37): Action Not Likely Required

Class I (Speculation Score ≥15): Insufficient Information

Note: This worksheet can be copied for inclusion in site reports or other documents.

I. Contaminant Characteristics (max. 33) Complete A, B, C, and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
A. Degree of Hazard (max. 14)				
High concern contaminants - high concentrations	14			Suspected Contaminants include: petroleum hydrocarbons and metals - medium concern.
High concern contaminants - low concentrations	11			
Medium concern contaminants - high concentrations	8			Concentrations: =< CCME industrial standard / CWS for those samples analysed; however, landfills are typically greatly inhomogeneous and exceeding soils may exist with the waste.
Medium concern contaminants - low concentrations	5			
Low concern contaminants (high or low concentrations)	3			
A. Site Score		8	Speculation	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
B. Contaminant Quantity (max. 10)				
>10 ha or 5000 m^3	10			
2 to 10 ha or 1000 to 5000 m^3	6			
<2 ha or 1000 m^3	2			Estimated volume of landfill is 500 m3.
B. Site Score		2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
C. Physical State (max. 9)				
Highly mobile contaminants or high potential for mobility by erosion	9			Suspected contaminants (petroleum hydrocarbons and metals) are moderately mobile when exposed to groundwater; however limited groundwater is present in landfill. Contaminants could be mobilised by leaching by precipitation. Wastes generally not exposed to erosion at surface (some large pieces of debris at surface, but otherwise surface is covered with gravel and cobbles).
Moderately mobile contaminants	7			
Low to immobile contaminants or low potential for mobility by erosion	3			
C. Site Score		5	Data	
Special Considerations (max. 6)	-6 to +6	0		

Score Based on Data	7
Score Based on Speculation	8
Score from Special Considerations	0
Total Site Score for Contaminant Characteristics	15

II. Exposure Pathways A. Groundwater (max. 11) Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination and operable groundwater pathway within and/or beyond the property boundary (max. 11)				
For potable groundwater environments, 1) groundwater concentrations exceed background concentrations and the CCME Canadian Drinking Water Guidelines (CDWG) by 2X or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts. For nonpotable environments (typically urban environments with municipal services), 1) groundwater concentrations exceed 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway) or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts.	11			
For potable water environments, groundwater concentrations exceed background concentrations and the CDWG 1 to 2X. For nonpotable environments, groundwater concentrations exceed by 1 to 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway).	6			
Meets CDWG for potable environments; meets nonpotable criteria or modified generic (excludes ingestion of drinking water pathway) for nonpotable environments, or Absence of groundwater exposure pathway.	0			No aquifer present; minimal groundwater observed. This is a permafrost area with an active zone of less than 2 m that is frozen for much of the year. Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
A1. Site Score		0		
2. Potential for Groundwater Contamination. Complete a, b, c, d, and e.				
2a. Engineered Subsurface Containment (max. 4)				
No containment	4			
Partial containment	2			
Full containment or direct, monitored evidence of natural attenuation processes	0			
A2a. Site Score				
2b. Thickness of confining layer over aquifer of concern or groundwater exposure pathway (max. 1.5)				
3 m or less including no or discontinuous confining layer or unknown	1.5			
3 to 10 m	1			
>10 m	0			
A2b. Site Score				
2c. Hydraulic conductivity of confining layer (max. 1.5)				
$>10^{-4}$ cm/s or no confining layer or unknown	1.5			
10^{-4} to 10^{-6} cm/sec	1			
$<10^{-6}$ cm/sec	0.5			
A2c. Site Score				
2d. Annual precipitation (max. 1)				
>1000 mm and moderately to highly permeable surface material	1			
600 mm and moderately to highly permeable surface material	0.6			
400 mm and low to moderately permeable surface material	0.4			
200 mm and low permeability surface material	0.2			
A2d. Site Score				
2e. Hydraulic conductivity of aquifer of concern (max. 3)				

II. Exposure Pathways

A. Groundwater (max. 11) **Complete 1 (Known) or 2 (Potential), and Special Considerations.**	**Scoring Guideline**	**Site Score**	**Information Source**	**Document relevant site information, the source of that information, and the rationale for selecting the site score.**
$>10^{-2}$ cm/sec	3			
10^{-2} to 10^{-4} cm/sec	1.5			
$<10^{-4}$ cm/sec	0.5			
A2e. Site Score				
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	0
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Groundwater	0

II. Exposure Pathways B. Surface Water (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Observed or measured contamination, above background conditions of surface water/effluent near the site which is considered an operable exposure pathway (max. 11)				
Known concentrations of surface water:				
1) Concentrations exceed background concentrations and exceed CCME CWQG - Protection of Aquatic Life Guidelines by 2X; or 2) There is known contact of contaminants with surface water based on physical evidence; or 3) In the absence of CWQG, chemicals have been proven to be toxic based on site specific testing (e.g. toxicity testing, bioassay testing or other indicator testing of exposure).	11			
Known concentrations of surface water which are above background and between 1 and 2X CWQG.	6			
Meets CWQG or absence of surface water exposure pathway	0			
B1. Site Score				
2. Potential for Surface Water Contamination. Complete a, b, c, d, and e.				
2a. Surface Containment (max. 5)				
No containment	5			
Partial containment	3			
Full containment	0.5			No surface containment.
B2a. Site Score		5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2b. Distance to Perennial Surface Water (max. 3)				
0 to <100 m	3			
100 to 300 m	2			
>300 m	0.5			Dolomite Lake located approx. 300 m to south, as measured along the creek flow path.
B2b. Site Score		2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2c. Topography (max. 1.5)				
Contaminants above ground level and slope is steep	1.5			
Contaminants at or below ground level and slope is steep	1.2			
Contaminants above ground level and slope is flat	0.8			
Contaminants at or below ground level and slope is flat	0			Landfill is developed on and stands above steep, southwest-facing slope of gully.
B2c. Site Score		1.5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2d. Run-off Potential (max. 1)				
>1000 mm precipitation and low permeability surface material	1			Environment Canada climate normals (www.climate.weatheroffice.ec.gc.ca/ climate_normals/index_e.html): 248.4 mm precipitation annually.
500 - 1000 mm precipitation and moderately permeable surface material	0.6			
<500 mm precipitation and highly permeable surface material	0.2			Highly permeable surface material (crushed rock).
B2d. Site Score		0.2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2e. Flood Potential (max. 0.5)				
1 in 2 years	0.5			
1 in 10 years	0.3			Landfill is developed on slope of gully, at least 10 m above the creek. Flooding of the landfill does not appear to be possible.
1 in 50 years	0.1			
B2e. Site Score		0	Speculation	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	8.7
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Surface Water	8.7

II. Exposure Pathways C. Direct Contact (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination of media by direct contact (max. 11)				
Known contamination of media (soil, sediments and air): 1) Concentrations exceed background concentrations and exceed 2X applicable environmental quality criteria (EQC) for the appropriate land use on/near the site; or 2) There is known contact of contaminants with media based on physical evidence; or 3) There is known vapour migration into indoor air environment (building).	11			
Known contamination of media (soil, sediments, and air) with concentrations exceeding background and exceeding by 1 to 2 X applicable EQC for the appropriate land use on/near the site.	6			
No exceedance of applicable EQC for appropriate land use on/near the site; or no physical evidence of contamination of the media; or absence of direct contact exposure pathway.	0			
C1. Site Score				
2. Potential for Direct Human and/or Animal Contact. Complete a, b, and c.				
2a. Vapour Emissions (gases, subsurface and surface generated vapours, contaminated dust; max. 5)				
Suspected vapour migration with a potential for exposure to impact on an indoor air environment (building on-site or near site).	5			
Evidence of significant dust generated and impacting on-site and off-site potential or known receptors.	3			No evidence of volatile contaminants detected. The only structure nearby is a shed placed on sleepers (no contact with ground and prevents ingress of vapours).
No vapour emissions and/or no dust generated	0			
C2a. Site Score		0	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2b. Accessibility of Site (ability to contact materials; max. 4)				
Limited barriers to prevent site access; contamination not covered	4			Limited access: landfill is located inside quarry gate (locked after hours) and located on far side of quarry from access road (also gated after hours). Surface of landfill is covered with gravel and cobbles, although some larger pieces of debris are present on surface.
Moderate access or no intervening barriers; contaminants are covered; remote locations in which contaminants are not covered	3			
Controlled access or remote location and contaminants are covered	0			
C2b. Site Score		0	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2c. Hazardous Soil Gas Migration and Explosive Potential from the Site (max. 2)				
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard; soil permeability is high	2			
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard. Soil permeability is low and/or groundwater is <2 m from surface.	1			
Contaminants are neither volatile nor mobile in the gas/vapour phase. No risk of explosive hazard.	0			No evidence of volatile contaminants detected.
C2c. Site Score		0	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	0
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Direct Contact	0

III. Receptors A. Human and Animal Uses (max. 18). Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known adverse impact on humans or animals (domestic or documented traditional food source) as a result of the contaminated site (max. 18)				
Documented adverse impact or high quantified exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	18			
Suspected adverse impact or moderately high exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	15			
No quantified or suspected exposures/impacts in humans or animals	0			
A1. Site Score				
2. Potential for impacts on humans and animals Complete a, b, and c.				
a) Drinking water supply (max. 9). Complete i (Known) or ii (Potential).				
i) Known impact on drinking water supply (max. 9)				
Known contamination of drinking water supply (groundwater or surface water) with (1) concentrations above background and CDWG, or (2) there is physical evidence of drinking water contamination.	9			
Measurable concentrations of contaminants in the drinking water supply (groundwater or surface water) but concentrations are less than the CDWG or there is a significant potential for CDWG exceedances of the water supply in the near future	7			
Drinking water supply is known not to be contaminated	0			
A2ai. Site Score		0		
ii) Potential for impact on drinking water supply (max. 9) Complete both sections.				
Proximity to drinking water supply (max. 6)				
0 to <100 m	6			
100 to <300 m	5			Seasonal and permanent residences located around Dolomite Lake may use Lake for domestic water supply.
300 m to <1 km	4			
1 to 5 km	3			Dolomite Lake located approx. 300 m to south, as measured along the creek flow path.
A2aii(Part1). Site Score		5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Availability of alternative drinking water supply (max. 3)				
Alternative drinking water supply is not available	3			
Alternative drinking water supply difficult to obtain	2			
Alternative drinking water supply available	0.5			
A2aii(Part2). Site Score		2	Data	Inconvenient to carry water in to residences - no road access (boat or overland only).
2a. Site Score Based on Data		7		
2a. Site Score Based on Speculation		0		
2a. Site Score		7		
b) Other water resources (max. 4). Complete i (Known) or ii (Potential)				
i) Water resources (i.e. recreational, commercial, livestock, irrigation or other food chain uses) known to be adversely affected as a result of site contamination (max. 4)				

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
Known contamination of water resource (1) to concentrations above background and above the appropriate environmental quality criteria (EQC) as required based on the water resources usage or (2) there is physical evidence of water resources contamination	4			
Chemical concentrations are currently below the appropriate EQC as required based on the water resources usage but strongly suspect potential for future EQC exceedances	3			
Water resource is not known to be contaminated	0			
A2bi. Site Score		0		

ii) Potential for impact on water resources (max. 4). **Complete both sections.**

Proximity to water resources (max. 2)

0 to <100 m	2			
100 to <300 m	1.5			
300 m to <1 km	1			
1 to 5 km	0.5			Dolomite Lake located approx. 300 m to south, as measured along the creek flow path.
A2bii(Part1). Site Score		1.5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.

Use of water resources (max. 2). If multiple uses, give the highest score automatically (use following table)

Water Use	**Frequent Use**	**Occasional Use**
Recreational (swimming, fishing, etc.)	2	1
Commercial food preparation	1.5	0.8
Livestock watering	1	0.5
Irrigation	1	0.5
Other domestic or food chain uses	0.5	0.3
Not currently used but likely future use	0.5	0.2

A2bii(Part2). Site Score	2	Data	Fishing for food reportedly takes place in Dolomite Lake.
2b. Site Score Based on Data	3.5		
2b. Site Score Based on Speculation	0		
2b. Site Score	3.5		

c) Direct human exposure (max. 5). **Complete i (Known) or ii (Potential)**

i) Known contamination of land used by humans (max. 5)

Known contamination of land used for agricultural (AG) or residential/parkland/school purposes (R/P) above AG or R/P CCME Environmental Quality Criteria (EQC).	5		
Known contamination of land used for commercial or industrial (C/I) purposes above C/I CCME EQC.			
Land is known not to be contaminated above background concentrations	0		
A2ci. Site Score			

ii) Potential human exposure through land use (give highest score to worst case scenario; max. 5)

Determine use(s) of land at and surrounding site and assign score using following table:

Land Use	**Distance from Site**		
	0-<300 m	300 m-<1 km	1-5 km

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

			Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
residential	5	4.5	3			
agricultural	5	4	2.5			
parkland/school	4	3	1.5			
commercial/industrial	3	1	0.5			
		A2cii. Site Score		3	Data	Quarry activities - industrial use. Residential areas on far side of Dolmite Lake (<2km).
		2c. Site Score Based on Data		3		
		2c. Site Score Based on Speculation		0		
		2c. Site Score		3		
Special Considerations (max. 5)			-5 to +5	0		
		Score Based on Data		13.5		
		Score Based on Speculation		0		
		Score from Special Considerations		0		
		Total Site Score for Receptors/ Human and Animal Uses		13.5		

III. Receptors B. Environmental Receptors (max. 16) Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known impacts on the environment as a result of the contaminated site (max. 16)				
Known adverse effect on environmental receptors including fish habitat	16			
Visual physical evidence of stress on aquatic species or vegetative stress on trees, crops or plant life located on the site or off-site with impacts related to the contaminated site	12			
No known environmental receptors within 1 km of contaminated site and no known adverse effects.	0			
B1. Site Score				
2. Potential for Impact on Environmental Receptors. Complete a and b.				
a) Distance from the site to the nearest environmental receptor (max. 10)				
0 to <300 m	10			
300 m to <1 km	6			**Creek located at bottom of gully, 15-20 m from toe of landfill; leads to Dolomite Lake, 275 m downstream.**
1 km to <5 km	2			
>5 km	0.5			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2a. Site Score		10	Data	
b) Distance to an important or susceptible groundwater or surface water resource (max. 6)				
0 to <300 m	6			
300 m to <1 km	4			**Creek located at bottom of gully, 15-20 m from toe of landfill; leads to Dolomite Lake, 275 m downstream.**
1 km to <5 km	2			
>5 km	1			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2b. Site Score		6	Data	
Special Considerations (max. 5)	-5 to +5			
Score Based on Data		16		
Score Based on Speculation		0		
Score from Special Considerations		0		
Total Site Score for Receptors/ Environmental Receptors		16		

FCSAP(NCS) Evaluation completed for APEC 09, Landfill West of Quarry, Inuvik Airport
Final Score Sheet

Factor Categories	Known and Potential Scores Based on Data	Potential Scores Based on Speculation	Scores from Special Considerations	Total Category Scores
I. Contaminant Characteristics (max. 33)	7	8	0	15
II. Exposure Pathways (max. 33)				
A. Groundwater (max. 11)	0	0	0	0
B. Surface Water (max. 11)	8.7	0	0	8.7
C. Direct Contact (max. 11)	0	0	0	0
III. Receptors (max. 34)				
A. Human and Animal (max. 18)	13.5	0	0	13.5
B. Environment (max. 16)	16	0	0	16
Total Scores for the Site	45.2	8	0	53.2

Site Classification **Class 2 - Action Likely Required**

Class 1 (Score 70 to 100): Action Required

Class 2 (Score 50 to 69.9): Action Likely Required

Class 3 (Score 37 to 49.9): Action May Be Required

Class N (Score <37): Action Not Likely Required

Class I (Speculation Score ≥15): Insufficient Information

Note: This worksheet can be copied for inclusion in site reports or other documents.

I. Contaminant Characteristics (max. 33) Complete A, B, C, and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
A. Degree of Hazard (max. 14)				Suspected Contaminants include: petroleum hydrocarbons and metals - medium concern.
High concern contaminants - high concentrations	14			
High concern contaminants - low concentrations	11			Petroleum hydrocarbon concentrations: =< CCME industrial standard / CWS for those samples analysed; however, landfills are typically greatly inhomogeneous and exceeding soils may exist with the waste. Metals concentrations up to >2x CCME industrial standard / CWS (high concentrations).
Medium concern contaminants - high concentrations	8			
Medium concern contaminants - low concentrations	5			
Low concern contaminants (high or low concentrations)	3			
A. Site Score		8	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
B. Contaminant Quantity (max. 10)				
>10 ha or 5000 m^3	10			
2 to 10 ha or 1000 to 5000 m^3	6			
<2 ha or 1000 m^3	2			Estimated volume of landfill is up to 1000 m3.
B. Site Score		2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
C. Physical State (max. 9)				Confirmed contaminants (metals) are moderately mobile when exposed to groundwater; however limited groundwater is present in landfill. Contaminants could be mobilised by leaching by precipitation. Wastes generally not exposed to erosion at surface (numerous drums with tar residues surface, but otherwise surface is covered with vegetation).
Highly mobile contaminants or high potential for mobility by erosion	9			
Moderately mobile contaminants	7			
Low to immobile contaminants or low potential for mobility by erosion	3			
C. Site Score		7	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 6)	-6 to +6			

Score Based on Data	17
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Contaminant Characteristics	17

II. Exposure Pathways A. Groundwater (max. 11) Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination and operable groundwater pathway within and/or beyond the property boundary (max. 11)				
For potable groundwater environments, 1) groundwater concentrations exceed background concentrations and the CCME Canadian Drinking Water Guidelines (CDWG) by 2X or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts. For nonpotable environments (typically urban environments with municipal services), 1) groundwater concentrations exceed 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway) or 2) there is known contact of contaminants with groundwater, based on physical evidence of groundwater impacts.	11			
For potable water environments, groundwater concentrations exceed background concentrations and the CDWG 1 to 2X. For nonpotable environments, groundwater concentrations exceed by 1 to 2X the appropriate nonpotable guidelines or modified generic guidelines (which excludes ingestion of drinking water pathway).	6			
Meets CDWG for potable environments; meets nonpotable criteria or modified generic (excludes ingestion of drinking water pathway) for nonpotable environments, or Absence of groundwater exposure pathway.	0			No aquifer present; minimal groundwater observed. This is a permafrost area with an active zone of less than 2 m that is frozen for much of the year. Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
A1. Site Score		0		
2. Potential for Groundwater Contamination. Complete a, b, c, d, and e.				
2a. Engineered Subsurface Containment (max. 4)				
No containment	4			
Partial containment	2			
Full containment or direct, monitored evidence of natural attenuation processes	0			
A2a. Site Score				
2b. Thickness of confining layer over aquifer of concern or groundwater exposure pathway (max. 1.5)				
3 m or less including no or discontinuous confining layer or unknown	1.5			
3 to 10 m	1			
>10 m	0			
A2b. Site Score				
2c. Hydraulic conductivity of confining layer (max. 1.5)				
$>10^{-4}$ cm/s or no confining layer or unknown	1.5			
10^{-4} to 10^{-6} cm/sec	1			
$<10^{-6}$ cm/sec	0.5			
A2c. Site Score				
2d. Annual precipitation (max. 1)				
>1000 mm and moderately to highly permeable surface material	1			
600 mm and moderately to highly permeable surface material	0.6			
400 mm and low to moderately permeable surface material	0.4			
200 mm and low permeability surface material	0.2			
A2d. Site Score				
2e. Hydraulic conductivity of aquifer of concern (max. 3)				

II. Exposure Pathways

A. Groundwater (max. 11) **Complete 1 (Known) or 2 (Potential), and Special Considerations.**	**Scoring Guideline**	**Site Score**	**Information Source**	**Document relevant site information, the source of that information, and the rationale for selecting the site score.**
$>10^{-2}$ cm/sec	3			
10^{-2} to 10^{-4} cm/sec	1.5			
$<10^{-4}$ cm/sec	0.5			
A2e. Site Score				
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	0
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Groundwater	0

II. Exposure Pathways B. Surface Water (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations.	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Observed or measured contamination, above background conditions of surface water/effluent near the site which is considered an operable exposure pathway (max. 11)				
Known concentrations of surface water:				
1) Concentrations exceed background concentrations and exceed CCME CWQG - Protection of Aquatic Life Guidelines by 2X; or 2) There is known contact of contaminants with surface water based on physical evidence; or 3) In the absence of CWQG, chemicals have been proven to be toxic based on site specific testing (e.g. toxicity testing, bioassay testing or other indicator testing of exposure).	11			
Known concentrations of surface water which are above background and between 1 and 2X CWQG.	6			
Meets CWQG or absence of surface water exposure pathway	0			
B1. Site Score				
2. Potential for Surface Water Contamination. Complete a, b, c, d, and e.				
2a. Surface Containment (max. 5)				
No containment	5			
Partial containment	3			
Full containment	0.5			No surface containment.
B2a. Site Score		5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2b. Distance to Perennial Surface Water (max. 3)				
0 to <100 m	3			
100 to 300 m	2			
>300 m	0.5			Dolomite Lake located approx. 400 m to south.
B2b. Site Score		0.5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2c. Topography (max. 1.5)				
Contaminants above ground level and slope is steep	1.5			
Contaminants at or below ground level and slope is steep	1.2			
Contaminants above ground level and slope is flat	0.8			Contaminants at ground surface and below; drums lying on surface. Steep slope is vegetated.
Contaminants at or below ground level and slope is flat	0			
B2c. Site Score		1.5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2d. Run-off Potential (max. 1)				
>1000 mm precipitation and low permeability surface material	1			Environment Canada climate normals (www.climate.weatheroffice.ec.gc.ca/ climate_normals/index_e.html): 248.4 mm precipitation annually.
500 - 1000 mm precipitation and moderately permeable surface material	0.6			
<500 mm precipitation and highly permeable surface material	0.2			Highly permeable surface material (crushed rock).
B2d. Site Score		0.2	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2e. Flood Potential (max. 0.5)				
1 in 2 years	0.5			
1 in 10 years	0.3			
1 in 50 years	0.1			Site located on side of ridge - no apparent flood potential.
B2e. Site Score		0	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 4)	-4 to +4			

Score Based on Data	7.2
Score Based on Speculation	0
Score from Special Considerations	0
Total Site Score for Exposure Pathways/ Surface Water	7.2

II. Exposure Pathways C. Direct Contact (max. 11). Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known contamination of media by direct contact (max. 11)				
Known contamination of media (soil, sediments and air): 1) Concentrations exceed background concentrations and exceed 2X applicable environmental quality criteria (EQC) for the appropriate land use on/near the site; or 2) There is known contact of contaminants with media based on physical evidence; or 3) There is known vapour migration into indoor air environment (building).	11			
Known contamination of media (soil, sediments, and air) with concentrations exceeding background and exceeding by 1 to 2 X applicable EQC for the appropriate land use on/near the site.	6			
No exceedance of applicable EQC for appropriate land use on/near the site; or no physical evidence of contamination of the media; or absence of direct contact exposure pathway.	0			
C1. Site Score				
2. Potential for Direct Human and/or Animal Contact.Complete a, b, and c.				
2a. Vapour Emissions (gases, subsurface and surface generated vapours, contaminated dust; max. 5)				
Suspected vapour migration with a potential for exposure to impact on an indoor air environment (building on-site or near site).	5			
Evidence of significant dust generated and impacting on-site and off-site potential or known receptors.	3			
No vapour emissions and/or no dust generated	0			No structures nearby. Site is fully vegetated. No vapour emissions or dust generation.
C2a. Site Score		0	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2b. Accessibility of Site (ability to contact materials; max. 4)				
Limited barriers to prevent site access; contamination not covered	4			
Moderate access or no intervening barriers; contaminants are covered; remote locations in which contaminants are not covered	3			Limited access: landfill is located inside fenced airport lands; gates locked after hours. Surface of landfill is vegetated although numerous drums with tar resideue are present on surface.
Controlled access or remote location and contaminants are covered	0			
C2b. Site Score		1.5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
2c. Hazardous Soil Gas Migration and Explosive Potential from the Site (max. 2)				
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard; soil permeability is high	2			
Contaminants are volatile, mobile in the gas/vapour phase and are a potential explosion hazard. Soil permeability is low and/or groundwater is <2 m from surface.	1			
Contaminants are neither volatile nor mobile in the gas/vapour phase. No risk of explosive hazard.	0			No evidence of volatile contaminants detected.
C2c. Site Score		0	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Special Considerations (max. 4)	-4 to +4	4		Cracks in top of landfill provide access to wastes to wildlife. Cracks may indicate a potentail for slope failure and release of landfill contents.
Score Based on Data		1.5		
Score Based on Speculation		0		
Score from Special Considerations		4		
Total Site Score for Exposure Pathways/ Direct Contact		5.5		

III. Receptors A. Human and Animal Uses (max. 18). Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known adverse impact on humans or animals (domestic or documented traditional food source) as a result of the contaminated site (max. 18)				
Documented adverse impact or high quantified exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	18			
Suspected adverse impact or moderately high exposure which has or will result in an adverse effect, injury or harm or impairment of the safety to humans or animals (domestic or documented traditional food source) as a result of the contaminated site.	15			
No quantified or suspected exposures/impacts in humans or animals	0			
A1. Site Score				
2. Potential for impacts on humans and animals Complete a, b, and c.				
a) Drinking water supply (max. 9). Complete i (Known) or ii (Potential).				
i) Known impact on drinking water supply (max. 9)				
Known contamination of drinking water supply (groundwater or surface water) with (1) concentrations above background and CDWG, or (2) there is physical evidence of drinking water contamination.	9			
Measurable concentrations of contaminants in the drinking water supply (groundwater or surface water) but concentrations are less than the CDWG or there is a significant potential for CDWG exceedances of the water supply in the near future	7			
Drinking water supply is known not to be contaminated	0			
A2ai. Site Score		0		
ii) Potential for impact on drinking water supply (max. 9) Complete both sections.				
Proximity to drinking water supply (max. 6)				
0 to <100 m	6			
100 to <300 m	5			Seasonal and permanent residences located around Dolomite Lake may use Lake for domestic water supply.
300 m to <1 km	4			
1 to 5 km	3			Dolomite Lake located approx. 300 m to south, as measured along the creek flow path.
A2aii(Part1). Site Score		5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.
Availability of alternative drinking water supply (max. 3)				
Alternative drinking water supply is not available	3			
Alternative drinking water supply difficult to obtain	2			
Alternative drinking water supply available	0.5			
A2aii(Part2). Site Score		2	Data	Inconvenient to carry water in to residences - no road access (boat or overland only).
2a. Site Score Based on Data		7		
2a. Site Score Based on Speculation		0		
2a. Site Score		7		
b) Other water resources (max. 4). Complete i (Known) or ii (Potential)				
i) Water resources (i.e. recreational, commercial, livestock, irrigation or other food chain uses) known to be adversely affected as a result of site contamination (max. 4)				

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
Known contamination of water resource (1) to concentrations above background and above the appropriate environmental quality criteria (EQC) as required based on the water resources usage or (2) there is physical evidence of water resources contamination	4			
Chemical concentrations are currently below the appropriate EQC as required based on the water resources usage but strongly suspect potential for future EQC exceedances	3			
Water resource is not known to be contaminated	0			
A2bi. Site Score		0		

ii) Potential for impact on water resources (max. 4). **Complete both sections.**

Proximity to water resources (max. 2)

0 to <100 m	2			
100 to <300 m	1.5			
300 m to <1 km	1			
1 to 5 km	0.5			Dolomite Lake located approx. 300 m to south, as measured along the creek flow path.
A2bii(Part1). Site Score		1.5	Data	Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.

Use of water resources (max. 2). If multiple uses, give the highest score automatically (use following table)

Water Use	**Frequent Use**	**Occasional Use**
Recreational (swimming, fishing, etc.)	2	1
Commercial food preparation	1.5	0.8
Livestock watering	1	0.5
Irrigation	1	0.5
Other domestic or food chain uses	0.5	0.3
Not currently used but likely future use	0.5	0.2

A2bii(Part2). Site Score	2	Data	Fishing for food reportedly takes place in Dolomite Lake.
2b. Site Score Based on Data	3.5		
2b. Site Score Based on Speculation	0		
2b. Site Score	3.5		

c) Direct human exposure (max. 5). **Complete i (Known) or ii (Potential)**

i) Known contamination of land used by humans (max. 5)

Known contamination of land used for agricultural (AG) or residential/parkland/school purposes (R/P) above AG or R/P CCME Environmental Quality Criteria (EQC).	5		
Known contamination of land used for commercial or industrial (C/I) purposes above C/I CCME EQC.			
Land is known not to be contaminated above background concentrations	0		
A2ci. Site Score			

ii) Potential human exposure through land use (give highest score to worst case scenario; max. 5)

Determine use(s) of land at and surrounding site and assign score using following table:

Land Use	**Distance from Site**		
	0-<300 m	300 m-<1 km	1-5 km

III. Receptors

A. Human and Animal Uses (max. 18).

Complete 1 (Known) or 2 (Potential), and Special Considerations

			Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
residential	5	4.5	3			
agricultural	5	4	2.5			
parkland/school	4	3	1.5			Adjacent sites formerly used as fire fighter training area and soil treatment - potential for renewed use of sites for Comm/Ind. purposes in future remains. Residential areas on far side of Dolmite Lake (<2km).
commercial/industrial	3	1	0.5			
		A2cii. Site Score		3	Data	
		2c. Site Score Based on Data		3		
		2c. Site Score Based on Speculation		0		
		2c. Site Score		3		
Special Considerations (max. 5)			-5 to +5	0		
		Score Based on Data		13.5		
		Score Based on Speculation		0		
		Score from Special Considerations		0		
		Total Site Score for Receptors/ Human and Animal Uses		13.5		

III. Receptors B. Environmental Receptors (max. 16) Complete 1 (Known) or 2 (Potential), and Special Considerations	Scoring Guideline	Site Score	Information Source	Document relevant site information, the source of that information, and the rationale for selecting the site score.
1. Known impacts on the environment as a result of the contaminated site (max. 16)				
Known adverse effect on environmental receptors including fish habitat	16			
Visual physical evidence of stress on aquatic species or vegetative stress on trees, crops or plant life located on the site or off-site with impacts related to the contaminated site	12			
No known environmental receptors within 1 km of contaminated site and no known adverse effects.	0			
B1. Site Score				
2. Potential for Impact on Environmental Receptors. Complete a and b.				
a) Distance from the site to the nearest environmental receptor (max. 10)				
0 to <300 m	10			
300 m to <1 km	6			
1 km to <5 km	2			**Dolomite Lake located approx. 400 m to south.**
>5 km	0.5			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2a. Site Score		6	Data	
b) Distance to an important or susceptible groundwater or surface water resource (max. 6)				
0 to <300 m	6			
300 m to <1 km	4			
1 km to <5 km	2			**Dolomite Lake located approx. 400 m to south.**
>5 km	1			**Source: Phase II and III ESA, Inuvik Airport, Franz Environmental Inc., January 2007.**
B2b. Site Score		4	Data	
Special Considerations (max. 5)	-5 to +5			
Score Based on Data		10		
Score Based on Speculation		0		
Score from Special Considerations		0		
Total Site Score for Receptors/ Environmental Receptors		10		

FCSAP(NCS) Evaluation completed for APEC 10, Landfill South of LTU, Inuvik Airport
Final Score Sheet

Factor Categories	Known and Potential Scores Based on Data	Potential Scores Based on Speculation	Scores from Special Considerations	Total Category Scores
I. Contaminant Characteristics (max. 33)	17	0	0	17
II. Exposure Pathways (max. 33)				
A. Groundwater (max. 11)	0	0	0	0
B. Surface Water (max. 11)	7.2	0	0	7.2
C. Direct Contact (max. 11)	1.5	0	4	5.5
III. Receptors (max. 34)				
A. Human and Animal (max. 18)	13.5	0	0	13.5
B. Environment (max. 16)	10	0	0	10
Total Scores for the Site	49.2	0	4	53.2

Site Classification **Class 2 - Action Likely Required**

Class 1 (Score 70 to 100): Action Required

Class 2 (Score 50 to 69.9): Action Likely Required

Class 3 (Score 37 to 49.9): Action May Be Required

Class N (Score <37): Action Not Likely Required

Class I (Speculation Score ≥15): Insufficient Information

Note: This worksheet can be copied for inclusion in site reports or other documents.