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September 1987

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Superfund Record of Decision:

South Brunswick, NJ

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(Please read Instructions on the reverse before completing)

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15. SUPPLEMENTARY NOTES

16. ABSTRACT

The Browning-Ferris Industries South Brunswick Landfill (BFI) is a closed landfill situated on approximately 68 acres in Middlesex County, New Jersey. The landfill is located adjacent to a school, park and private residence, although a substantial portion of the landfill is surrounded by woods. The site is in close proximity to a brook that feeds into a public drinking water supply 10 miles downstream. For more than twenty years the site operated, under two separate owners, as a solid waste landfill that received municipal refuse, pesticides, chemical wastes and hazardous wastes. Pursuant to a closure order from the New Jersey Department of Environmental Protection (NJDEP) in July 1978, the site was officially closed in December 1978. In June 1980 EPA conducted a site investigation that revealed elevated levels of VOCs and iron in the ground water and surface water. The selected containment remedy for the site has been in place and operational since September 1985. This Record of Decision (ROD) evaluates the remedy selection process in the context of SARA.

The selected remedial action for this site includes onsite containment (leachate collection/treatment system, slurry wall, clay cap, gas venting system), which was initiated in May 1983 and completed on September 1985; and post-remedial ground water, surface and air monitoring.

17. KEY WORDS AND DOCUMENT ANALYSIS

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Record of Decision South Brunswick Landfill, NJ Second Remedial Action - Final Contaminated Media: none Key contaminants: none		

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DECLARATION STATEMENT

RECORD OF DECISION

BROWNING-FERRIS INDUSTRIES SOUTH BRUNSWICK LANDFILL

SITE LOCATION:

The Browning-Ferris Industries South Brunswick Landfill Site is located along New Road approximately one-half mile northwest of U.S. Route 1 in Middlesex County, New Jersey.

STATEMENT OF PURPOSE:

This decision document represents the selected and implemented remedial action for this site evaluated in the context of CERCLA, as amended by SARA, and to the extent practicable, the National Contingency Plan.

The State of New Jersey has concurred on the selected remedy.

DESCRIPTION OF THE SELECTED REMEDY:

The site strategy for the BFI-South Brunswick Landfill is on-site containment and monitoring for a period of thirty (30) years. A post remedial monitoring plan has been proposed to assess the long term integrity of the remedy and evaluate any previous off-site migration of contaminants in the context of chemical specific/ambient ARARS. Should the monitoring program reveal exceedances of ARARS, additional remedial action will be considered.

The remedial action consists of a leachate collection/treatment system, slurry wall, clay cap and gas venting system. The remedial work was initiated in May, 1983 and was completed in September, 1985. In addition, EPA has determined that a fence should be installed along the site perimeter to restrict access, eliminate any nuisance threats and preserve the integrity of the remedial action.

DECLARATION:

The selected remedy is protective of human health and the environment, attains Federal action and location specific requirements that are applicable or relevant and appropriate and is cost-effective.

A State landfill capping requirement has been waived since the containment system in place provides an equivalent level of performance.

The Statutory preference for treatment is not satisfied because treatment was found to be impracticable.

The remedy was selected on the basis of its implementability and proven effectiveness in landfill containment given the hydrogeology of the site, size of the landfill and waste disposal practices. The landfill accepted predominantly municipal refuse which was comingled with hazardous waste. Excavation and off-site disposal and/or treatment of hazardous waste was not considered feasible or cost-effective due to the size of the landfill and the fact that discrete areas of hazardous waste disposal could not be adequately identified.

September 30, 1987
Date

Christopher J. Daggett
Regional Administrator

SUMMARY OF REMEDIAL ALTERNATIVE SELECTION

BROWNING-FERRIS INDUSTRIES SOUTH BRUNSWICK LANDFILL

SOUTH BRUNSWICK, NEW JERSEY

SITE LOCATION AND DESCRIPTION

The Browning-Ferris Industries (BFI) South Brunswick Township Landfill is located along New Road approximately one-half mile northwest of U.S. Route 1 in Middlesex County, New Jersey (Figure 1).

The landfill occupies an area of approximately 68 acres. A significant portion of the land surrounding the site is wooded. A private residence is located adjacent to the site, a school and park are located directly across New Road and a housing development has been constructed north of the site.

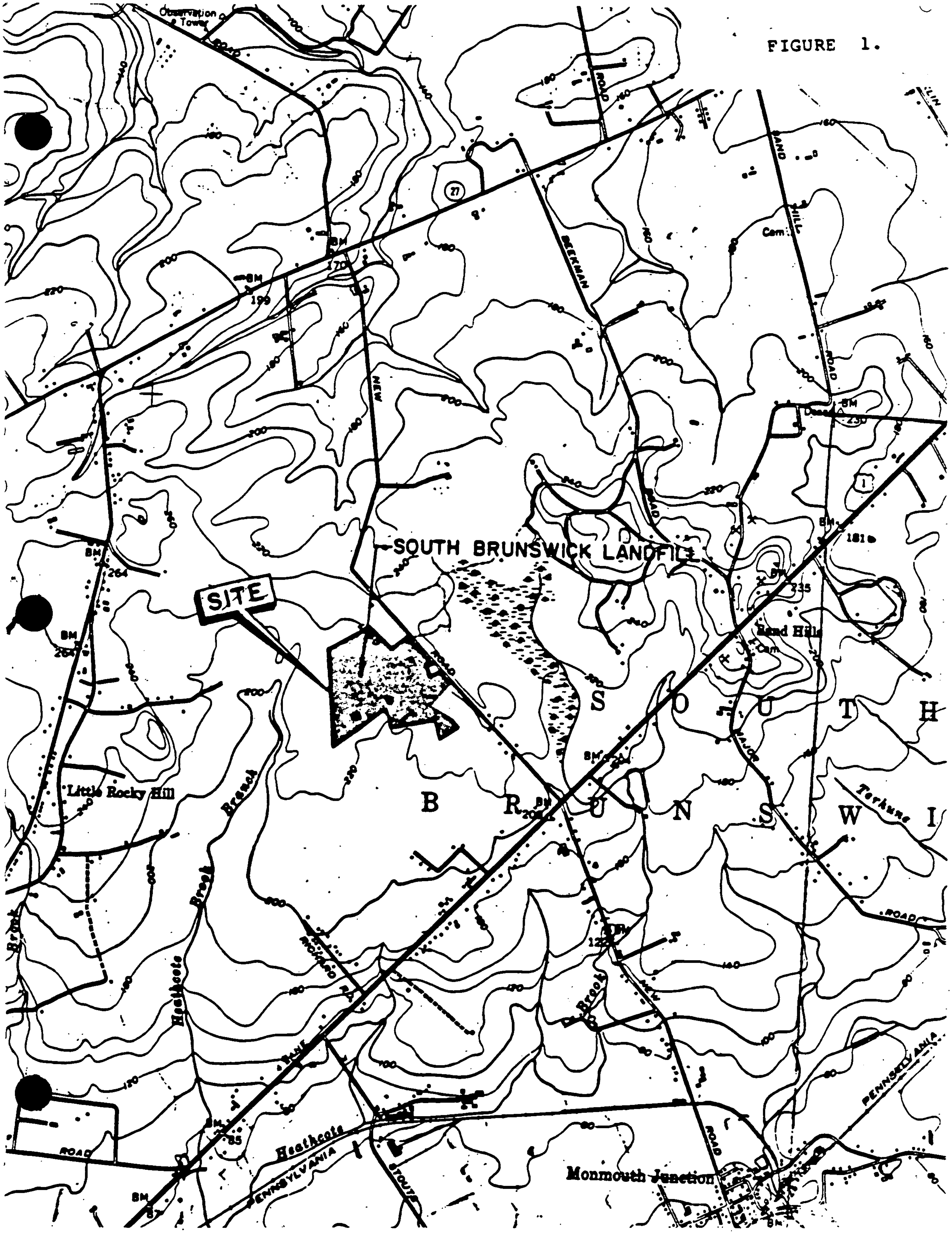
The site is in close proximity to Heathcote Brook which is a tributary to the Millstone River. The City of New Brunswick occasionally draws water for drinking from an intake 10 miles downstream. Groundwater flows in a south-easterly direction and the nearest public groundwater supply is located approximately 1 mile north of the site.

SITE HISTORY

The site, which operated for more than twenty years as a solid waste landfill, accepted municipal refuse, pesticides, chemical wastes and hazardous wastes. Title to the South Brunswick Landfill property was acquired by Princeton Disposal Service, Inc., predecessor in interest to BFI of South Jersey, Inc., on or about May 31, 1973, from G & J Spilatore Excavation, previous owner and operator of the facility. The landfill was registered with the New Jersey Department of Environmental Protection (NJDEP) on August 19, 1970. Pursuant to a closure order from the NJDEP on July 24, 1978, the site was officially closed on December 31, 1978.

In June, 1980 the U.S. Environmental Protection Agency (EPA) conducted an investigation of the BFI-South Brunswick Landfill site. The sampling results revealed elevated levels of volatile organic compounds in seven on-site monitoring wells as well as five on-site surface water sampling locations. The data from this sampling effort resulted in the site being included on the Superfund National Priorities List in December, 1982. The complete chemical data base from this investigation is provided in Appendix

FIGURE 1.



SITE
SOUTH BRUNSWICK LANDFILL
SOUTH BRUNSWICK
Little Rocky Hill
Sand Hills
Monmouth Junction
Heathcote
Heathcote Brook
Brook
Terhune
BEEKMAN ROAD
SAND HILL ROAD
NEW ROAD
MAJOR ROAD
PENNSYLVANIA
Observation Tower
Cem

ENFORCEMENT ACTIONS

Browning-Ferris Industries of South Jersey, Inc., as the owner and operator of the landfill since 1973, was identified by EPA as a responsible party with respect to the site. Accordingly, EPA entered into negotiations with the company and on April 5, 1982, EPA and BFI entered into an agreement concerning remedial efforts to be performed at this site. The agreement was in the form of a Resource Conservation and Recovery Act (RCRA) 7003 Administrative Order on Consent (Index No. RCRA-700320101) which outlined a three-phase work program.

Phase I consisted of a hydrogeologic investigation designed to determine the nature and extent of contamination related to the site. This work was performed by Wehran Engineering as consultant to BFI in the summer of 1982.

Phase II called for development of a Remedial Plan and construction of the EPA-selected remedy. The Remedial Plan which was submitted to EPA in February, 1983 consisted of a leachate collection/treatment system, slurry wall, clay cap and gas venting system. The remedial work was initiated in May, 1983 and was completed in September, 1985.

Phase III, a post-remedial environmental monitoring program designed to provide a continuous assessment of the long-term effectiveness of the completed on-site remedial action, was proposed by BFI on June 5, 1987. It is anticipated that BFI will implement this progr[redacted] under EPA supervision, beginning in the fall of 1987.

HYDROGEOLOGIC INVESTIGATION

The Hydrogeologic Investigation revealed that the majority of the site is underlain by a dense unfractured diabase bedrock with an estimated average permeability of 1×10^{-7} cm/sec. The bedrock is overlain by a low permeability (10^{-6} to 10^{-7} cm/sec) saprolite or residual soil. Groundwater occurs primarily within an unconfined water table zone within the landfill refuse and Raritan formation. Groundwater flow in this unconfined zone is predominantly lateral and southerly to groundwater discharge points south of the site (proximate streams and seepage areas).

In a small portion of the site along the northern boundary, the bedrock was found to be fractured and of much greater permeability (2×10^{-4} to 4×10^{-6} cm/sec). Observed groundwater elevations indicated upward vertical gradients within the bedrock. Thus, contaminants were not expected to flow through the bedrock in any significant quantities.

The Hydrogeologic Investigation supported the findings of EPA's June, 1980 sampling effort. The groundwater in the shallow unconfined aquifer was found to be contaminated with total volatile organics (TVO's) ranging from 80 to 1,955 parts per billion (ppb). Groundwater in the deeper fractured bedrock zone in the northern portion of the site was also found to be contaminated with TVO's,

ranging from 23 to 494 ppb. Elevated levels of iron were also detected in both the shallow and fractured bedrock on-site monitoring wells. In general, the highest concentrations of groundwater contamination was found in the surficial unconfined aquifer.

A resistivity survey was used in conjunction with analyses of indicator parameters in off-site monitoring wells in order to determine the relative extent of off-site migration of contaminants. Results showed that with two exceptions, the contaminants appeared to be restricted immediately along the margin of the landfill. At two locations along the western edge of the landfill, it was apparent that leachate had flowed radially from the landfill over the ground surface toward a small stream located approximately 1000 feet west of the site. Leachate flow was evidenced by ground staining and varying amounts of vegetative stress.

The groundwater data obtained during the hydrogeologic investigation is provided in Appendix 1.

The results of the June, 1980 EPA sampling effort and the BFI hydrogeologic investigation revealed that leachate eminating from the landfill was degrading surface and groundwater quality in the vicinity of the site. Although the site posed no immediate threat to potable water supplies, there was concern about potential future impacts on regional groundwater quality. Uncontrolled radial flow of leachate from the landfill posed a threat of direct contact to human health and the environment. Therefore, EPA determined it was necessary to implement a remedial action which would mitigate any further release of contamination from the landfill.

CURRENT SITE STATUS

The selected containment remedy for the BFI South Brunswick Landfill has been in place and operational since September, 1985. This Record of Decision (ROD) evaluates the remedy selection process in the context of the Superfund Amendments and Reauthorization Act of 1986 (SARA). EPA believes the site has been effectively remediated, thereby mitigating the threat of release of contaminants into the environment which could present an imminent and substantial endangerment to human health and the environment.

The operational success of the remedy is evidenced by monthly analysis of leachate (quantity and quality) discharged to the Stony Brook Regional Sewerage Authority for treatment. The volumetric leachate discharge rate for the 68 acre site has been reduced from an average of 150,000 gallons/day prior to remediation, to a current average of 20,000 gallons/day. Furthermore, water quality analysis of leachate has revealed an improvement in leachate quality over time. Leachate quality and volumetric discharge data is provided in Appendix 4.

Visually there has been a marked benefit to the surrounding environment as a result of the completed remedial activities. Prior to remediation, proximate streams and wetlands were fouled with leachate migrating laterally from the site. Presently, there is no visual evidence of leachate entering adjacent surface waters.

ALTERNATIVES EVALUATION

Based upon information gathered during the Hydrogeologic Investigation, a range of containment alternatives involving a leachate collection system, slurry wall and clay cap, were developed to control the release of hazardous substances emanating from the landfill. Specifically, remedial alternatives were developed to address the findings and conclusions outlined below.

A. The majority of the site was found to be underlain by low permeability diabase bedrock and/or residual soil which would provide a suitable strata to "key-in" a slurry wall.

B. The northern portion of the site where fractured bedrock was encountered would not provide a suitable "key in" strata.

C. Leachate flow in the unconfined water bearing zone was predominantly lateral, hence a perimeter collection/containment system would control off-site leachate migration.

D. Capping and proper grading of the landfill with low permeability clay would control drainage, reduce infiltration and thereby reduce leachate generation to a minimum.

E. A collection system designed to provide a preferential hydraulic gradient towards the collection line within the confines of a slurry wall would eliminate radial leachate discharges from the site and reduce the hydraulic head within the landfill.

F. A low permeability clay/soil slurry wall keyed into a suitable bottom strata would reduce to a minimum the flow of groundwater through the site.

The hydrogeologic characteristics of the site were found to be very conducive to site containment. Accordingly, eight (8) containment options and the option of taking no action were evaluated. The following is a comparative summary of each alternative.

(1) NO ACTION

The no action alternative included the construction of a security fence to restrict access to potentially contaminated areas and the implementation of a long-term groundwater monitoring program to provide advance warning of increased future releases of hazardous substances from the landfill into the environment. This alternative was considered inappropriate as a permanent remedy since it would not adequately protect human health or mitigate any releases or potential releases of contaminants into the environment.

treated would also be reduced to a practical minimum. Once again, the major disadvantage asssociated with this alternative was the "open container effect", as is described above. In addition, since residual soils are somewhat more permeable than the underlying bedrock, the potential for migration of contaminated groundwater was greater than with the deeper bedrock slurry wall.

(7) SLURRY WALL TO RESIDUAL SOIL, CLAY CAP, NO LEACHATE COLLECTION SYSTEM

This alternative is very similar to the construction of a slurry wall keyed into bedrock and a clay cap as described in Alternative (5). Again, the "open container" effect would be minimized by the installation of a clay cap. However, since, in this alternative, the slurry would be keyed into residual soil, which is more permeable than bedrock, there would be a greater potential for groundwater migration beneath the wall.

(8) SLURRY WALL TO RESIDUAL SOIL AND BEDROCK, CLAY CAP, AND NO LEACHATE COLLECTION SYSTEM

In this case alternatives 5 and 7 are combined to provide slurry wall key-in to bedrock where it is relatively shallow with the transition to residual soil where the bedrock deepens. By allowing for two key-in materials, excessive depths on slurry wall construction where key-in is to bedrock would be eliminated and construction costs reduced. The construction of this slurry wall in conjunction with a clay cap would minimize leachate formation, off-site leachate migration and long-term leachate handling and treatment. The "open container" effect would once again be minimized but long-term leachate buildup within the landfill could be a significant problem without the benefit of a leachate collection system. The portion of the slurry wall which would be keyed into residual soil, which is more permeable than bedrock, could also be of concern since this would provide for a greater potential for groundwater migration beneath the wall.

(9) SLURRY WALL TO RESIDUAL SOIL AND BEDROCK, CLAY CAP WITH GAS VENTS AND LEACHATE COLLECTION SYSTEM

In this case the slurry wall design would be identical to Alternative (8). The wall key-in would be to bedrock where it is relatively shallow with a transition to residual soil where the bedrock deepens. The construction of a slurry wall, clay cap and gas vents would minimize leachate formation, off-site leachate migration and treatment and gas pressure build-up within the landfill. The "open container" effect is reduced to a minimum and any leachate buildup would be collected and pumped to the Stony Brook Regional Sewerage Authority for treatment by the leachate collection system. Thus, the large leachate volumes formed from rainwater infiltration through the landfill and associated treatment costs would be significantly reduced with the construction of clay cap and leachate collection system. The portion of the slurry

wall keyed into residual soil would be of less concern here because of the leachate collection system which would reduce the level of groundwater within the landfill to create a preferential hydraulic gradient into the containment system.

After a careful evaluation of these nine (9) Alternatives, EPA decided that the most cost-effective and environmentally sound remedy was Alternative (9).

It is important to remember that the evaluation, selection and implementation of the selected remedy occurred prior to the new administrative requirements of SARA. Therefore, the new SARA evaluation criteria for remedy selection, (i.e., permanence, innovative technologies and consistency with applicable or relevant and appropriate requirements (ARARs) of other environmental laws) were not formally addressed in the original 1983 remedy selection process. Since this is the first ROD written for the BFI-South Brunswick Landfill site, the purpose is to evaluate the remedy selection process in the context of CERCLA, as amended by SARA.

Table 1 provides a summary of each alternative in the context of the SARA evaluation criteria.

SELECTED REMEDY

The site strategy for the South Brunswick Landfill is onsite containment and monitoring for a period of thirty (30) years. Should the post remedial monitoring program reveal exceedences of ambient or chemical specific ARARs for air, surface water and groundwater, additional remedial action may be required. However, EPA believes that the completed on-site containment system is functioning as designed to eliminate contaminant migration from the site.

DESCRIPTION OF SELECTED REMEDY

The following is a detailed description of the selected remedy:

SLURRY WALL

A clay/soil slurry wall has been constructed along the site perimeter excluding the northern portion of the site where the bedrock is known to be fractured. The slurry wall has been located in a conservative position so that the entire area enclosed by the slurry wall is underlain by low permeability diabase and/or residual soil. This slurry wall provides key-in to bedrock where it is relatively shallow with a transition to residual soil where the bedrock deepens. For the majority of the slurry wall (7315 ft in length) alignment, the key-in is to bedrock (63%). The remaining 37% of the slurry wall length is keyed into residual soil.

SUMMARY OF ALTERNATIVES IN CONTEXT OF SARA EVALUATION CRITERIA

TABLE 1

	ARAR's: LOCATION AND ACTION SPECIFIC	REDUCTION OF TOXICITY, MOBILITY, OR VOLUME VIA TREATMENT	SHORT TERM EFFECTIVENESS	LONG TERM EFFECTIVENESS AND PERMANENCE	IMPLEMENT-ABILITY	COST	OVERALL PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT
ALTERNATIVE 2 LEACHATE COLLECTION SYSTEM*, NO CAP, AND NO SLURRY WALL	Does not comply with RCRA closure requirements; Complies with Clean Water Act discharge to POTW requirements ***	Treatment of volatile organics at POTW	Risk Reduction-low Short-term Risks due to Construction-- low	Residual Risks-high O&M-high Human Exp.-moderate Long-term Reliability-low	Easily constructed. Will operate reliably Discharge to POTW--permit needs to be obtained Treatment capacity available	Capital-low O&M-high Five Year Review-high Potential Future RA Costs-high	Does not provide adequate protection of human health and the environment
ALTERNATIVE 3 LEACHATE COLLECTION SYSTEM*, CLAY CAP, AND NO SLURRY WALL	Compliance with Federal RCRA closure requirements and Clean Water Act discharge to POTW	SAME AS ABOVE	Risk Reduction-moderate Short-term Construction Risks-low	Residual Risks-Mod. O&M-high Human Exp.-moderate Long-term Reliability-moderate	SAME AS ABOVE	Capital-Mod. O&M-moderate Five Year Review-high Potential Future RA Costs-Mod.	SAME AS ABOVE
ALTERNATIVE 4 SLURRY WALL TO BEDROCK, NO CAP AND NO LEACHATE COLLECTION SYSTEM	Does not comply with RCRA closure requirements	NO REDUCTION	Risk Reduction-low Short-term Construction Risks-Mod.	Residual Risks-high O&M-low Human Exp.-moderate Long-term Reliability-moderate	Easily constructed. Will operate reliably.	Capital-Mod. O&M-low Five Year Review Costs- Potential Future RA Costs-high	SAME AS ABOVE

	ARAR's: LOCATION AND ACTION SPECIFIC	REDUCTION OF TOXICITY, MOBILITY, OR VOLUME VIA TREATMENT	SHORT TERM EFFECTIVENESS	LONG TERM EFFECTIVENESS AND PERMANENCE	IMPLEMENT-ABILITY	COST	OVERALL PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT
ALTERNATIVE 5 SLURRY WALL TO BEDROCK, CLAY CAP AND NO LEACHATE COLLECTION SYSTEM	Compliance with Federal RCRA closure requirements	NO REDUCTION	Risk Reduction-moderate Short-term Construction Risks-Mod.	Residual Risks-Mod. O&M-low Human Exp.-low Long-term Reliability-moderate	Easily constructed. Will operate reliably.	Capital-Mod. O&M-low Five Year Review-high Potenial Future RA Costs-Mod.	SAME AS ABOVE
ALTERNATIVE 6 SLURRY WALL TO RESIDUAL SOIL, NO CAP AND NO LEACHATE COLLECTION SYSTEM	Same as Alternative 4	NO REDUCTION	Risk Reduction-low Short-term Construction Risks-Mod.	Residual Risks-high O&M-low Human Exp.-moderate Long-term Reliability-moderate	SAME AS ABOVE	Capital-low O&M-low Five Year Review-high Potential Future RA Costs-high	SAME AS ABOVE
ALTERNATIVE 7 SLURRY WALL TO RESIDUAL SOIL, CLAY CAP AND NO LEACHATE COLLECTION SYSTEM	Same as Alternative 5	NO REDUCTION	Same as Alternative 5	Residual Risks-Mod. O&M-moderate. Human Exp.-low Long-term Reliability-mode[redacted]	SAME AS ABOVE	Capital-Mod. O&M-moderate Five Year Review-high Potential Future RA Costs-Mod.	SAME AS ABOVE

	ARAR's: LOCATION AND ACTION SPECIFIC	REDUCTION OF TOXICITY, MOBILITY, OR VOLUME VIA TREATMENT	SHORT TERM EFFECTIVENESS	LONG TERM EFFECTIVENESS AND PERMANENCE	IMPLEMENT-ABILITY	COST	OVERALL PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT
ALTERNATIVE 8 SLURRY WALL TO RESIDUAL SOIL AND BED-ROCK,CLAY CAP AND NO LEACH-ATE COLLECTION SYSTEM	Compliance with Federal RCRA closure requirements	NO REDUCTION	Risk Reduction-moderate Short-term Construction Risks-Mod.	Residual Risks-Mod. O&M-moderate Human Exp.-low Long-term Reliability-moderate	Easily constructed. Will operate reliably.	Capital-Mod. O&M-Mod. Five Year Review-high Potential Future RA Costs-Mod.	SAME AS ABOVE
ALTERNATIVE 9 SLURRY WALL TO RESIDUAL SOIL AND BEDROCK, CLAY CAP AND A LEACHATE COLLECTION SYSTEM* (CHOSEN ALT.)	Compliance with Federal RCRA closure requirements and Clean Water Act discharge to POTW requirements	Treatment of volatile organics at POTW	Risk Reduction-high Short-term Construction Risks-Mod.	Residual Risks-low O&M-moderate Human Exp.-low Long-term Reliability-high	Easily Constructed Will operate reliably Available POTW capacity	Capital-high O&M-high Five Year Review-high Potential Future RA Costs-low	Adequate protection of human health and the environment is provided.

* Includes leachate treatment at Publicly Owned Treatment Works (POTW).

** The No Action alternative would not meet ARAR's, reduce toxicity, mobility or volume of contaminants, provide short or long-term effectiveness and be protective of human health and the environment.

*** As discussed on p.19, State capping requirements are not met by any of the above alternatives although equivalent performance is achieved by Alternative 9.

Where the cut-off wall is keyed into the bedrock, inflow through and beneath the wall are considered negligible. Where the wall is keyed into the residual soil, inflow from outside of the wall will exist commensurate with the permeability of the saprolite. Inflow, as opposed to outflow, will result from the induced gradient developed by the leachate collection line.

Construction of the slurry wall was of the slurry trench clay type. The wall is designed to achieve a permeability of 1.0×10^{-7} cm/sec. The slurry wall is a minimum of three feet in thickness. Slurry wall permeability testing was performed in place during construction to confirm compliance with design specifications.

CAPPING AND SITE GRADING

A multi-layer clay cap designed to facilitate surface runoff and prevent infiltration was constructed over the entire site, including the area underlain by fractured bedrock. Reduction of surface infiltration through the landfill will significantly reduce long term leachate generation. The detail of the final cover is shown in Figure 2. The cap consisted of the following:

- Twelve inches of clay soil compacted to achieve a maximum permeability of 1.0×10^{-7} cm/sec.

- Six inches of sandy soils (well-drained) to provide subdrainage of the clay and minimize the occurance of saturated conditions which could harm vegetative cover.

- Six inches of soil suitable to sustain vegetative growth seeded and fertilized in accordance with the recommendations of the local unit of the Soil Conservation Service.

The above-described cap is in compliance with RCRA action-specific ARAR's (Table 2 of Appendix 2).

LEACHATE COLLECTION SYSTEM

The leachate collection system consists of the following elements:

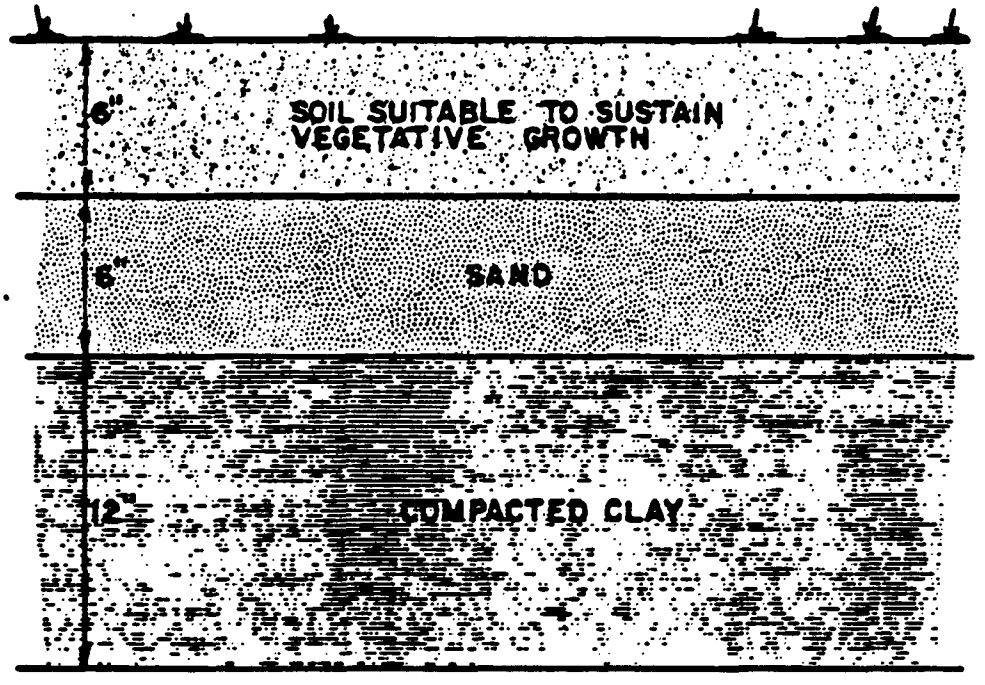
- A gravel packed perimeter collection line

- Gravel packed interior collection lines

- Access/maintenance manholes spaced a maximum of 500 feet on center

- Intermediate pump stations

The collection system inside of the perimeter slurry wall is designed to intercept groundwater flow within the unconfined water bearing zone. The perimeter collection line has been constructed to induce a hydraulic gradient which facilitates the flow of groundwater towards the collection lines. The line consists of a six-inch perforated pipe within a granular drainage aggregate and



FINAL COVER DETAIL

Figure 2

filter fabric envelope. The height and depth of the collection line are dependent upon the required slopes for proper drainage and the flow net developed within the unconfined water table. The collection line conveys leachate to two pumping stations which pump leachate to the central metering station, which then discharges to the New Road sewer line and, ultimately, to the Stony Brook Regional Sewerage Treatment Plant. The collection line has also been designed with access manholes throughout the system. This allows for inspection, maintenance, and repair of the facilities as necessary. The leachate collection system and cut-off wall are illustrated in Figure 3.

GAS VENTING SYSTEM

With the construction of a relatively impermeable cap, vertical venting of landfill gases was necessary to minimize the potential for methane gas buildup within the landfill. A series of permeable gas ducts were constructed throughout the top of the main fill areas. Since gases can be present in high concentrations in the vents, a fence was installed to control access. Landfill gases are also vented from manhole covers providing access to the leachate collection system every 500 feet along the perimeter of the landfill.

FENCING

EPA has determined that a fence should be installed along the site perimeter to restrict access, eliminate any nuisance threats and ensure the integrity of the remedial action.

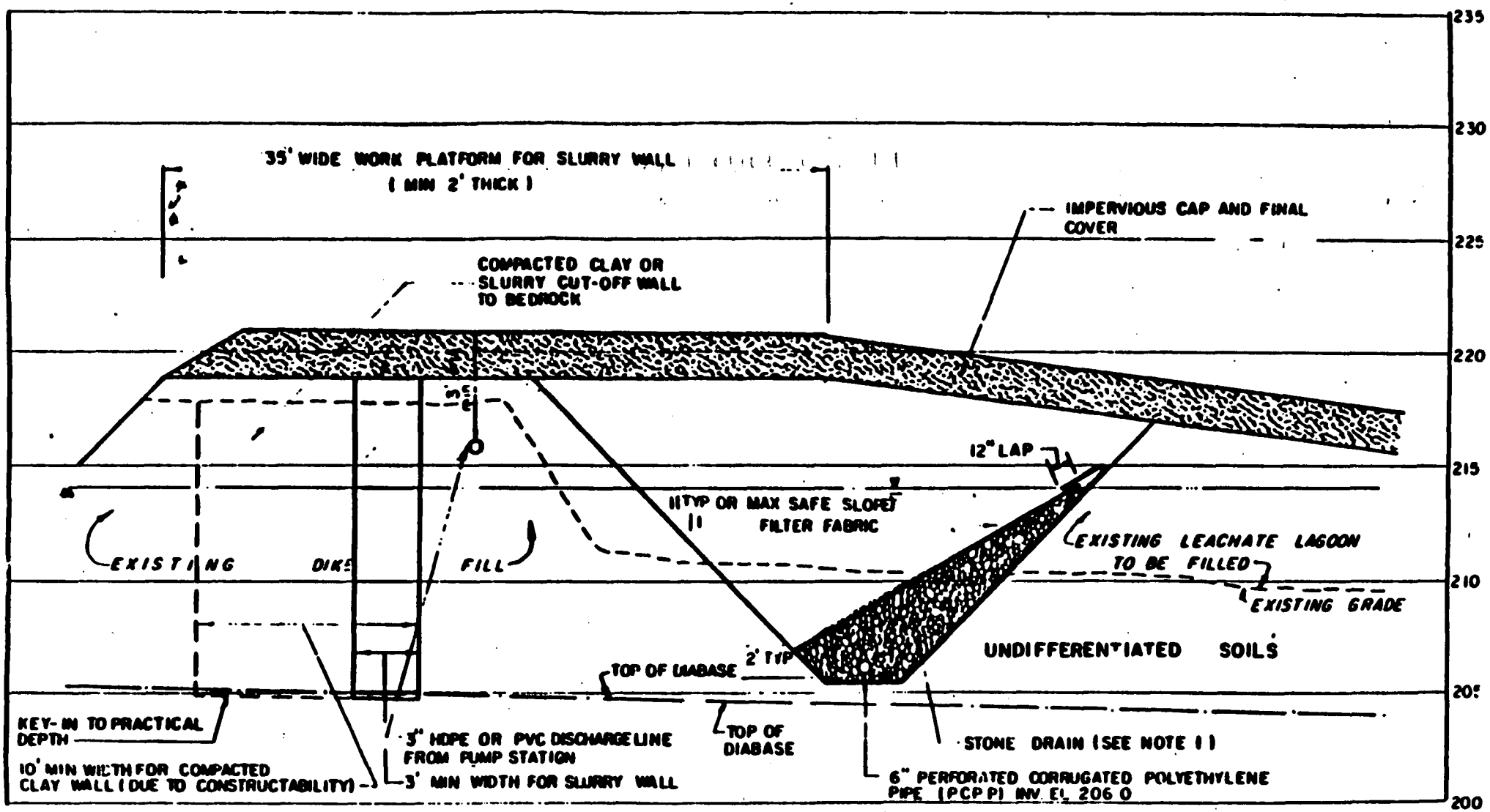
POST REMEDIAL MONITORING

A post remedial off-site monitoring program has been proposed by BFI and submitted to EPA and NJDEP for review. The purpose of the monitoring program is to evaluate the effectiveness of the completed remedial action for a period of thirty years and assess the impacts of any pre-remedial off-site migration of contaminants. The program sets forth plans and methodologies for implementing the following:

- Installation of groundwater monitoring wells along the perimeter of the site,
- Sampling and analysis of groundwater, surface water and sediments and air,
- Measuring hydraulic gradients along the slurry wall,
- Identification of State and Federal ambient and chemical specific ARARs,
- Investigate any potential off-site soil contamination related to previous off-site leachate migration

A more detailed discussion of the monitoring program is provided in the following subsections. However, EPA may modify the monitoring

Figure 3



LEACHATE COLLECTION AND CUT-OFF WALL

5 0 5

program (e.g. sampling locations, parameters and frequency) as necessary in order to fully evaluate the remedy's protectiveness of human health and the environment.

Groundwater Monitoring

The post-remedial groundwater monitoring network will contain thirteen monitor wells. Three of these monitor wells (BR-1, BR-2 and BR-3) will be completed in the fractured bedrock underlying the northern portion of the site and ten wells (RF-1 through RF-10) will monitor groundwater quality in the more shallow Raritan Formation sediments. The three bedrock wells to the north will also address the elevated level of total volatile organics discovered in the area during the pre-remedial action Hydrogeologic Investigation. The thirteen monitoring wells will be positioned approximately 500 feet apart along the entire perimeter of the site and will be sampled initially on a quarterly basis for two quarters. Groundwater samples will be analyzed for all Priority Pollutants plus up to 40 additional parameters. After data from both sampling events has been reviewed, future sampling frequencies and parameters will be specified.

Surface Water and Sediment Sampling

One upstream and two downstream surface water and sediment sampling stations will be established by the EPA based upon field observations. Surface water and sediment samples will be collected on a quarterly basis for two quarters at the same time the ground water monitor wells are sampled. Each sample will be analyzed for the Priority Pollutants plus up to 40 additional parameters. After the data from the first two sampling events has been reviewed, modifications to the surface water and sediment sampling program will be specified.

Off-site Soil Sampling

Soil sampling locations to assess areas of potential residual contamination related to previous off-site leachate migration will be determined by EPA based upon field observations. Soil samples will be analyzed for priority pollutants plus up to forty additional parameters.

Air Sampling and Analysis

The post-remedial air pollution control monitoring program will include two initial events: point source emissions testing and ambient air quality monitoring. These two events will be conducted in accordance with the protocols approved by EPA with the consultation of NJDEP. After the data from the point source testing and ambient air quality monitoring have been reviewed, future sampling frequencies and parameters will be specified.

Leachate Collection System Monitoring

The purpose of the leachate monitoring program is to verify that leachate is not building up inside the slurry wall. In order to be assured that any groundwater migration is into the containment system, it is necessary to maintain a lower water level within the landfill. Groundwater levels inside and outside of the perimeter slurry wall will be monitored using leachate collection system manholes and groundwater monitoring wells, respectively.

In addition to the Post-remedial Environmental Monitoring Program, Section 121(2)(c) of SARA requires EPA to review remedial actions that result in any hazardous substances, pollutants, or contaminants remaining at the site no less often than each five (5) years after the initiation of such remedial action, to assure that human health and the environment are being adequately protected. If upon such review, it is the judgment of EPA that further remedial action is appropriate at this site, the EPA will implement, or through enforcement action require that such action be implemented.

OPERATION AND MAINTENANCE

Operation and maintenance is required to ensure the continued effectiveness of the remedial action. Aspects of operation and maintenance can generally be classified as follows:

- Scheduled inspections and preventative maintenance
- Pumping system cleaning, repair and replacement,
- Metering system recalibration, repair and replacement,
- Leachate collection system cleaning (e.g., jet rodding for sediment buildup) and repairs,
- Manhole repairs (e.g., spalling or cracking) and cleaning of sediment buildup,
- Drainage structure cleaning and repairs,
- Repair of erosion or seepage channels in the cap and areas that may not drain properly,
- Reseeding and refertilizing as necessary to maintain vegetative cover on the cap,
- Mowing as necessary to control deep rooted crops (e.g., trees) which could compromise cap integrity,
- Groundwater monitoring well redevelopment, if necessary,
- Access road maintenance.

All maintenance items will be performed on an as-needed basis as evidenced by the monitoring programs. Repair and replacement work would be performed in a manner equal to the original design standards and specifications.

PROTECTIVENESS

The remedy is protective of human health and the environment through on-site containment of wastes. As a result, the site has been isolated from the pathways of migration by which contaminated water could impact human and environmental receptors. Since the site is located in an area of groundwater discharge and the nearest public groundwater supply well is located 1 mile upgradient, the major potential threat is surface water degradation. As expressed previously, the remedy has successfully prevented direct contact with the landfill waste and mitigated leachate migration into adjacent surface waters. Thirty year monitoring in conjunction with scheduled operation and maintenance will ensure the long term effectiveness of the remedy.

CONSISTENCY WITH OTHER ENVIRONMENTAL LAWS

CERCLA, as amended by SARA, requires that completed remedial actions comply with applicable and/or relevant and appropriate requirements (ARARs) of federal laws and more stringent promulgated state laws. ARARs are classified into three (3) groups: ambient or chemical specific, location specific, and action specific requirements.

Ambient or chemical specific ARARs set health or risk-based concentration limits in various environmental media for specific hazardous substances, pollutants or contaminants. These ARARs, i.e., groundwater, surface water and air pollution control standards will not be addressed in this ROD. They will be incorporated into the Post-remedial Environmental Monitoring Program and utilized to evaluate the need for any additional remedial actions related to the site.

Action specific requirements control or restrict activities related to the management of hazardous substances, pollutants or contaminants. Examples include RCRA regulations for closure of hazardous waste landfills and Clean Water Act pretreatment standards for discharge to Publicly Owned Treatment Works (POTW's).

Location specific ARARs restrict activities depending on the characteristics of a site or its immediate environment. Pertinent action and location specific ARARs are provided in Table 2 of Appendix 2.

Although RCRA hazardous wastes were not disposed of or moved about the site after November 19, 1980, the Federal and State RCRA requirements governing site closure are to be considered relevant and appropriate under SARA.

The BFI South Brunswick Landfill closure included the placement of a clay cap over the fill material. The cap was designed to achieve a permeability of 1 x 10^{-7} cm/sec and thereby provide long term minimization of liquid percolation through the landfill. The cap was also graded properly in order to promote drainage and minimize erosion. During the construction phase the clay cover was compacted to prevent future cap settling.

In accordance with RCRA capping requirements, the permeability of the cap is less than or equal to the permeability (10^{-6} to 10^{-7} cm/sec) of the natural sub-soils present at the site, thereby preventing infiltration which can lead to leachate mounding within the landfill. Finally, in order to restrict post-closure use of the property to prevent damage to the clay cover, a locked gate has been placed at the landfill entrance and "No Trespassing" warning signs have been posted approximately every 50 feet along the landfill perimeter. Furthermore, EPA has determined that a fence should be constructed along the site perimeter to restrict access, reduce any nuisance threat and preserve the integrity of the remedial action.

While the selected remedy complies with the closure performance requirements set forth in 40 CFR Part 264, Subpart G, it does not meet the standards contained in the New Jersey Administrative Code, which is part of a duly authorized RCRA program. Nevertheless, EPA has decided to waive the State's capping requirements since the selected remedy (clay cap, slurry wall and leachate collection system) at this site is achieving a standard of performance equivalent to that required by the State regulations. Furthermore, given the equivalent protectiveness of the remedy, it would be impractical to disturb the existing 68 acre cap in order to meet State capping requirements.

In order to continuously evaluate the effectiveness of the remedial action in containing the waste and, ultimately protecting human health and the environment, a Post-remedial Environmental Monitoring Program shall be implemented over a 30 year period. Post-closure maintenance of the remedy is addressed in the Operations and Maintenance Program for this site.

In addition to the clay cap, a leachate collection system was also constructed as part of the remedial action. The function of this system is to collect leachate within the landfill and pump it to Stony Brook Regional Sewerage Authority for treatment. As a result, the Clean Water Act pretreatment standards are also considered relevant and appropriate under SARA.

In August, 1981 a treatability study of the BFI-South Brunswick Landfill leachate was conducted to determine if the leachate was acceptable for treatment at the POTW. The leachate was found to contain low levels of volatile organics, acid and base/neutral compounds and heavy metals.

The leachate can be described as free flowing (non-obstructive), non-corrosive (pH 7.50) liquid that would not result in fire or explosion or raise POTW influent termperatures above 104°F.

The current rate of discharge is 20,000 gallons/day. Leachate is discharged during off-hours so as not to interfere with the POTW's operation. The current leachate discharged complies with the Stony Brook Regional Sewerage Authority's requirements, is spill-proof due to the spill prevention design of the leachate collection system, and is monitored and reported monthly to the New Jersey Department of Environmental Protection.

Location-specific ARAR's are governed primarily by Executive Order 11990, Protection of Wetlands. The remedial actions taken at the site have eliminated the off-site migration of contaminated leachage thereby preventing any further destruction, loss, or degradation of wetlands.

NJDEP will provide EPA with chemical/ambient specific ARARs upon evaluation of the initial sampling results from the post-remedial monitoring program.

COST EFFECTIVENESS/PERMANENT SOLUTIONS/ALTERNATIVE TREATMENT TECHNOLOGIES

The remedy was selected on the basis of its implementability and proven effectiveness in landfill containment given the hydrogeology of the site, size of the landfill and waste disposal practices.

The landfill accepted predominantly municipal waste which was comingled with hazardous waste. Since discrete areas of hazardous waste disposal could not be adequately identified, excavation, off-site disposal and/or treatment of contaminant hot spots was not considered feasible. Excavation and disposal/ treatment of the entire 68 acre landfill was considered impracticable and not cost-effective.

A reduction in the toxicity, mobility and volume of contaminants is achieved by the remedy through treatment of collected leachate at the Stony Brook Sewage Treatment plant. Analysis has shown the quality of leachate discharging to the treatment plant improving over time indicating a reduction of contamination within the landfill.

Given the limited scope of practical remedial alternatives for a landfill the size and nature of BFI South Brunswick the containment option selected and implemented represents the cost effective and environmentally sound approach toward site remediation.

STATE ACCEPTANCE OF REMEDY

The NJDEP agrees that the on-site containment system in conjunction with the 30 year post-remedial monitoring program will be protective of human health and the environment. Accordingly, NJDEP has concurred with the remedy.

COMMUNITY RELATIONS

A public availability session was held at the South Brunswick Township Hall on August 6, 1987. Concerned citizens were informed of the remedial actions taken at the site and the proposed post remedial monitoring plan. The public comment period which began on that day closed on September 4, 1987. Upon request, the comment period was extended until September 9, 1987. Concerns expressed by the public are addressed in the Responsiveness Summary appended to this document (Appendix 5). Overall, the public and local officials have expressed satisfaction with the selected remedy and the time-frame in which it was implemented.

FUTURE ACTIONS

Any future actions at the site are dependant upon the results of the post remedial monitoring study. The study will address Federal and State ambient and chemical specific ARARs which will be utilized to evaluate the need for additional remediation.

LIST OF APPENDICES

APPENDIX 1

GROUNDWATER QUALITY DATA FROM HYDROGEOLOGIC INVESTIGATION
(Table 1)

APPENDIX 2

SELECTED ACTION AND LOCATION SPECIFIC ARAR's
(Table 2)

APPENDIX 3

DATA FROM JUNE, 1980 EPA INVESTIGATION

APPENDIX 4

LEACHATE QUALITY AND VOLUMETRIC DISCHARGE DATA

APPENDIX 5

RESPONSIVENESS SUMMARY

APPENDIX 1

GROUNDWATER QUALITY DATA FROM HYDROGEOLOGIC INVESTIGATION (Table 1)

TABLE 1

GROUND-WATER QUALITY DATA
August 12, 1982
(mg/l)

Well	Chloride	Specific Conductance (μmhos/cm)	Dissolved Solids Total	pH	COD	Volatile Organics Total[1]	Non-Volatile Halogenated Organics Total[2]	Phenols
W-9	7.6	126	140	7.68	56.6	0.023	< 0.001	0.0009
W-10	7.7	170	158	9.57	107.0	0.028	0.001	0.0057
W-11	5.2	178	158	9.20	43.9	0.494	0.001	0.0037
B-5	46.8	445	310	6.80	8.4	0.248	0.001	0.0014
B-15	267	2,250	1,326	6.79	224	1.955	0.002	0.0694
B-16	12.4	1,800	94	7.55	7.7	0.132	0.003	0.0027
B-17	14.4	200	36	6.15	8.1	0.080	< 0.001	0.0021
B-18	173	1,523	910	6.52	10.8	0.631	< 0.001	0.0280
MP-1	202	830	-	-	-	-	-	-
MP-2	26.3	132	-	-	-	-	-	-
MP-3	112	510	-	-	-	-	-	-
MP-4	27.3	65	-	-	-	-	-	-
MP-5	48.8	60	-	-	-	-	-	-
NJDEP Class GW-2 Standard	250	-	-	5-9	-	-	-	0.3

Notes:

[1] Total volatile organic compounds expressed as 1, 2 - Dichloroethane.
[2] Total non-volatile organic compounds expressed as Lindane.

TABLE 1, PAGE 2

GROUND-WATER QUALITY DATA
(mg/l)

Well	Arsenic Total	Barium Total	Cadmium Total	Chromium Total	Iron Total	Lead Total	Manganese Total	Mercury Total	Selenium Total	Silver Total	Zinc Total
W-9	0.0015	< 0.05	< 0.01	< 0.05	12.0	< 0.05	< 0.05	< 0.0005	< 0.001	< 0.05	0.12
W-10	0.0151	< 0.05	< 0.01	< 0.05	1.8	< 0.05	< 0.05	< 0.0005	0.003	< 0.05	0.09
W-11	0.0162	< 0.05	< 0.01	< 0.05	6.0	< 0.05	< 0.05	< 0.0005	0.003	< 0.05	0.50
B-5	0.0108	< 0.05	< 0.01	< 0.05	17.0	< 0.05	0.20	< 0.0005	0.001	< 0.05	16.0
B-15	0.0098	1.12	< 0.01	< 0.05	17.0	< 0.05	0.18	< 0.0005	0.003	< 0.05	3.5
B-16	0.0063	< 0.05	< 0.01	< 0.05	8.0	< 0.05	< 0.05	< 0.0005	< 0.001	< 0.05	0.77
B-17	0.0175	< 0.05	< 0.01	< 0.05	16	< 0.05	< 0.05	< 0.0005	0.002	< 0.05	16.0
B-18	0.0017	< 0.05	< 0.01	< 0.05	88	< 0.05	0.20	< 0.0005	< 0.001	< 0.05	8.0
NJDEP Class GW-2 Standard	0.05	1.0	0.01	0.05	0.3	0.05	0.05	0.002	0.01	0.05	5.0

APPENDIX 2

SELECTED ACTION AND LOCATION SPECIFIC ARAR's (Table 2)

SELECTED ACTION-SPECIFIC ARAR's
TABLE 2

ACTIONS	REQUIREMENTS	PREREQUISITES	CITATION
CAPPING 264.22B(a)	Placement of cap over waste (e.g., closing a landfill, or closing a surface impoundment or waste pile as a landfill, or similar action) requires a cover designated and constructed to: • Provide long-term minimization migration of liquids through the capped area: • Function with minimum maintenance; • Promote drainage and minimize erosion or abrasion of the cover; • Accomodate settling and subsidence so that the cover's integrity is maintained; and • Have a permeability less than or equal to the permeability of any bottom liner system or natural sub-soils present.	RCRA hazardous waste placed at site after November 19, 1980, or movement of hazardous waste from one unit, area of contamination, or location into another unit or area of contamination will make requirements applicable. Capping without such movement will not make requirements applicable, but technical requirements are likely to be relevant and appropriate.	CFR 264.310(a) (Landfills)
	• Restrict post-closure use of property as necessary to prevent damage to the cover.		40 CFR 264.117(c)

SELECTED ACTION-SPECIFIC ARAR's
TABLE 2 (continued)

ACTIONS	REQUIREMENTS	PREREQUISITES	CITATION
Closure with Waste in Place (Capping)	Eliminate free liquids by removal or solidification.	Disposal of RCRA hazardous waste (listed or characteristic) at site after November 19, 1980, or movement of hazardous waste from one unit, area of contamination, or location into another unit or area of contamination. Not applicable to material undisturbed since November 19, 1980.	40 CFR 264.228 (a)(2)
Operation and Maintenance (O&M)	Post-Closure care to ensure that site is maintained and monitored.		40 CFR 264-1
Discharge to POTW	Pollutants that pass-through the POTW without treatment, interfere with POTW: operation, or contaminate POTW sludge are prohibited. Specific prohibitions preclude the discharge of pollutants to POTSs that: • Create a fire or explosion hazard in the POTW; • Are corrosive (ph<5.0); • Obstruct flow resulting interference;		40 CFR 403.5

SELECTED ACTION-SPECIFIC ARAR's
TABLE 2 (continued)

ACTION	REQUIREMENTS	PREREQUISITES	CITATION
Discharge to POTW (cont.)	• Are discharged at a flow rate and/or concentration that will result in interference; and		
	• Increase the temperature of wastewater entering the treatment plant that would result in interference, but in no case raise the POTW influent temperature above 104°C).		
	• Discharge must comply with local POTW pretreatment program, including POTW-specific pollutants, spill preventation program requirements.		40 CFR 403.5 and local POTW regulations

SELECTED LOCATION-SPECIFIC ARAR's
TABLE 2 (continued)

ACTIONS	REQUIREMENTS	PREREQUISITIES	CITATION
Wetland	Action to minimize the destruction, loss, or degradation of wetlands	Wetland as defined by Executive Order 11990 Section 7.	Executive Order 11990, Protection of Wetlands, (40 CFR 6, Appendix A)

APPENDIX 3

Data From June, 1980 EPA Investigation

Pages	Content
A1 - A14	Organics Results of Water Samples
B1 - B15	Metals and Sediment Analysis
C1 - C 3	Comparison of Monitoring Well Data
D1 - D 3	Comparison of Surface Water Data
E1 - E 3	Comparison of Sediment Analysis
F1 - F 5	Previous Well Data (6/20/76-7/21/78)
G1 - G 2	Groundwater Data
H1	Sketch of Sampling Locations
I1	Review of Analytical Contractor Results by the NEIC

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY

A

SAMPLE ID B0101 WELL 1A	SAMPLE ID B0101
LAB ID 19601A1 PS 1 of 39	LAB ID 19601B1
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/11/80
STD ID DFTPP1066 PHENOL244	STD ID DFTPP1070 BNSTD272
CONC FACTOR 1000	CONC FACTOR 1000

	Acid Compounds	ug/l
1A	2,4,6-trichlorophenol	ND
2A	p-chloro-m-cresol	ND
4A	2-chlorophenol	ND
1A	2,4-dichlorophenol	ND
4A	2,4-dimethylphenol	ND
A	2-nitrophenol	ND
A	4-nitrophenol	ND
A	2,4-dinitrophenol	ND
A	4,6-dinitro-o-cresol	ND
A	pentachlorophenol	ND
A	phenol	*

	Base/Neutral Compounds	ug/l
	acenaphthene	ND
	benzidine	ND
	1,2,4-trichlorobenzene	ND
	hexachlorobenzene	ND
	hexachloroethane	ND
	bis(2-chloroethyl)ether	ND
	2-chloronaphthalene	ND
	1,2-dichlorobenzene	ND
	1,3-dichlorobenzene	ND
	1,4-dichlorobenzene	ND
	3,3'-dichlorobenzidine	ND
	2,4-dinitrotoluene	ND
	2,6-dinitrotoluene	ND
	1,2-diphenylhydrazine (as azobenzene)	ND
	fluoranthene	ND

	Base/Neutral Compounds	ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	*
56B	nitrobenzene	*
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY ____ A

SAMPLE ID 80101 pg 2 of 39
LAB ID 19601V1
DATE INJECTED 6/19/80
STD ID DFTPP1052 19600V7
CONC. FACTOR -----

SAMPLE ID 80101
LAB ID TRACE #538
DATE EXTRACTED 6/14/80
DATE INJECTED 6/20/80
STD ID TRACE #532
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	23
6V	carbon tetrachloride	ND
7V	chlorobenzene	*
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	40
14V	1,1,2-trichloroethane	ND
1[illegible]	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	*
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		
19V	2-chloroethylvinyl ether	ND
23V	chloroform	105
29V	1,1-dichloroethylene	48
30V	1,2-trans-dichloroethylene	59
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
4V	methylene chloride	30
5V	methyl chloride	ND
6V	methyl bromide	ND
7V	bromoform	ND
8V	dichlorobromomethane	ND
9V	trichlorofluoromethane	ND
0[illegible]	dichlorodifluoromethane	ND
1V	chlorodibromomethane	ND
5V	tetrachloroethylene	ND
6V	toluene	*
7V	trichloroethylene	[illegible]

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	1.06**
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** [illegible]

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 10 pg 3 of 39

Sample Number
80101

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	58.6	50.0	117
1-Chloro-2-Bromopropane	VOA	56.8	50.0	114
Toluene - d8	VOA	65.7	50.0	131
2-Fluorophenol	ACID	78	108	72
Phenol - d5	ACID	55	105	61
Nitrobenzene - d5	B/N	64	103	61
2-Fluorobiphenyl	B/N	22	103	21

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		CHLORODIFLUOROMETHANE	VOA#32	947
2.		1,1'-OXYBYSETHANE	VOA#147	980
3.		TRIMETHOXYMETHANE	VOA#195	869
4.		UNKNOWN	VOA#359	NO GOOD FITS
5.		UNKNOWN	VOA#398	NO GOOD FITS
6.		UNKNOWN	ACID#341	NO GOOD FITS
7.		UNKNOWN	ACID#365	NO GOOD FITS
8.		N,N-DIMETHYLFORAMIDE	ACID#42	961
9.		3,3,5-TRIMETHYL CYCLO-		
10.		HEXANONE	B#149	973
11.		4-FLUORO-1,1'-BIPHENYL	ACID#129	991
12.		N,N-DIMETHYLFORMAMIDE	B#93	894
13.		UNKNOWN	B#107	NO GOOD FITS
14.		UNKNOWN	B#170	NO GOOD FITS
15.		3,5,5-TRIMETHYL-2-		
15.		CYCLOHEXEN-1-ONE	B#197	906
17.				
18.				

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____

A

SAMPLE ID B0102 WELL 2	SAMPLE ID B0102 WELL #2
ID 19601A2 09 4 of 39	LAB ID 196018Z
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/11/80
STD ID DFTPP1066 PHENOL244	STD ID DFTPP1071D BNSTD273
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
[redacted]	phenol	ND

Base/Neutral Compounds		
1B	acenaphthene	ND
5B	benzidine	ND
6B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
16B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	*
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	10
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
[redacted]	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

Base/Neutral Compounds		
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	246
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-	ND

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80102 WELL #2
LAB ID 196017/2 PS 5 of 39
DATE INJECTED 6/20/80
STD ID DFTPP1052 1960CV7
CONC. FACTOR -----

SAMPLE ID 80102
LAB ID TRACE #541
DATE EXTRACTED 6/14/80
DATE INJECTED 6/20/80
STD ID TRACE #532
CONC. FACTOR 100

	Volatiles	ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	42
6V	carbon tetrachloride	ND
7V	chlorobenzene	17
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
XXXX	~~bis(chloromethyl)ether~~	XXXXXXXXX
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	48
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	58
44V	methylene chloride	22
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	1208
87V	trichloroethylene	*
88V	vinyl chloride	ND

	Pesticides	ug/l
89P	aldrin	0.120**
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	0.70**
101P	heptachlor epoxide	0.23**
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	0.16**
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 10 pg 6 of 39

Sample Number
80102

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	51.7	50.0	103
1-Chloro-2-Bromopropane	VOA	47.5	50.0	95
Toluene - d8	VOA	70.7	50.0	141
2-Fluorophenol	ACID	ND	108	---
Phenol - d5	ACID	ND	105	---
Nitrobenzene - d5	B/N	51	103.3	50
2-Fluorobiphenyl	B/N	114	102.6	112

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		2-PROPANONE	VOA#84	988
2.		2-PROPANOL	VOA#100	979
3.		DIMETHOXYMETHANE	VOA#115	993
4.		1,1'-OXYBISETHANE	VOA#147	994
5.		2-BUTANONE	VOA#161	970
6.		2-BUTANOL	VOA#176	961
7.		2-PENTANONE	VOA#245	955
8.		1,3-DICHLORO-2-PROPANONE	VOA#272	852
9.		4-METHYL-2-PENTANONE	VOA#306	966
10.		ETHYLBENZE & 2-HEPTANONE	VOA#425	997/944
11.		UNKNOWN	ACID#62	NO GOOD FITS
12.		UNKNOWN	ACID#86	NO GOOD FITS
13.		UNKNOWN	ACID#107	NO GOOD FITS
14.		UNKNOWN	ACID#142	NO GOOD FITS
15.		UNKNOWN	ACID#157	NO GOOD FITS
16.		UNKNOWN	ACID#194	NO GOOD FITS
17.		UNKNOWN	ACID#221	NO GOOD FITS
18.		UNKNOWN	ACID#233	NO GOOD FITS
19.				

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80103 WELL 3	SAMPLE ID 80103
LAB ID 196013A3 PS 7 of 39	LAB ID 196018B3
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/11/80
STD ID DFTPP1066 PHENOL244	STD ID DFTPP1071D BNSTD273
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

Base/Neutral Compounds		ug/l
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	11
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80103 WELL #3
LAB ID 1360176 pg 8 of 39
DATE INJECTED 6/20/80
STD ID OFTPP1053 1960079
CONC. FACTOR -----

SAMPLE ID 80103
LAB ID TRACE #542
DATE EXTRACTED 6/14/80
DATE INJECTED 6/20/80
STD ID TRACE #532
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
[illegible]V	chloroethane	*
[illegible]	[illegible]	[illegible]
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	107
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	17
[illegible]V	chlorodibromomethane**	ND
[illegible]V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	*

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

WCTS Report No: 10 pg 9 of 39

Sample Number
80103

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	(Surrogates only) % Recovery
Benzene - d6	VOA	52.0	50.0	104
1-Chloro-2-Bromoethane	VOA	50.5	50.0	101
Toluene - d8	VOA	56.2	50.0	112
2-Fluorophenol	ACID	80	108	74
Phenol - d5	ACID	72	105	69
Nitrobenzene - d5	B/N	99	103.3	96
2-Fluorobiphenyl	B/N	148	102.6	144

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		CHLORODIFLUOROMETHANE	VOA#30	958
2.		DICHLOROFLUOROMETHANE	VOA#71	950
3.		2-PROPANONE	VOA#85	957
4.		TRIMETHOXYMETHANE	VOA#195	921
5.		2-METHYL BUTANOIC ACID	ACID#100	932
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID	80104 well 4:	SAMPLE ID	80104
LAB ID	1960186 PS 10 of 39	LAB ID	1960187
DATE EXTRACTED	6/15/80	DATE EXTRACTED	6/13/80
DATE INJECTED	7/7/80	DATE INJECTED	7/13/80
STD ID	DFTPP1067 PHEN 245	STD ID	DFTPP1073 BNSTD275
CONC FACTOR	1000	CONC FACTOR	1000

	Acid Compounds	ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
[illegible]A	pentachlorophenol	ND
[illegible]A	phenol	ND

	Base/Neutral Compounds	ug/l
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
[illegible]B	2,4-dinitrotoluene	ND
[illegible]	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

	Base/Neutral Compounds	ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-	

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 30104 pg 11 of 39
LAB ID 19601V17
DATE INJECTED 6/21/80
STD ID DFTPP1054 19601V15
CONC. FACTOR -----

SAMPLE ID 30104
LAB ID TRACE #544
DATE EXTRACTED 6/14/80
DATE INJECTED 6/20/80
STD ID TRACE #542
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
17V	bis(chloromethyl) ether	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	90
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GC/MS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 10 pg 12 of 39

Sample Number
30104

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	52	50	104
1-Chloro-2-Bromopropane	VOA	47	50	94
Toluene - d8	VOA	51	50	102
2-Fluorophenol	ACID	88	108	81
Phenol - d5	ACID	80	105	76
Nitrobenzene - d5	B/N	66	103	64
2-Fluorobiphenyl	B/N	98	103	86

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		2-PROPANONE	VOA#87	970
2.		TRIMETHOXYMETHANE	VOA#195	925
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80105 Well 5	SAMPLE ID 80105
LAB ID 19601A7 pg 13 of 39	LAB ID 1960188
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/13/80
DATE INJECTED 7/7/80	DATE INJECTED 7/13/80
STD ID DFTPP1067 PHEN 245	STD ID DFTPP1073 BNSTD 275
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
37A	2-nitrophenol	ND
38A	4-nitrophenol	ND
39A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	*

Base/Neutral Compounds		
1B	acenaphthene	ND
5B	benzidine	ND
6B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
16B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	*
26B	1,3-dichlorobenzene	*
27B	1,4-dichlorobenzene	ND
29B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

Base/Neutral Compounds		ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	*
66B	bis (2-ethylhexyl) phthalate	*
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID B0105 WELL #5
LAB ID 1960177 PS 14 of 39
DATE INJECTED 6/20/80
STD ID DFTPP1053 1960074
CONC. FACTOR -----

SAMPLE ID B0105
LAB ID TRACE #549
DATE EXTRACTED 6/14/80
DATE INJECTED 6/20/80
STD ID TRACE #532
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	13
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
[illegible]	1,1,2,2-tetrachloroethane	ND
[illegible]	chloroethane	*
[illegible]	[illegible] ether	[illegible]
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	16**
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
[illegible]	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 10 pg 15 of 39

Sample Number
80105

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	53	50.0	105
1-Chloro-2-Bromopropane	VOA	50.0	50.0	100
Toluene - d8	VOA	56	50.0	111
2-Fluorophenol	ACID	82	108	76
Phenol - d5	ACID	78	105	74
Nitrobenzene - d5	B/N	71	103	69
2-Fluorobiphenyl	B/N	86	103	84

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		1,1'-OXYBIS ETHANE	VOA#145	913
2.		TRIMETHOXYMETHANE	VOA#195	944
3.		1,1-METHYLENE BIS(OXY)'	VOA#283	982
4.		1-ETHOXY-BUTANE	VOA#320	961
5.		UNKNOWN	ACID#339	NO GOOD FITS
6.		CHLOROBENZENE	B/N#60	964
7.		UNKNOWN	B/N#81	NO GOOD FITS
8.		UNKNOWN	B/N#187	NO GOOD FITS
9.		UNKNOWN	B/N#468	NO GOOD FITS
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____

A

SAMPLE ID 80106 Well 6	SAMPLE ID 80106
LAB ID 19601A8 ES-16 of 39	LAB ID 1960189
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/13/80
STD ID DFTPP1067 PHEN 245	STD ID DFTPP1073 BNSTD 275
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	154

Base/Neutral Compounds		
1B	acenaphthene	ND
5B	benzidine	ND
6B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	*
26B	1,3-dichlorobenzene	*
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	11
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	167
71B	dimethyl phthalate	*
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY

A

SAMPLE ID 80106 WELL#6 pg 17 of 39
LAB ID 19601V9
DATE INJECTED 6/20/80
STD ID DFTPP1053 19600V4
CONC. FACTOR -----

SAMPLE ID 80106
LAB ID TRACE #568 &569
DATE EXTRACTED 6/14/80
DATE INJECTED 6/24/80
STD ID TRACE #571
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	81
6V	carbon tetrachloride	ND
7V	chlorobenzene	102
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	58
XXXX	[illegible]	XXXXXXXXX
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	44
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	160
44V	methylene chloride	147
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	35
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	267
87V	trichloroethylene	*
88V	vinyl chloride	37

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	**0.30
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 10 Pg 18 of 31

Sample Number
B0106

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	52.3	50.0	105
1-Chloro-2-Bromopropane	VOA	47.2	50.0	94
Toluene - d8	VOA	66.3	50.0	123
2-Fluorophenol	ACID	0	96	0 *
Phenol - d5	ACID	0	106	0 *
Nitrobenzene - d5	B/N	188	103	182 *
2-Fluorobiphenyl	B/N	65	103	63
* due to high matrix interfernece				

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		CHLOROFLUOROMETHANE	VOA#31	953
2.		METHYLOXIRANE	VOA#85	955
3.		2-PROPANOL	VOA#100	969
4.		TETRAHYDROFURAN	VOA#132	998
5.		1,1'-OXYBISETHANE	VOA#146	990
6.		2-BUTANONE	VOA#160	869
7.		2-BUTANOL	VOA#174	887
8.		TRIMETHOXYMETHANE	VOA#194	943
9.		UNKNOWN	VOA#304	NO GOOD FITS
10.		4-METHYL-2-PENTANOL	VOA#321	963
11.		UNKNOWN	ACID#47	NO GOOD FITS
12.		UNKNOWN	ACID#56	NO GOOD FITS
13.		UNKNOWN	ACID#74	NO GOOD FITS
14.		UNKNOWN	ACID#99	NO GOOD FITS
15.		UNKNOWN	ACID#128	NO GOOD FITS
16.		UNKNOWN	ACID#149	NO GOOD FITS
17.		2-ETHYL-4-METHYL-1-PENTANOL	ACID#181	944
18.		DECANOIC ACID	ACID#195	945

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80107 WELL #7 pg 16 of 39
LAB ID 19601V13
DATE INJECTED 6/21/80
STD ID DFTPP1053 19600V4
CONC. FACTOR 5

SAMPLE ID 80107
LAB ID TRACE #576
DATE EXTRACTED 6/14/80
DATE INJECTED 6/24/80
STD ID TRACE #577
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	186
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	64
11V	1,1,1-trichloroethane	28
13V	1,1-dichloroethane	1254
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	77
~~17V~~	~~2-chloroethylvinyl ether~~	~~ND~~
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	77
30V	1,2-trans-dichloroethylene	303
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	116
44V	methylene chloride	2215
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	12
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	70
86V	toluene	1183
87V	trichloroethylene	237
88V	vinyl chloride	19

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

SAMPLE ID 80107	SAMPLE ID 80107
LAB ID 19601A13	LAB ID 19601B10
DATE EXTRACTED 6/5/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/13/80
STD ID DFTPP1067 PHEN 245	STD ID DFTPP1073 BNSTD 275
CONC FACTOR 20	CONC FACTOR 50

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	3935

Base/Neutral Compounds		ug/l
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
29B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

Base/Neutral Compounds		ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	107
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	35
70B	diethyl phthalate	ND
71B	dimethyl phthalate	214
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-dioxin	ND

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 10 Pg 21 of 39

Sample Number
80107

*Due to High Matrix Interference

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	50.3	50.0	101
1-Chloro-2-Bromoethane	VOA	45.7	50.0	90
Toluene - d8	VOA	55.8	50.0	111
2-Fluorophenol	ACID	143	108	132
Phenol - d5	ACID	ND	105	0 *
Nitrobenzene - d5	B/N	450	103	437 *
2-Fluorobiphenyl	B/N	48	103	46

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		DICHLOROFLUOROMETHANE	VOA#71	973
2.		UNKNOWN	VOA#87	NO GOOD FITS
3.		2-PROPANOL	VOA#101	980
4.		1-PROPANOL	VOA#122	969
5.		2-BUTANOL	VOA#175	939
6.		1-BUTANOL	VOA#206	978
7.		UNKNOWN	VOA#241	NO GOOD FITS
8.		ETHYLESTERBUTANOICACID	VOA#347	976
9.		1-HEXANOL	VOA#374	985
10.		2,3,4-TRIMETHYL HEXANE	VOA#439	919
11.		UNKNOWN	ACID#51	NO GOOD FITS
12.		UNKNOWN	ACID#58	NO GOOD FITS
13.		UNKNOWN	ACID#75	NO GOOD FITS
14.		UNKNOWN	ACID#102	NO GOOD FITS
15.		UNKNOWN	ACID#130	NO GOOD FITS
16.		UNKNOWN	ACID#134	NO GOOD FITS
17.		UNKNOWN	ACID#150	NO GOOD FITS
18.		NONANOIC ACID	ACID#189	953
19.		BENZOIC ACID	[illegible]	984

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80108 Leachate to Pool A	SAMPLE ID 80108
LAB ID 1960A10 pg 22 of 39	LAB ID 1960811
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/13/80
STD ID DFTPP1067 PHEN245	STD ID DFTPP1073 BNSTD275
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
37A	2-nitrophenol	ND
38A	4-nitrophenol	ND
39A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

Base/Neutral Compounds		ug/l
1B	acenaphthene	*
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
16B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	*
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	13
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	*
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	67
71B	dimethyl phthalate	*
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	10
79B	benzo(ghi)perylene	ND
80B	fluorene	*
81B	phenanthrene	10
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

co-elute

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SAMPLE ID 80108
LAB ID 19601V18
DATE INJECTED 6/21/80
STD ID DFTPP1054 19601V15
CONC. FACTOR -----

SAMPLE ID 80108
LAB ID TRACE #578, 573, 575, 604
DATE EXTRACTED 6/14/80
DATE INJECTED 6/24/80
STD ID TRACE #604
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	57
6V	carbon tetrachloride	ND
7V	chlorobenzene	*
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	*
[illegible]		
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	11
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	40
44V	methylene chloride	*
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	20
50V	dichlorodifluoromethane	*
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	325
87V	trichloroethylene	ND
88V	vinyl chloride	*

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Lab No: 10 pg 24 of 39

Sample Number
80108

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	52	50	104
1-Chloro-2-Bromopropane	VOA	45	50	90
Toluene - d8	VOA	52	50	104
2-Fluorophenol	ACID	57	108	53
Phenol - d5	ACID	12	105	12
Nitrobenzene - d5	B/N	51	103	49
2-Fluorobiphenyl	B/N	75	103	73

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		CHLOROFLUOROMETHANE	VOA#32	938
2.		DICHLOROFLUOROMETHANE	VOA#72	949
3.		ETHANETHIOL	VOA#88	890
4.		TETRAHYDROFURAN	VOA#132	986
5.		1,1'-OXYBIS-ETHANE	VOA#146	983
6.		3,4-DIMETHYL-2-HEXANONE	VOA#160	859
7.		4-METHYL-2-PENTANONE	VOA#304	963
8.		UNKNOWN	VOA#406	NO GOOD FITS
9.		N,N-DIMETHYL FORMAMIDE	ACID#35	951
10.		PROPANOICACID	ACID#50	930
11.		UNKNOWN	ACID#123	NO GOOD FITS
12.		UNKNOWN	ACID#86	NO GOOD FITS
13.		CYCLOHEXANE CARBOXYLIC	ACID#147	928
14.		UNKNOWN ACID	ACID#198	NO GOOD FITS
15.		UNKNOWN	ACID#220	NO GOOD FITS
16.		UNKNOWN	ACID#241	NO GOOD FITS
17.		2,5-DIMETHYL BUTANOIC	ACID#267	890
18.		(E)-3,7-OCTADIEN-2-ONE	ACID#278	896
19.				

SAMPLE ID 80109 pg 25 of 39	SAMPLE ID 80109
LAB ID 19601A11 Downtown at Rt. 1	LAB ID 19601812
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/13/80
STD ID DFTPP1067 PHEN245	STD ID BNSTD275 DFTPP1073
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

Base/Neutral Compounds		ug/l
1B	acenaphthene	ND
5B	benzidine	ND
6B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

Base/Neutral Compounds		ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND*
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80109 pg 26 of 39
LAB ID 19601V19
DATE INJECTED 6/21/80
STD ID DFTPP1054 19601V15
CONC. FACTOR -----

SAMPLE ID 80109
LAB ID TRACE #570
DATE EXTRACTED 6/14/80
DATE INJECTED 6/24/80
STD ID TRACE #571
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
XXX	bis(chloromethyl)ether	XXXXXXXXX
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	*
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	*
87V	trichloroethylene	ND
88V	vinyl chloride	ND

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 10 pg 27 of 39

Sample Number
80109

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc. (ug/l)	(Surrogates only) Spike Added (ug/l)	(Surrogates only) % Recovery
Benzene - d6	VOA	50	50	100
1-Chloro-2-Bromopropane	VOA	45	50	90
Toluene - d8	VOA	53	50	106
2-Fluorophenol	ACID	84	108	78
Phenol - d5	ACID	77	105	73
Nitrobenzene - d5	B/N	56	103	55
2-Fluorobiphenyl	B/N	54	103	52

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		UNKNOWN	VOA#57	NO GOOD FITS
2.		TRIMETHOXYMETHANE	VOA#195	927
3.		UNKNOWN		NO GOOD FITS
4.		DIBUTYLESTER-1,2-		
5.		BENZENEDICARBOXYLIC ACID	ACID#257	943
6.		UNKNOWN	B/N#247	NO GOOD FITS
7.		UNKNOWN	B/N#306	NO GOOD FITS
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY A

SAMPLE ID 80110 Leachate Pool A	SAMPLE ID 80110
LAB ID 1960A12 pg 20 of 39	LAB ID 19601814
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/13/80
STD ID DFTPP1067 PHEN245	STD ID DFTPP1073 BNSTD276
CONC FACTOR 100	CONC FACTOR 1000

	Acid Compounds	ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
[illegible]A	phenol	1134

	Base/Neutral Compounds	ug/l
1B	acenaphthene	ND
5B	benzidine	ND
9B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
29B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
[illegible]B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

	Base/Neutral Compounds	ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	4572
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	185
71B	dimethyl phthalate	14
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-	ND

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY A

SAMPLE ID B0110
LAB ID 19601V20 pg 29 of 39
DATE INJECTED 6/21/80
STD ID DFTPP1054 19601V15
CONC. FACTOR -----

SAMPLE ID B0110
LAB ID TRACE #605
DATE EXTRACTED 6/14/80
DATE INJECTED 6/25/80
STD ID TRACE #603
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	53
6V	carbon tetrachloride	*
7V	chlorobenzene	23
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	11
13V	1,1-dichloroethane	199
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	20
17V	bis(chloromethyl) ether	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	*
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	32
32V	1,2-dichloropropane	*
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	25
44V	methylene chloride	475
45V	methyl chloride	27
46V	methyl bromide	*
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	76
50V	dichlorodifluoromethane	20
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	10
86V	toluene	310
87V	trichloroethylene	20
88V	vinyl chloride	ND

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	0.24**
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Lab No: 11 pg 20 of 39

Sample Number
B0110

*Matrix interference with Isophrone

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	48	50	96
1-Chloro-2-Bromopropane	VOA	42	50	84
Toluene - d8	VOA	49	50	98
2-Fluorophenol	ACID	93.1	108	86
Phenol - d5	ACID	ND	105	0
Nitrobenzene - d5	B/N	1428	103	1382 *
2-Fluorobiphenyl	B/N	74	103	72

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		CHLOROFLUOROMETHANE	VOA#30	954
2.		UNKNOWN	VOA#68	NO GOOD FITS
3.		2-PROPANONE	VOA#85	948
4.		1,1'-OXYBISETHANE	VOA#144	988
5.		UNKNOWN	VOA#173	NO GOOD FITS
6.		1-BUTANOL	VOA#203	977
7.		4-METHYL-2-PENTANONE	VOA#302	953
8.		4-METHYL-2-PENTANOL	VOA#319	955
9.		1-HEXANOL	VOA#372	969
10.		UNKNOWN	VOA#253	NO GOOD FITS
11.		UNKNOWN	ACID#55	NO GOOD FITS
12.		UNKNOWN	ACID#62	NO GOOD FITS
13.		UNKNOWN	ACID#82	NO GOOD FITS
14.		UNKNOWN	ACID#106	NO GOOD FITS
15.		UNKNOWN	ACID#122	NO GOOD FITS
16.		UNKNOWN	ACID#142	NO GOOD FITS
17.		NONANOICACID	ACID#181	904
18.		BENZOIC ACID		952

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY A

SAMPLE ID B0111 Leachate Pool B	SAMPLE ID B0111
LAB ID 19601A14 pg 31 of 39	LAB ID 19601B16
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/7/80	DATE INJECTED 7/13/80
STD ID DFTPP1067 PHEN245	STD ID DFTPP1073 BNSTD275
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	159

Base/Neutral Compounds		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
16B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

Base/Neutral Compounds		ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	2121
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	34
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	* (1)
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	*
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-	

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY A

SAMPLE ID 80111 pg 32 of 39
LAB ID 19601V22
DATE INJECTED 6/2T/80
STD ID DFTPP1054 19601V15
CONC. FACTOR -----

SAMPLE ID 80111
LAB ID TRACE #608
DATE EXTRACTED 6/14/80
DATE INJECTED 6/25/80
STD ID TRACE #609
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	*
6V	carbon tetrachloride	ND
7V	chlorobenzene	*
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	*
[illegible]	[illegible]	[illegible]
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	178
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	*
44V	methylene chloride	124
45V	methyl chloride	12
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
[illegible]	tetrachloroethylene	ND
[illegible]	toluene	193
87V	trichloroethylene	*
88V	vinyl chloride	*

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	2.7**
105P	delta-BHC	2.9**
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Lab No: 11 pg 33 of 39

Sample Number
30111

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	47	50	94
1-Chloro-2-Bromopropane	VOA	42	50	84
Toluene - d8	VOA	50	50	100
2-Fluorophenol	ACID	87	108	81
Phenol - d5	ACID	78	105	74
Nitrobenzene - d5	B/N	54	103	53
2-Fluorobiphenyl	B/N	77	110	70

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		UNKNOWN	ACID#57	NO GOOD FITS
2.		UNKNOWN	ACID#88	NO GOOD FITS
3.		UNKNOWN	ACID#113	NO GOOD FITS
4.		UNKNOWN	ACID#125	NO GOOD FITS
5.		6-NITROTRICYCLO/2:2,1.0[illegible]	ACID#135	915
6.		UNKNOWN	ACID#144	NO GOOD FITS
7.		UNKNOWN	ACID#177	NO GOOD FITS
8.		UNKNOWN	ACID#192	NO GOOD FITS
9.		UNKNOWN	ACID#217	NO GOOD FITS
10.		UNKNOWN	ACID#228	NO GOOD FITS
11.		UNKNOWN	VOA#85	NO GOOD FITS
12.		2-PROPANONE	VOA#83	970
13.		2-PROPANOL	VOA#98	977
14.		TETRAHYDROFURAN	VOA#129	983
15.		1,1'-OXYBISETHANE	VOA#143	968
16.		2-BUTANONE	VOA#157	932
17.		2-BUTANOL	VOA#172	958
18.		4-METHYL-2-PENTANONE	VOA#300	979

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY A

SAMPLE ID 80112 Stream rec well 1A	SAMPLE ID 80112
LAB ID 19601A17 pg 34 of 39	LAB ID 19601B15
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/10/80	DATE INJECTED 7/13/80
STD ID DFTPP1069 PHENOL 25GA	STD ID DFTPP1073 BNSTD276
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
[redacted]A	phenol	141

Base/Neutral Compounds		
1B	acenaphthene	ND
3B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
[redacted]B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

Base/Neutral Compounds		ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	19
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	37
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	11 (1)
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	11 (1)
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-	ND

A

SAMPLE ID 80112 pg 35 of 39
LAB ID 19601V26
DATE INJECTED 6/21/80
STD ID DFTPP1054 19601V24
CONC. FACTOR -----

SAMPLE ID 80112
LAB ID TRACE #607 & 610
DATE EXTRACTED 6/14/80
DATE INJECTED 6/25/80
STD ID TRACE #609
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	*
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	*
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	132
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	*
44V	methylene chloride	40
45V	methyl chloride	*
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	275
87V	trichloroethylene	*
88V	vinyl chloride	*

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	0.2**
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

7605 Fafrica Way Suite — — California 90701 213 921-3871

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Report No: 11 pg 36 of 39

Sample Number
B0112

*Due to high matrix interference

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	50.2	50.0	100
1-Chloro-2-Bromopropane	VOA	47.7	50.0	95
Toluene - d8	VOA	48.0	50.0	96
2-Fluorophenol	ACID	78	108	72
Phenol - d5	ACID	220	105	209 *
Nitrobenzene - d5	B/N	138	103	133
2-Fluorobiphenyl	B/N	81	110	74

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		2-PROPANONE	VOA#86	968
2.		2-PROPANOL	VOA#101	946
3.		TETRAHYDROFURAN	VOA#131	985
4.		2-METHYL-2-PROPANOL	VOA#139	924
5.		2-BUTANONE	VOA#160	907
6.		2-BUTANOL	VOA#174	953
7.		2-PENTANONE	VOA#242	936
8.		4-METHYL-2-PENTANONE	VOA#303	954
9.		2-HEXANOL	VOA#320	915
10.		UNKNOWN	VOA#371	NO GOOD FITS
11.		PROPANOIC ACID	ACID#45	950
12.		UNKNOWN	ACID#57	NO GOOD FITS
13.		BUTANOIC ACID	ACID#62	980
14.		2-METHYL-BUTANOIC ACID	ACID#71	965
15.		PENTANOIC ACID	ACID#85	953
16.		2-METHYL-PENTANOIC ACID	ACID#99	961
17.		HEXANOIC ACID	ACID#110	958
18.		UNKNOWN	ACID#141	NO GOOD FITS
19.				
20.				

WCTS WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80113 Blank	SAMPLE ID 80113
LAB ID 19601A16 pg 37 of 39	LAB ID 19601B13
DATE EXTRACTED 6/15/80	DATE EXTRACTED 6/14/80
DATE INJECTED 7/10/80	DATE INJECTED 7/13/80
STD ID DFTPP1069 PHENOL 250A	STD ID DFTPP1073 BNSTD275
CONC FACTOR 1000	CONC FACTOR 1000

Acid Compounds		ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
37A	2-nitrophenol	ND
38A	4-nitrophenol	ND
39A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

Base/Neutral Compounds		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
15B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

Base/Neutral Compounds		ug/l
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	*
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

WEST COAST TECHNICAL SERVICE INC. INDUSTRIAL CATEGORY _____ A

SAMPLE ID 80113 BLANK
LAB ID 19601V28 pg 38 of 39
DATE INJECTED 6/21/80
STD ID DFTPP1054 19601V24
CONC. FACTOR -----

SAMPLE ID 80113
LAB ID TRACE #572
DATE EXTRACTED 6/14/80
DATE INJECTED 6/24/80
STD ID TRACE #571
CONC. FACTOR 100

Volatiles		ug/l
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
17V	[illegible]	[illegible]
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	*
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

Pesticides		ug/l
89P	aldrin	ND
90P	dieldrin	ND
91P	chlordane	ND
92P	4,4'-DDT	ND
93P	4,4'-DDE	ND
94P	4,4'-DDD	ND
95P	alpha-endosulfan	ND
96P	beta-endosulfan	ND
97P	endosulfan sulfate	ND
98P	endrin	ND
99P	endrin aldehyde	ND
100P	heptachlor	ND
101P	heptachlor epoxide	ND
102P	alpha-BHC	ND
103P	beta-BHC	ND
104P	gamma-BHC	ND
105P	delta-BHC	ND
106P	PCB-1242	ND
107P	PCB-1254	ND
108P	PCB-1221	ND
109P	PCB-1232	ND
110P	PCB-1248	ND
111P	PCB-1260	ND
112P	PCB-1016	ND
113P	toxaphene	ND

* = Less than 10 ug/l
(pesticides less than 5 ug/l)
ND = Not detected
** = Not confirmed by GCMS

A

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

QC Report No: 11 pg 39 of 39

Sample Number
80113

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	% Recovery
Benzene - d6	VOA	54.0	50.0	108
1-Chloro-2-Bromopropane	VOA	50.3	50.0	101
Toluene - d8	VOA	52.4	50.0	105
2-Fluorophenol	ACID	61	108	56
Phenol - d5	ACID	46	105	44
Nitrobenzene - d5	B/N	57	103	55
2-Fluorobiphenyl	B/N	95	103	92

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: FIT (specify)
1.		UNKNOWN	B/N#384	NO GOOD FITS
2.		UNKNOWN	B/N#140	NO GOOD FITS
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				

SAMPLE ID	METHOD BLANK
LAB ID	19601A15
DATE EXTRACTED	6/15/80
DATE INJECTED	7/10/80
STD ID	DFTPP1069 PHENOL 250A
CONC FACTOR	1000

SAMPLE ID	METHOD BLANK	
LAB ID	1960184	
DATE EXTRACTED	6/14/80	
DATE INJECTED	7/12/80	
STD ID	DFTPP1073 BNSTD 275	
CONC FACTOR	1000	

	Acid Compounds	ug/l
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	*

	Base/Neutral Compounds	ug/l
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
16B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
29B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl) ether	ND
43B	bis (2-chloroethoxy) methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis (2-ethylhexyl) phthalate	*
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a) anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND
129B	2,3,7,8-tetrachlorodibenzo-p-dioxin	ND

WEST COAST TECHNICAL SERVICE INC.
ORGANICS ANALYSIS DATA SHEET - Page 3

Page 2 of 2

A

Sample Number
METHOD BLANK

A. SURROGATE SPIKE RESULTS

COMPOUND	Fraction	Conc.(ug/l)	(Surrogates only) Spike Added (ug/l)	(Surrogates only) % Recovery
Benzene - d6	VOA	NA	NA	NA
1-Chloro-2-Bromopropane	VOA	NA	NA	NA
Toluene - d8	VOA	NA	NA	NA
2-Fluorophenol	ACID	52	108	48
Phenol - d5	ACID	53	105	50
Nitrobenzene - d5	B/N	31	103	29
2-Fluorobiphenyl	B/N	58	103	56

B. TENTATIVELY IDENTIFIED COMPOUNDS

	CAS #	COMPOUND NAME	FRACTION	% Maximum Score Attained Mass Matching Routine: EIM (specify)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				

COMPILED ANALYSIS REPORT

REPORT DATE 89/07/31

PROJECT NO 829 — MOBILE BAHF PO[illegible] TECHNICAL — PROJECT DATE 89/07/01

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARM	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK		SD OR MSD	QC VALID
J09[illegible]14	89/06/11	1025	1004.0	57807								
					01077	SILVER	UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC	UG/L	TOTAL	23.0000		41.760	
					01012	BERYLLIUM	UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM	UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM	UG/L	TOTAL	15.0000	J	14.200	
					01042	COPPER	UG/L	TOTAL	30.0000		13.500	
					71900	MERCURY	UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD	UG/L	TOTAL	30.0000	J	29.100	
					01067	NICKEL	UG/L	TOTAL	20.0000	J	13.000	
					01097	ANTIMONY	UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM	UG/L	TOTAL	.400000	K	20.000	
					01059	THALLIUM	UG/L	TOTAL	.900000	J	20.000	
					01092	ZINC	UG/L	TOTAL	110.000		9.500	
J09[illegible]23	89/06/11	1255	1004.0	57808								
					01077	SILVER	UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC	UG/L	TOTAL	4.70000		61.700	
					01012	BERYLLIUM	UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM	UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM	UG/L	TOTAL	11.000	J	14.200	
					01042	COPPER	UG/L	TOTAL	30.0000		13.500	
					71900	MERCURY	UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD	UG/L	TOTAL	30.0000	J	29.100	
					01067	NICKEL	UG/L	TOTAL	20.0000	K	13.000	
					01097	ANTIMONY	UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM	UG/L	TOTAL	.400000	J	20.000	
					01059	THALLIUM	UG/L	TOTAL	.900000	J	20.000	
					01092	ZINC	UG/L	TOTAL	110.000		9.500	
J09[illegible]34	89/06/11	1210	1005.0	57809								
					01077	SILVER	UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC	UG/L	TOTAL	14.2000		61.700	
					01012	BERYLLIUM	UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM	UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM	UG/L	TOTAL	13.0000	J	14.200	
					01042	COPPER	UG/L	TOTAL	30.0000		13.500	
					71900	MERCURY	UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD	UG/L	TOTAL	30.0000	J	29.100	
					01067	NICKEL	UG/L	TOTAL	30.0000	J	13.000	
					01097	ANTIMONY	UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM	UG/L	TOTAL	.400000	K	20.000	
					01059	THALLIUM	UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC	UG/L	TOTAL	60.0000		9.500	
J09[illegible]34	89/06/11	0915	1101.0	57810								
					34624	2,4,6-TRICHLOROPHENOL	$ UG/KG	SEDIMENT		U	20.000	
					34455	P-CHLORO-M-CRESOL	$ UG/KG	SEDIMENT		U	20.000	
					34589	2-CHLOROPHENOL	$ UG/KG	SEDIMENT		U	20.000	
					34604	2,4-DICHLOROPHENOL	$ UG/KG	SEDIMENT		U	20.000	
					34609	2,4-DIMETHYLPHENOL	$ UG/KG	SEDIMENT		U	20.000	

PROJECT NO 829 PROJECT NAME PRINCETON DISPOSAL PROJECT DA 80/07/03

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR ASD	QC VALID
				57810	34649	4-NITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34619	2,4-DINITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34660	4,6-DINITRO-O-CRESOL	$	UG/KG	SEDIMENT		U	20.000	
					39081	PENTACHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34695	PHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34208	ACENAPHTHENE	$	UG/KG	SEDIMENT	28.0000		20.000	
					39121	BENZIDENE	$	UG/KG	SEDIMENT		U	20.000	
					34554	1,2,4-TRICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					39701	HEXACHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34197	HEXACHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34276	BIS(2-CHLOROETHYL) ET.	$	UG/KG	SEDIMENT		U	20.000	
					34584	2-CHLORONAPHTHALENE	$	UG/KG	SEDIMENT		U	20.000	
					34539	1,2-DICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34569	1,3-DICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34574	1,4-DICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34634	3,3'-DICHLOROBENZIDENE	$	UG/KG	SEDIMENT		U	20.000	
					34614	2,4-DINITROTOLUENE	$	UG/KG	SEDIMENT		U	20.000	
					34629	2,6-DINITROTOLUENE	$	UG/KG	SEDIMENT		U	20.000	
					34349	1,2-DIPHENYLHYDRAZINE	$	UG/KG	SEDIMENT		U	20.000	
					34379	FLUORANTHENE	$	UG/KG	SEDIMENT	160.000		20.000	
					34644	4-CHLOROPHENYL PHENYL ET.	$	UG/KG	SEDIMENT		U	20.000	
					34639	4-BROMOPHENYL PHENYL ET.	$	UG/KG	SEDIMENT		U	20.000	
					34286	BIS(2-CHLOROISOPROPYL) ETHS	$	UG/KG	SEDIMENT		U	20.000	
					34281	BIS(2-CHLOROETHOXY) METH.	$	UG/KG	SEDIMENT		U	20.000	
					34394	HEXACHLOROBUTADIENE	$	UG/KG	SEDIMENT		U	20.000	
					34389	HEXACHLOROCYCLOPENTADIENE	$	UG/KG	SEDIMENT		U	20.000	
					34411	ISOPHORONE	$	UG/KG	SEDIMENT		U	20.000	
					34445	NAPHTHALENE	$	UG/KG	SEDIMENT		U	20.000	
					34490	NITROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34441	N-NITROSODIMETHYLAMINE	$	UG/KG	SEDIMENT		U	20.000	
					34436	N-NITROSODIPHENYLAMINE	$	UG/KG	SEDIMENT		U	20.000	
					34431	N-NITROSODI-N-PROPYLAMINE	$	UG/KG	SEDIMENT		U	20.000	
					39102	BIS(2-ETHYLHEXYL) PHTHAL.	$	UG/KG	SEDIMENT	2200.00		20.000	
					34295	BUTYL BENZYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					39112	DI-N-BUTYLPHTHALATE	$	UG/KG	SEDIMENT	310.000		20.000	
					34599	DI-N-OCTYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					34319	DIETHYL PHTHALATE	$	UG/KG	SEDIMENT	50.0000		20.000	
					34344	DIMETHYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					34529	1,2-BENZANTHRACENE	$	UG/KG	SEDIMENT		U	20.000	
					34250	BENZO A PYRENE	$	UG/KG	SEDIMENT		U	20.000	
					34233	3,4-BENZOFLUORANTHENE	$	UG/KG	SEDIMENT		U	20.000	
					34245	11,12-BENZOFLUORANTHENE	$	UG/KG	SEDIMENT		U	20.000	
					34323	CHRYSENE	$	UG/KG	SEDIMENT		U	20.000	
					34201	ACENAPHTHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34223	ANTHRACENE	$	UG/KG	SEDIMENT	170.000		20.000	
					34524	1,12-BENZOPERYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34396	FLUORENE	$	UG/KG	SEDIMENT		U	20.000	
					34464	PHENANTHRENE	$	UG/KG	SEDIMENT	170.000		20.000	
					34559	1,2 5,6-DIBENZANTHRACENE	$	UG/KG	SEDIMENT		U	20.000	
					34406	INDENO(1,2,3-C,D) PYRENE	$	UG/KG	SEDIMENT		U	20.000	
					34472	PYRENE	$	UG/KG	SEDIMENT	160.000		20.000	
					34678	TCDD	$	UG/KG	SEDIMENT		U	20.000	
					01078	SILVER	$	MG/KG	SEDIMENT	.800000	J	20.000	

COMPUTED ANALYSIS REPORT — REPORT DATE 90/07/31

PROJECT NO 829 — PROJECT NAME PRIBILOF DISPOSAL — PROJECT DATE 90/07/01

STATION ID	DATE FROM TO	TYPE OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		MD OR PSD	LC VALID
				57810	01003	ARSENIC	S	UG/KG	SEDIMENT	6.10000		20.000	
					01013	BERYLLIUM	S	UG/KG	SEDIMENT	1.00000	J	20.000	
					01028	CADMIUM	S	UG/KG	SEDIMENT	.700000	P	20.000	
					01029	CHROMIUM	S	UG/KG	SEDIMENT	29.0000		20.000	
					01043	COPPER	S	UG/KG	SEDIMENT	230.000		20.000	
					71921	MERCURY	S	UG/KG	SEDIMENT	.500000 -01	R	20.000	
					01052	LEAD	S	UG/KG	SEDIMENT	160.000		20.000	
					01068	NICKEL	S	UG/KG	SEDIMENT	18.0000		20.000	
					01097	ANTIMONY	S	UG/KG	SEDIMENT	6.70000		20.000	
					01148	SELENIUM	S	UG/KG	SEDIMENT	.900000 -01	J	20.000	
					34480	THALLIUM	S	UG/KG	SEDIMENT	.200000	A	20.000	
					01093	ZINC	S	UG/KG	SEDIMENT	460.000		20.000	
					39381	AZURIN	S	UG/KG	SEDIMENT		U	20.000	
					39383	DIELDRIN	S	UG/KG	SEDIMENT		U	20.000	
					39351	CHLORDANE	S	UG/KG	SEDIMENT		U	20.000	
					39301	4,4'-DDT	S	UG/KG	SEDIMENT		U	20.000	
					39321	4,4'-DDE	S	UG/KG	SEDIMENT		U	20.000	
					39311	4,4'-DDD	S	UG/KG	SEDIMENT		U	20.000	
					34364	ALPHA ENDOSULFAN	S	UG/KG	SEDIMENT		U	20.000	
					34359	BETA ENDOSULFAN	S	UG/KG	SEDIMENT		U	20.000	
					34354	ENDOSULFAN SULFATE	S	UG/KG	SEDIMENT		U	20.000	
					34391	ENDRIN	S	UG/KG	SEDIMENT		U	20.000	
					34167	ENDRIN ALDEHYDE	S	UG/KG	SEDIMENT		U	20.000	
					39413	HEPTACLOR	S	UG/KG	SEDIMENT		U	20.000	
					39421	HEPTACHLOR EPOXIDE	S	UG/KG	SEDIMENT		U	20.000	
					39076	ALPHA-BHC	S	UG/KG	SEDIMENT		U	20.000	
					34257	BETA-BHC	S	UG/KG	SEDIMENT		U	20.000	
					34267	GAMMA-BHC	S	UG/KG	SEDIMENT		U	20.000	
					34262	DELTA-BHC	S	UG/KG	SEDIMENT		U	20.000	
					39492	PCB-1242	S	UG/KG	SEDIMENT		U	20.000	
					39507	PCB-1254	S	UG/KG	SEDIMENT		U	20.000	
					39491	PCB-1221	S	UG/KG	SEDIMENT		U	20.000	
					39495	PCB-1232	S	UG/KG	SEDIMENT		U	20.000	
					39503	PCB-1248	S	UG/KG	SEDIMENT		U	20.000	
					39511	PCB-1260	S	UG/KG	SEDIMENT		U	20.000	
					39514	PCB-1016	S	UG/KG	SEDIMENT		U	20.000	
					39411	TOXAPHENE	S	UG/KG	SEDIMENT		U	20.000	
					34237	BENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34299	CARBON TETRACHLORIDE	S	UG/KG	SEDIMENT		U	20.000	
					34304	CHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34536	1,2-DICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34509	1,1,1-TRICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34429	1,1-DICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34514	1,1,2-TRICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34519	1,1,2,2-TETRACHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34314	CHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34278	BIS(CHLOROMETHYL) ETHER	S	UG/KG	SEDIMENT		U	20.000	
					34579	2-CHLOROETHYL VINYL ETHER	S	UG/KG	SEDIMENT		U	20.000	
					34418	CHLOROFORM	S	UG/KG	SEDIMENT		U	20.000	
					34504	1,1-DICHLOROETHYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34549	1,2-TRANS DICHLOROETHYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34544	1,2-DICHLOROPROPANE	S	UG/KG	SEDIMENT		U	20.000	
					34564	1,3-DICHLOROPROPENE	S	UG/KG	SEDIMENT		U	20.000	

COMPLETED ANALYSIS REPORT

REPORT DATE 80/07/31

PROJECT NO 829 PROJECT N[redacted] PRINCETON DISPOSAL PROJECT DAT[redacted]/07/03

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR RSD	QC VALUE
				57810	34374	ETHYLBENZENE	$	UG/KG	SEDIMENT	1.80000		20.000	
					34426	METHYLENE CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34421	METHYL CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34416	METHYL BROMIDE	$	UG/KG	SEDIMENT		U	20.000	
					34290	BROMOFORM	$	UG/KG	SEDIMENT		U	20.000	
					34330	DICHLOROBROMOMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34491	TRICHLOROFLUOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34334	DICHLORODIFLUOROMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34309	CHLORODIBROMOMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34478	TETRACHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34483	TOLUENE	$	UG/KG	SEDIMENT		U	20.000	
					34487	TRICHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34495	VINYL CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34213	ACROLEIN	$	UG/KG	SEDIMENT		U	20.000	
					34218	ACRYLONITRILE	$	UG/KG	SEDIMENT		U	20.000	
J0000018234	80/06/11	0900	3301.0	57811									
					01077	SILVER		UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC		UG/L	TOTAL	1.00000	J	61.700	
					01012	BERYLLIUM		UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM		UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM		UG/L	TOTAL	10.0000	J	14.200	
					01042	COPPER		UG/L	TOTAL	10.0000	J	13.500	
					71900	MERCURY		UG/L	TOTAL	1.20000		23.900	
					01051	LEAD		UG/L	TOTAL	10.0000	J	29.100	
					01067	NICKEL		UG/L	TOTAL	30.0000	J	13.000	
					01097	ANTIMONY		UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM		UG/L	TOTAL	22.0000		20.000	
					01059	THALLIUM		UG/L	TOTAL	28.0000		20.000	
					01092	ZINC		UG/L	TOTAL	99.0000		9.500	
J0000018234	80/06/12	1215	3001.0	57812									
					01077	SILVER		UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC		UG/L	TOTAL	8.60000		61.700	
					01012	BERYLLIUM		UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM		UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM		UG/L	TOTAL	20.0000		14.200	
					01042	COPPER		UG/L	TOTAL	340.000		13.500	
					71900	MERCURY		UG/L	TOTAL	5.00000		23.900	
					01051	LEAD		UG/L	TOTAL	30.0000	J	29.100	
					01067	NICKEL		UG/L	TOTAL	30.0000	J	13.000	
					01097	ANTIMONY		UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM		UG/L	TOTAL	27.0000		20.000	
					01059	THALLIUM		UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC		UG/L	TOTAL	540.000		9.500	
J0000018234	80/06/12	1519	3002.0	57813									
					01077	SILVER		UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC		UG/L	TOTAL	29.0000		61.700	
					01012	BERYLLIUM		UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM		UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM		UG/L	TOTAL	30.0000	J	14.200	
					01042	COPPER		UG/L	TOTAL	62.0000		13.500	

COMPUTED ANALYSIS REPORT — REPORT DATE 90/07/31

PROJECT NO 829 — PROJECT NAME PRINCETON DISPOSAL — PROJECT DATE 90/07/31

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARM	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK		SD OR RSD	UC VALID
				57813	71900	MERCURY	UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD	UG/L	TOTAL	260.000		29.100	
					01067	NICKEL	UG/L	TOTAL	20.6000	K	13.000	
					01097	ANTIMONY	UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM	UG/L	TOTAL	.800000	K	20.000	
					01059	THALLIUM	UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC	UG/L	TOTAL	620.000		9.600	
J00001B734	90/06/12	1020	1006.0	57814								
					01077	SILVER	UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC	UG/L	TOTAL	1.00000	J	61.700	
					01012	BERYLLIUM	UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM	UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM	UG/L	TOTAL	10.0000	J	14.200	
					01042	COPPER	UG/L	TOTAL	240.000		13.500	
					71900	MERCURY	UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD	UG/L	TOTAL	210.000		29.100	
					01067	NICKEL	UG/L	TOTAL	100.000		13.000	
					01097	ANTIMONY	UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM	UG/L	TOTAL	14.0000		20.000	
					01059	THALLIUM	UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC	UG/L	TOTAL	160.000		9.600	
J00001B734	90/06/12	1612	1007.0	57815								
					01077	SILVER	UG/L	TOTAL	10.0000		20.000	
					01002	ARSENIC	UG/L	TOTAL	22.0000		61.700	
					01012	BERYLLIUM	UG/L	TOTAL	10.0000		20.000	
					01027	CADMIUM	UG/L	TOTAL	9.00000		21.400	
					01034	CHROMIUM	UG/L	TOTAL	10.0000		14.200	
					01042	COPPER	UG/L	TOTAL	75.0000		13.500	
					71900	MERCURY	UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD	UG/L	TOTAL	400.000		29.100	
					01067	NICKEL	UG/L	TOTAL	40.0000	J	13.000	
					01097	ANTIMONY	UG/L	TOTAL	1.00000	J	20.000	
					01147	SELENIUM	UG/L	TOTAL	.500000	K	20.000	
					01059	THALLIUM	UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC	UG/L	TOTAL	250.000		9.600	
J00001B734	90/06/12	0918	1601.0	57816								
					01077	SILVER	UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC	UG/L	TOTAL	11.0000		61.700	
					01012	BERYLLIUM	UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM	UG/L	TOTAL	9.00000	K	21.400	
					01034	CHROMIUM	UG/L	TOTAL	57.0000		14.200	
					01042	COPPER	UG/L	TOTAL	18.0000		13.500	
					71900	MERCURY	UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD	UG/L	TOTAL	150.000		29.100	
					01067	NICKEL	UG/L	TOTAL	50.0000	J	13.000	
					01097	ANTIMONY	UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM	UG/L	TOTAL	.800000	K	20.000	
					01059	THALLIUM	UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC	UG/L	TOTAL	620.000		9.600	
J00001B734	90/06/12	0943	1602.0	57817								

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01077 SILVER UG/L TOTAL 10.0000 K 30.000

COMPLETED ANALYSIS REPORT — REPORT DATE 80/07/31

PROJECT NO 029 — PROJECT NAME PRINCETON DISPOSAL — PROJECT DATE 80/07/03

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LAB NO	PARM NO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE	REMARK	SD OR RSD	QC VALID
				57817	01002	ARSENIC		UG/L	TOTAL	14.0000		61.700	
					01012	BERYLLIUM		UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM		UG/L	TOTAL	10.0000	J	21.400	
					01034	CHROMIUM		UG/L	TOTAL	180.000		14.2[illegible]	
					01042	COPPER		UG/L	TOTAL	210.000		13.500	
					71900	MERCURY		UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD		UG/L	TOTAL	720.000		29.100	
					01067	NICKEL		UG/L	TOTAL	920.000		11.0[illegible]	
					01097	ANTIMONY		UG/L	TOTAL	1.00000	J	20.000	
					01147	SELENIUM		UG/L	TOTAL	2.00000		20.000	
					01059	THALLIUM		UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC		UG/L	TOTAL	[illegible]		9.5[illegible]	
JCOGOIP234	80/06/12	0953	4102.0	57818									
					34624	2,4,6-TRICHLOROPHENOL	S	UG/KG	SEDIMENT		U	20.000	
					34455	P-CHLORO-M-CRESOL	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34589	2-CHLOROPHENOL	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34604	2,4-DICHLOROPHENOL	S	UG/KG	SEDIMENT		U	20.000	
					34609	2,4-DIMETHYLPHENOL	S	UG/KG	SEDIMENT		U	20.000	
					34594	2-NITROPHENOL	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34649	4-NITROPHENOL	S	UG/KG	SEDIMENT		U	20.000	
					34619	2,4-DINITROPHENOL	S	UG/KG	SEDIMENT		U	20.000	
					34660	4,6-DINITRO-O-CRESOL	S	UG/KG	SEDIMENT		U	20.000	
					39061	PENTACHLOROPHENOL	S	UG/KG	SEDIMENT		U	20.000	
					34695	PHENOL	S	UG/KG	SEDIMENT		U	20.000	
					34208	ACENAPHTHENE	S	UG/KG	SEDIMENT		U	20.000	
					39121	BENZIDINE	S	UG/KG	SEDIMENT		U	20.000	
					34554	1,2,4-TRICHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					39701	HEXACHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34399	HEXACHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34276	BIS(2-CHLOROETHYL) ET.	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34584	2-CHLORONAPHTHALENE	S	UG/KG	SEDIMENT		U	20.000	
					34539	1,2-DICHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34569	1,3-DICHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34574	1,4-DICHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34634	3,3'-DICHLOROBENZIDINE	S	UG/KG	SEDIMENT		U	20.000	
					34614	2,4-DINITROTOLUENE	S	UG/KG	SEDIMENT		U	20.000	
					34629	2,6-DINITROTOLUENE	S	UG/KG	SEDIMENT		U	20.000	
					34349	1,2-DIPHENYLHYDRAZINE	S	UG/KG	SEDIMENT		U	20.000	
					34379	FLUORANTHENE	S	UG/KG	SEDIMENT	6.70000		20.000	
					34644	4-CHLOROPHENYL PHENYL ET.	S	UG/KG	SEDIMENT		U	20.000	
					34639	4-BROMOPHENYL PHENYL ET.	S	UG/KG	SEDIMENT		U	20.000	
					34286	BIS(2-CHLOROISOPROPYL) ETHS	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34281	BIS(2-CHLOROETHOXY) [illegible]	S	UG/KG	SEDIMENT		U	20.000	
					34394	HEXACHLOROBUTADIENE	S	UG/KG	SEDIMENT		U	20.000	
					34389	HEXACHLOROCYCLOPENTADIENE	S	UG/KG	SEDIMENT		U	20.000	
					34411	ISOPHORONE	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34445	NAPHTHALENE	S	UG/KG	SEDIMENT		U	20.000	
					34450	NITROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34441	N-NITROSODIMETHYLAMINE	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34436	N-NITROSODIPHENYLAMINE	S	UG/KG	SEDIMENT		U	20.0[illegible]	
					34431	N-NITROSODI-N-PROPYLAMINE	S	UG/KG	SEDIMENT		U	20.[illegible]	
					39102	BIS(2-ETHYLHEXYL) PHTHAL.	S	UG/KG	SEDIMENT	210.000		20.[illegible]	

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PROJECT NO 829 PROJECT NAME [redacted] DISPOSAL PROJECT DATE [redacted]/01

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR PSD	QC VALID
				57818	34295	BUTYL BENZYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					39112	DI-N-BUTYLPHTHALATE	$	UG/KG	SEDIMENT	160.000		20.000	
					34599	DI-N-OCTYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					34339	DIETHYL PHTHALATE	$	UG/KG	SEDIMENT	68.0000		20.000	
					34344	DIMETHYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					34529	1,2-BENZANTHRACENE	$	UG/KG	SEDIMENT		U	20.000	
					34250	BENZO A PYRENE	$	UG/KG	SEDIMENT		U	20.000	
					34233	3,4-BENZOFLUORANTHENE	$	UG/KG	SEDIMENT		U	20.000	
					34245	11,12-BENZOFLUORANTHENE	$	UG/KG	SEDIMENT		U	20.000	
					34321	CHRYSENE	$	UG/KG	SEDIMENT		U	20.000	
					34203	ACENAPHTHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34223	ANTHRACENE	$	UG/KG	SEDIMENT	13.0000		20.000	
					34524	1,12-BENZOPERYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34384	FLUORENE	$	UG/KG	SEDIMENT		U	20.000	
					34464	PHENANTHRENE	$	UG/KG	SEDIMENT	13.0000		20.000	
					34559	1,2 5,6-DIBENZANTHRACENE	$	UG/KG	SEDIMENT		U	20.000	
					34406	INDENO(1,2,3-C,D) PYRENE	$	UG/KG	SEDIMENT		U	20.000	
					34472	PYRENE	$	UG/KG	SEDIMENT	5.20000		20.000	
					34675	TCDD	$	UG/KG	SEDIMENT		U	20.000	
					01078	SILVER	$	MG/KG	SEDIMENT	.400000	K	20.000	
					01003	ARSENIC	$	MG/KG	SEDIMENT	6.00000		20.000	
					01013	BERYLLIUM	$	MG/KG	SEDIMENT	.900000	K	20.000	
					01028	CADMIUM	$	MG/KG	SEDIMENT	.700000	K	20.000	
					01029	CHROMIUM	$	MG/KG	SEDIMENT	11.0000		20.000	
					01043	COPPER	$	MG/KG	SEDIMENT	8.80000		20.000	
					71921	MERCURY	$	MG/KG	SEDIMENT	.500000E-01	K	20.000	
					01052	LEAD	$	MG/KG	SEDIMENT	12.0000		20.000	
					01068	NICKEL	$	MG/KG	SEDIMENT	1.00000	J	20.000	
					01098	ANTIMONY	$	MG/KG	SEDIMENT	.300000	K	20.000	
					01148	SELENIUM	$	MG/KG	SEDIMENT	.200000E-01	J	20.000	
					34480	THALLIUM	$	MG/KG	SEDIMENT	.200000	K	20.000	
					01093	ZINC	$	MG/KG	SEDIMENT	150.000		20.000	
					39333	ALDRIN	$	UG/KG	SEDIMENT		U	20.000	
					34383	DIELDRIN	$	UG/KG	SEDIMENT		U	20.000	
					39351	CHLORDANE	$	UG/KG	SEDIMENT		U	20.000	
					39301	4,4'-DDT	$	UG/KG	SEDIMENT		U	20.000	
					39321	4,4'-DDE	$	UG/KG	SEDIMENT		U	20.000	
					39311	4,4'-DDD	$	UG/KG	SEDIMENT		U	20.000	
					34364	ALPHA ENDOSULFAN	$	UG/KG	SEDIMENT		U	20.000	
					34359	BETA ENDOSULFAN	$	UG/KG	SEDIMENT		U	20.000	
					34354	ENDOSULFAN SULFATE	$	UG/KG	SEDIMENT		U	20.000	
					39393	ENDRIN	$	UG/KG	SEDIMENT		U	20.000	
					34369	ENDRIN ALDEHYDE	$	UG/KG	SEDIMENT		U	20.000	
					39413	HEPTACLOR	$	UG/KG	SEDIMENT		U	20.000	
					39423	HEPTACHLOR EPOXIDE	$	UG/KG	SEDIMENT		U	20.000	
					39078	ALPHA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					34257	BETA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					34261	GAMA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					34262	DELTA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					39499	PCB-1242	$	UG/KG	SEDIMENT		U	20.000	
					39507	PCB-1254	$	UG/KG	SEDIMENT		U	20.000	
					39491	PCB-1221	$	UG/KG	SEDIMENT		U	20.000	
					39495	PCB-1232	$	UG/KG	SEDIMENT		U	20.000	

COMPLETED ANALYSIS REPORT — REPORT DATE 80/07/11

PROJECT NO 829 — PROJECT NAME PRINCETON DISPOSAL — PROJECT DATE 80/07/01

STATION ID	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR MSD	QC VALID
				97818	39503	PCB-1248	S	UG/KG	SEDIMENT		U	20.000	
					39511	PCB-1260	S	UG/KG	SEDIMENT		U	20.000	
					39514	PCB-1016	S	UG/KG	SEDIMENT		U	20.000	
					39403	TOXAPHENE	S	UG/KG	SEDIMENT		U	20.000	
					34237	BENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34299	CARBON TETRACHLORIDE	S	UG/KG	SEDIMENT		U	20.000	
					34304	CHLOROBENZENE	S	UG/KG	SEDIMENT	7.60000		20.000	
					34334	1,2-DICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34509	1,1,1-TRICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34499	1,1-DICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34514	1,1,2-TRICHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34519	1,1,2,2-TETRACHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34314	CHLOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34271	BISCHLOROMETHYL ETHER	S	UG/KG	SEDIMENT		U	20.000	
					34579	2-CHLOROETHYL VINYL ETHER	S	UG/KG	SEDIMENT		U	20.000	
					34311	CHLOROFORM	S	UG/KG	SEDIMENT		U	20.000	
					34504	1,1-DICHLOROETHYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34549	1,2-TRANS DICHLOROETHYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34544	1,2-DICHLOROPROPANE	S	UG/KG	SEDIMENT		U	20.000	
					34564	1,3-DICHLOROPROPYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34374	ETHYLBENZENE	S	UG/KG	SEDIMENT	9.30000		20.000	
					34426	METHYLENE CHLORIDE	S	UG/KG	SEDIMENT		U	20.000	
					34421	METHYL CHLORIDE	S	UG/KG	SEDIMENT		U	20.000	
					34416	METHYL BROMIDE	S	UG/KG	SEDIMENT		U	20.000	
					34200	BROMOFORM	S	UG/KG	SEDIMENT		U	20.000	
					34330	DICHLORODIFLUOROMETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34491	TRICHLOROFLUOROMETHANE	S	UG/KG	SEDIMENT	13.0000		20.000	
					34334	DICHLORODIFLUOROETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34301	CHLORODIBROMOMETHANE	S	UG/KG	SEDIMENT		U	20.000	
					34475	TETRACHLOROETHYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34483	TOLUENE	S	UG/KG	SEDIMENT	130.000		20.000	
					34477	TRICHLOROETHYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34405	VINYL CHLORIDE	S	UG/KG	SEDIMENT		U	20.000	
					34215	ACROLEIN	S	UG/KG	SEDIMENT		U	20.000	
					34210	ACRYLONITRILE	S	UG/KG	SEDIMENT		U	20.000	
300:01P234	80/06/12	1153	1639.0	97819									
					01077	SILVER		UG/L	TOTAL	10.0000	A	20.000	
					01002	ARSENIC		UG/L	TOTAL	12.0000		61.700	
					01012	BERYLLIUM		UG/L	TOTAL	10.3900	K	20.000	
					01027	CADMIUM		UG/L	TOTAL	10.0000	J	21.400	
					01034	CHROMIUM		UG/L	TOTAL	55.0000		14.200	
					01042	COPPER		UG/L	TOTAL	81.0000		13.500	
					71900	MERCURY		UG/L	TOTAL	.200000	K	23.450	
					01051	LEAD		UG/L	TOTAL	300.000		29.100	
					01067	NICKEL		UG/L	TOTAL	179.000		13.000	
					01097	ANTIMONY		UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM		UG/L	TOTAL	20.000		20.000	
					01059	THALLIUM		UG/L	TOTAL	.400000	K	20.000	
					01092	ZINC		UG/L	TOTAL	870.000		9.500	
300:01P[redacted]	80/06/12	1153	1639.0	97820									
					34624	2,4,6-TRICH[redacted]PHENOL	S	UG/KG	SEDIMENT		U	[redacted].00	

COMPLETED ANALYSIS REPORT — REPORT DATE 80/07/31

PROJECT NO 829 — PROJECT NAME PRINCETON DISPOSAL — PROJECT DATE 80/07/03

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR RSD	QC VALID
				57020	34455	P-CHLORO-M-CRESOL	$	UG/KG	SEDIMENT		U	20.000	
					34589	2-CHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34604	2,4-DICHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34609	2,4-DIMETHYLPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34594	2-NITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34649	4-NITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34619	2,4-DINITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34660	4,6-DINITRO-O-CRESOL	$	UG/KG	SEDIMENT		U	20.000	
					39061	PENTACHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34695	PHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34208	ACENAPHTHENE	$	UG/KG	SEDIMENT	30.0000		20.000	
					39121	BENZIDENE	$	UG/KG	SEDIMENT		U	20.000	
					34554	1,2,4-TRICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					39701	HEXACHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34399	HEXACHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34276	BIS(2-CHLOROETHYL) ET.	$	UG/KG	SEDIMENT		U	20.000	
					34584	2-CHLORONAPHTHALENE	$	UG/KG	SEDIMENT		U	20.000	
					34539	1,2-DICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34569	1,3-DICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34574	1,4-DICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34634	3,3'-DICHLOROBENZIDENE	$	UG/KG	SEDIMENT		U	20.000	
					34614	2,4-DINITROTOLUENE	$	UG/KG	SEDIMENT		U	20.000	
					34629	2,6-DINITROTOLUENE	$	UG/KG	SEDIMENT		U	20.000	
					34349	1,2-DIPHENYLHYDRAZINE	$	UG/KG	SEDIMENT		U	20.000	
					34379	FLUORANTHENE	$	UG/KG	SEDIMENT	330.000		20.000	
					34644	4-CHLOROPHENYL PHENYL ET.	$	UG/KG	SEDIMENT		U	20.000	
					34639	4-BROMOPHENYL PHENYL ET.	$	UG/KG	SEDIMENT		U	20.000	
					34286	BIS(2-CHLOROISOPROPYL) ETHE	$	UG/KG	SEDIMENT		U	20.000	
					34281	BIS(2-CHLOROETHOXY) METH.	$	UG/KG	SEDIMENT		U	20.000	
					34394	HEXACHLOROBUTADIENE	$	UG/KG	SEDIMENT		U	20.000	
					34389	HEXACHLOROCYCLOPENTADIENE	$	UG/KG	SEDIMENT		U	20.000	
					34411	ISOPHORONE	$	UG/KG	SEDIMENT		U	20.000	
					34445	NAPHTHALENE	$	UG/KG	SEDIMENT	55.0000		20.000	
					34450	NITROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34441	N-NITROSODIMETHYLAMINE	$	UG/KG	SEDIMENT		U	20.000	
					34416	N-NITROSODIPHENYLAMINE	$	UG/KG	SEDIMENT		U	20.000	
					34431	N-NITROSODI-N-PROPYLAMINE	$	UG/KG	SEDIMENT		U	20.000	
					39102	BIS(2-ETHYLHEXYL) PHTHAL.	$	UG/KG	SEDIMENT	4900.00		20.000	
					34295	BUTYL BENZYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					39112	DI-N-BUTYLPHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					34599	DI-N-OCTYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					34339	DIETHYL PHTHALATE	$	UG/KG	SEDIMENT	190.000		20.000	
					34144	DIMETHYL PHTHALATE	$	UG/KG	SEDIMENT		U	20.000	
					34529	1,2-BENZANTHRACENE	$	UG/KG	SEDIMENT	280.000		20.000	
					34250	BENZO A PYRENE	$	UG/KG	SEDIMENT		U	20.000	
					34233	3,4-BENZOFLUORANTHENE	$	UG/KG	SEDIMENT		U	20.000	
					34245	11,12-BENZOFLUORANTHENE	$	UG/KG	SEDIMENT		U	20.000	
					34323	CHRYSENE	$	UG/KG	SEDIMENT	280.000		20.000	
					34201	ACENAPHTHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34223	ANTHRACENE	$	UG/KG	SEDIMENT	600.000		20.000	
					34524	1,12-BENZOPERYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34384	FLUORENE	$	UG/KG	SEDIMENT	120.000		20.000	
					34464	PHENANTHRENE	$	UG/KG	SEDIMENT	600.000		20.000	

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE	E	REMARK	SD OR RSD	QC VALID
				57820	34559	1,2,5,6-DIBENZANTHRACENE	S	UG/KG	SEDIMENT			U	20.000	
					34406	INDENO(1,2,3-C,D) PYRENE	S	UG/KG	SEDIMENT			U	20.000	
					34472	PYRENE	S	UG/KG	SEDIMENT	270.000			20.000	
					34478	ICDD	S	UG/KG	SEDIMENT			U	20.000	
					01078	SILVER	S	MG/KG	SEDIMENT	.400000		K	20.000	
					01013	ARSENIC	S	MG/KG	SEDIMENT	7.10000			20.000	
					01013	BERYLLIUM	S	MG/KG	SEDIMENT	.900000		K	20.000	
					01026	CADMIUM	S	MG/KG	SEDIMENT	.700000		K	20.000	
					01029	CHROMIUM	S	MG/KG	SEDIMENT	30.3000			20.000	
					01043	COPPER	S	MG/KG	SEDIMENT	39.2000			20.000	
					71921	MERCURY	S	MG/KG	SEDIMENT	.500000 -01		K	20.000	
					01052	LEAD	S	MG/KG	SEDIMENT	70.0000			20.000	
					01068	NICKEL	S	MG/KG	SEDIMENT	19.6000			20.000	
					01094	ANTIMONY	S	MG/KG	SEDIMENT	.400000		J	20.000	
					01148	SELENIUM	S	MG/KG	SEDIMENT	.140000			20.000	
					34480	THALLIUM	S	MG/KG	SEDIMENT	.200000		K	20.000	
					01093	ZINC	S	MG/KG	SEDIMENT	93.0000			20.000	
					39333	ALDRIN	S	UG/KG	SEDIMENT			U	20.000	
					39381	DIELDRIN	S	UG/KG	SEDIMENT			U	20.000	
					39351	CHLORDANE	S	UG/KG	SEDIMENT			U	20.000	
					39301	4,4'-DDT	S	UG/KG	SEDIMENT			U	20.000	
					39321	4,4'-DDE	S	UG/KG	SEDIMENT			U	20.000	
					39311	4,4'-DDD	S	UG/KG	SEDIMENT			U	20.000	
					34364	ALPHA ENDOSULFAN	S	UG/KG	SEDIMENT			U	20.000	
					34359	BETA ENDOSULFAN	S	UG/KG	SEDIMENT			U	20.000	
					34354	ENDOSULFAN SULFATE	S	UG/KG	SEDIMENT			U	20.000	
					39393	ENDRIN	S	UG/KG	SEDIMENT			U	20.000	
					34169	ENDRIN ALDEHYDE	S	UG/KG	SEDIMENT			U	20.000	
					39413	HEPTACLOR	S	UG/KG	SEDIMENT			U	20.000	
					39423	HEPTACLOR EPOXIDE	S	UG/KG	SEDIMENT			U	20.000	
					39076	ALPHA-BHC	S	UG/KG	SEDIMENT			U	20.000	
					34257	BETA-BHC	S	UG/KG	SEDIMENT			U	20.000	
					34267	GAMA-BHC	S	UG/KG	SEDIMENT			U	20.000	
					34262	DELTA-BHC	S	UG/KG	SEDIMENT			U	20.000	
					39499	PCB-1242	S	UG/KG	SEDIMENT			U	20.000	
					39507	PCB-1254	S	UG/KG	SEDIMENT			U	20.000	
					39491	PCB-1221	S	UG/KG	SEDIMENT			U	20.000	
					39495	PCB-1232	S	UG/KG	SEDIMENT			U	20.000	
					39503	PCB-1248	S	UG/KG	SEDIMENT			U	20.000	
					39511	PCB-1260	S	UG/KG	SEDIMENT			U	20.000	
					39514	PCB-1016	S	UG/KG	SEDIMENT			U	20.000	
					39401	TOXAPHENE	S	UG/KG	SEDIMENT			U	20.000	
					34237	BENZENE	S	UG/KG	SEDIMENT			U	20.000	
					34299	CARBON TETRACHLORIDE	S	UG/KG	SEDIMENT			U	20.000	
					34304	CHLOROBENZENE	S	UG/KG	SEDIMENT			U	20.000	
					34534	1,2-DICHLOROETHANE	S	UG/KG	SEDIMENT			U	20.000	
					34509	1,1,1-TRICHLOROETHANE	S	UG/KG	SEDIMENT			U	20.000	
					34499	1,1-DICHLOROETHANE	S	UG/KG	SEDIMENT			U	20.000	
					34514	1,1,2-TRICHLOROETHANE	S	UG/KG	SEDIMENT			U	20.000	
					34519	1,1,2,2-TETRACHLOROETHANE	S	UG/KG	SEDIMENT			U	20.000	
					34314	CHLOROETHANE	S	UG/KG	SEDIMENT			U	20.000	
					34271	BISCHLOROMETHYL ETH.	S	UG/KG	SEDIMENT			U	20.000	
					34279	2-CHLOROETHYL VI ET.	S	UG/KG	SEDIMENT			U	20.000	

COMPLETED ANALYSIS REPORT — REPORT DATE [redacted]

PRO[redacted] NO 829 — PROJECT NAME [redacted]NCETON DISPOSAL — PROJECT DATE [redacted]

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR RSD	QC VALID
				57820	34311	CHLOROFORM	$	UG/KG	SEDIMENT		U	20.000	
					34506	1,1-DICHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34549	1,2-TRANS DICHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34544	1,2-DICHLOROPROPANE	$	UG/KG	SEDIMENT		U	20.000	
					34564	1,3-DICHLOROPROPYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34374	ETHYLBENZENE	$	UG/KG	SEDIMENT	19.0000		20.000	
					34426	METHYLENE CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34421	METHYL CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34416	METHYL BROMIDE	$	UG/KG	SEDIMENT		U	20.000	
					34290	BROMOFORM	$	UG/KG	SEDIMENT		U	20.000	
					34330	DICHLOROBROMOMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34491	TRICHLOROFLUOROMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34334	DICHLORODIFLUOROMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34109	CHLORODIBROMOMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34478	TETRACHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34483	TOLUENE	$	UG/KG	SEDIMENT		U	20.000	
					34487	TRICHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34495	VINYL CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34213	ACROLEIN	$	UG/KG	SEDIMENT		U	20.000	
					34214	ACRYLONITRILE	$	UG/KG	SEDIMENT		U	20.000	
J0000010234	80/06/12	1230	3302.0	57821									
					01077	SILVER		UG/L	TOTAL	10.0000	K	20.000	
					01002	ARSENIC		UG/L	TOTAL	7.80000		61.700	
					01012	BERYLLIUM		UG/L	TOTAL	10.0000	K	20.000	
					01027	CADMIUM		UG/L	TOTAL	10.0000		21.400	
					01034	CHROMIUM		UG/L	TOTAL	40.0000		14.200	
					01042	COPPER		UG/L	TOTAL	41.0000		13.500	
					71900	MERCURY		UG/L	TOTAL	.200000	K	23.900	
					01051	LEAD		UG/L	TOTAL	100.000		29.100	
					01067	NICKEL		UG/L	TOTAL	140.000		13.900	
					01097	ANTIMONY		UG/L	TOTAL	2.00000	K	20.000	
					01147	SELENIUM		UG/L	TOTAL	25.0000		20.000	
					01059	THALLIUM		UG/L	TOTAL	1.00000	J	20.000	
					01092	ZINC		UG/L	TOTAL	600.000		9.500	
J0000010234	80/06/12	1230	3104.0	57822									
					34624	2,4,6-TRICHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34455	P-CHLORO-M-CRESOL	$	UG/KG	SEDIMENT		U	20.000	
					34586	2-CHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34604	2,4-DICHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34609	2,4-DIMETHYLPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34594	2-NITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34649	4-NITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34619	2,4-DINITROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34660	4,6-DINITRO-O-CRESOL	$	UG/KG	SEDIMENT		U	20.000	
					39061	PENTACHLOROPHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34695	PHENOL	$	UG/KG	SEDIMENT		U	20.000	
					34208	ACENAPHTHENE	$	UG/KG	SEDIMENT		U	20.000	
					39121	BENZIDENE	$	UG/KG	SEDIMENT		U	20.000	
					34554	1,2,4-TRICHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					39701	HEXACHLOROBENZENE	$	UG/KG	SEDIMENT		U	20.000	
					34399	HEXACHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	

COMPLETED ANALYSIS REPORT — REPORT DATE 88/07/31

PROJECT NO 829 — PROJECT NAME PRINCETON DISPOSAL — PROJECT DATE 88/07/03

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR RSD	QC VALID
				97822	34276	BIS(2-CHLOROETHYL) ET.	S	UG/KG	SEDIMENT		U	20.000	
					34584	2-CHLORONAPHTHALENE	S	UG/KG	SEDIMENT		U	20.000	
					34539	1,2-DICHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34564	1,3-DICHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34574	1,4-DICHLOROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34634	3,3'-DICHLOROBENZIDENE	S	UG/KG	SEDIMENT		U	20.000	
					34614	2,4-DINITROTOLUENE	S	UG/KG	SEDIMENT		U	20.000	
					34629	2,6-DINITROTOLUENE	S	UG/KG	SEDIMENT		U	20.000	
					34349	1,2-DIPHENYLHYDRAZINE	S	UG/KG	SEDIMENT		U	20.000	
					34379	FLUORANTHENE	S	UG/KG	SEDIMENT		U	20.000	
					34644	4-CHLOROPHENYL PHENYL ET.	S	UG/KG	SEDIMENT		U	20.000	
					34639	4-BROMOPHENYL PHENYL ET.	S	UG/KG	SEDIMENT		U	20.000	
					34286	BIS(2-CHLOROISOPROPYL) ETHS	S	UG/KG	SEDIMENT		U	20.000	
					34281	BIS(2-CHLOROETHOXY) METH.	S	UG/KG	SEDIMENT		U	20.000	
					34394	HEXACHLOROBUTADIENE	S	UG/KG	SEDIMENT		U	20.000	
					34389	HEXACHLOROCYCLOPENTADIENE	S	UG/KG	SEDIMENT		U	20.000	
					34411	ISOPHORONE	S	UG/KG	SEDIMENT		U	20.000	
					34445	NAPHTHALENE	S	UG/KG	SEDIMENT		U	20.000	
					34450	NITROBENZENE	S	UG/KG	SEDIMENT		U	20.000	
					34441	N-NITROSODIMETHYLAMINE	S	UG/KG	SEDIMENT		U	20.000	
					34436	N-NITROSODIPHENYLAMINE	S	UG/KG	SEDIMENT		U	20.000	
					34431	N-NITROSODI-N-PROPYLAMINE	S	UG/KG	SEDIMENT		U	20.000	
					19102	BIS(2-ETHYLHEXYL) PHTHAL.	S	UG/KG	SEDIMENT	100.000		20.000	
					34295	BUTYL BENZYL PHTHALATE	S	UG/KG	SEDIMENT		U	20.000	
					39112	DI-N-BUTYLPHTHALATE	S	UG/KG	SEDIMENT	190.000		20.000	
					34599	DI-N-OCTYL PHTHALATE	S	UG/KG	SEDIMENT		U	20.000	
					34339	DIETHYL PHTHALATE	S	UG/KG	SEDIMENT		U	20.000	
					34344	DIMETHYL PHTHALATE	S	UG/KG	SEDIMENT		U	20.000	
					34529	1,2-BENZANTHRACENE	S	UG/KG	SEDIMENT		U	20.000	
					34250	BENZO A PYRENE	S	UG/KG	SEDIMENT		U	20.000	
					34233	3,4-BENZOFLUORANTHENE	S	UG/KG	SEDIMENT		U	20.000	
					34245	11,12-BENZOFLUORANTHENE	S	UG/KG	SEDIMENT		U	20.000	
					34323	CHRYSENE	S	UG/KG	SEDIMENT		U	20.000	
					34203	ACENAPHTHYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34223	ANTHRACENE	S	UG/KG	SEDIMENT		U	20.000	
					34524	1,12-BENZOPERYLENE	S	UG/KG	SEDIMENT		U	20.000	
					34384	FLUORENE	S	UG/KG	SEDIMENT	23.0000		20.000	
					34464	PHENANTHRENE	S	UG/KG	SEDIMENT	87.0000		20.000	
					34559	1,2,5,6-DIBENZANTHRACENE	S	UG/KG	SEDIMENT		U	20.000	
					34406	INDENO(1,2,3-C,D) PYRENE	S	UG/KG	SEDIMENT		U	20.000	
					34472	PYRENE	S	UG/KG	SEDIMENT		U	20.000	
					14678	TCDD	S	UG/KG	SEDIMENT		U	20.000	
					01078	SILVER	S	MG/KG	SEDIMENT	.400000	K	20.000	
					01003	ARSENIC	S	MG/KG	SEDIMENT	.740000		20.000	
					01013	BERYLLIUM	S	MG/KG	SEDIMENT	.900000	K	20.000	
					01028	CADMIUM	S	MG/KG	SEDIMENT	.700000	K	20.000	
					01029	CHROMIUM	S	MG/KG	SEDIMENT	15.0000		20.000	
					01043	COPPER	S	MG/KG	SEDIMENT	18.0000		20.000	
					71921	MERCURY	S	MG/KG	SEDIMENT	.500000E-01	K	20.000	
					01052	LEAD	S	MG/KG	SEDIMENT	10.0000		20.000	
					01068	NICKEL	S	MG/KG	SEDIMENT	5.00000	J	20.000	
					01098	ANTIMONY	S	MG/KG	SEDIMENT	.300000	K	20.000	
					01148	SELENIUM	S	MG/KG	SEDIMENT	.100000		20.000	

COMPLETED [redacted]SIS REPORT — REPORT DATE [redacted]07/31

PROJECT NO 829 — PROJECT NAME PRINCETON DISPOSAL — PROJECT DATE 80/07/03

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR RSD	QC VALID
				57822	34480	THALLIUM	$	MG/KG	SEDIMENT	.200000	K	20.000	
					01093	ZINC	$	MG/KG	SEDIMENT	36.0000		20.000	
					39333	ALDRIN	$	UG/KG	SEDIMENT		U	20.000	
					39383	DIELDRIN	$	UG/KG	SEDIMENT		U	20.000	
					39351	CHLORDANE	$	UG/KG	SEDIMENT		U	20.000	
					39301	4,4'-DDT	$	UG/KG	SEDIMENT		U	20.000	
					39321	4,4'-DDE	$	UG/KG	SEDIMENT		U	20.000	
					39311	4,4'-DDD	$	UG/KG	SEDIMENT		U	20.000	
					34364	ALPHA ENDOSULFAN	$	UG/KG	SEDIMENT		U	20.000	
					34359	BETA ENDOSULFAN	$	UG/KG	SEDIMENT		U	20.000	
					34354	ENDOSULFAN SULFATE	$	UG/KG	SEDIMENT		U	20.000	
					39393	ENDRIN	$	UG/KG	SEDIMENT		U	20.000	
					34369	ENDRIN ALDEHYDE	$	UG/KG	SEDIMENT		U	20.000	
					39413	HEPTACHLOR	$	UG/KG	SEDIMENT		U	20.000	
					39423	HEPTACHLOR EPOXIDE	$	UG/KG	SEDIMENT		U	20.000	
					39076	ALPHA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					34257	BETA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					34767	GAMA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					34262	DELTA-BHC	$	UG/KG	SEDIMENT		U	20.000	
					39499	PCB-1242	$	UG/KG	SEDIMENT		U	20.000	
					39507	PCB-1254	$	UG/KG	SEDIMENT		U	20.000	
					39491	PCB-1221	$	UG/KG	SEDIMENT		U	20.000	
					39495	PCB-1232	$	UG/KG	SEDIMENT		U	20.000	
					39503	PCB-1248	$	UG/KG	SEDIMENT		U	20.000	
					39511	PCB-1260	$	UG/KG	SEDIMENT		U	20.000	
					39514	PCB-1016	$	UG/KG	SEDIMENT		U	20.000	
					39403	TOXAPHENE	$	UG/KG	SEDIMENT		U	20.000	
					34237	BENZENE	$	UG/KG	SEDIMENT	4.90000		20.000	
					34299	CARBON TETRACHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34304	CHLOROBENZENE	$	UG/KG	SEDIMENT	3.90000		20.000	
					34534	1,2-DICHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34509	1,1,1-TRICHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34499	1,1-DICHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34514	1,1,2-TRICHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34519	1,1,2,2-TETRACHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34314	CHLOROETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34271	BIS(CHLOROMETHYL) ET.	$	UG/KG	SEDIMENT		U	20.000	
					34579	2-CHLOROETHYL VINYL ET.	$	UG/KG	SEDIMENT		U	20.000	
					34318	CHLOROFORM	$	UG/KG	SEDIMENT		U	20.000	
					34534	1,1-DICHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34549	1,2-TRANS DICHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34544	1,2-DICHLOROPROPANE	$	UG/KG	SEDIMENT		U	20.000	
					34564	1,3-DICHLOROPROPYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34374	ETHYLBENZENE	$	UG/KG	SEDIMENT	63.0000		20.000	
					34426	METHYLENE CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34421	METHYL CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34416	METHYL BROMIDE	$	UG/KG	SEDIMENT		U	20.000	
					34270	BROMOFORM	$	UG/KG	SEDIMENT		U	20.000	
					34330	DICHLORODIBROMOMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34491	TRICHLOROFLUOROMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34334	DICHLORODIFLUOROMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34309	CHLORODIBROMOMETHANE	$	UG/KG	SEDIMENT		U	20.000	
					34478	TETRACHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	

COMPLETED ANALYSIS REPORT

REPORT DATE 88/07/31

PROJECT NO 829

PROJECT NAME PRINCETON DISPOSAL

PROJECT DATE 88/07/05

STATION NO	DATE FROM TO	TIME OF DAY	DEPTH	LABNO	PARNO	PARAMETER NAME		UNITS	CHEMISTRY	VALUE & REMARK		SD OR RSD	QC VALID
				57022	34481	ETHYLENE	$	UG/KG	SEDIMENT	14.0000		20.000	
					34487	TRICHLOROETHYLENE	$	UG/KG	SEDIMENT		U	20.000	
					34495	VINYL CHLORIDE	$	UG/KG	SEDIMENT		U	20.000	
					34213	ACROLEIN	$	UG/KG	SEDIMENT		U	20.000	
					34210	ACRYLONITRILE	$	UG/KG	SEDIMENT		U	20.000	