Revision 1

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HYDROGEOLOGIC INVESTIGATION REPORT

FLEETWIDE ASSESSMENT
LaSALLE GENERATING STATION
MARSEILLES, ILLINOIS

Prepared For:
Exelon Generation Company, LLC

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TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES
(Following Text)

LIST OF TABLES
(Following Text)

LIST OF APPENDICES

EXECUTIVE SUMMARY

This Hydrogeologic Investigation Report (HIR) documents the results of Conestoga-Rovers & Associates' (CRA's) May 2006 Hydrogeologic Investigation Work Plan (Work Plan) pertaining to the LaSalle County Station. CRA prepared this Hydrogeologic Investigation Report for Exelon Generation Company, LLC (Exelon) as part of its Fleetwide Program to determine whether groundwater at and in the vicinity of its nuclear power generating facilities has been adversely impacted by any releases of radionuclides.

CRA collected and analyzed information on historical releases, the structures, components, and areas of the Station that have the potential to release tritium or other radioactive liquids to the environment and past hydrogeologic investigations at the Station. CRA used this information, combined with its understanding of groundwater flow at the Station to identify the Areas for Further Evaluation (AFEs) and sample locations for the Station.

CRA installed 13 new monitoring wells and five temporary sample points. CRA collected 20 groundwater samples and six surface water samples at the Station. CRA also collected a full round of water levels from the newly installed and existing wells and measured surface water levels. All groundwater and surface water samples were analyzed for tritium, strontium-89/90, and gamma-emitting radionuclides.

The results of the hydrogeologic investigation are as follows:

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective Lower Limits of Detection (LLDs) in any of the groundwater or surface water samples obtained and analyzed during the course of this investigation;
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 picoCuries per liter (pCi/L) in any of the groundwater or surface water samples obtained and analyzed during the course of this investigation;
- Tritium was not detected at concentrations greater than the United States Environmental Protection Agency drinking water standard of 20,000 pCi/L in any of the groundwater or surface water samples obtained during the course of this investigation;
- Low levels of tritium were detected at concentrations greater than the LLD of 200 pCi/L, which is considered background, but well below the applicable drinking water standard;

- Tritium was detected in a sample from one groundwater monitoring well (MW-LS-105S at 1,280 ± 184 pCi/L). The presence of tritium at this location was verified through re-sampling. Tritium was detected in the second groundwater sample from MW-LS-105S at 766 ± 153 pCi/L. The source of tritium in monitoring well MW-LS-105S is most likely from a historical release associated with the Cycled Condensate Storage Tank overflow in 2001. Samples obtained from adjacent monitoring wells and surface water locations revealed no detectable tritium levels. The tritium detected in MW-LS-105S is localized to the area of that well;
- Tritium was also detected in two surface water samples (SW-LS-101 and SW-LS-106 at 232 ± 116 pCi/L and 219 ± 113 pCi/L, respectively). SW-LS-106 was collected from the Intake Canal and SW-LS-101 was collected from the north storm water retention pond. The remaining surface water locations have tritium concentrations of less than the lower limit of detection (200 pCi/L). These detections are likely due to background surface water concentrations, since the Station pumps over 80 million gallons per day of Illinois River water into LaSalle Lake (surface water concentrations from the Illinois River range from non-detect at the lower limit of detection of 200 pCi/L to a high of 1,682 pCi/L);
- Based on the results of this investigation, tritium is not migrating off the Station property at detectable concentrations;
- Based on the results of this investigation, there is no current risk from exposure to radionuclides associated with licensed plant operations through any of the identified potential exposure pathways; and
- Based on the results of this investigation, there are no known active releases into the groundwater at the Station.

Based upon the information collected to date, CRA recommends that Exelon conduct periodic monitoring of selected sample locations.

1.0 INTRODUCTION

Conestoga-Rovers and Associates (CRA) prepared this Hydrogeologic Investigation Report (HIR) for Exelon Generation Company, LLC (Exelon) as part of its Fleetwide Program to determine whether groundwater at and near its nuclear power generating facilities has been adversely impacted by any release of radionuclides. This report documents the results of CRA's May 2006 Hydrogeologic Investigation Work Plan (Work Plan) as well as an additional investigative task recommended by CRA during the course of the investigation. These investigations pertain to Exelon's LaSalle County Generating Station (Station) in Marseilles, Illinois (see Figure 1.1). The Station is defined as all property, structures, systems, and components owned and operated by Exelon, LLC located at 2601 North 21st Road in rural Brookfield Township, LaSalle County, Marseilles, Illinois. The approximate property boundaries are depicted on Figure 1.2.

Pursuant to the Work Plan, CRA assessed groundwater quality at the Station in locations designated as Areas for Further Evaluation (AFEs). The process by which CRA identified AFEs is discussed in Section 3.0 of this report.

The objectives of the Work Plan were to:

- characterize the geologic and hydrogeologic conditions at the Station including subsurface soil types, the presence or absence of confining layers, and the direction and rate of groundwater flow;
- characterize the groundwater/surface water interaction at the Station, including a determination of the surface water flow regime;
- evaluate groundwater quality at the Station including the vertical and horizontal extent, quantity, concentrations, and potential sources of tritium and other radionuclides in the groundwater, if any;
- define the probable sources of any radionuclides released at the Station;
- evaluate potential human, ecological, or environmental receptors of any radionuclides that might have been released to the groundwater; and
- evaluate whether interim response activities are warranted.

2.0 STATION DESCRIPTION

The following section presents a general summary of the Station location and definition, overview of Station operations, surrounding land use, and an overview of both regional and Station-specific topography, surface water features, geology, hydrogeology, and groundwater flow conditions. This section also presents an overview of groundwater use in the area.

2.1 STATION LOCATION

The Station consists of approximately 3,055 acres, of which approximately 7 acres are used for generating electricity. The remaining 2,981 acres of property encompass an approximate 2,058-acre cooling lake (LaSalle Lake) and the land associated with the blowdown and make-up water pipelines.

This report uses the following definitions:

- PA - the PA is the area contained within the perimeter fencing where the generating facilities, warehouses, training center, switchyard and other critical Station features are located; and
- Site - the Site includes the PA and the area immediately surrounding the PA within the perimeter vehicle barrier. The Site is approximately 7 acres.

2.2 OVERVIEW OF COOLING WATER OPERATIONS

The Station operates two boiling water reactors, design Type 5 (BWR-5) units manufactured by General Electric. The BWR-5 units are each capable of generating a net electrical output of 1,140 megawatts. Construction of the Station structures commenced in 1974 and both reactor units began commercial operation in 1984. The Station operates the two BWR-5 reactor units to generate power under Nuclear Regulatory Commission (NRC) Operating License Nos. NPF-11 and NPF-18, respectively. In addition to operating the two BWR-5 reactor units under the NRC licenses, the Station discharges wastewater and non-contact cooling water via eleven outfalls under its Illinois National Pollutant Discharge Elimination System (NPDES) Permit (IL 0048151).

The Station's BWR-5 Reactor Cooling Water System consists of two separate loops. Each loop is designed to avoid mixing the fluids of one loop with the fluids of another. The loops are called the primary loop and the secondary loop.

The primary loop transfers the energy generated from fission in the fuel to the turbine to produce electricity. It is a closed-loop system. A byproduct of the nuclear fission is heat. After passing through the steam turbines and transferring the kinetic energy of the steam to the turbine to produce electricity, the steam then passes into the Main Condenser. In the Main Condenser, the remaining heat energy of the steam is transferred to the Circulating Water System changing the steam back into water. The condensate water is then circulated back to the reactor core to start the cycle over again through the Feed Water Pumps.

The main purpose of the secondary loop cooling water is to cool the other side of the Main Condenser, cooling the primary loop steam and transferring the heat to the environment. Cooling water is pumped from the unlined Intake Canal from LaSalle Lake to the Main Condenser. After passing through the Main Condenser, the heated cooling water is then discharged back to LaSalle Lake through the Circulating Water (CW) Discharge Pipe. The CW discharges into the unlined Discharge Canal. The Discharge Canal is located on the west side of the Site and flows in a clockwise direction around the Site back to LaSalle Lake. There are two "baffle" berms located within LaSalle Lake to increase the flow pathway through the lake and increase the heat removal process. In addition, make-up water is pumped into LaSalle Lake from the Illinois River while blowdown water is gravity-discharged from LaSalle Lake back to the Illinois River.

The blowdown and make-up water lines aid in reducing the dissolved mineral concentration in the lake water, which increase due to evaporation and aids in the dissipating of heat energy. Make-up water to the lake is pumped from the Illinois River at a rate of approximately 55,800 gallons per minute (gpm) while blowdown water from LaSalle Lake is discharged back to the Illinois River at a rate of approximately 32,980 gpm. The Illinois River is approximately 5 miles to the north of the Station. The combination of the make-up and blowdown lines from the Illinois River along with the movement of water from LaSalle Lake through the Main Condenser and back into LaSalle Lake constitute the secondary loop.

In addition to the primary and secondary loops, there are a number of support systems, such as the Residual Heat Removal (RHR) heat exchangers, the High Pressure Core Spray (HPCS), the Low Pressure Core Spray (LPCS), and the Suppression Pool which are independent of the primary and secondary loops. The RHR Heat Exchangers remove decay heat and excess heat from the Suppression Pool. LaSalle Lake water is pumped through the RHR Heat Exchangers and discharged back to LaSalle Lake also through the Core Standby Cooling System (CSCS). The HPCS, LPCS and the

Suppression Pool use purified water that is generated through the Station's Demineralizer Systems.

Liquid radiological waste is processed through the Station's Demineralizer Systems prior to being discharged to the blowdown line. Discharge was previously completed on a batch process at a maximum flow rate of 45 gpm, dependant upon dilution calculations, under the authority of the Station's NPDES Permit and NRC Operating Licenses. The Station policy since December 2000 is not to discharge radioactively contaminated fluid into the Radwaste discharge pipe that feeds into the blowdown line.

2.3 SURROUNDING LAND USE

The land surrounding the Station to the north, east, west, and south is rural with farmland and wooded areas encompassing the greatest portion of the area immediately surrounding the Station. The blowdown and make-up pipelines are on an irregularly shaped narrow portion of land that extends northward from the Site to the Illinois River (Figure 1.2). To the east of this portion of land there are rural farms and residences. To the west of this portion of land there are also farms and residences along with the Marseilles State Fish and Wildlife Area and the Illinois National Guard Training Area. The closest town, Seneca, has a population of approximately 2,000 people and is located approximately 4 miles to the north-northeast of the Site (Figure 1.2).

2.4 STATION SETTING

The following sections present a summary of the topography, surface water features, geology, hydrogeology, and groundwater flow conditions in the region surrounding the Station. The information was primarily gathered from Sections 2.4 and 2.5 of the LaSalle Station Updated Final Safety Analysis Report (UFSAR) Revision 15 dated April 2004. The main references UFSAR relies on are listed in Section 10.0 of this HIR. CRA checked and verified all UFSAR references that apply to this HIR.

2.4.1 TOPOGRAPHY AND SURFACE WATER FEATURES

The Station's location is presented on the LaSalle Mosaic, Illinois 7.5-minute United States Geological Service (USGS) topographic quadrangle map (see Figure 1.1). The LaSalle Mosaic is comprised of the USGS topographic quadrangle maps Marseilles-1994,

Ransom-1983, Kinsman-1983, and Seneca-1970; Photorevised 1980. The topography of the region is predominately flat farmland with little relief.

The topography at the Station is generally flat with a gentle slope to the west-southwest, while within the PA the land is generally flat and covered by paved areas, roadways, and parking lots. Further northward from the Site, along the Illinois River, topographic relief is much more pronounced, with a mixture of gently rolling areas, gradual and deep ravines and flatland. Moving northward from the Station to the Illinois River, the elevation changes abruptly at about 4,000 feet from the River, where it descends rapidly to the River valley. The plains of the River valley, in the area of the blowdown/make-up pipelines lie at an elevation of approximately 500 feet above mean sea level (AMSL) (Figure 1.1).

The predominant surface water features in the area of the Station are LaSalle Lake, the Station's storm water retention ponds and the Illinois River. LaSalle Lake is an unlined man-made lake lying immediately east of the Station covering an area of approximately 2,058 acres. The Lake was constructed to function as the cooling lake for the Station. The Lake varies in depth ranging from only a few feet in some areas to over 80 feet deep in other areas with an average depth of approximately 15 feet (UFSAR, Rev. 15, 2004).

The storm water retention ponds are located on the west side of the Station and receive storm water runoff from the PA. Storm water runoff from the PA is drained by a storm water system of surface ditches and underground piping, which discharge to an oil/water separator at the west side of the PA prior to entering the retention ponds. The cooling water discharge canal separates the two storm water retention ponds. The retention ponds discharge through a weir located at the northwest corner of the ponds into the cooling water discharge canal that is connected to LaSalle Lake located to the east of the Site.

The Illinois River is located approximately 5 miles north of the Station. The confluence of the Kankakee and Des Plaines Rivers, approximately 40 miles northwest of the Station near Joliet, Illinois forms the Illinois River. It flows west across northern Illinois at a rate of 12,600 cubic feet per second, eventually turning southwest and joining the Mississippi River near Grafton, Illinois. It is approximately 273 miles long and receives water from a 40,000 square mile drainage basin in central Illinois. The primary uses for the Illinois River are for transportation of bulk goods, recreation, sport fishing, and as a source of potable water (The Nature Conservancy, 2006).

2.4.2 GEOLOGY

LaSalle Station is located at the northern border of the Illinois Basin on the eastern flank of the LaSalle Anticlinal Belt, approximately 5 miles south of the Illinois River. Regional soil deposits in the Uplands portion of LaSalle Station consist predominantly of 120 to 200 feet or more of Pleistocene till resting on Pennsylvanian bedrock. Near the Illinois River valley, soil deposits consist of valley fill of the Ticona and Kempton Buried Bedrock Valleys (UFSAR, Rev. 15, 2004; Visocky et al., 1985).

The Station is between two minor folds at the northwest end of the LaSalle Anticlinal Belt, the Ransom Syncline and the Odell Anticline. Soil at the Site is generally Holocene to Wisconsinan in age, with minor amounts of Illinoian, Kansan, and pre-Kansan sediments reported in the area. Holocene sediments at the Site are primarily alluvium and colluvium along the Illinois River Valley ranging from less than 5 feet to approximately 25 feet in thickness. The Wisconsinan sediments are primarily glacial till (Wedron) and outwash deposits with minor amounts of loess, lacustrine, and ice-contact deposits, as well as some terrace gravels along the Illinois River (Visocky et al., 1985). Figure 2.1 provides a geologic cross-section for the region.

Excavation activities completed during the construction of LaSalle Station confirmed that the Site is entirely within the Yorkville Till Member of the Wedron Formation (Wedron Clay Till). Borings indicated scattered occurrences of small sand and gravel pockets through the Wedron Clay Till (UFSAR, Rev. 15, 2004).

The bedrock units at the Site include nearly flat-lying Pennsylvanian cyclotherm sequences (limestones, shales, sandstones, coals) unconformably overlying Ordovician limestones, shales, dolomites, and sandstones. These units are part of very gently dipping (less than 1 degree), broad folds related to the LaSalle Anticlinal Belt. The Pennsylvanian Carbondale Formation beneath is exposed in narrow strips along the bluffs of the Illinois River (William and Frye, 1970). Refer to Figures 2.2 and 2.3 for the relationships between the units.

2.4.3 HYDROGEOLOGY

At the Station's River Screen house, located approximately 4 miles north of the Site, the alluvial aquifer extends along the Illinois River and is bounded on the north by the River and on the south by the valley walls. The alluvial aquifer near the river screen house ranges in width from 3,500 to 4,800 feet. It is generally composed of two layers. The upper layer is alluvium and consists of silty clay or clayey silt overlain with organic

material. The lower layer is glacial outwash and consists of silty sand, gravelly sand, and sand and gravel mixtures. The thickness of the alluvial aquifer ranges from 0.9 to 37 feet, becoming thicker to the east with an average thickness of 16.7 feet. This aquifer recharges by direct infiltration of precipitation and by inflow from the Illinois River. Groundwater discharge is directly to the river and to the underlying Pennsylvanian bedrock by slow seepage (Schicht et al., 1976, UFSAR, Rev. 15, 2004).

The glacial drift aquitard at the Station is composed of relatively impermeable Wedron Formation silty clay or clay tills with discontinuous pockets of well-graded sand and gravel. The Wedron Clay Till ranges in thickness from 0 foot at the bedrock outcrops along the Illinois River Valley to over 200 feet in the upland portion of the Station (Figure 2.2). The Wedron Clay Till underlies the Site and continues northward along the blowdown/make-up water pipelines until reaching the Illinois River Valley where it has been removed through erosion. The discontinuous pockets of well-graded sand and gravel within the Wedron Clay Till contain groundwater, and groundwater occurs predominantly under water table conditions, but occasionally as artesian conditions. The permeable zones are recharged by slow infiltration of precipitation through the tills, while discharge is controlled under gravity flow into nearby river or stream valleys, underlying bedrock, to glaciofluvial deposits of the buried bedrock valley aquifers, or to pumping wells. The glacial drift aquitard at the Station is also recharged through seepage from LaSalle Lake, the Station intake and discharge canals, the storm water retention ponds as well as groundwater beneath the Station lying on top of the Wedron Formation (Arnold et al., 1999; UFSAR, Rev. 15, 2004).

The underlying Pennsylvanian aquitard consists of alternating beds of shale, siltstone, underclay, sandstone, limestone, coal, and many gradational units. Beneath the Station, the Pennsylvanian aquitard is approximately 180 feet in thickness and groundwater occurs under artesian conditions. Recharge to the Pennsylvanian aquitard is through seepage through the overlying shales and glacial drift (Figure 2.3) (Visocky et al., 1985).

Underlying the Pennsylvanian aquitard is the Cambrian-Ordovician Aquifer. The Cambrian-Ordovician Aquifer consists of various stratigraphic units of dolomite, limestone, and sandstone. Public groundwater use within 10 miles of the Station is obtained primarily from the lower Cambrian-Ordovician Aquifer (Visocky et al., 1985).

The buried bedrock valley aquifers consist of sand and gravel fill within valleys cut into the Pennsylvanian bedrock, mainly the east-west trending Ticona Bedrock Valley. Recharge is primarily by seepage through the overlying clayey Wedron Clay Tills (Schicht et al., 1976).

2.5 AREA GROUNDWATER USE

Water supplies for the municipalities of Seneca (4 miles northeast of the Station), Kinsman (6 miles southeast of the Station), Marseilles (6 miles northwest of the Station) and Illinois State Park (5 miles northwest of the Station) are taken directly from the Cambrian-Ordivician Aquifer. The municipality of Ransom (6 miles south of the Station) withdraws groundwater from both the Pennsylvanian aquitard and the Cambrian-Ordivician Aquifer. Grand Ridge (9 miles west of the Station) is the only municipality within 10 miles of the Station that withdraws groundwater from the glaciofluvial deposits of the buried Ticona Bedrock Valley. Residents of the surrounding rural areas and smaller communities not served by these public water supplies obtain groundwater from individual wells in the glacial drift, Pennsylvanian aquitard, glaciofluvial deposits of the buried Ticona Bedrock Valley, and the upper portions of the Cambrian-Ordivician Aquifer (UFSAR, Rev. 15, 2004).

The alluvial aquifer is generally less than 25 feet in thickness and is recharged through direct infiltration of precipitation and recharge from the Illinois River. The average pumping rate of the alluvial aquifer is 5,680 gpm (UFSAR, Rev. 15, 2004).

The glacial drift aquitard, which is in the Wedron Clay Till, is present throughout the regional area and ranges in thickness from 0 foot near the bedrock outcrops of the Illinois River valley to over 200 feet thick near the Station. The glacial drift aquitard consists predominantly of silty clay tills. LaSalle Station and the Site are underlain by the glacial drift aquitard. Typical permeabilities are 1.0×10^{-07} centimeters per second (cm/sec). Well yields from the glacial drift aquitard range between 2.5 gpm and 15 gpm (UFSAR, Rev. 15, 2004).

The glacial drift aquitard is underlain by Pennsylvanian bedrock composed of siltstone, shale, sandstone, clay, limestone, and coal. The Pennsylvanian strata may locally yield up to 20 gpm from the interbedded sandstones. Beneath the Pennsylvanian bedrock is the Cambrian-Ordovician aquifer, which is composed of a number of dolomite, limestone and sandstone strata. Water supply wells completed in this aquifer are at depths of over 400 feet below ground surface (bgs) and typically produce over 700 gpm. The Station's deep Well No. 1 and Well No. 2 are completed in the Ironton-Galesville Sandstone at a depth of approximately 1,600 feet bgs (Visocky et al., 1985: UFSAR, Rev. 15, 2004).

CRA requested a search of the Illinois Department of Natural Resources State Water Survey (IDNR SWS, 2006) and the Illinois State Geological Survey (ISGS, 2006) database

to identify wells within a 1-mile radius of the property line of the Station. As a result of the database search, 506 domestic, commercial and industrial wells were identified within a 2-mile distance from the Station property boundary. Figure 2.4 depicts the approximate location of the water wells identified in the database search. Information obtained from the IDNR SWS and ISGS database is in Appendix A along with a summary table of the information.

Residences located within an approximate 1-mile radius of the Station use groundwater for potable water supplies as well as irrigation and consumption by livestock. The wells are constructed in the overburden and bedrock and range in depth from approximately 10 feet bgs to over 1,600 feet bgs. The wells identified in the water well reports have not been field verified and it is expected, based on the dates of installation for some of the wells, that many of the wells listed have been abandoned.

3.0 AREAS FOR FURTHER EVALUATION

CRA considered all Station operations in assessing groundwater quality at the Station. During this process, CRA identified areas at the Station that warranted further evaluation or "AFEs". This section discusses the process by which AFEs were selected.

CRA's identification of AFEs involved the following components:

- Station inspection on March 22 and 23, 2006;
- interviews with Station personnel;
- evaluation of Station systems;
- investigation of confirmed and unconfirmed releases of radionuclides; and
- review of previous Station investigations.

CRA analyzed the information collected from these components combined with information obtained from CRA's study of hydrogeologic conditions at the Station to identify those areas where groundwater potentially could be impacted from operations at the Station.

CRA then designed an investigation to determine whether any confirmed or potential releases or any other release of radionuclides adversely affected groundwater. This entailed evaluating whether existing Station groundwater monitoring systems were sufficient to assess the groundwater quality at the AFEs. If the systems were not sufficient to adequately investigate groundwater quality associated with any AFE, additional monitoring wells were installed by CRA.

The following sections describe the above considerations and the identification of AFEs. The results of CRA's investigation are discussed in Section 5.0.

3.1 SYSTEMS EVALUATIONS

Exelon launched an initiative to systematically assess the structures, systems and components that store, use, or convey potentially radioactively contaminated liquids. Maps depicting each of these systems were developed and provided to CRA for review. The locations of these systems are presented on Figures 3.1 and 3.2. The Station identified a total of 22 systems that contain or could contain potentially radioactively contaminated liquids. The following presents a list of these systems.

System Identification	*Description*
CSCS	Core Standby Cooling System
CW	Circulating Water
CY	Cycled Condensate Storage
DL	Laundry Drain Collector Sump
DR	Radwaste Building Floor Drains and Sump
DT	Units 1 and 2 Fire Sumps
HD	Feedwater Heater Drain Pumps
HPCS	High Pressure Core Spray
LAS	Surface Water Discharges
LPCS	Low Pressure Core Spray
MISC	Miscellaneous Releases
OG	Off-gas Building
RE	Reactor Building Equipment Drains
RF	Reactor Building Floor Drains
RH	Residual Heat Removal
RI	Reactor Core Isolation Cooling
ST/TW/STORM WATER	Sewage Treatment, Wastewater Treatment, Storm Water System
TE	Turbine Building Equipment Drains
TF	Turbine Building Floor Drain Sumps
TW	Wastewater Clarifiers
WE/WF/WX/WY/WZ	Equipment Drain Reprocessing Radwaste
WL	Blowdown and Make-up Pipelines

After these systems were identified, Exelon developed a list of the various structures, components and areas of the systems (e.g., piping, tanks, process equipment) that handle or could potentially handle any radioactively contaminated liquids. The structures, components, and areas may include:

- aboveground storage tanks;
- condensate vents;
- areas where confirmed or potential historical releases, spills or accidental discharges may have occurred;
- pipes;
- pools;
- sumps;
- surface water bodies (i.e., basins, pits, ponds, or lagoons);

- trenches;
- underground storage tanks; and
- vaults.

The Station then individually evaluated the various system components to determine the potential for any release of radioactively contaminated liquid to enter the environment. Each structure or identified component was evaluated against the following seven primary criteria:

- location of the component (i.e., basement or second floor of building);
- component construction material (i.e., stainless steel or steel tanks);
- construction methodologies (i.e., welded or mechanical pipe joints);
- concentration of radioactively contaminated liquid stored or conveyed;
- amount of radioactively contaminated liquid stored or conveyed;
- existing controls (i.e., containment and detection); and
- maintenance history.

System components, which were located inside a building or that otherwise had some form of secondary containment, such that a release of radioactively contaminated liquid would not be discharged directly to the environment, were eliminated from further evaluation. System components that are not located within buildings or did not have some other form of secondary containment were retained for further qualitative evaluation of the risk of a release of a radioactively contaminated liquid to the environment and the potential magnitude of any release.

Exelon's risk evaluation took into consideration factors such as:

- the potential concentration of radionuclides;
- the volume of liquid stored or managed;
- the probabilities of the systems actually containing radioactively contaminated liquid; and
- the potential for a release of radioactively contaminated liquid from the system component.

These factors were then used to rank the systems and system components according to the risk for a potential release of a radioactively contaminated liquid to the environment.

The evaluation process resulted in the identification of structures, components, and areas to be considered for further evaluation.

3.2 HISTORICAL RELEASES

CRA also reviewed information concerning confirmed or potential historical releases of radionuclides at the Station, including reports and documents previously prepared by Exelon and compiled for CRA's review. CRA evaluated this information in identifying the AFEs. Any historical releases identified during the course of this assessment that may have a current impact on Station conditions are further discussed in Section 3.4.

3.3 STATION INVESTIGATIONS

CRA considered previous Station investigations in the process of selecting the AFEs for the Station. This section presents a summary of the pre-operational radiological environmental monitoring program (pre-operational REMP), past Station investigations, and the radiological environmental monitoring program.

3.3.1 PRE-OPERATIONAL RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

A pre-operational REMP was conducted to establish background radioactivity levels prior to operation of the Station. The environmental media sampled and analyzed during the pre-operational REMP were surface water, rainwater, drinking water, direct radiation, air particulate, sediment, and vegetation and animal products. The results of the monitoring were detailed in the report entitled "Environmental Radiological Monitoring for LaSalle County Nuclear Power Station, Commonwealth Edison Company, Annual Report, 1981", March 1982.

Atmospheric radiation monitoring consisted of gas and air particulate radioactivity measurements. Gross beta radioactivity in air particulate samples collected from 14 locations ranged from 0.01 picoCuries/cubic meter (pCi/m^3) to 0.61 pCi/m^3 with an average of 0.11 pCi/m^3.

Results of gamma isotopic analyses of quarterly composite of air particulate filters from each sampling location indicated the absence of any gamma-emitters above the detection limit of the program of 0.01 pCi/m^3.

Surface water samples were collected from eight locations along the Illinois River, at Marseilles, Ottawa, Seneca, as well as Kickapoo Creek, the Illinois Nitrogen Corporation raw water, the Recreational Area Cooling Lake and the LaSalle County Station (LSCS) intake and discharge pipes. Samples were analyzed for gross beta, gamma-emitters, tritium, and strontium-89/90. None of the composite samples indicated the presence of other than naturally occurring gamma-emitters at a lower limit of detection (LLD) of 10 picoCuries/liter (pCi/L). No samples contained strontium-89/90 at a LLD of 10 pCi/L. Tritium concentrations were variable ranging from <200 pCi/L to 350 pCi/L. The gross beta analytical results in surface water samples were <10 pCi/L.

Drinking water samples were collected from an LSCS on-Site well and the following off-Site wells: Marseilles Well, Seneca Well, Ransom Well, Ottawa Well, and Illinois State Park Well. Gross beta analysis was performed on all samples. Gamma isotopic, radioactive strontium, and tritium analyses were conducted on the quarterly samples from the area wells and on a quarterly composite of monthly samples from the on-Site well. No unusual results were observed in analyses performed. However, several of the area wells had gross beta concentrations higher than that of nearby surface water. Samples taken which contained higher beta concentrations are indicative of the presence of slightly elevated concentrations of naturally occurring radionuclides in groundwater. Tritium concentrations in drinking water were variable, within the range of less than 200 pCi/L to 350 pCi/L. Gross beta analytical results in drinking water ranged from less than the LLD (1.6 pCi/L) to 22 pCi/L. In summary, the pre-operational REMP analytical results from samples collected from surface water and drinking water wells indicate that tritium was detected in both surface water and drinking water samples prior to Station operation.

Samples of precipitation were collected from four local farms on a monthly basis. All samples were analyzed for gross beta concentrations, and quarterly composites of monthly samples are analyzed for gamma-emitters, radioactive strontium, and tritium. No unusual findings were made except for the presence of strontium-89/90 in the composites for the second quarter. Presence of this isotope in the precipitation is attributable to the fallout from the nuclear test conducted on October 16, 1980 by the Peoples Republic of China.

3.3.2 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

The REMP at the Station was initiated in 1982. The REMP includes the collection of multi-media samples including air, surface water, groundwater, fish, sediment, and vegetation. The samples are analyzed for beta and gamma-emitting radionuclides, tritium, iodine-131, and/or strontium as established in the procedures developed for the REMP. The samples are collected at established locations, identified as stations, so that trends in the data can be monitored.

An annual report is prepared providing a description of the activities performed and the results of the analysis of the samples collected from the various media. The latest report generated was prepared by Station personnel and is entitled "LaSalle County Station, Units 1 and 2 - Annual Radiological Environmental Operating Report – 1 January Through 31 December 2005", May 2006. This report concluded that the operation of the Station had no adverse radiological impact on the environment. The annual report is submitted to the NRC.

As part of REMP, two surface water samples are collected weekly at two locations described as "Illinois River at Seneca, Upstream (control)" and "Illinois River, Downstream (indicator)" which have a location identification number in the REMP report as L-21 and L-40, respectively. Surface water data from 2005, indicate tritium sample concentration results range from less than the LLD (200 pCi/L) to 943 pCi/L. The 943 pCi/L tritium concentration was detected in the surface water sample from location L-21 while it should also be noted that the sample from location L-40 had a tritium concentration of 821 pCi/L during the same sampling event.

Drinking water samples are collected at two locations described as "LSCS (LaSalle County Station) Onsite Well (indicator)" and "Marseilles Well (indicator)" which have a location identification number in the REMP report as L-27 and L-28, respectively. Drinking water tritium sample concentration results were all less than the LLD (200 pCi/L).

3.3.3 HISTORIC INVESTIGATIONS

This section summarizes investigations undertaken at the Station prior to this hydrogeologic investigation, related to actual or potential releases of radioactively contaminated liquids to the subsurface.

3.3.3.1 POWER PLANT DOCUMENTS-UFSAR REPORT

During the construction of the Station, a series of comprehensive investigations of regional and local geology, surface water, and groundwater conditions were conducted. These studies were performed for a number of purposes including geotechnical evaluations of the underlying geologic deposits, present and future sources of groundwater, present and future groundwater use, and other engineering and environmental purposes. These studies are documented in the UFSAR, Rev. 15, 2004.

3.3.3.2 GROUNDWATER TRITIUM MONITORING PROGRAM

Data exists for groundwater samples from four existing monitoring wells located in the area east and southeast of the Reactor Building. These monitoring wells were installed in response to the Units 1 and 2 HPCS CY line rupture in 1985. The Station collected monthly groundwater samples and analyzed them for tritium between January 1986 and September 1987. The highest detected tritium concentration within a groundwater well was approximately 11,000 pCi/L (HP-7). In addition to collecting water samples from four groundwater monitoring wells, the Station also collected groundwater samples from a drawdown borehole that was located approximately 40 feet west of well location HP-7. The drawdown borehole was installed to manage groundwater while repair activities to the HPCS lines were being completed. The highest detected tritium concentration from this drawdown borehole was 148,100 pCi/L. During the last sample collection event for the groundwater monitoring wells in 1987, one groundwater sample contained tritium at a concentration of 490 pCi/L (HP-7) while the other three wells were non-detect at the LLD. In addition to the installation of the four groundwater monitoring wells, the Station also installed several boreholes (HP-1, HP-3, HP-4, HP-6, HP-8, and HP-9) and collected soil samples for radionuclide analysis. A review of the historical data associated with the sampling of the HP-wells indicates a decreasing tritium trend from a high of 11,000 pCi/L (HP-7) to non-detect at the LLD (200 pCi/L). For the drawdown borehole sample (identified as "caisson discharge composite"), the tritium decreased from an initial high concentration of 148,100 pCi/L to a low concentration of 5,740 pCi/L. No radionuclides were detected above their respective LLD in these samples. No stratigraphic or well construction information for the HP boreholes and wells was available for review. The wells HP-2, HP-5, HP-7, and HP-10 were sampled as part of the HIR investigation to evaluate the current condition of groundwater quality in this area of the historical Units 1 and 2 HPCS line ruptures. The results of the sampling are discussed further throughout Section 5.0.

3.3.3.3 BLOWDOWN LINE INVESTIGATION

In the spring of 2006, Station personnel collected discrete water samples from the vacuum breaker locations along the blowdown line where standing water was present. A total of 16 out of 17 vacuum breakers (valve pit locations) had standing water present. A water sample was collected and analyzed for tritium. All samples were non-detect with the exception of one sample collected from vacuum breaker valve pit #7, which had a tritium concentration of 274 ± 129 pCi/L. The sample was re-analyzed using the distillation process resulting in a tritium concentration of less than the LLD of 200 pCi/L. This information was used in developing the AFEs associated with blowdown line.

3.4 IDENTIFIED AREAS FOR FURTHER EVALUATION

CRA used the information presented in the above sections along with its understanding of the hydrogeology at the Station to identify AFEs, which were a primary consideration in the development of the scope of work in the Work Plan. The establishment of AFEs is a standard planning practice in hydrogeologic investigations to focus the investigation activities at areas where there is the greatest potential for impact to groundwater.

Specifically, AFEs were identified based on these six considerations:

- systems evaluations;
- risk evaluations;
- review of confirmed and/or potential releases;
- review of documents;
- review of the hydrogeologic conditions; and
- Station inspection completed on March 22 and 23, 2006.

Prior to CRA completing its analysis and determination of AFEs, Station personnel completed an exhaustive review of all historic and current management of systems that may contain potentially radioactively contaminated liquids.

CRA reviewed the systems identified by the Station, which have the potential for the release of radioactively contaminated liquids to the environment, and groundwater flow at the Station. This evaluation allowed CRA to become familiar with Station operations and potential systems that may impact groundwater. CRA then evaluated information

concerning historic releases as provided by the Station. This information, along with a review of the results from historic investigations, was used to refine CRA's understanding of areas likely to have the highest possibility of impacting groundwater. Where at risk systems or identified historical releases were located in close proximity or were located in areas which could not be evaluated separately, the systems and historical releases were combined into a single AFE. At times, during the Station investigation, separate AFEs were combined into one or were otherwise altered based on additional information and consideration.

Finally, CRA used its understanding of known hydrogeologic conditions (prior to this investigation) to identify AFEs. Groundwater flow was an important factor in deciding whether to combine systems or historical releases into a single AFE or create separate AFEs. For example, groundwater beneath several systems that contain radioactively contaminated liquids that flows toward a common discharge point were likely combined into a single AFE.

Based upon its review of information concerning confirmed or potential historical releases, historic investigations, and the systems at the Station that have the potential for release of radioactively contaminated liquids to the environment combined with its understanding of groundwater flow at the Station, CRA has identified the following as the AFEs (see Figures 3.1 and 3.2).

<u>AFE-LaSalle-1: High Pressure Core Spray (HPCS)/Reactor Core Isolation (RI) Systems</u>

This area was identified as an AFE in order to investigate any residual contamination related to previous releases of tritiated water.

<u>AFE-LaSalle-2: Reactor/Turbine/Radwaste Sumps</u>

This area was identified to evaluate the quality of groundwater in the area around the Reactor, Turbine and Radwaste Buildings. This AFE was established based on information regarding the storage, handling, and potential for releases from sumps within these buildings.

<u>AFE-LaSalle-3: Cycled Condensate (CY) System</u>

In September 2001, the Unit 2 Cycled Condensate (CY) System storage tank overflowed. No active remediation activities were completed relative to this AFE.

Blowdown Line AFEs (4 through 6)

AFEs LaSalle 4, 5, and 6, were established based on information regarding historical releases in this area.

AFE-LaSalle-4: Blowdown Line Vacuum Breaker 3A&B

This area was identified as an AFE in order to investigate any residual contamination related to previous releases of tritiated water.

AFE-LaSalle-5: Blowdown Line Vacuum Breaker 15A&B

This area was identified as an AFE in order to investigate any residual contamination related to previous releases of tritiated water.

AFE-LaSalle-6: Blowdown Line Vacuum Breaker 16B

This area was identified as an AFE in order to investigate any residual contamination related to previous releases of tritiated water.

AFE-LaSalle-7: Radwaste Discharge Line

This area was established as an AFE in order to evaluate and determine whether a tritium release to the environment had occurred during the operation of the Radwaste line. The Station has not discharged Radwaste through this line since December 2000. Based on discussions with Station personnel and the level of tritium concentrations contained within water that was discharged through this line, further evaluation for the potential release of radioactively contaminated liquids was warranted.

4.0 FIELD METHODS

The field investigations completed for this HIR were completed in May and July 2006. CRA supervised the installation of monitoring wells and staff gauges, collected samples from the newly-installed and existing monitoring wells, and collected samples from surface water locations. The field investigations were completed in accordance with the methodologies presented in the Work Plan (CRA, 2006).

4.1 STAFF GAUGES INSTALLATION

Figure 4.1 presents the location of the four new staff gauges installed on July 6, 2006 as part of this investigation. CRA installed staff gauges at four locations (SG-LS-101 to 104) within the intake canal, the discharge canal, the north storm water retention pond, and the south storm water retention pond perimeter ditch in a manner appropriate with the depth and flow velocity of these surface water bodies to maintain the staff gauges in a stable position.

4.2 GROUNDWATER MONITORING WELL INSTALLATION

Prior to completing any ground penetration activities, CRA completed subsurface utility clearance procedures to minimize the potential of injury to workers and/or damage to subsurface utility structures. The subsurface clearance procedures consisted of completing an electronic survey within a minimum of 10-foot radius of the proposed location utilizing electromagnetic and ground penetrating radar technology. Additionally, an air knife was utilized to verify utilities were not present at the proposed location to a depth to 10 feet bgs.

Thirteen new monitoring wells were installed at the Station as part of the fleetwide hydrogeologic investigations. Monitoring well construction logs are provided in Appendix B. Figure 4.1 presents the location of 13 new monitoring wells (MW-LS-101S through MW-LS-113S). These locations were selected based on a review of all data provided, the hydrogeology at the Station, and current understanding of identified AFEs. Table 4.1 summarizes the well completion details. With the exception of MW-LS-110S, the remaining new wells were installed within and adjacent to the PA (four new wells within the PA and eight new wells outside the perimeter of the PA). Well MW-LS-110S was installed adjacent to vacuum breaker 16B (AFE-LaSalle-6), which is located approximately 4 miles north of the Station in the Illinois River Valley. Due to

its distance from the Site, this location was not used for determination of Site groundwater flow direction.

Specific installation protocols for the shallow monitoring wells are described below:

- the borehole was advanced to the target depth using 4.25-inch inside diameter hollow-stem augers (HSA);
- a nominal 2-inch diameter (No. 10 slot) PVC screen, 10 feet in length, attached to a sufficient length of 2-inch diameter schedule 40 PVC riser pipe to extend to the surface, was placed into the borehole through the augers;
- a filter sand pack consisting of silica sand was installed to a minimum height of 2 feet above the top of the screen as the augers were removed;
- a minimum 2-foot thick seal consisting of 3/8-inch diameter bentonite pellets or chips was placed on top of the sand pack and hydrated using potable water;
- the remaining borehole annulus was sealed to within 3 feet of the surface using pure bentonite chips;
- the remaining portion of the annulus was filled with concrete and a 6-inch diameter protective above-grade casing. The well head will be fitted with a water-tight, lockable cap; and
- cement-filled bollard posts were installed around selected monitoring well locations.

The shallow soil borings completed in unconsolidated materials that were to be used for monitoring well installation were installed using either Hydraulic Direct Push or 4.25-inch inside diameter (HSA) drilling techniques. The borehole depths ranged from 6.5 to 30 feet bgs. During the subsurface utility clearance activities described above, the borehole was periodically examined and the soil types documented. A description was added to each monitoring well construction log. The overburden soils were classified using the Unified Soil Classification System (USCS).

The following deviations from the Work Plan were noted during the installation of the monitoring wells due to depth or other area-specific constraints:

- At well location MW-LS-110S, bedrock refusal was encountered at 6.5 feet bgs. Therefore, this monitoring well was installed using a 5-foot 2-inch #10 slot PVC screen, and no filter pack footing was installed, and this monitoring well was installed with the screen on top of the bedrock.
- At monitoring well locations MS-LS-104S/-105S/-106S/-108S/-109S/-110S/ -111S/-112S/-113S, bentonite seal was placed to a minimum 1-foot above the filter

pack instead of the minimum of 2 feet above the filter pack. The above-specified wells were installed to such a shallow depth based on observed depths to groundwater, a 2-foot space above the filter pack could not be completed.

- For monitoring well locations MW-LS-101S/-102S/-103S/-107S/-108S/-109S/-111S flush mount well casings were installed instead of a standard stickup riser due to high traffic concerns in these areas.

4.3 GROUNDWATER MONITORING WELL DEVELOPMENT

To establish good hydraulic communication with the aquifer and to reduce the volume of sediment in the monitoring well, CRA developed the monitoring wells. With the exception of monitoring wells MW-LS-101S/-102S/-103S/-106S/-108S/-110S/-111S/ -113S, all of the monitoring wells that were installed were developed in accordance with this procedure:

- Prior to the collection of hydraulic or groundwater quality data, the monitoring wells were developed using a 5-foot bailer. The bailer was allowed to fall freely through the monitoring well until it struck the surface of the water. The contact of the bailer produced a strong outward surge of water. As the bailer filled and was rapidly withdrawn, the drawdown created in the borehole caused the particulate matter outside the well intake to flow through the well intake and into the well.
- Subsequent bailing removed the sand and other particulate from the well.
- Development continued until the turbidity and silt content of the monitoring wells was significantly reduced or a minimum of five well volumes and not more than eight well volumes was removed.

Monitoring wells MW-LS-101S/-102S/-103S/-111S/ and -113S were dry upon installation, and therefore could not be developed. Monitoring wells MW-LS-106S/ -108S/ and -110S purged to dry after 7.5 volumes, 4.5 volumes, and 0.9 volumes were removed, respectively. The remaining wells were fully developed without incident.

CRA containerized the water purged during well development, and the containers were labeled as non-hazardous per directions from Station personnel. The containers were left, as directed by Station personnel, for prescreening and management at a later date by Station personnel.

Well development details are presented in Table 4.2.

4.4 SURVEY

The 13 new and four existing monitoring wells and the four staff gauge locations were surveyed to establish reference elevations relative to mean sea level. The top of each well casing was surveyed to the nearest 0.01 foot relative to the National Geodetic Vertical Datum (NGVD), and the survey point was marked on the well casing. The survey included the ground elevation at each well to the nearest 0.10 foot relative to the NGVD, and the well location to the nearest 1.0 foot.

4.5 GROUNDWATER AND SURFACE WATER ELEVATION MEASUREMENTS

On May 22, 2006, CRA collected a round of water level measurements from the monitoring wells and staff gauges at the Station in accordance with the Work Plan. On July 6, 2006, CRA collected a second round of water level measurements from the monitoring wells and staff gauges at the Station. Based on the measured depth to water from the reference point and the surveyed elevation of the reference point, the groundwater or surface water elevation was calculated. A summary of groundwater elevations is provided in Table 4.3. A summary of the surface water elevations is provided in Table 4.4.

Prior to the water level measurements, the wells and staff gauges were identified and located. Once the wells were identified, CRA completed a thorough inspection of each well and noted any deficiencies. Water level measurements were collected using an electronic depth-to-water probe accurate to ± 0.01 foot. The measurements were made from the designated location on the inner riser or steel casing of each monitoring well and reference point on each staff gauge. The water level measurements were obtained using the following procedures:

- the proper elevation of the meter was checked by inserting the tip into water and noting if the contact was registering correctly;
- the tip was dried, and then slowly lowered into the well or surface water body until contact with the water was indicated;
- the tip was slowly raised until the light and/or buzzer just began to activate. This indicated the static water level;
- the reading at the reference point was noted to the nearest hundredth of a foot;
- the reading was then re-checked; and

- the water level was then recorded, and the water level meter decontaminated prior to use at the next location.

4.6 GROUNDWATER AND SURFACE WATER SAMPLE COLLECTION

CRA conducted one round of groundwater sampling during the completion of the Work Plan for this hydrogeologic investigation. A total of 17 monitoring wells and five temporary sample locations were sampled between May 22 and 30, 2006. Additional verification sampling at one well location was completed July 5, 2006. Of the 17 monitoring wells sampled, 13 were newly installed. The sampling was scheduled to allow for two weeks to elapse between well development and groundwater sample collection. The existing wells were selected for inclusion in this monitoring program based on their proximity to the AFEs.

At the monitoring well locations, with the exception of wells MW-LS-102S and MW-LS-113S which were dry, CRA conducted the sampling using dedicated tubing and peristaltic pumps to employ low flow purging techniques as described in Puls and Barcelona (1996).

The groundwater in the monitoring wells was sampled by the following low-flow procedures:

- the wells were located and the well identification numbers were verified;
- a water level measurement was taken;
- the well was sounded by carefully lowering the water level tape to the bottom of the well (so as to minimize penetration and disturbance of the well bottom sediment), and comparing the sounded depth to the installed depth to assess the presence of any excess sediment or drill cuttings;
- the pump or tubing was lowered slowly into the well and fixed into place such that the intake was located at the mid-point of the well screen, or a minimum of two feet above the well bottom/sediment level;
- the purging was conducted using a pumping rate between 100 to 500 milliliters per minute (mL/min). Initial purging began using the lower end of this range. The groundwater level was monitored to ensure that a drawdown of less than 0.3 foot occurred. If this criterion was met, the pumping rate was increased dependent on the behavior of the well. During purging, the pumping rate and groundwater level were measured and recorded approximately every 10 minutes;

- the field parameters [pH, temperature, conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity] were monitored during the purging to evaluate the stabilization of the purged groundwater. Stabilization was considered to be achieved when three consecutive readings for each parameter, taken at 5-minute intervals, were within the following limits:

pH	± 0.1 pH units of the average value of the three readings,
Temperature	± 3 percent of the average value of the three readings,
Conductivity	± 0.005 milliSiemen per centimeter (mS/cm) of the average value of the three readings for conductivity <1 mS/cm and ± 0.01 mS/cm of the average value of the three readings for conductivity >1 mS/cm,
ORP	± 10 millivolts (mV) of the average value of the three readings,
DO	± 10 percent of the average value of the three readings, and
Turbidity	± 10 percent of the average value of the three readings, or a final value of less than 5 nephelometric turbidity units (NTUs);

- once purging was complete, the groundwater samples were collected directly from the pump/tubing directly into the sample containers; and
- in the event that the groundwater recharge to the monitoring well was insufficient to conduct the low-flow procedure, the well was pumped dry and allowed to sufficiently recharge prior to sampling.

All groundwater samples were labeled with a unique sample number, the date and time, the parameters to be analyzed, the job number, and the sampler's initials. The samples were then screened by the Station for shipment to Teledyne Brown Engineering Inc., (Teledyne Brown).

A sample key is presented in Table 4.5; field measurements for the hydrogeologic investigation are presented in Table 4.6.

CRA containerized the water purged from the monitoring wells during the sampling, as well as the water purged from all of the wells during the hydrogeologic investigation. The water was placed into 55-gallon drums, which will be processed by the Station in accordance with its NPDES permit.

Surface water samples SW-LS-101 through SW-LS-103 were collected on May 23, 2006, SW-LS-106 was collected on May 24, 2006 and SW-LS-104 and SW-LS-105 were collected on May 25, 2006. The surface water sampling locations are presented on Figure 4.1.

The surface water samples were collected by directly filling the sample container from the composite samplers at the determined locations until completely filled. A sample key is presented in Table 4.6.

4.7 DATA QUALITY OBJECTIVES

CRA has validated the analytical data to establish the accuracy and completeness of the data reported. Teledyne Brown provided the analytical services. The Quality Assurance Program for the laboratory is described in Appendix C. Analytical data for groundwater and surface water samples collected in accordance with the Work Plan are presented in Appendix D. Data validation memo is presented in Appendix E. The data validation included the following information and evaluations:

- sample preservation;
- sample holding times;
- laboratory method blanks;
- laboratory control samples;
- laboratory duplicates;
- verification of laboratory qualifiers; and
- field quality control (field blanks and duplicates).

Following the completion of field activities, CRA compiled and reviewed the geologic, hydrogeologic, and analytical data.

The data were reviewed using the following techniques:

- data tables and databox figures;
- hydrogeologic cross-sections; and
- hydraulic analyses.

4.8 SAMPLE IDENTIFICATION

Systematic sample identification codes were used to uniquely identify all samples. The identification code format used in the field was: WG - LS – MW-LS-101S - 052406 - NK - 006. A summary of sample identification numbers is presented in Table 4.6.

WG	-	Sample matrix -groundwater
WS	-	Sample matrix - surface water
RB	-	Sample matrix – rinse blank
LS	-	Station code
MW-LS-101S	-	Well Location
052406	-	Date
NK	-	Sampler initial
006	-	Sample number

4.9 CHAIN-OF-CUSTODY RECORD

The samples were delivered to Station personnel under chain-of-custody protocol. Subsequently, the Station shipped the samples under chain-of-custody protocol to Teledyne Brown for analyses.

4.10 QUALITY CONTROL SAMPLES

Quality control samples were collected to evaluate the sampling and analysis process.

Field Duplicates

Field duplicates were collected to verify the accuracy of the analytical laboratory by providing two samples collected at the same location and then comparing the analytical results for consistency. Field duplicate samples were collected at a frequency of one duplicate for every ten samples collected. A total of three duplicate samples were collected. The locations of duplicate samples were selected in the field during the performance of sample collection activities. The duplicate samples were collected simultaneously with the actual sample and were analyzed for the same parameters as the actual samples.

Rinsate Blank Samples

Rinsate blanks were collected to verify that decontamination procedures conducted in the field were adequate. Rinsate blanks were collected by routing Station-supplied demineralized water through decontaminated sampling equipment. Rinsate blanks were collected at a frequency of one rinsate blank for every day samples were collected

using non-disposable or non-dedicated equipment. A total of two rinsate blanks were collected.

Split Samples

Split samples were collected for the NRC for tritium simultaneously with the actual sample at every sample location. Split samples were delivered to the Station personnel and made available to the NRC.

4.11 ANALYSES

Groundwater and surface water samples were analyzed for tritium and gamma-emitting radionuclides as listed in NUREG-1302 and strontium-89/90 as listed in 40 CFR 141.25.

4.12 ADDITIONAL FIELD ACTIVITIES

4.12.1 WELL INVENTORY

CRA performed a comprehensive water well search of the IDNR SWS and ISGS databases. The results of the database search are in Appendix A.

In addition, CRA personnel conducted an evaluation of the viability of the four existing groundwater monitoring wells at the Station (HP-2, -5, -7, -10). Each well was sounded to determine a top of water elevation and a bottom of well depth and purged of 3- to 5-well volumes to evaluate groundwater recovery capabilities. Each well was determined to be functional and useable for this investigation. Stratigraphic and well construction information for these four wells were not available.

4.12.2 TEMPORARY SAMPLING POINT INSTALLATION

CRA installed five temporary sampling points (TS-LS-101S through TS-LS-105S) using direct push techniques at points between the Station and the Illinois River (see Figure 4.1). These points were installed at locations along the Radwaste Discharge Line and the Blowdown Line to evaluate whether there has been any impact to the groundwater in these areas. TS-LS-101S and TS-LS-102S were located adjacent to vacuum breaker valves 15AB and 3AB, respectively (AFE-LaSalle-5 and AFE-LaSalle-4, respectively). The overburden soils were classified using the USCS. Immediately after

installation and sampling, the sampling point was backfilled with borehole cuttings (with the exception of TS-LS-101S, where an existing open borehole was used).

4.12.3 TEMPORARY SAMPLING POINT SAMPLE COLLECTION

At each temporary sampling point, a single grab sample of water was obtained from the water table immediately after borehole installation. The grab samples were obtained using a 3.0-foot bailer or peristaltic pump with tubing. The bailer or tubing was lowered to the water table, and without purging, the groundwater was immediately collected and placed into the sample containers. The only exception to this procedure was the groundwater sampling at TS-LS-105S. This location did not have sufficient groundwater present to fill all of the sample containers at once. Therefore, the groundwater sample was obtained over a three-day period using a peristaltic pump, allowing for recharge.

A sample key for the temporary sampling points is also presented in Table 4.6.

5.0 RESULTS SUMMARY

This section provides a summary of Station-specific geology and hydrogeology, along with a discussion of hydraulic gradients, groundwater elevations, and flow directions in the vicinity of the Station. This section also presents and evaluates the analytical results obtained from activities performed in accordance with the Work Plan.

5.1 STATION GEOLOGY

The soil information collected from the installation of the permanent monitoring wells and temporary sampling point locations is consistent with the regional geology described in Section 2.4. The geology beneath the Site consists Wedron Clay Till resting on Pennsylvanian bedrock. Historic stratigraphic logs from the Station (UFSAR, Rev. 15, 2004) show that the Wedron Clay Till beneath the Station is more than 200 feet thick.

CRA prepared geologic cross-sections in both north-south and west-east profiles for the Station. Figure 5.1 displays the profile locations across the Site. The cross-sections are presented on Figures 5.2, 5.3, and 5.4. These cross-sections were chosen because of their close proximity to the AFEs and structures potentially influencing groundwater flow patterns.

The main building excavation for the Turbine/Reactor Building extends into the Wedron Clay Till to a maximum depth of 60 feet below the final surface grade while excavation activities for auxiliary buildings, ranged in depth from 5 to 30 feet below the final surface grade. In addition, the excavation for the intake structure and the CSCS piping extends into the Wedron Clay Till from 5 to 40 feet below grade surface. As a result of these construction activities, a trough or "bowl-like" depression at the top of the Wedron Clay Till has been created, containing the groundwater and influencing groundwater flow.

The 13 monitoring wells and five temporary sampling points installed were completed in the overburden fill and clay. The overburden consists of approximately 0.4 to 10 feet of compacted sand, gravel and clay fill material underlain by the Wedron Clay Till which is comprised of silty clay to clay with intermittent pockets of gravel and sand. The stratigraphic and instrumentation logs showing well construction details for the newly installed monitoring wells are in Appendix B.

Profile A-A' is a north-south profile through the middle of the Site. It begins east of the old Exelon parking lot north of the northern fence line bordering the PA and terminates

south of MW-LS-103S. This profile transects with AFE-LaSalle-2 (Reactor/Turbine/Rad Waste Sumps) in the northwest quarter of the PA. This profile shows the relationship between the geology, excavated areas, the Reactor Building foundation, and storm drains in the overburden materials. The Turbine/Reactor Building foundation was constructed in the Wedron Clay Till to an elevation of approximately 635 feet AMSL or approximately 60 feet bgs. The foundation of the Turbine/Reactor Building sits on a 1-foot thick lean concrete mud mat, which extends 10 feet out from the foundation in all directions to prevent sinking or shifting and a base foundation slab that consists of 7-foot thick reinforced concrete overlies the mud mat. The Turbine/Reactor Building foundation is not seated in bedrock. Engineered compacted fill was placed around the foundation of the Turbine/Reactor Building to the ground surface. The storm drainpipes along this sectional line are located in the fill above the clay till unit, to the north and south of the Turbine/Reactor Building.

Profile B-B' is a west-east profile through the middle of the Site. It begins outside the western perimeter fence line in the south storm water retention pond and terminates outside the eastern perimeter fence line at the switchyard. This profile cuts through AFE-LaSalle-3 [Cycled Condensate (CY) System] in the western portion of the PA and AFE-LaSalle-1 [High Pressure Core Spray (HPCS)/Reactor Core Isolation (RI) Systems] in the middle of the PA. This profile shows the relationship between geology, excavated areas, the Turbine/Reactor Building foundation, and storm drains in the overburden materials. The Turbine/Reactor Building foundation in this area was constructed within the Wedron Clay Till to a depth of approximately 655 feet AMSL. The Turbine/Reactor Building foundation is not seated in bedrock. Engineered compacted fill was placed around the foundation of the Turbine/Reactor Building to the ground surface. The storm drainpipes along this sectional line are located in the compacted engineered fill above the clay till unit, to the south and west of the Turbine/Reactor Building. The historical pipe rupture area at AFE-LaSalle-1 is shown to be adjacent to the excavation of the Turbine/Reactor Building to the east, in the vicinity of HP-10. AFE-LaSalle-3 is located in the excavation area just southwest of the Turbine/Reactor Building.

Profile C-C' is a north-south profile through the western side of the Site, outside of the PA. It begins in the "Old Exelon Parking Lot" to the north of the PA, and terminates south of the "In-Processing Facility" to the south of the PA. This profile transects with the Circulating Water pipes that terminate at the discharge canal. This profile shows the relationship between geology, excavated areas, and the two Circulating Water pipes in the overburden material. The excavation for the Circulating Water pipes extends to approximately 680 feet AMSL, and was filled with engineered fill material. The pipes are approximately 12.5 feet in diameter. They discharge into the Discharge Canal.

5.2 STATION HYDROGEOLOGY

The hydrogeologic profiles are presented on Figures 5.2, 5.3, and 5.4. This profile uses the same A-A', B-B', and C-C' profile lines as shown on Figure 5.1 for the geologic cross-sections.

The monitoring wells at the Site were installed to monitor the shallow overburden, therefore, only the overburden hydrogeology is discussed in this section.

Field observations and stratigraphic information developed during the investigation indicates that the Station is underlain by granular fill, which is in turn underlain by the Wedron Clay Till. Groundwater is located in the fill material lying on top of the Wedron Clay Till. These observations are consistent with information provided by the Station in the UFSAR which indicates that the Station is underlain by Wedron Clay Till which is over 200 feet thick in the area of the Station. No borings for the investigation were advanced pass 50 feet bgs (MW-LS-103S and TS-LS-105S) and therefore the thickness of the Wedron Clay Till could not be confirmed. Soil samples from the borings indicated that once the Wedron Clay Till was encountered, it continued to the limit of the borehole (UFSAR, Rev. 15, 2004).

Along the blowdown line, field observations noted during the investigation indicated that the blowdown line, from the Station to the Illinois River Valley, is buried within the Wedron Clay Till. At the onset of the Illinois River Valley, the blowdown line is buried within the alluvium sediments and within bedrock. This was also consistent with the information outlined in the UFSAR (UFSAR, Rev. 15, 2004).

The groundwater contours (Figure 5.5) and top of clay contours (Figure 5.6) at the Site indicate that groundwater flow is divided from north to south in the area of monitoring well HP-2. East of the well, groundwater flows to the intake canal while west of the divide groundwater flows westward around the Reactor/Turbine Building into the storm water retention ponds and the discharge canal.

There are no groundwater pumping activities or slurry walls constructed at the Site that would affect overburden groundwater flow patterns to the nearby surface water bodies.

5.2.1 GROUNDWATER FLOW DIRECTIONS

The foundations or basements associated with the Turbine/Reactor Building extend to depths below the water table (approximately 60 feet bgs) into the Wedron Clay Till (refer to the geologic cross-sections on Figures 5.2, 5.3, and 5.4). These foundations/basements are barriers to groundwater flow in the overburden materials.

The wells installed by CRA at the Site were screened to monitor the interface between the fill and the top of the Wedron Clay Till (clay unit) unit and to delineate the groundwater flow along the top of the relatively impermeable clay unit. The Wedron Clay Till acts as barrier to vertical migration of groundwater and therefore limits groundwater movement to a predominantly horizontal component through the granular fill. Figure 5.5 shows the water table groundwater contours based on data collected May 22, 2006 for the Site. CRA utilized a commercially available contouring program (Surfer, Version 8.02, 2002) to provide an initial contouring of the measured groundwater elevations. The initial contours were then modified using professional judgment to prepare the final contour maps.

As shown on Figure 5.5, the general groundwater flow direction in the shallow overburden is to the southwest with an apparent low point southwest of the Turbine/Reactor Building near MW-LS-105S. The only subsurface feature that appears to be able to affect groundwater flow is the foundation of the Turbine/Reactor Building. Schematic diagrams in the UFSAR show that the foundations of the Turbine/Reactor Building is approximately 60 feet bgs into the Wedron Clay Till (UFSAR, Ref. 15, 2004). Therefore, shallow groundwater flow from the northeast portion of the Site is diverted north and south around the building foundation as it flows toward the west.

Figure 5.6 presents the top of clay unit contours based upon the well logs and building excavation details (UFSAR, 2004). As shown, the elevation of the top of clay ranges from 698.61 feet AMSL (MW-LS-104S) to 703.27 feet AMSL (MS-LS-107S). The elevation of the top of clay unit for the perimeter monitoring wells (outside of the PA) ranges from 704.54 feet AMSL (MW-LS-111S) to 710.85 feet AMSL (MW-LS-112S).

The elevation of the top of clay unit beneath the PA is approximately 1 to 12 feet lower than the elevation of the top of clay at the perimeter of the PA, indicating a depressed area in the natural clay exists beneath the PA near MW-LS-105S, MW-LS-104S, HP-7, and MW-LS-109S. These conditions create a "bowl" beneath the Site where groundwater accumulates until it fills the bowl. Based on the Reactor/Turbine Building excavation details the bowl is a result of the construction activities at the Site. In preparation for constructing the Reactor/Turbine Building complex and the underground circulating

water pipelines, the overburden, which consisted of loess and Wedron Clay Till was excavated to a depth of approximately 60 feet below the final design grade elevation of approximately 710 feet AMSL. In order to safely complete the excavation activities, the side slopes were cut to a 1:1 slope that resulted in the excavation extending 20 to 30 feet beyond the foundations of the building. These areas of the excavation extending beyond the foundation walls were backfilled with granular fill. These construction excavation activities resulted in the present day bowl-like top of clay outline.

During wet conditions, groundwater flows into the bowl area from the northeast, filling the depression. As groundwater continues to flow into the depressed area of the Wedron Clay Till beneath the Site, eventually the depression fills up and overflows. Once the depression is full, groundwater continues to flow to the west and southwest. During dry conditions, with less groundwater flow into the depressed area, the groundwater that is able to flow into the depression would be trapped in the depression, unable to continue to flow west and southwest out of the depressed area, effectively isolating the groundwater beneath the Station from the local flow regime outside of the influence of the depressed area. Although groundwater may become trapped beneath the Station, any residual tritium impacts, as indicated by the presence of tritium in the groundwater sample from MW-LS-105S would be contained due to the Wedron Clay Till beneath the Station that extends to over 200 feet beneath the Station. Figure 5.7 shows the saturated thickness of the groundwater beneath the Station. As expected from the "bowl-like" conditions of the Wedron Clay Till, the saturated thickness is greatest in the vicinity of the Turbine/Reactor Building.

The groundwater flow is likely influenced by the excavation trenches used to install the intake and discharge pipelines. The removal of the clay and emplacement of engineered fill around the building foundations and pipelines would provide a preferential path for the movement of groundwater from the top of the clay till downward along the building foundations. These circumstances may be responsible for the low point in the groundwater elevation at MW-LS-105S.

5.2.2 MAN-MADE INFLUENCES ON GROUNDWATER FLOW

The main building excavation for the Turbine/Reactor Building extends into the Wedron Clay Till to a maximum depth of 60 feet below the final surface grade. The sidewalls of the excavation were constructed at a 1:1 slope. Additional excavation activities within the main building excavation, for Auxiliary Buildings, ranged in depth from 5 to 30 feet below the final surface grade. Prior to erecting the Turbine/Reactor Building structure, the final Wedron Clay Till bearing surfaces were protected with a

mud mat that consisted of a 1-foot thick layer of lean concrete. The mud mat extended 10 feet beyond the outsides of the building walls. A base foundation slab that consists of 7-foot thick reinforced concrete overlies the mud mat. The base foundation slab extends beneath the Turbine and the Reactor Building. In addition, the excavation for the intake structure and the CSCS piping extends into the Wedron Clay Till from 5 to 40 feet below grade surface.

The primary backfill installed around the main buildings (Turbine/Reactor/Auxiliary) and the CSCS piping consisted of C-6 structural fill, which is composed of sand and gravel materials (UFSAR, Rev. 15, 2004).

These construction activities and the use of a granular backfill resulted as a preferential pathway for the flow of groundwater beneath the Station since the granular fill would have higher hydraulic conductivity relative to the highly impermeable Wedron Clay Till.

In addition, LaSalle Lake is a man-made feature, which also influences groundwater flow at the Station. LaSalle Lake functions as a cooling lake and is immediately east of the Site, comprising over 2,058 acres of impounded water. To the west of the Station is the Discharge Canal and the storm water ponds. The Discharge Canal wraps around the northern portion of the Site and discharges back to LaSalle Lake. In addition to these surface water bodies, man-made Site features such as storm water underground piping and underground utilities will also provide preferential pathways for the migration of groundwater across the Site.

5.3 GROUNDWATER QUALITY

CRA personnel collected groundwater samples from 15 wells and five temporary sampling locations. The samples were analyzed for tritium and additional radionuclides. Teledyne Brown provided the analytical services. The Quality Assurance Program for the laboratory is described in Appendix C. The analytical data reports are provided in Appendix D.

The analytical data presented herein has been subjected to CRA's data validation process. CRA has used the data with appropriate qualifiers where necessary.

The data reported in the figures and tables does not include the results of recounts that the laboratory completed, except if those results ultimately replaced an initial report. The tables and figures, therefore, include only the first analysis reported by the

laboratory. Where multiple samples were collected over time, then the most recent result has been used in the discussion, below.

5.3.1 SUMMARY OF BETA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

A summary of the tritium results for the groundwater samples collected during this investigation is provided in Table 5.1 and shown on Figure 5.8.

All tritium concentrations were below the United States Environmental Protection Agency (USEPA) drinking water standard of 20,000 pCi/L. Tritium was not detected at concentrations greater than the LLD of 200 pCi/L in 19 of the 20 groundwater samples collected.

Further, tritium was only detected in one sample above the laboratory LLD of 200 pCi/L. The concentration of tritium in the May 26, 2006 groundwater sample from MW-LS-105S was 1,280 ± 184 pCi/L. Monitoring well location MW-LS-105S was re-sampled on July 5, 2006 and the concentration of tritium in the groundwater sample was 766 ± 153 pCi/L.

Strontium-89/90 was not detected at concentrations greater than the LLD of 2.0 pCi/L. A summary of the strontium-89/90 results for the groundwater samples collected as part of the investigation that is the subject of this HIR is provided in Table 5.2 and shown on Figure 5.9.

5.3.2 SUMMARY OF GAMMA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

Gamma-emitting target radionuclides were not detected at concentrations greater than their respective LLD. A summary of the gamma-emitting radionuclides results for the groundwater samples collected as part of the investigation that is the subject of this HIR is provided in Table 5.2 and shown on Figure 5.9.

Other non-targeted radionuclides were also included in the tables but excluded from discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

5.3.3 SUMMARY OF FIELD MEASUREMENTS

A summary of the field measurement results for the groundwater samples collected as part of the investigation is provided in Table 4.6. These field measurements included pH, dissolved oxygen, conductivity, turbidity and temperature. The field parameters were typical of a shallow granular fill aquifer. pH values ranged from 6.46 standard units to 8.28 standard units. Temperature readings were slightly elevated within the PA area relative to readings from wells outside of the PA. However, the elevated temperature readings are likely due to transfer of residual heat from the Circulating Water piping buried beneath the Station PA. The conductivity was indicative of a shallow water table system subject to surface water recharge. Overall, the readings were within the expected ranges for naturally occurring groundwater.

5.4 SURFACE WATER QUALITY

Six surface water samples were collected from the locations shown on Figure 4.1. The samples were analyzed for tritium, gamma-emitting radionuclides, and strontium-89/90. Teledyne Brown provided the analytical services. The Quality Assurance Programs for the laboratory is described in Appendix C. The analytical data reports are provided in Appendix D.

5.4.1 SUMMARY OF BETA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

A summary of the tritium results for the surface water samples collected in this investigation is provided in Table 5.3 and shown on Figure 5.9. As shown in the table, the surface water samples from SW-LS-101 and SW-LS-106 contained tritium at concentrations of 232 ± 116 pCi/L and 219 ± 113 pCi/L, respectively.

Annual REMP reporting for surface water samples collected from the Illinois River indicates tritium concentrations in the Illinois River water samples ranging from non-detectable at the LLD of 200 pCi/L to as high as 1,682 pCi/L (2003 REMP Report). In 2004 the average concentration of tritium in Illinois River water samples reported by the Station in their Annual REMP report was 521 pCi/L with a maximum of 1,058 pCi/L while in the 2005 report, the tritium concentrations ranged from non-detectable at the LLD of 200 pCi/L to 943 pCi/L.

Strontium-89/90 was not detected at concentrations greater than the LLD of 2.0 pCi/L. A summary of the strontium-89/90 results for the surface water samples collected in this investigation is provided in Table 5.4 and shown on Figure 5.9.

5.4.2 SUMMARY OF GAMMA-EMITTING RADIONUCLIDES ANALYTICAL RESULTS

Gamma-emitting target radionuclides were not detected at concentrations greater than their respective LLD. A summary of the gamma-emitting radionuclide results for the surface water samples collected in this investigation is provided in Table 5.4 and shown on Figure 5.9.

Other non-targeted radionuclides were also included in the tables but excluded from discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

6.0 RADIONUCLIDES OF CONCERN AND SOURCE AREAS

This section discusses radionuclides evaluated in this investigation, potential sources of the radionuclides detected, and their distribution.

6.1 GAMMA-EMITTING RADIONUCLIDES

Gamma-emitting target radionuclides were not detected at concentrations greater than their respective LLD. Other non-targeted radionuclides were also included in the tables but excluded from discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

6.2 BETA-EMITTING RADIONUCLIDES

Strontium-89/90 was not detected in any of the 26 samples collected at concentrations that were greater than the LLD of 2.0 pCi/L. Tritium was detected in three of the 26 total sample locations. Concentrations of tritium ranged between less than the LLD of 200 pCi/L to 1,280 ± 184 pCi/L.

Since only tritium was detected at concentrations greater than its LLD, the following sections focus on tritium; specifically, providing general characteristics of tritium, potential sources, distribution in groundwater, and a conceptual model for migration.

6.3 TRITIUM

This section discusses the general characteristics of tritium, the distribution of tritium in groundwater and surface water, and the conceptual model of tritium release and migration.

6.3.1 GENERAL CHARACTERISTICS

Tritium (chemical symbol H-3) is a radioactive isotope of hydrogen. The most common forms of tritium are tritium gas and tritium oxide, which is also called "tritiated water." The chemical properties of tritium are essentially those of ordinary hydrogen. Tritiated

water behaves the same as ordinary water in both the environment and the body. Tritium can be taken into the body by drinking water, breathing air, eating food, or absorption through skin. Once tritium enters the body, it disperses quickly and is uniformly distributed throughout the body. Tritium is excreted primarily through urine within a month or so after ingestion. Organically bound tritium (tritium that is incorporated in organic compounds) can remain in the body for a longer period.

Tritium is produced naturally in the upper atmosphere when cosmic rays strike air molecules. Tritium is also produced during nuclear weapons explosions, as a by-product in reactors producing electricity, and in special production reactors, where the isotopes lithium-7 and/or boron-10 are bombarded to produce tritium.

Although tritium can be a gas, its most common form is in water because, like non-radioactive hydrogen, radioactive tritium reacts with oxygen to form water. Tritium replaces one of the stable hydrogen atoms in the water molecule and is called tritiated water. Like normal water, tritiated water is colorless and odorless. Tritiated water behaves chemically and physically like non-tritiated water in the subsurface, and therefore tritiated water will travel at the same velocity as the average groundwater velocity.

Tritium has a half-life of approximately 12.3 years. It decays spontaneously to helium-3 (^{3}He). This radioactive decay releases a beta particle (low-energy electron). The radioactivity of tritium is the source of the risk of exposure.

Tritium is one of the least dangerous radionuclides because it emits very weak radiation and leaves the body relatively quickly. Since tritium is almost always found as water, it goes directly into soft tissues and organs. The associated dose to these tissues is generally uniform and is dependent on the water content of the specific tissue.

6.3.2 DISTRIBUTION IN STATION GROUNDWATER

This section provides an overview of the lateral and vertical distribution of tritium detected in groundwater at the Station. Tritium was detected in groundwater at concentrations exceeding the LLD of 200 pCi/L.

Tritium concentrations exceeding 200 pCi/L were detected in one groundwater sample collected from well MW-LS-105S at a concentration of 1,280 ± 184 pCi/L. MW-LS-105S was re-sampled on July 5, 2006 and tritium was detected in the groundwater sample at 766 ± 153 pCi/L. MW-LS-105S is adjacent to the Interim RadWaste Storage Facility, on

the southwest side of the Turbine/Reactor Building in the PA. A review of the historical release information indicates that MW-LS-105S appears to be located upgradient of the historical release from the AFE-LaSalle-3 – Unit 2 Cycled Condensate Storage Tank. It is possible that this detection is the residual impact related to this previous release. However, Site features that could have acted as interceptors and prevented the migration of tritium from the AFE-LaSalle-2 location northward to MW-LS-105S are a storm drain and the Off-Gas Underground pipelines (Figure 3.2).

6.3.3 DISTRIBUTION IN STATION SURFACE WATER

Tritium concentrations exceeding 200 pCi/L were detected in two surface water samples, SW-LS-101 and SW-LS-106. Surface water samples from SW-LS-101 and SW-LS-106 had concentrations of tritium of 232 ± 116 pCi/L and 219 ± 113 pCi/L, respectively. SW-LS-101 was collected from the north storm water retention pond, which is connected to the Discharge Canal which feeds LaSalle Lake, and SW-LS-106 was collected from the Intake Canal emanating from the LaSalle Lake. Based upon the groundwater flow for the Station (see Figure 5.6), groundwater from the north side of the Reactor/Turbine Building appears to discharge to the north storm water retention pond while groundwater from the northeast corner of the Site discharges back to the intake canal. Although above the anticipated background concentration for tritium for the Site, the detections are not uncharacteristic of the data set over time. As part of the REMP, routine sampling of the Illinois River, which provides makeup water to LaSalle Lake, has consistently demonstrated tritium concentrations in both upstream and downstream surface water samples ranging from 1,680 pCi/L in 2003 to non-detectable at the LLD of 200 pCi/L during this hydrogeological investigation. As such, the detected concentrations of tritium in the two surface water samples collected as part of the hydrogeologic investigation are likely the result of elevated tritium concentrations in the Illinois River.

6.3.4 CONCEPTUAL MODEL OF TRITIUM RELEASE AND MIGRATION

This section presents CRA's conceptual model of groundwater and tritium migration at the Station.

Hydrogeological Framework

Groundwater flows through the overburden fill materials at the Site in response to the surface water bodies located to the east and west of the Site (Figure 5.1). Groundwater elevations indicate a groundwater divide extending from north to south near HP-2. Groundwater to the east of HP-2 appears to flow eastward to the Intake Canal while groundwater to the west of HP-2 appears to flow west-southwest towards and around the Reactor/Turbine Building until it discharges to the storm water ponds and Discharge Canal to the west.

The underlying Wedron Clay Till, which is over 200 feet thick in the area of the Station, separates this overburden groundwater zone from regional overburden and bedrock aquifers. Construction activities have produced a depression in the top of the Wedron Clay Till also, which creates a minor groundwater depression surrounding the Reactor/Turbine Building. This groundwater depression also influences the horizontal movement of groundwater from east to west across the Site. Groundwater flowing through the overburden fill materials overlying the Wedron Clay Till, is also influenced by the presence of building foundations which extend into the top of the Wedron Clay Till. There are no slurry walls or groundwater pumping locations within the overburden fill material that would influence groundwater movement.

Vertical migration of radioactively contaminated liquids through the Wedron Clay Till is limited due to the very low permeability of the till (less than 1.0×10^{-07} cm/sec).

Sources and Migration of Tritium

Tritium concentrations exceeding 200 pCi/L were detected in one groundwater sample at the Site from monitoring well MW-LS-105S.

The detection of tritium above 200 pCi/L in the groundwater sample from monitoring well MW-LS-105S appears to be localized to the area around the well. Tritium was not detected at the lower limit of detection of 200 pCi/L in the groundwater samples collected from monitoring wells in the vicinity and downgradient of this location.

The most likely source of the tritium in the groundwater at this well is from the historical release associated with the overflow of the Unit 2 Cycled Condensate Tank in 2001 (AFE-LaSalle-3) Discussion with Station personnel have been unable to define another possible source of the tritium detection.

Due to the low permeability of the Wedron Clay Till combined with the generally shallow east to west gradient of the water table and the apparent groundwater depression around MW-LS-105S, the tritiated water is not expected to migrate very far laterally from this monitoring well location.

There are two potential migration pathways for the tritiated groundwater found near MW-LS-105S:

- There is a potential for tritiated groundwater to discharge to the storm drain system (see Figure 3.2). The storm water drain invert nearest to MW-LS-105S is at approximately 705 feet AMSL. On May 22, 2006, the groundwater elevation at MW-LS-105S was 704.36 feet AMSL. This shows that the water table is below the invert of the nearest storm drain; however, as discussed in Section 5.2.2, there is a groundwater depression present at MW-LS-105S. It is possible that during high groundwater conditions, the water table may rise to the invert of the storm drain, allowing the tritiated groundwater to discharge into the storm drain. The groundwater that infiltrates the storm water system will flow to the oil/water separator to the west. This separator discharges water to the south storm water retention pond; and
- During periods of high groundwater elevations, it is possible that the groundwater near MW-LS-105S could flow northwest along the foundation of the Turbine/Reactor Building to the fill material for the discharge pipeline. The fill material surrounding the pipeline could create a preferential pathway for the migration of tritiated groundwater into the Discharge Canal.

There is no indication from the HIR investigation that tritium impacted groundwater is migrating off Site.

<u>Surface Water</u>

As part of the Station's REMP, the Station collects water samples from the Illinois River quarterly, both upstream of the river intake and downstream of the blowdown line, which discharges to the Illinois River. The Station collects its upstream river sample from a boat pier/dock in the municipality of Seneca, Illinois which is located approximately 4 miles northeast of the Station and approximately 3.5 miles upstream of the Station's intake (make-up water line). The Station collects the downstream sample at a boat launch in Illinois State Park, which is located approximately 4.5 miles northwest of the Station and approximately 2 miles downstream of the blowdown line discharge. Annual reporting of the average tritium concentrations for the last 3 years indicates

tritium concentrations in the Illinois River, from water samples collected upstream and downstream of the Station, ranged from ND (2005 REMP Report) at the LLD of 200 pCi/L to as high as 1,682 pCi/L (2003 REMP Report).

In addition, a review of the groundwater contours presented on Figure 5.5 indicates that it would be highly unlikely that the tritium detected in the groundwater sample from MW-LS-105S could migrate eastward (against the groundwater gradient) and be the cause of the tritium detection in the intake canal. As previously stated in the section above, it is possible that tritium impacted groundwater from MW-LS-105S could migrate along the building foundation northward to the discharge canal piping and discharge into the discharge canal.

Based the historical tritium levels of the Illinois River and the volume of water that is pumped daily into LaSalle Lake from the Illinois River (80.4 million gallons per day), it is likely that the source of the detections of tritium in the two surface water samples are associated with the levels of tritium present in the Illinois River and not with impacted groundwater near MW-LS-105S.

7.0 EXPOSURE PATHWAY ASSESSMENT

This section addresses the groundwater impacts from tritium and other radionuclides at the Station and potential risks to human health and the environment.

Based upon historical knowledge and data related to the Station operations, and based upon radionuclide analyses of groundwater samples, the primary constituent of concern (COC) is tritium. The discussions that follow are restricted to the exposure pathways related to tritium.

Teledyne Brown reports all samples to their statistically derived minimum detectable concentration (MDC) of approximately 150 to 170 pCi/L, which is associated with 95 percent confidence interval on their hard copy reports. However, the laboratory uses a 99 percent confidence range (± 3 sigma) for determining whether to report the sample activity concentration as detected or not. This 3-sigma confidence range typically equates to 150 (± 135.75) pCi/L.

Exelon has specified a LLD of 200 pCi/L for the Fleetwide Assessment. Exelon has also required the laboratory to report related peaks identified at the 95 percent confidence level (2-sigma).

This HIR, therefore, screens and assesses data using Exelon's LLD of 200 pCi/L. As is outlined below, this concentration is also a reasonable approximation of the background concentration of tritium in groundwater at the Station.

7.1 HEALTH EFFECTS OF TRITIUM

Tritium is a radionuclide that decays by emitting a low-energy beta particle that cannot penetrate deeply into tissue or travel far in air. A person's exposure to tritium is primarily through the ingestion of water (drinking water) or through ingestion of water bearing food products. Inhalation of tritium requires the water to be in a vapor form (i.e., through evaporation or vaporization due to heating). Inhalation is a minor exposure route when compared to direct ingestion or drinking of tritiated water. Absorption of tritium through skin is possible, but tritium exposure is more limited here versus direct ingestion or drinking of tritiated water.

7.2 BACKGROUND CONCENTRATIONS OF TRITIUM

The purpose of the following paragraphs is to establish a background concentration through review of various media.

7.2.1 GROUNDWATER

Tritium is created in the environment from naturally occurring processes both cosmic and subterranean, as well as from anthropogenic (i.e., man-made) sources. In the upper atmosphere, "cosmogenic" tritium is produced from the bombardment of stable nuclides and combines with oxygen to form tritiated water, which will then enter the hydrologic cycle. Below ground, "lithogenic" tritium is produced by the bombardment of natural lithium isotopes ^{6}Li (92.5 percent abundance) and ^{7}Li (7.5 percent abundance) present in crystalline rocks by neutrons produced by the radioactive decay of uranium and thorium. Lithogenic production of tritium is usually negligible compared to other sources due to the limited abundance of lithium in rock. The lithogenic tritium is introduced directly to groundwater.

A major anthropogenic source of tritium comes from the former atmospheric testing of thermonuclear weapons. Levels of tritium in precipitation increased during the 1950s and early 1960s, coinciding with the release of significant amounts of tritium to the atmosphere during nuclear weapons testing prior to the signing of the Limited Test Ban Treaty in 1963, which prohibited atmospheric nuclear tests.

7.2.2 PRECIPITATION DATA

Precipitation samples are routinely collected at stations around the world for the analysis of tritium and other radionuclides. Two publicly available databases that provided tritium concentrations in precipitation are Global Network of Isotopes in Precipitation (GNIP) and USEPA's RadNet database. GNIP provides tritium precipitation concentration data for samples collected world wide from 1960 to 2006. RadNet provides tritium precipitation concentration data for samples collected at Stations through the U.S. from 1960 up to and including 2006.

Based on GNIP data for sample stations located in the U.S. Midwest including Chicago, St. Louis and Madison, Wisconsin, as well as Ottawa Ontario, and data from the University of Chicago, tritium concentrations peaked around 1963. This peak, which approached 10,000 pCi/L for some stations, coincided with the atmospheric testing of

thermonuclear weapons. Tritium concentrations showed a sharp decline up until 1975 followed by a gradual decline since that time. Tritium concentrations in Midwest precipitation have typically been below 100 pCi/L since around 1980.

The RadNet database for several stations in the U.S. Midwest (Chicago, Columbus, Indianapolis, Lansing, Madison, Minneapolis, Painesville, Toledo, and Welsch, MN) did not show the same trend, which can attributed to pre-1995 data handling procedures. The pre-1995 data were rounded to the nearest 100 pCi/L, which damped out variances in the data. The post-1995 RadNet data, where rounding was not applied, exhibit much more scatter, and similar to the GNIP data, the vast majority of the data were less than 100 pCi/L.

CRA constructed a non-parametric upper tolerance limit with a confidence of 95 percent and coverage of 95 percent based on RadNet data for USEPA Region 5 from 2004 to 2005. The resulting upper tolerance limit is 133 pCi/L, which indicates that CRA is 95 percent confident that 95 percent of the ambient precipitation concentration results are below 133 pCi/L. The statistical confidence, however, must be compared with the limitations of the underlying RadNet data, which does not include the minimum detectable concentration for a majority of the measurements. Some of the RadNet values below 200 pCi/L may be approximated. Nevertheless, these results show a background contribution for precipitation of up to 133 pCi/L.

7.2.3 SURFACE WATER DATA

Tritium concentrations are routinely measured in large surface water bodies, including Lake Michigan and the Mississippi River. Surface water data from the RadNet database for Illinois sampling stations include East Moline (Mississippi River), Moline (Mississippi River), Marseilles (Illinois River), Morris (Illinois River), Oregon (Rock River), and Zion (Lake Michigan). As is the case for the RadNet precipitation data, the pre-September 1995 Illinois surface water data was rounded to the nearest 100 pCi/L, creating a dampening of variances in the data. The post-1995 Illinois surface water data, similar to the post-1995 Midwest precipitation data, were less than 100 pCi/L with the exception of the Moline (Mississippi River) station. Tritium surface water concentrations at this location varied between 100 and 800 pCi/L, which may reflect local natural or anthropogenic inputs.

For the Lake Michigan station, the surface water concentrations were less than 100 pCi/L, with the exception of a couple of occasions occurring around 1996 to 1997. Tritium concentrations in Lake Michigan would be expected to be lower than

precipitation concentrations given the 99-year surface water residence time within Lake Michigan, which corresponds to 8 half-lives of tritium and the dilution provided the large volume of the Lake (1,180 cubic miles) as well as seasonal mixing effects (WDNR, 1999).

Recent surface water measurements for tritium sampling locations upstream and downstream of the LaSalle Generating Station show that concentrations in the Illinois River consistently range between below 200 pCi/L to as high as 1,682 pCi/L (REMP, 2003, 2004, & 2005).

Surface water samples were taken from eight locations, along the Illinois River at Marseilles, Ottawa, Seneca, as well as Kickapoo Creek, the Illinois Nitrogen Corporation Raw, the Recreational Area Cooling Lake and the LSCS intake and discharge pipes. Samples were analyzed for gross beta content, gamma-emitters, tritium, and strontium-89/90. None of the composite samples indicated the presence of other than naturally occurring gamma-emitters at a sensitivity of 10 pCi/L. No samples contained strontium-89/90 at a detection level of 10 pCi/L. Tritium concentrations were ranged from less than the LLD of 200 pCi/L to 350 pCi/L. The Gross beta analytical results in surface water samples were less than the LLD of 10 pCi/L.

The USEPA RadNet surface water data typically has a reported 'Combined Standard Uncertainty' of 35 to 50 pCi/L. According to USEPA, this corresponds to a ± 70 to 100 pCi/L 95 percent confidence bound on each given measurement. Therefore, the typical background data provided may be subject to measurement uncertainty of approximately ± 70 to 100 pCi/L.

7.2.4 DRINKING WATER DATA

Tritium concentrations in drinking water from the RadNet database for three Illinois sampling stations (Chicago, Morris, and East Chicago) exhibit similar trends as the precipitation and surface water data. As with the precipitation and surface water data, the pre-1995 data has dampened out variances due to rounding the data to the nearest 100 pCi/L. The post-1995 results show tritium concentrations in samples of drinking water were less than 100 pCi/L and less than the tritium concentrations found in precipitation and surface water.

Drinking water samples were taken from an LSCS on-Site well and the following off-Site wells: Marseilles Well, Seneca Well, Ransom Well, Ottawa Well, and Illinois State Park Well. Gross beta analysis was performed on all samples. Gamma isotopic, radioactive

strontium, and tritium analyses were conducted on the quarterly samples from the area wells and on a quarterly composite of monthly samples from the on-Site well. No unusual results were observed in analyses preformed. However, several of the area wells had gross beta concentrations higher than that of nearby surface water. Sample results, which show samples contained higher beta concentrations, are indicative of the presence of slightly elevated concentrations of naturally occurring radionuclides in subsurface water. Tritium concentrations were variable, within the range of less than 200 pCi/L to 350 pCi/L. Gross beta analytical results in drinking water ranged from less than the LLD of 1.6 pCi/L to 22 pCi/L.

7.2.5 EXPECTED TRITIUM BACKGROUND FOR THE STATION

As reported in the GNIP and RadNet databases, tritium concentrations in U.S. Midwest precipitation has typically been less than 100 pCi/L since 1980. Tritium concentrations reported in the RadNet database for Illinois surface water and groundwater, at least since 1995, has typically been less than 100 pCi/L. Based on the USEPA Region 5's 2004 to 2005 RadNet precipitation data, 95 percent of the ambient concentrations of tritiated water in Illinois are expected to be less than 133 pCi/L, based on a 95 percent confidence limit. Tritium concentrations in surface water and drinking water are expected to be comparable or less based on historical data and trends.

Concentrations in groundwater similar to surface and drinking water are expected to be less than precipitation values. The lower groundwater concentrations are related to the age of the groundwater as compared to the half-life of tritium. Deep aquifers in proximity to crystalline basement rock, however, can potentially show elevated concentrations of tritium due to lithogenic sources.

According to the 1981 pre-operational REMP, groundwater well sample results from off-Site wells indicated tritium levels ranged from a maximum of 360 ± 100 pCi/L to a less than the LLD of 200 pCi/L. On-Site well sample results indicated tritium levels ranged from a maximum of 300 pCi/L to less than the LLD of 200 pCi/L.

As noted in Section 7.0, the analytical laboratory is reporting tritium results to a LLD of 200 pCi/L. This concentration also represents a reasonable representation of background groundwater quality, given the data for precipitation, surface water, and drinking water.

Based on the evaluation presented above, the background concentration for tritium at the Station is reasonably represented by the LLD of 200 pCi/L.

7.3 IDENTIFICATION OF POTENTIAL EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

Three potential exposure pathways were considered during the evaluation of tritium in groundwater.

- potential groundwater migration to the Station's potable water supply well;
- potential groundwater migration off the Station property to private and public groundwater users; and
- potential groundwater migration off the Station property to a surface water body.

The following section provides an overview of each of these three potential exposure pathways for tritium in groundwater.

7.3.1 POTENTIAL GROUNDWATER MIGRATION TO DRINKING WATER USERS AT THE STATION

Based on the groundwater elevation data, there appears to be a groundwater divide at monitoring well location HP-2. Groundwater east of the divide flows northeast back to the intake canal while groundwater to the west of the divide flows to the west towards the Reactor/Turbine Building, around the building and eventually discharges into the discharge canal and storm water ponds on the west side of the Station. Although tritiated groundwater could migrate horizontally to the east and west from the divide, there is no exposure route for the ingestion of tritiated groundwater on the Station. The Station receives its potable water from a cased 1,600-foot bedrock well on the Site, which is installed in the Ironton-Galesville Sandstone. The vertical movement of tritiated water from the shallow overburden into deeper formations is restricted by the Wedron Clay Till, which is highly impermeable. Since vertical migration of tritiated water through the impermeable Wedron Clay Till to the Ironton-Galesville Aquifer is restricted but theoretically not eliminated, this is a potentially complete exposure pathway but there is no current risk for groundwater ingestion at the Station.

7.3.2 POTENTIAL GROUNDWATER MIGRATION TO DRINKING WATER USERS OFF THE STATION PROPERTY

Off-Site migration of tritium impacted groundwater is highly unlikely since groundwater elevation data indicates that the Site groundwater discharges to the Intake and Discharge Canals and the storm water ponds at the Site. Since there is no off-Site migration, tritium concentrations detected are less than the USEPA drinking water standard of 20,000 pCi/L, and there are no potable water supply wells in the overburden groundwater zone, there is no potentially complete exposure pathway, therefore, there is no current risk for groundwater ingestion off the Station property.

Groundwater samples were also collected adjacent to vacuum breakers associated with historical releases along the blowdown line. The results of the tritium analysis were non detect at the LLD of 200 pCi/L. Potential private wells could theoretically extract groundwater that is sourced from this area, but the groundwater immediately adjacent to the blowdown line is not impacted by tritium. As such, this is a potentially complete exposure pathway, but there is no current risk for groundwater ingestion off the Station property.

7.3.3 POTENTIAL GROUNDWATER MIGRATION TO SURFACE WATER USERS

Under this potential exposure route groundwater must migrate from the Station property to nearby LaSalle Lake at concentrations greater than the 20,000 pCi/L drinking water and surface water standards. Potential exposures could occur if the groundwater discharge to the surface water body was sufficient to increase tritium levels in LaSalle Lake to levels above 20,000 pCi/L. Current surface water data for LaSalle Lake and one of the Station's storm water retention ponds indicates tritium concentrations slightly above 200 pCi/L. The highest tritium concentration in the groundwater at the Station is 1,280 ± 184 pCi/L (MW-LS-105S), which is significantly less than the Illinois surface water standard of 20,000 pCi/L. There is no indication from the HIR investigation that tritium impacted groundwater from the area of MW-LS-105S is migrating off the Station into the adjacent LaSalle Lake. This is a potentially complete exposure pathway, but there is no current risk for ingestion off the Station property.

7.4 SUMMARY OF TRITIUM EXPOSURE PATHWAYS

In summary, there are three potential exposure pathways for tritium originating at the Station:

- potential groundwater migration to the Station potable water supply well;
- potential groundwater migration off the Station property to private and public groundwater users; and
- potential groundwater migration off the Station property to a surface water user.

Based upon the groundwater and surface water data provided and referenced in this report, none of the potential receptors are at risk of exposure to concentrations of tritium in excess of the USEPA drinking water standard (20,000 pCi/L).

7.5 OTHER RADIONUCLIDES

Target radionuclides were not detected in the groundwater and surface water samples collected at concentrations greater than their respective LLD. Other non-targeted radionuclides were also included in the tables but excluded from discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.

8.0 CONCLUSIONS

Based on this hydrogeologic investigation, CRA concludes:

Groundwater Flow

- The groundwater table beneath LaSalle Station is in the overburden, which consists of granular fill and silty clay. Depth to water ranges from 2 to 7.5 feet bgs.
- There is an isolated groundwater trough beneath the PA to the southwest of the Turbine/Reactor Building due to a depression in the Wedron Clay Till which acts like a bowl; trapping groundwater beneath the PA.
- There appears to be a groundwater divide extending from north to south in the area of the existing monitoring well HP-2. Groundwater to the east of HP-2 flows towards and discharges into the intake canal while groundwater to the west of the divide flows to the west around the Reactor/Turbine Building into the storm water retention ponds and discharge canal located west of the PA.
- Groundwater flow within the PA is affected by the foundations of the Reactor/Turbine Building structure, which is constructed in the Wedron Clay Till. This building is a barrier to horizontal groundwater flow to the west.
- The deeper bedrock and overburden water supply aquifers are separated from the Station groundwater by the Wedron Clay Till. There are two potable bedrock wells installed in the Ironton-Galesville Sandstone at a depth of approximately 1,600 feet bgs. These wells are cased from the surface into bedrock.
- The Station building structures were not constructed through the Wedron Clay Till and as such the Wedron Clay Till has not been penetrated by the Station construction activities. Also the Wedron Clay Till has a very low permeability. Therefore, it continues to restrict downward vertical movement of groundwater.
- Groundwater appears to discharge to the north and south storm water retention ponds.

Groundwater Quality

- Tritium concentrations in groundwater were not detected at concentrations greater than the USEPA drinking water standard of 20,000 pCi/L.
- Tritium was not detected at concentrations greater than the LLD (200 pCi/L) in 19 of the 20 groundwater samples collected as part of this investigation.

- Tritium was detected in a groundwater sample from monitoring well MW-LS-105S at a concentration of 1,280 ± 184 pCi/L. A second groundwater sample collected from MW-LS-105S had tritium detected at a concentration of 766 ± 153 pCi/L.
- The source of tritium in the groundwater sample from monitoring well MW-LS-105S is most likely attributable to historical spills. Samples obtained from adjacent monitoring wells and surface water locations revealed no detectable tritium levels. The tritium detected in the groundwater sample from MW-LS-105S is localized to the area of that well.
- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in 20 of the 20 groundwater samples collected as part of this investigation.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in 20 of the 20 samples collected as part of this investigation.

Surface Water Quality

- Tritium concentrations in surface water were not detected at concentrations greater than the USEPA drinking water standard of 20,000 pCi/L.
- Tritium was not detected at concentrations greater than the LLD (200 pCi/L) in four of the six surface water samples collected as part of this investigation.
- Tritium was detected at a concentration of 219 ± 113 pCi/L in sample SW-LS-106 collected from the intake canal (Circulating Water Inlet).
- Tritium was detected at a concentration of 232 ± 116 pCi/L in sample SW-LS-101 collected from the north Storm Water Retention Pond.
- The likely source of the tritium detections are from the Illinois River since the Station pumps over 80 million gallons per day of Illinois River Water into LaSalle Lake.
- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in six of the six surface water samples collected as part of this investigation.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in six of the six surface water samples collected as part of this investigation.

AFE-LaSalle-1 – High Pressure Core Spray (HPCS)/Reactor Core Isolation (RI) Systems

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the

groundwater samples collected from the monitoring wells in the vicinity of AFE-LaSalle-1.

- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples collected from the monitoring wells in the vicinity of AFE-LaSalle-1.
- Tritium was not detected at concentrations greater than the LLD of 200 pCi/L in any of the groundwater samples collected from the monitoring wells in the vicinity of AFE-LaSalle-1.
- There is no current impact from this AFE to groundwater at the Station.
- The groundwater samples collected from monitoring wells HP-2, HP-5, HP-7, and HP-10 installed to evaluate AFE-LaSalle-1 did not contain tritium, targeted gamma-emitting radionuclides, or strontium-89/90 at concentrations greater than their respective LLDs. This AFE is not a source of radionuclides to groundwater.

AFE-LaSalle-2 – Reactor/Turbine/Radwaste Sumps and AFE-LaSalle-3 – Cycled Condensate (CY) System

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples collected from the monitoring wells in the vicinity of AFE-LaSalle-2 and -3.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples collected from the monitoring wells in the vicinity of AFEs-LaSalle-2 and -3.
- The groundwater samples collected from monitoring wells HP-2, HP-5, HP-7, HP-10, MW-LS-104S, and MW-LS-107S installed to evaluate AFEs-LaSalle-2 and -3 did not contain tritium, targeted gamma-emitting radionuclides, or stronium-89/90 at concentrations greater than their respective LLDs.
- Tritium was detected at a concentration of 1,280 ± 184 pCi/L at monitoring well MW-LS-105S. Re-sampling of this well on July 5, 2006 verified the presence of tritium. Tritium was detected in the second groundwater sample at a concentration of 766 ± 153 pCi/L.
- The source of tritium in monitoring well MW-LS-105S is most likely from a historical release associated with the CY Storage Tank overflow in 2001. Samples obtained from adjacent monitoring wells and surface water locations revealed no detectable tritium levels. The tritium detected in MW-LS-105S is localized to the area of that well.

AFE-LaSalle-4 – Blowdown Line Valve/Vacuum Breaker 3A&B:

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-4.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-4.
- Tritium was not detected at concentrations greater than the LLD of 200 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-4.
- The groundwater samples collected from temporary sampling point TS-LS-102S installed adjacent to VB-3A&B installed to evaluate AFE-LaSalle-4 did not contain tritium, targeted gamma-emitting radionuclides, or strontium-89/90 at concentrations greater than their respective LLDs. This AFE is not a source of radionuclides to groundwater.
- There is no current impact from this AFE to groundwater at the Station.

AFE-LaSalle-5 – Blowdown Line Valve/Vacuum Breaker 15A&B:

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-5.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-5.
- Tritium was not detected at concentrations greater than the LLD of 200 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-5.
- The groundwater samples collected from temporary sampling point TS-LS-101S installed adjacent to VB-15A&B to evaluate AFE-LaSalle-5 did not contain tritium, targeted gamma-emitting radionuclides, or strontium-89/90 at concentrations greater than their respective LLDs. This AFE is not a source of radionuclides to groundwater.
- There is no current impact from this AFE to groundwater at the Station.

AFE-LaSalle-6 – Blowdown Line Valve/Vacuum Breaker 16B:

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-6.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-6.
- Tritium was not detected at concentrations greater than the LLD of 200 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-6.
- The groundwater samples collected from temporary sampling point TS-LS-110 installed adjacent to VB-16B installed to evaluate AFE-LaSalle-6 did not contain tritium, targeted gamma-emitting radionuclides, or strontium-89/90 at concentrations greater than their respective LLDs. This AFE is not a source of radionuclides to groundwater.
- There is no current impact from this AFE to groundwater at the Station.

AFE-LaSalle-7 –Radwaste Discharge Line:

- Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective LLDs in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-7.
- Strontium-89/90 was not detected at a concentration greater than the LLD of 2.0 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-7.
- Tritium was not detected at concentrations greater than the LLD of 200 pCi/L in any of the groundwater samples collected from the temporary sampling locations in the vicinity of AFE-LaSalle-7.
- The groundwater samples collected from temporary sampling point TS-LS-103S, TS-LS-104S and TS-LS-105S installed adjacent to the Radwaste Discharge Line to evaluate AFE-LaSalle-7 did not contain tritium, targeted gamma-emitting radionuclides, or strontium-89/90 at concentrations greater than their respective LLDs. The Station discontinued the discharge of Radwaste through this line in December 2000. This AFE is not a source of radionuclides to groundwater.
- There is no current impact from this AFE to groundwater at the Station.

Potential Receptors

- Based on the results of this investigation[1], there is no current risk from exposure to radionuclides associated with licensed plant operations through any of the identified potential exposure pathways.

General Conclusions

- Based on the results of this investigation, tritium is not migrating off the Station property at detectable concentrations.
- Based on the results of this investigation, there are no known active releases into the groundwater at the Station.

1 Using the LLD specified in this HIR.

9.0 RECOMMENDATIONS

The following presents CRA's recommendations for proposed activities to be completed at the Station.

9.1 DATA GAPS

Based on the results of this hydrogeologic investigation, there are no data gaps remaining to support CRA's conclusions regarding the characterization of the groundwater regime and potential impacts from radionuclides at the Station.

9.2 GROUNDWATER MONITORING

Based upon the information collected to date, CRA recommends that Exelon conduct periodic monitoring of selected sample locations.

10.0 REFERENCES CITED

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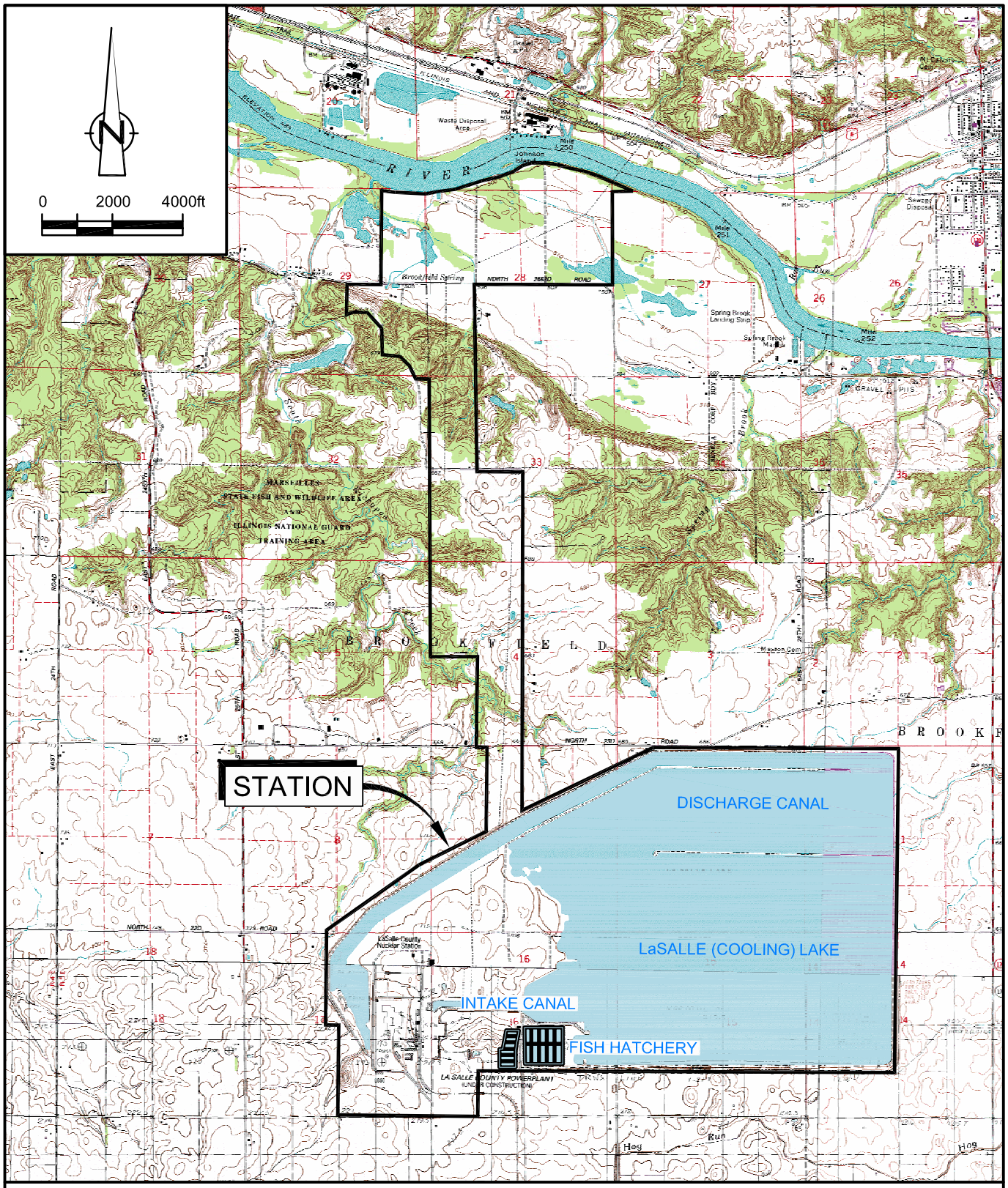


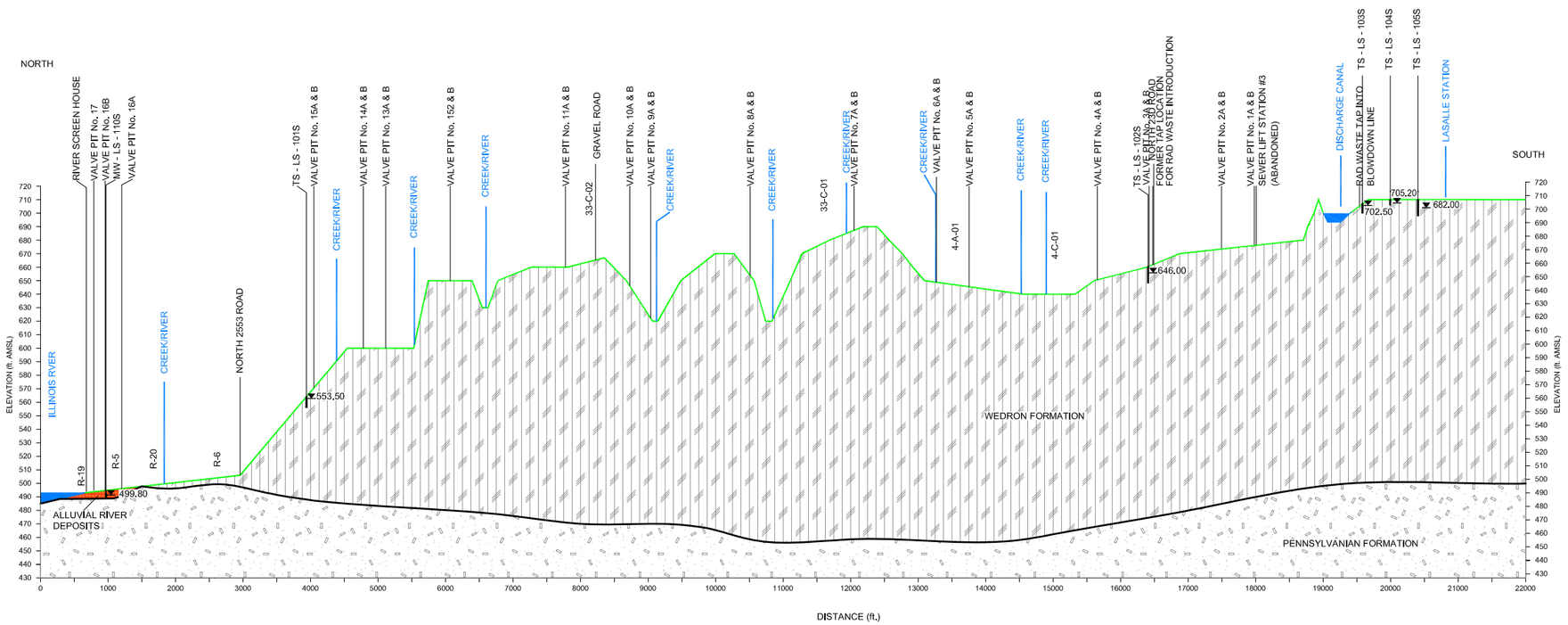
SOURCE: USGS QUADRANGLE MAP MOSAIC
CREATED FROM USGS QUADRANGLES:
SENECA - 1970, PHOTOREVISED 1980
KINSMAN - 1983
RANSOM - 1983
MARSEILLES - 1994

Exelon

figure 1.1

STATION LOCATION MAP
LaSALLE GENERATING STATION
EXELON GENERATION COMPANY, LLC
Marseilles, Illinois

45136-24(016)GN-WA005 JUL 12/2006



SCALE: HOR. 1" = 1000'
VER. 1" = 50'
20X VERTICAL EXAGGERATION

LEGEND

- ALLUVIAL RIVER DEPOSITS
- PENNSYLVANIAN FORMATION (BEDROCK)
- WEDRON FORMATION (TILL)
- TEMPORARY SAMPLING LOCATION BOREHOLE
- 499.80 WATER ELEVATION (FT. AMSL)

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

GEOLOGIC CROSS SECTION - STATION TO ILLINOIS RIVER
LaSALLE GENERATING STATION
MARSEILLES, ILLINOIS

Exelon

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
SDI CONSULTANTS, ALTA/ACSM LAND TITLE SURVEY
LaSALLE NUCLEAR STATION, 9-15-2000

Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	M. KELLY	JULY 2006	
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45136-24(016)GN-WA016 JUL 12/2006

SYSTEM	SERIES	GROUP OR FORMATION	HYDROGEOLOGIC UNIT		DESCRIPTION	HYDROGEOLOGIC CHARACTERISTICS
QUATERNARY	Pleistocene	Richland Loess	Glacial Drift Aquitard		Silty clay or clayey silt	Ground water occurs predominantly in thin sand and gravel pockets within the glacial drift. Yields are quite variable and typically low, suitable only for domestic and farm purposes. Wells or cisterns that intersect the more permeable zones may exhibit high, short-term yields. The glacial drift aquitard locally overlies the buried bedrock valley aquifers.
		Wedron Formation			Silty clay or clayey silt with interspersed sand and gravel, some thin sand and gravel pockets	
			Buried Bedrock Valley Aquifers		Sand and gravel, some silt	The buried bedrock valley aquifers consist of sand and gravel deposited in channels cut into the underlying Pennsylvanian strata. Ground water occurs under water table conditions. Where the glaciofluvial deposits are clean and well-sorted, yields of 100 gpm or more can be sustained.
PENNSYLVANIAN	Missourian	Modesto Formation	Pennsylvanian Aquitard		Principally shale, with some interbedded underclay, sandstone, limestone, and coal	Ground water occurs primarily in thin sandstone beds and occasionally in joints in thin limestone beds. Ground water occurs under leaky artesian conditions. The high proportion of shales makes the Pennsylvanian strata generally unfavorable as aquifers. Yields are low and are suitable only for domestic and farm purposes.
	Desmoinesian	Carbondale Formation				
		Spoon Formation				
	Atokan	Abbott Formation				
ORDOVICIAN	Champlainian	Galena Group	Galena-Platteville dolomites	Cambrian-Ordovician Aquifer	Dolomite and limestone, locally cherty, sandy at base, shale partings	Ground water occurs under leaky artesian conditions in the sandstones and in joints in the dolomites. Yields are variable and depend upon which units are open to the well. In terms of the total yield of a well penetrating the entire thickness of the Cambrian-Ordovician Aquifer, the Glenwood-St. Peter sandstone supplies about 15 percent, the Prairie du Chien, Eminence, Potosi, and Franconia dolomites collectively supply about 35 percent, and the Ironton-Galesville sandstone supplies about 50 percent.
		Platteville Group				
		Ancell Group	Glenwood-St. Peter sandstone		Sandstone, shale at top, little dolomite, locally cherty at base	
	Canadian	Prairie du Chien Group	Prairie du Chien, Eminence, Potosi, and Franconia dolomites		Sandy dolomite, dolomitic sandstone, cherty at top, interbedded shale in lower part	
CAMBRIAN	Croixan	Eminence Formation				
		Potosi Dolomite				
		Franconia Formation				
		Ironton Sandstone	Ironton-Galesville sandstone		Sandstone, upper part dolomite	
		Galesville Sandstone				
		Eau Claire Formation	Eau Claire Aquitard (upper and middle beds)		Shales, dolomites, and shaly dolomitic sandstone	Insignificant amounts of ground water may occur in joints. These beds act as a confining layer between the Cambrian-Ordovician Aquifer and the Mt. Simon Aquifer.
		Mt. Simon Sandstone	Mt. Simon Aquifer		Sandstone	Ground water occurs under leaky artesian conditions. Ground water in this aquifer is too highly mineralized for most purposes. Adequate supplies for municipal and industrial use are more easily obtained from shallower aquifers.

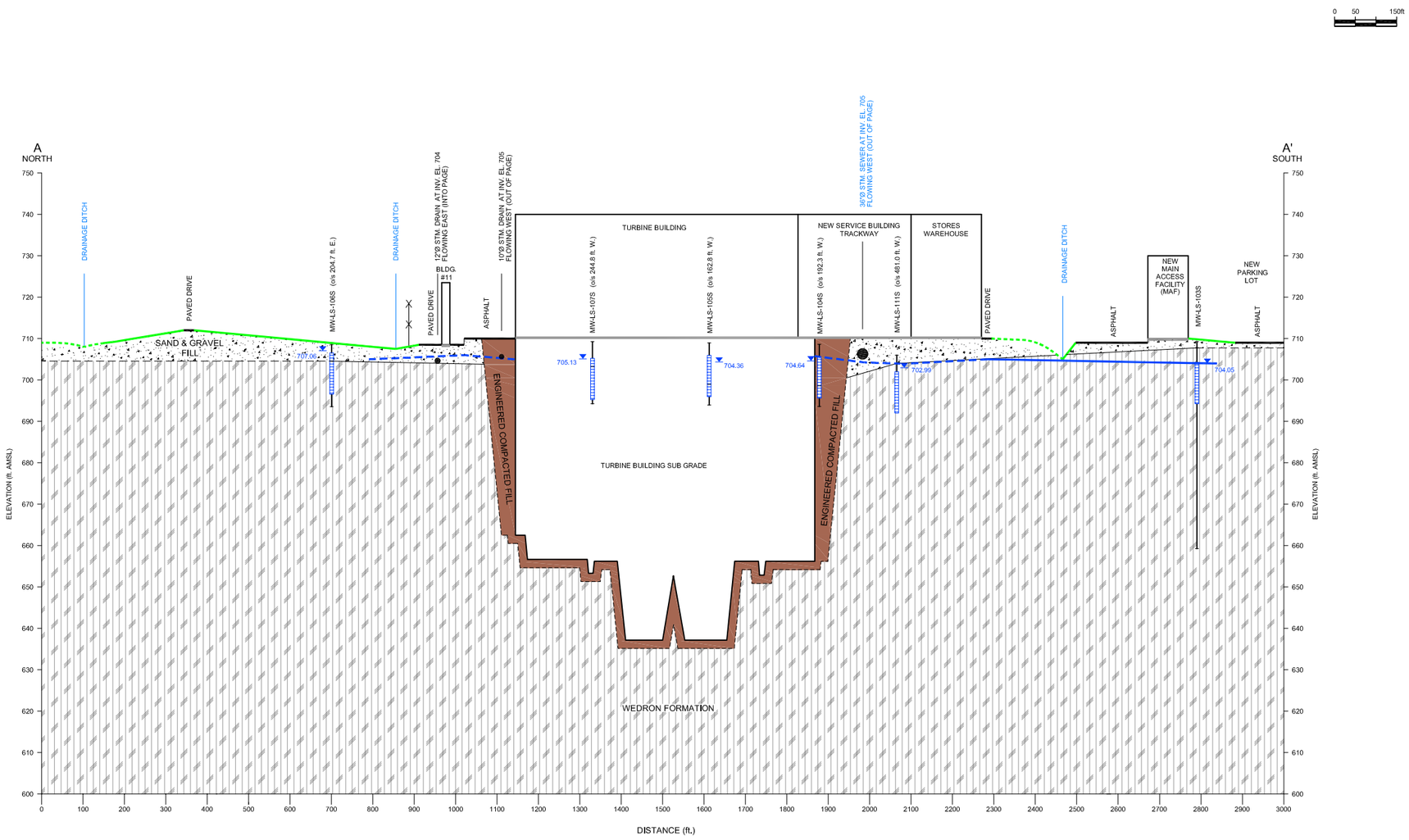
SOURCE REFERENCE: UFSAR, REV. 15, 2004 (WILLIAM et al., 1975; HOOVER AND SCHICHT, 1967, p.4, AND CSALLANY, 1966, p.4E)

figure 2.3

SITE STRATIGRAPHIC UNITS AND CHARACTERISTICS
LaSALLE GENERATING STATION
EXELON GENERATION COMPANY, LLC
Marseilles, Illinois

Exelon

GRA



SCALE: HOR. 1" = 150'
VER. 1" = 15'
10X VERTICAL EXAGGERATION

MONITORING WELL IDENTIFICATION
o/s — OFFSET (ft.)
FENCE LOCATION
MW-LS-111S
GROUND SURFACES
MONITORING WELL CASING
MONITORING WELL SCREEN INTERVAL
EXCAVATION LIMIT (APPROXIMATE)
APPROXIMATE STORM SEWER LOCATION
SAND AND GRAVEL
ENGINEERED COMPACTED FILL
WEDRON FORMATION
SILTY CLAY TILL WITH INTERMITTENT SAND AND GRAVEL POCKETS

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

HYDROGEOLOGIC CROSS-SECTION A-A'
LaSALLE GENERATING STATION
MARSEILLES, ILLINOIS

Exelon

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
SDI CONSULTANTS, ALTA/ACSM LAND TITLE SURVEY
LaSALLE NUCLEAR STATION, 9-15-2000

Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	M. KELLY	JULY 2006	
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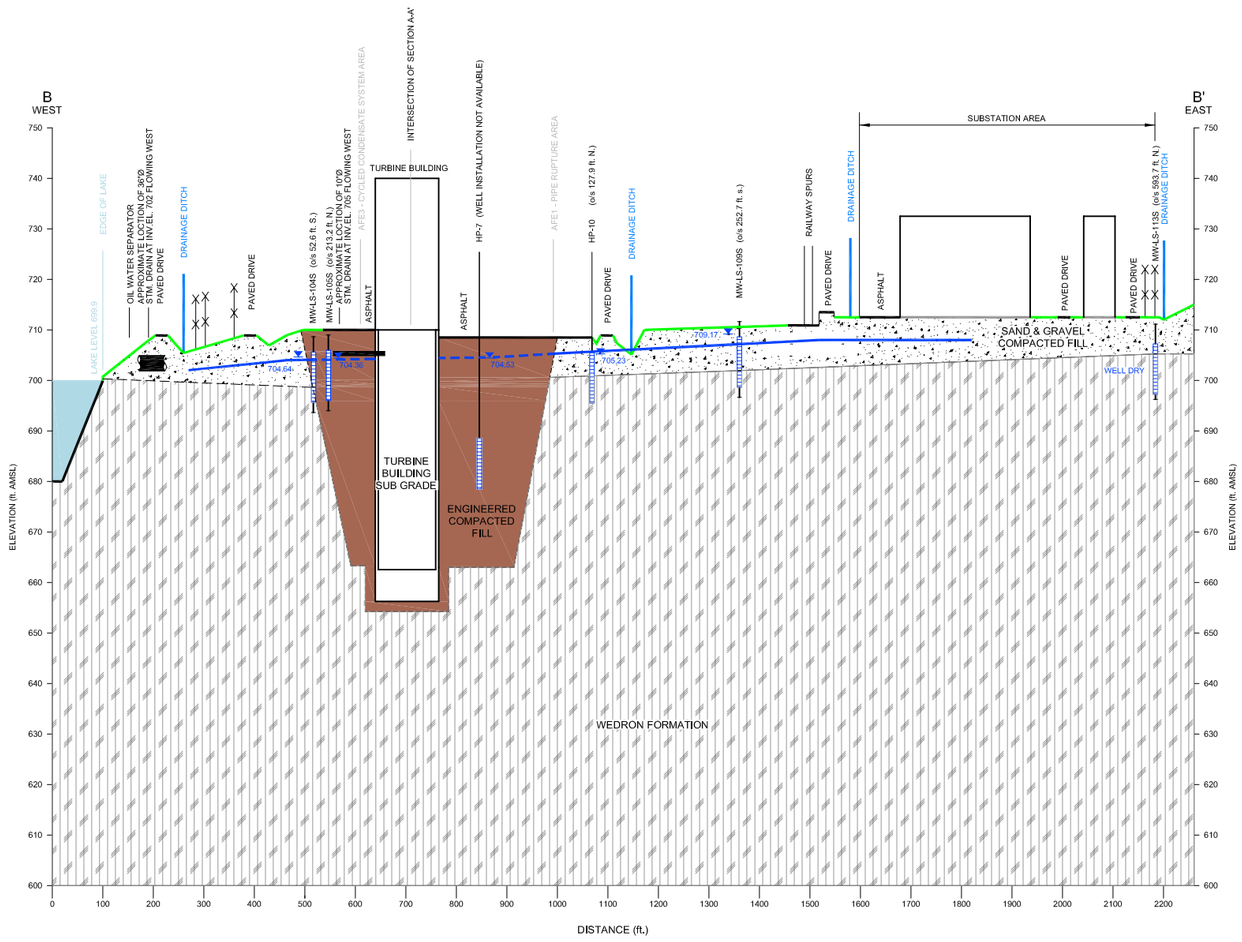
45136-24(016)GN-WA009 JUL 12/2006



SCALE: HOR. 1" = 150'
VER. 1" = 15'
10X VERTICAL EXAGGERATION

0 50 150ft

MONITORING WELL IDENTIFICATION
o/s — OFFSET (ft.)
FENCE LOCATION
MW-LS-111S
GROUND SURFACES
MONITORING WELL CASING
MONITORING WELL SCREEN INTERVAL
EXCAVATION LIMIT (APPROXIMATE)
APPROXIMATE STORM SEWER LOCATION
SAND AND GRAVEL
ENGINEERED COMPACTED FILL
WEDRON FORMATION
SILTY CLAY TILL WITH INTERMITTENT
SAND AND GRAVEL POCKETS

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

HYDROGEOLOGIC CROSS-SECTION B-B'
LaSALLE GENERATING STATION
MARSEILLES, ILLINOIS

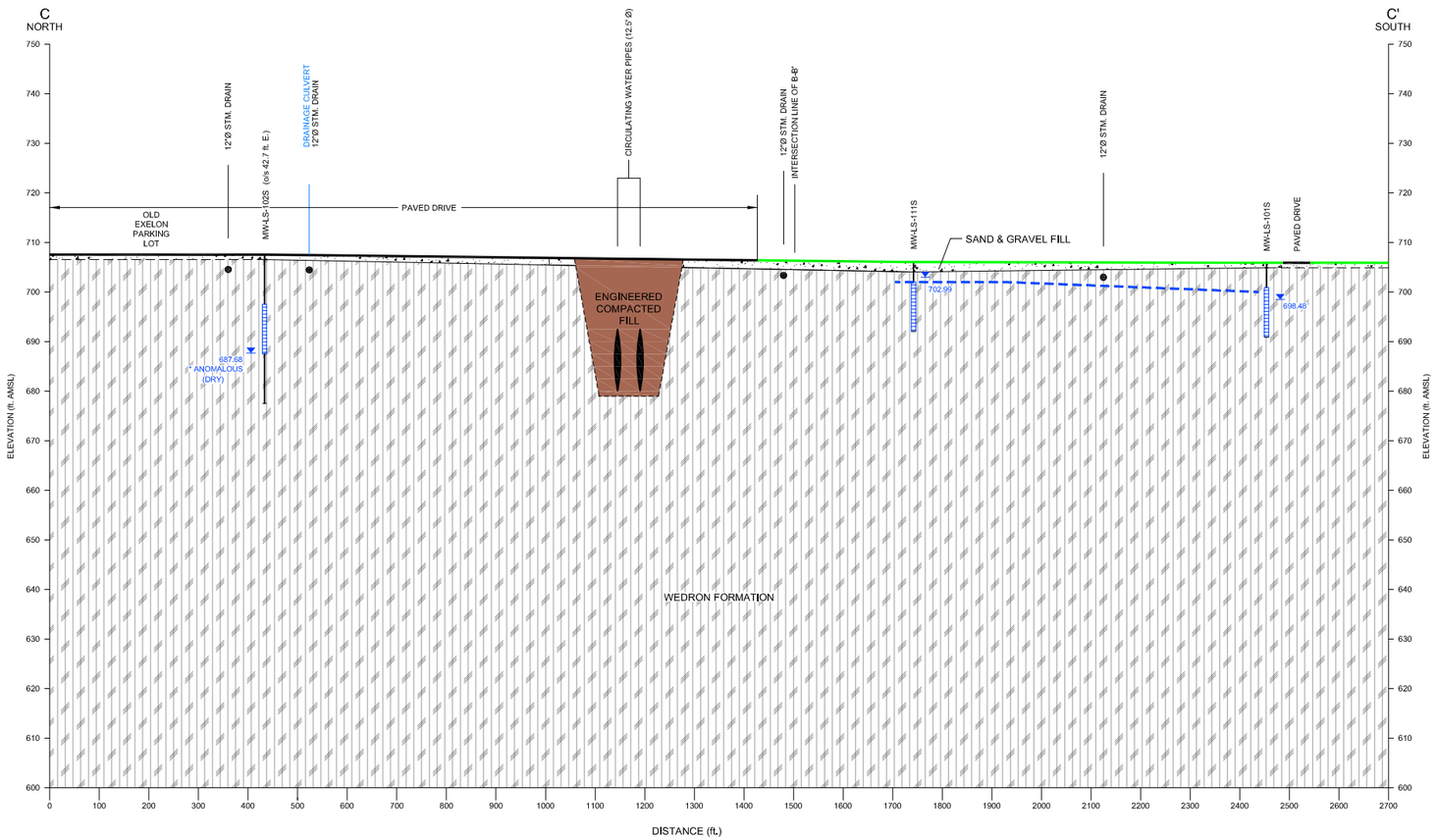
Exelon

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
SDI CONSULTANTS, ALTA/ACSM LAND TITLE SURVEY
LASALLE NUCLEAR STATION, 9-15-2000

Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	M. KELLY	JULY 2006	
Scale: AS SHOWN	Project №: 45136-24	Report №: 016	Drawing №: figure 5.3

45136-24(016)GN-WA009 JUL 12/2006



SCALE: HOR. 1" = 150'
VER. 1" = 15'
10X VERTICAL EXAGGERATION

0 50 150ft

MONITORING WELL IDENTIFICATION
o/s — OFFSET (ft.)
FENCE LOCATION
MW-LS-111S
GROUND SURFACES
MONITORING WELL CASING
MONITORING WELL SCREEN INTERVAL
EXCAVATION LIMIT (APPROXIMATE)
APPROXIMATE STORM SEWER LOCATION
SAND AND GRAVEL
ENGINEERED COMPACTED FILL
WEDRON FORMATION
SILTY CLAY TILL WITH INTERMITTENT
SAND AND GRAVEL POCKETS

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

EXELON GENERATION COMPANY, LLC

FLEETWIDE ASSESSMENT

HYDROGEOLOGIC CROSS-SECTION C-C'
LaSALLE GENERATING STATION
MARSEILLES, ILLINOIS

Exelon

CONESTOGA-ROVERS & ASSOCIATES

Source Reference:
SDI CONSULTANTS, ALTA/ACSM LAND TITLE SURVEY
LaSALLE NUCLEAR STATION, 9-15-2000

Project Manager:	Reviewed By:	Date:	
S. QUIGLEY	M. KELLY	JULY 2006	
Scale:	Project Nº:	Report Nº:	Drawing Nº:
AS SHOWN	45136-24	016	figure 5.4

45136-24(016)GN-WA009 JUL 12/2006

TABLE 4.1

SUMMARY OF MONITORING WELL INSTALLATION DETAILS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*X-coord.*	*Y-coord.*	*Surface Elevation*	*Reference Elevation*	*Installation Date*	*Boring Total Depth*	*Screened Interval*						*Well Construction*	*Media Screened*
	(UTM Coordinates [1])		*(ft AMSL)*	*(ft AMSL)*		*(ft bgs)*	*Top*		*Bottom*	*Top*		*Bottom*		
							(ft bgs)			*(ft AMSL)*				
MW-LS-101S	1180993.44	14983470.48	705.90	705.52	5/9/06	15.0	5	to	15	700.90	to	690.90	2-inch PVC Screen	Silty clay
MW-LS-102S	1180951.77	14985491.03	707.54	706.96	5/10/06	30.0	10	to	20	697.54	to	687.54	2-inch PVC Screen	Clay
MW-LS-103S	1181464.72	14983456.74	709.26	708.91	5/10/06	16.0	5	to	15	704.26	to	694.26	2-inch PVC Screen	Silty clay
MW-LS-104S	1181279.40	14984366.48	708.61	712.16	5/11/06	15.0	3	to	13	705.61	to	695.61	2-inch PVC Screen	Sand, gravel, silty clay
MW-LS-105S	1181308.70	14984632.73	708.96	712.41	5/11/06	15.0	3	to	13	705.96	to	695.96	2-inch PVC Screen	Sand, gravel, silty clay
MW-LS-106S	1181675.72	14985547.19	708.58	711.41	5/10/06	15.0	2	to	12	706.58	to	696.58	2-inch PVC Screen	Gravel, sand, clay
MW-LS-107S	1181227.28	14984916.19	709.27	708.72	5/11/06	15.0	4	to	14	705.27	to	695.27	2-inch PVC Screen	Gravel, sand, cobbles, clay
MW-LS-108S	1182095.82	14983470.45	711.17	714.02	5/10/06	15.0	3	to	13	708.17	to	698.17	2-inch PVC Screen	Silty clay
MW-LS-109S	1182120.59	14984169.45	711.64	711.27	5/11/06	15.0	3	to	13	708.64	to	698.64	2-inch PVC Screen	Sand, gravel, silty clay
MW-LS-110S	1182683.90	15007603.00	502.35	505.85	5/4/06	6.5	1.5	to	6.5	500.85	to	495.85	2-inch PVC Screen	Silty clay
MW-LS-111S	1180991.71	14984180.68	706.04	705.41	5/12/06	14.0	4	to	14	702.04	to	692.04	2-inch PVC Screen	Clay
MW-LS-112S	1182846.27	14983653.78	715.65	718.67	5/12/06	15.0	4	to	14	711.65	to	701.65	2-inch PVC Screen	Silty clay
MW-LS-113S	1182944.38	14985015.98	711.23	714.21	5/15/06	15.0	4	to	14	707.23	to	697.23	2-inch PVC Screen	Silty clay

Notes:

(1) Universal Transverse Mercator (UTM), Zone 16, NAD 83, in feet
ft AMSL feet Above Mean Sea Level
ft bgs feet below ground surface
PVC Polyvinyl Chloride

TABLE 4.2

SUMMARY OF MONITORING WELL DEVELOPMENT PARAMETERS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Date*	*Well Volume (gallons)*	*Volume Purged (gallons)*	*pH (Std. Units)*	*Conductivity (µS/cm)*	*Temperature (°C)*	*Turbidity (NTU)*	*Observations*
MW-LS-101S	5/10/06				Dry; no development			
MW-LS-102S	5/11/06				Dry; no development			
MW-LS-103S	5/9/06				Dry; no development [1]			
MW-LS-104S	5/12/06	1.4	8	NM	NM	NM	NM	Turbid
MW-LS-105S	5/12/06	1.4	9	NM	NM	NM	NM	Turbid
MW-LS-106S	5/11/06	1.6	7.5	NM	NM	NM	>1000	
					Dry at 7.5 gallons.			
MW-LS-107S	5/12/06	1.7	8	NM	NM	NM	NM	Turbid
MW-LS-108S	5/11/06	1.9	4.5	NM	NM	NM	NM	Turbid
					Dry at 4.5 gallons.			
MW-LS-109S	5/12/06	1.9	8	NM	NM	NM	NM	Very turbid
MW-LS-110S	5/10/06	0.5	0.9	NM	NM	NM	NM	Brown; turbid
					Dry at 0.9 gallons.			
MW-LS-111S	5/15/06				Dry; no development			
MW-LS-112S	5/15/06	1.7	NM	NM	NM	NM	NM	
MW-LS-113S	5/15/06				Dry; no development			

Notes:

(1) Well considered developed on May 9, 2006, due to dryness for 2 days (May 8 thru May 10). Water found to be present on May 10, 2006. Well was purged as a precautionary measure. Well volume was 0.49 gallons; purged dry at 0.75 gallons.

°C Degree Celsius.
µS/cm Microsiemens per Centimeter.
NM Not Measured.
NTU Nephelometric Turbidity Units.
Std Units Standard Units.

TABLE 4.3

SUMMARY OF GROUNDWATER ELEVATIONS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINIOS

Sample Location	*Reference Elevation (ft AMSL)*	*Total Depth (ft below Reference)*	*May 22, 2006*		*July 6, 2006*	
			Depth to Water (ft below Reference)	*Groundwater Elevation (ft AMSL)*	*Depth to Water (ft below Reference)*	*Groundwater Elevation (ft AMSL)*
Shallow Wells						
MW-LS-101S	705.52	14.62	7.04	698.48	4.92	700.60
MW-LS-102S	706.96	19.42	19.28	687.68	17.16	689.80
MW-LS-103S	708.91	14.65	4.86	704.05	6.21	702.70
MW-LS-104S	712.16	16.54	7.52	704.64	8.01	704.15
MW-LS-105S	712.41	16.46	8.05	704.36	8.27	704.14
MW-LS-106S	711.41	14.83	4.35	707.06	5.91	705.50
MW-LS-107S	708.72	13.45	3.59	705.13	3.97	704.75
MW-LS-108S	714.02	15.85	6.44	707.58	6.66	707.36
MW-LS-109S	711.27	12.63	2.10	709.17	2.37	708.90
MW-LS-110S	505.85	10.00	6.83	499.02	9.51	496.34
MW-LS-111S	705.41	13.37	2.42	702.99	4.24	701.17
MW-LS-112S	718.67	17.03	7.02	711.65	8.58	710.09
MW-LS-113S	714.21	16.98	16.98	Well Dry	13.40	700.81
HP-2	713.14	24.54	5.24	707.90	5.59	707.55
HP-5	711.14	35.25	5.62	705.52	5.94	705.20
HP-7	711.47	33.80	6.94	704.53	7.12	704.35
HP-10	708.61	13.00	3.38	705.23	3.60	705.01

Notes:

ft AMSL feet Above Mean Sea Level.
NA Not Available.
Reference elevation is the top of riser elevation

TABLE 4.4

SUMMARY OF SURFACE WATER ELEVATIONS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Date	*Station Staff Gauge Average Lake Level (ft AMSL)*	*SG-LS-101 Intake Canal (ft AMSL)*	*SG-LS-102 North Storm Water Retention Pond (ft AMSL)*	*SG-LS-103 Discharge Canal (ft AMSL)*	*SG-LS-104 South Storm Water Retention Pond (ft AMSL)*
May 22, 2006	699.90	--	--	--	--
July 6, 2006	699.70	699.47	699.57	699.67	699.72

Note:

SG (staff gauge) locations installed by CRA on July 6, 2006.
ft AMSL feet Above Mean Sea Level.

TABLE 4.5

SAMPLE KEY
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Date*	*Time*	*Matrix*	*Analyses*
Monitoring Wells						
MW-LS-101S	WG-LS-MW-LS-101S-052406-NK-006		05/24/06	10:50	Groundwater	Tritium / Target Radionuclides
MW-LS-102S	No sample collected. Location was dry.		05/25/06			
MW-LS-103S	WG-LS-MW-LS-103S-052306-NK-001		05/23/06	11:00	Groundwater	Tritium / Target Radionuclides
MW-LS-104S	WG-LS-MW-LS-104S-052606-NK-020		05/26/06	11:00	Groundwater	Tritium / Target Radionuclides
MW-LS-105S	WG-LS-MW-LS-105S-052606-NK-019		05/26/06	11:10	Groundwater	Tritium / Target Radionuclides
MW-LS-105S	WG-LS-MW-105S-070506-JW-026		07/05/06	10:20	Groundwater	Tritium
MW-LS-106S	WG-LS-MW-LS-106S-052506-NK-017		05/25/06	10:05	Groundwater	Tritium / Target Radionuclides
MW-LS-107S	WG-LS-MW-LS-107S-052606-NK-018		05/26/06	9:20	Groundwater	Tritium / Target Radionuclides
MW-LS-108S	WG-LS-MW-LS-108S-052506-NK-016		05/25/06	8:40	Groundwater	Tritium / Target Radionuclides
MW-LS-109S	WG-LS-MW-LS-109S-052606-NK-021		05/26/06	12:55	Groundwater	Tritium / Target Radionuclides
Rinsate	RB-LS-052506-NK-010	Rinsate	05/25/06	-	water	Tritium / Target Radionuclides
MW-LS-110S	WG-LS-MW-LS-110S-052506-NK-011		05/25/06	10:40	Groundwater	Tritium / Target Radionuclides
MW-LS-111S	WG-LS-MW-LS-111S-053006-BW-022		05/30/06	11:06	Groundwater	Tritium / Target Radionuclides
MW-LS-111S	WG-LS-MW-LS-111S-053006-BW-023	Duplicate (022)	05/30/06	11:26	Groundwater	Tritium / Target Radionuclides
MW-LS-112S	WG-LS-MW-LS-112S-053006-BW-024		05/30/06	13:11	Groundwater	Tritium / Target Radionuclides
MW-LS-112S	WG-LS-MW-LS-112S-053006-BW-025	Duplicate (024)	05/30/06	13:21	Groundwater	Tritium / Target Radionuclides
MW-LS-113S	No sample collected. Location was dry.		5/30/2006			
HP-2	WG-LS-HP-2-052406-NK-012		05/24/06	11:00	Groundwater	Tritium / Target Radionuclides
HP-5	WG-LS-HP-5-052406-NK-013		05/24/06	12:00	Groundwater	Tritium / Target Radionuclides
HP-7	WG-LS-HP-7-052406-NK-015		05/24/06	13:40	Groundwater	Tritium / Target Radionuclides
HP-10	WG-LS-HP-10-052406-NK-014		05/24/06	12:45	Groundwater	Tritium / Target Radionuclides
Temporary Sampling Points						
TS-LS-101S	WG-LS-TS-LS-101S-050906-BW-001		05/09/06	10:55	Groundwater	Tritium / Target Radionuclides
TS-LS-102S	WG-LS-TS-LS-102S-050506-BW-002		05/05/06	10:45	Groundwater	Tritium / Target Radionuclides
TS-LS-103S	WG-LS-TS-LS-103S-050506-BW-003		05/05/06	13:55	Groundwater	Tritium / Target Radionuclides
TS-LS-104S	WG-LS-TS-LS-104S-050506-BW-004		05/05/06	16:00	Groundwater	Tritium / Target Radionuclides
TS-LS-105S	WG-LS-TS-LS-105S-050906-BW-005		05/09/06	9:15	Groundwater	Tritium / Target Radionuclides
Surface Water						
SW-LS-101	WS-LS-SW-LS-101-052306-NK-002		05/23/06	12:30	Surface Water	Tritium / Target Radionuclides
SW-LS-102	WS-LS-SW-LS-102-052306-NK-003		05/23/06	13:00	Surface Water	Tritium / Target Radionuclides
SW-LS-103	WS-LS-SW-LS-103-052306-NK-004		05/23/06	13:30	Surface Water	Tritium / Target Radionuclides
Rinsate	RB-LS-052306-NK-005	Rinsate	05/23/06	-	Water	Tritium / Target Radionuclides
SW-LS-104	WS-LS-SW-LS-104-052506-NK-008		05/25/06	8:35	Surface Water	Tritium / Target Radionuclides
SW-LS-105	WS-LS-SW-LS-105-052506-NK-009		05/25/06	9:00	Surface Water	Tritium / Target Radionuclides
SW-LS-105	WS-LS-SW-LS-105-052506-NK-018	Duplicate (009)	05/25/06	9:00	Surface Water	Tritium / Target Radionuclides
SW-LS-106	WS-LS-SW-LS-106-052406-NK-007		05/24/06	13:30	Surface Water	Tritium / Target Radionuclides

Notes:

QC - Quality Control
Target Radionuclides: Sr-89/90, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Nb-95, Zr-95, Cs-134, Cs-137, Ba-140, and La-140
Duplicate (009) - Duplicate of sample number in parenthesis

TABLE 4.6

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)*	*Volume Purged (gallons)*	*pH (Std. Units)*	*Temperature (°C)*	*Conductivity (µS/cm)*	*ORP (mV)*	*DO (mg/L)*	*Turbidity (NTU)*
MW-LS-101S	05/24/06	9:40	150	1.5	8.16	13.4	1.650	-27	4.84	912
		9:50	150		8.22	13.6	1.620	-29	4.76	803
		10:00	150		8.70	13.8	1.610	-25	4.62	530
		10:10	150		8.21	14.7	1.590	-18	4.59	420
		10:25	150		8.24	14.6	1.570	-42	4.65	330
		10:40	150		8.27	14.9	1.550	-48	4.93	297
		10:45	150		8.28	15.1	1.530	-46	4.83	317
MW-LS-103S	05/23/06	10:45	100	1.5	6.74	14.2	3.010	105	2.94	40.4
		10:50	100		6.76	14.9	2.960	102	2.74	25.7
		10:55	100		6.78	15.1	2.930	101	2.92	15.4
		11:00	100		6.78	15.2	2.930	100	2.71	12.65
		11:05	100		6.79	15.7	2.900	99	2.7	12.93
MW-LS-104S	05/26/06	10:45	200	1	8.03	16.9	0.858	61	0.38	107
		10:50	200		7.65	17.5	0.771	32	0.48	66.8
		10:55	200		7.58	17.5	0.734	41	0.55	30.3
		11:00	200		7.55	17.5	0.722	44	0.51	13.26
MW-LS-105S	05/26/06	10:30	200	1	7.55	19.4	0.653	144	1.73	166
		10:45	200		7.31	19.1	0.577	129	0.73	161
		10:50	200		7.28	19.1	0.567	120	0.67	155
		10:55	200		7.25	19.0	0.563	114	0.62	150
MW-LS-106S	05/25/06	9:45	250	1.5	7.84	14.8	1.450	81	8.6	38.7
		9:50	250		7.69	14.0	1.391	84	7.44	28.5
		9:55	250		7.56	16.2	1.376	81	7.44	26.8
		10:00	250		7.51	15.5	1.357	83	7.71	19.67
		10:05	250		7.49	15.7	1.341	86	7.69	18.37
MW-LS-107S	05/26/06	9:00	150	1	7.10	14.9	9.680	225	1.92	68.3
		9:05	150		7.00	15.9	9.990	176	1.67	56.6
		9:10	150		7.00	16.0	10.000	169	1.68	37.3
		9:15	150		7.01	16.0	10.040	165	1.61	44.4
		9:20	150		6.99	16.7	10.060	167	1.68	40.5

TABLE 4.6

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)*	*Volume Purged (gallons)*	*pH (Std. Units)*	*Temperature (°C)*	*Conductivity (µS/cm)*	*ORP (mV)*	*DO (mg/L)*	*Turbidity (NTU)*
MW-LS-108S	05/25/06	8:20	200	1	7.80	15.7	2.120	28	4.08	167
		8:25	200		7.95	15.5	2.120	28	4.76	123
		8:30	200		7.94	15.4	2.130	29	4.5	102
		8:35	200		7.92	15.3	2.110	33	4.44	91.1
MW-LS-109S	05/26/06	12:30	200	1.5	7.07	17.1	1.278	71	0.6	719
		12:35	200		7.04	18.0	1.289	44	0.53	717
		12:40	200		7.03	17.6	1.279	37	0.71	567
		12:45	200		7.04	17.9	1.314	35	0.99	349
		12:50	200		7.05	17.9	1.373	29	0.91	221
		12:55	200		7.05	17.3	1.330	28	0.89	196
MW-LS-110S	05/25/06	10:00	100	1	6.60	16.5	0.992	-88	1.91	220
		10:05	100		6.50	16.2	0.930	-38	2.18	216
		10:15	100		6.47	16.2	0.905	-16	2.49	180
		10:20	100		6.47	16.2	0.895	-11	2.62	167
		10:25	100		6.47	16.2	0.864	-6	2.73	150
		10:30	100		6.46	16.2	0.850	-6	2.76	135
		10:35	100		6.46	16.3	0.844	-5	2.68	138
		10:40	100		6.46	16.2	0.834	-4	2.72	130
MW-LS-111S	05/30/06	10:55	100	0.92	6.82	20.2	6.510	246	1.54	4.5
		11:00	100		6.82	20.5	6.560	242	1.51	4.49
		11:05	100		6.83	20.4	6.590	239	1.47	3.21
MW-LS-112S	05/30/06	12:45	100	1.06	6.67	18.4	2.040	-21	1.77	68.6
		13:00	100		6.71	18.9	2.040	-14	1.53	74.2
		13:05	100		6.72	19.2	2.050	-12	1.46	71.9
		13:10	100		6.73	19.5	2.060	-11	1.41	73.8
HP-2	05/24/06	10:35	200	1	7.79	18.2	1.600	-2	0.35	1.73
		10:40	200		7.84	17.9	1.630	-24	0.22	167
		10:45	200		7.76	18.0	1.760	-89	0.24	53
		10:50	200		7.74	18.1	1.740	-90	0.26	54
		10:55	200		7.72	18.4	1.740	-96	0.23	53

TABLE 4.6

SUMMARY OF MONITORING WELL PURGING PARAMETERS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Date*	*Time*	*Pumping Rate (mL/min)*	*Volume Purged (gallons)*	*pH (Std. Units)*	*Temperature (°C)*	*Conductivity (µS/cm)*	*ORP (mV)*	*DO (mg/L)*	*Turbidity (NTU)*
HP-5	05/24/06	11:40	300	0.75	8.01	18.7	7.140	-12	1.2	92.7
		11:45	300		7.99	18.9	7.150	-44	0.48	75.4
		11:50	300		7.94	19.1	7.190	-55	0.43	77.8
		11:55	300		7.93	19.4	7.220	-61	0.39	75.3
HP-7	05/24/06	13:20	150	0.8	8.25	18.7	0.949	-54	0.31	42.3
		13:25	150		8.09	19.4	0.942	-75	0.3	38.3
		13:30	150		8.07	19.7	0.938	-81	0.26	46.1
		13:35	150		8.05	19.5	0.936	-83	0.25	41.6
HP-10	05/24/06	12:30	200	1	8.10	16.7	0.638	32	2.42	72.5
		12:35	200		7.88	18.3	0.614	10	1.85	73.8
		12:40	200		7.81	18.9	0.517	8	2.22	74.7
		12:45	200		7.79	19.0	0.596	6	2.15	72.6

Notes:

°C	Degree Celsius.
µs/cm	Microsiemens per Centimeter.
DO	Dissolved Oxygen.
mg/L	Milligrams per Liter.
mL/min	Milliliters per Minute.
mV	Millivolts.
NTU	Nephelometric Turbidity Units.
ORP	Oxidation-Reduction Potential.
Std Units	Standard Units.

TABLE 5.1

ANALYTICAL RESULTS SUMMARY - TRITIUM IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Tritium (pCi/L)*	*Result Error*
HP-2	WG-LS-HP-2-052406-NK-012		5/24/2006	ND (200)	-
HP-5	WG-LS-HP-5-052406-NK-013		5/24/2006	ND (200)	-
HP-7	WG-LS-HP-7-052406-NK-015		5/24/2006	ND (200)	-
HP-10	WG-LS-HP-10-052406-NK-014		5/24/2006	ND (200)	-
MW-LS-101S	WG-LS-MW-LS-101S-052406-NK-006		5/24/2006	ND (200)	-
MW-LS-102S	Location dry; no sample collected.		5/25/2006		
MW-LS-103S	WG-LS-MW-LS-103S-052306-NK-001		5/23/2006	ND (200)	-
MW-LS-104S	WG-LS-MW-LS-104S-052606-NK-020		5/26/2006	ND (200)	-
MW-LS-105S	WG-LS-MW-LS-105S-052606-NK-019		5/26/2006	1280	+/-184
MW-LS-106S	WG-LS-MW-LS-106S-052506-NK-017		5/25/2006	ND (200)	-
MW-LS-107S	WG-LS-MW-LS-107S-052606-NK-018		5/26/2006	ND (200)	-
MW-LS-108S	WG-LS-MW-LS-108S-052506-NK-016		5/25/2006	ND (200)	-
MW-LS-109S	WG-LS-MW-LS-109S-052606-NK-021		5/26/2006	ND (200)	-
MW-LS-110S	WG-LS-MW-LS-110S-052506-NK-011		5/25/2006	ND (200)	-
MW-LS-111S	WG-LS-MW-LS-111S-053006-BW-022		5/30/2006	ND (200)	-
MW-LS-111S	WG-LS-MW-LS-111S-053006-BW-023	Duplicate (022)	5/30/2006	ND (200)	-
MW-LS-112S	WG-LS-MW-LS-112S-053006-BW-024		5/30/2006	ND (200)	-
MW-LS-112S	WG-LS-MW-LS-112S-053006-BW-025	Duplicate (024)	5/30/2006	ND (200)	-
MW-LS-113S	Location dry; no sample collected.		5/30/2006		
TS-LS-101S	WG-LS-TS-LS-101S-050906-BW-001		5/9/2006	ND (200)	-
TS-LS-102S	WG-LS-TS-LS-102S-050506-BW-002		5/5/2006	ND (200)	-
TS-LS-103S	WG-LS-TS-LS-103S-050506-BW-003		5/5/2006	ND (200)	-
TS-LS-104S	WG-LS-TS-LS-104S-050506-BW-004		5/5/2006	ND (200)	-
TS-LS-105S	WG-LS-TS-LS-105S-050906-BW-005		5/9/2006	ND (200)	-
MW-LS-105S	WG-LS-MW-105S-070506-JW-026		7/5/2006	766	+/-153

Notes:

Samples analyzed by: Teledyne Brown Engineering, Inc.
QC - Quality Control
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***HP-2***	***HP-2***	***HP-5***	***HP-5***	***HP-7***	***HP-7***	***HP-10***	***HP-10***
Sample Identification:		***WG-LS-HP-2-052406-NK-012***	***Result***	***WG-LS-HP-5-052406-NK-013***	***Result***	***WG-LS-HP-7-052406-NK-015***	***Result***	***WG-LS-HP-10-052406-NK-014***	***Result***
Sample Date:		***5/24/2006***	***Error***	***5/24/2006***	***Error***	***5/24/2006***	***Error***	***5/24/2006***	***Error***
	Units								
Target Radionuclides									
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides [(1)]									
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, + / - value not reported.

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***MW-LS-101S***	***MW-LS-101S***	***MW-LS-103S***	***MW-LS-103S***	***MW-LS-104S***	***MW-LS-104S***
Sample Identification:		***WG-LS-MW-LS-101S-052406-NK-006***	***Result***	***WG-LS-MW-LS-103S-052306-NK-001***	***Result***	***WG-LS-MW-LS-104S-052606-NK-020***	***Result***
Sample Date:		***5/24/2006***	***Error***	***5/23/2006***	***Error***	***5/26/2006***	***Error***
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10) U*	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30) U*	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides [(1)]							
Potassium-40	pCi/L	RNI	-	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, + / - value not reported.

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***MW-LS-105S***	***MW-LS-105S***	***MW-LS-106S***	***MW-LS-106S***	***MW-LS-107S***	***MW-LS-107S***
Sample Identification:		***WG-LS-MW-LS-105S-052606-NK-019***	***Result***	***WG-LS-MW-LS-106S-052506-NK-017***	***Result***	***WG-LS-MW-LS-107S-052606-NK-018***	***Result***
Sample Date:		***5/26/2006***	***Error***	***5/25/2006***	***Error***	***5/26/2006***	***Error***
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides [(1)]							
Potassium-40	pCi/L	RNI	-	71.49	+/-38.25	91.77	+/-37.12
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***MW-LS-108S***	***MW-LS-108S***	***MW-LS-109S***	***MW-LS-109S***	***MW-LS-110S***	***MW-LS-110S***
Sample Identification:		***WG-LS-MW-LS-108S-052506-NK-016***	***Result***	***WG-LS-MW-LS-109S-052606-NK-021***	***Result***	***WG-LS-MW-LS-110S-052506-NK-011***	***Result***
Sample Date:		***5/25/2006***	***Error***	***5/26/2006***	***Error***	***5/25/2006***	***Error***
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10) U*	-	ND (10)	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides [(1)]							
Potassium-40	pCi/L	68.74	+/-43.94	RNI	-	RNI	-
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***MW-LS-111S***	***MW-LS-111S***	***MW-LS-111S***	***MW-LS-111S***	***MW-LS-112S***	***MW-LS-112S***
Sample Identification:		***WG-LS-MW-LS-111S-053006-BW-022***	***Result***	***WG-LS-MW-LS-111S-053006-BW-023***	***Result***	***WG-LS-MW-LS-112S-053006-BW-024***	***Result***
Sample Date:		***5/30/2006***	***Error***	***5/30/2006***	***Error***	***5/30/2006***	***Error***
				Duplicate			
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides [(1)]							
Potassium-40	pCi/L	RNI	-	RNI	-	91.22	+/-46.34
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***MW-LS-112S***	***MW-LS-112S***	***TS-LS-101S***	***TS-LS-101S***	***TS-LS-102S***	***TS-LS-102S***
Sample Identification:		***WG-LS-MW-LS-112S-053006-BW-025***	***Result***	***WG-LS-TS-LS-101S-050906-BW-001***	***Result***	***WG-LS-TS-LS-102S-050506-BW-002***	***Result***
Sample Date:		***5/30/2006***	***Error***	***5/9/2006***	***Error***	***5/5/2006***	***Error***
		Duplicate					
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10) U*	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30) U*	-	ND (30) U*	-	ND (30) U*	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides [(1)]							
Potassium-40	pCi/L	RNI	-	RNI	-	433.5	+/-43.89
Radium-226	pCi/L	RNI	-	RNI	-	93.4	+/-53.55
Thorium-228	pCi/L	RNI	-	RNI	-	14.91	+/-3.337
Thorium-232	pCi/L	RNI	-	RNI	-	15.47	+/-6.935

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.2

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN GROUNDWATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***TS-LS-103S***	***TS-LS-103S***	***TS-LS-104S***	***TS-LS-104S***	***TS-LS-105S***	***TS-LS-105S***
Sample Identification:		***WG-LS-TS-LS-103S-050506-BW-003***	***Result***	***WG-LS-TS-LS-104S-050506-BW-004***	***Result***	***WG-LS-TS-LS-105S-050906-BW-005***	***Result***
Sample Date:		***5/5/2006***	***Error***	***5/5/2006***	***Error***	***5/9/2006***	***Error***
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10) U*	-	ND (10) U*	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30) U*	-	ND (30) U*	-	ND (30) U*	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Non-Target Radionuclides (1)							
Potassium-40	pCi/L	245.4	+/-41.16	74.47	+/-31.55	189.9	+/-37.42
Radium-226	pCi/L	RNI	-	RNI	-	RNI	-
Thorium-228	pCi/L	11.56	+/-3.275	RNI	-	6.858	+/-3.337
Thorium-232	pCi/L	RNI	-	RNI	-	RNI	-

Notes:

Samples analyzed by: Teledyne Brown
(1) - These non-targeted radionuclides are included in this table but excluded from the discussion in this report. These radionuclides were either a) naturally occurring and thus not produced by the Station, or b) could be definitively evaluated as being naturally occurring due to the lack of presence of other radionuclides which would otherwise indicate the potential of production from the Station.
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.3

ANALYTICAL RESULTS SUMMARY - TRITIUM IN SURFACE WATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Sample Date*	*Tritium (pCi/L)*	*Result Error*
SW-LS-101	WS-LS-SW-LS-101-052306-NK-002		5/23/2006	232	+/-116
SW-LS-102	WS-LS-SW-LS-102-052306-NK-003		5/23/2006	ND (200)	-
SW-LS-103	WS-LS-SW-LS-103-052306-NK-004		5/23/2006	ND (200)	-
SW-LS-104	WS-LS-SW-LS-104-052506-NK-008		5/25/2006	ND (200)	-
SW-LS-105	WS-LS-SW-LS-105-052506-NK-009		5/25/2006	ND (200)	-
SW-LS-105	WS-LS-SW-LS-105-052506-NK-018	Duplicate (009)	5/25/2006	ND (200)	-
SW-LS-106	WS-LS-SW-LS-106-052406-NK-007		5/24/2006	219	+/-113

Notes:

Samples analyzed by: Teledyne Brown Engineering, Inc.
QC - Quality Control
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.4

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN SURFACE WATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***SW-LS-101***	***SW-LS-101***	***SW-LS-102***	***SW-LS-102***	***SW-LS-103***	***SW-LS-103***
Sample Identification:		***WS-LS-SW-LS-101-052306-NK-002***	***Result***	***WS-LS-SW-LS-102-052306-NK-003***	***Result***	***WS-LS-SW-LS-103-052306-NK-004***	***Result***
Sample Date:		***5/23/2006***	***Error***	***5/23/2006***	***Error***	***5/23/2006***	***Error***
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10) U*	-	ND (10) U*	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30) U*	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-

Notes:

Samples analyzed by: Teledyne Brown
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.4

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN SURFACE WATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***SW-LS-104***	***SW-LS-104***	***SW-LS-105***	***SW-LS-105***	***SW-LS-105***	***SW-LS-105***
Sample Identification:		***WS-LS-SW-LS-104-052506-NK-008***	***Result***	***WS-LS-SW-LS-105-052506-NK-009***	***Result***	***WS-LS-SW-LS-105-052506-NK-018***	***Result***
Sample Date:		***5/25/2006***	***Error***	***5/25/2006***	***Error***	***5/25/2006***	***Error***
						Duplicate	
	Units						
Target Radionuclides							
Barium-140	pCi/L	ND (60)	-	ND (60)	-	ND (60)	-
Cesium-134	pCi/L	ND (10)	-	ND (10) U*	-	ND (10) U*	-
Cesium-137	pCi/L	ND (18)	-	ND (18)	-	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Iron-59	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Manganese-54	pCi/L	ND (15)	-	ND (15)	-	ND (15)	-
Niobium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-	ND (2)	-	ND (2)	-
Zinc-65	pCi/L	ND (30)	-	ND (30)	-	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-	ND (10)	-	ND (10)	-

Notes:

Samples analyzed by: Teledyne Brown
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

TABLE 5.4

ANALYTICAL RESULTS SUMMARY - RADIONUCLIDES IN SURFACE WATER
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location:		***SW-LS-106***	***SW-LS-106***
Sample Identification:		***WS-LS-SW-LS-106-052406-NK-007***	***Result***
Sample Date:		***5/24/2006***	***Error***
	Units		
Target Radionuclides			
Barium-140	pCi/L	ND (60)	-
Cesium-134	pCi/L	ND (10)	-
Cesium-137	pCi/L	ND (18)	-
Cobalt-58	pCi/L	ND (15)	-
Cobalt-60	pCi/L	ND (15)	-
Iron-59	pCi/L	ND (30)	-
Lanthanum-140	pCi/L	ND (15)	-
Manganese-54	pCi/L	ND (15)	-
Niobium-95	pCi/L	ND (10)	-
Strontium-89/90 (Total)	pCi/L	ND (2)	-
Zinc-65	pCi/L	ND (30)	-
Zirconium-95	pCi/L	ND (10)	-

Notes:

Samples analyzed by: Teledyne Brown
RNI- Radionuclide Not Identified during analysis.
NA - Data not available or not analyzed.
ND ( ) - Non-detect; value in parentheses is the LLD.
LLD - Lower limit of detection.
- - Non-detect value, +/- value not reported.

APPENDIX A

WATER WELL DATABASE SEARCH INFORMATION

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		Coordinates		Location Information					Well Details							
Well ID	ISGS Well ID	Latitude	Longitude	FIPS	TWN	RNG	SEC	PLOT	Owner	Driller	Drill Date	Depth	Record Type	Use	Well Type	AQ Type
80946	-	-	-	099	32N	05E	01	-	E Larson	CW Johnson	1924	240	RG	DO	-	-
90947	-	-	-	099	32N	05E	01	-	E Malady	CW Johnson	1919	187	RG	DO	-	-
80948	-	-	-	099	32N	05E	01	-	E Malady	-	02/02/1934	40	RG	DO	-	-
80949	409	41.276158	88.590021	099	32N	05E	01	-	E Farmer	CR Johnson	1954	130	RG	DO	-	-
81040	-	-	-	099	32N	05E	02	-	-	-	07/01/1856	-	C	DO	-	-
81041	-	-	-	099	32N	05E	02	-	-	-	08/07/1956	-	RG	DO	-	-
80950	-	-	-	099	32N	05E	02	-	WA Graves	CW Johnson	02/06/1934	200	RG	DO	-	-
80951	-	-	-	099	32N	05E	02	-	P Kennedy	CW Johnson	1913	488	RG	DO	-	-
80953	-	-	-	099	32N	05E	02	-	P Kennedy	M Higgins	1919	217	RG	DO	-	-
80954	411	41.273353	88.610301	099	32N	05E	02	-	J Talty	CW Johnson	1914	560	RG	DO	-	-
364963	27287	41.270599	88.613889	099	32N	05E	02	3B	Richard Hamilton #1	Area Well & Pump/Robert	08/17/2004	126	RG	DO	DL	UN
370504	27433	41.272263	88.621201	099	32N	05E	02	6C	Ryan Wenzel #1	Area Well & Pump/Robert	05/05/2005	460	RG	DO	DL	BR
-	410	41. 273115	88.624899	-	32N	05E	03	-	J Hogg	CR Johnson	01/01/2016	276	-	-	-	-
-	1348	41.271497	88.609934	-	32N	05E	03	-	T. Fitzgerald	Vickery Drilling Co., Inc	12/01/1958	443	-	-	-	-
80952	-	-	-	099	32N	05E	02	6C	P Kennedy	-	03/06/1934	488	C	DO	-	-
80956	-	-	-	099	32N	05E	03	-	T Olson	CW Johnson	02/07/1934	186	RG	DO	-	-
80955	-	-	-	099	32N	05E	03	-	O Hettle	-	02/01/1934	30	RG	DO	-	-
252466	24576	41.268421	88.642872	099	32N	05E	03	-	Ronald Neundorf	Knierim	12/27/1991	260	RG	DO	-	BR
360563	-	-	-	099	32N	05E	03	3G	Richard & Bernice Dunn	John Rix	-	16	A	DO	DU	-
81042	22707	41.268493	88.635638	099	32N	05E	03	4A	J Triplett	D Stoneberger	10/04/1976	172	RG	DO	-	-
81049	24002	41.268469	88.63805	099	32N	05E	03	5A	R Terry	R Scherf	07/02/1987	60	RG	DO	-	-
81043	2101	41.268421	88.642872	099	32N	05E	03	7A	J Purdue	JT Anderson	1946	226	RG	DO	-	-
81044	23524	41.268421	88.642872	099	32N	05E	03	7A	D White	P Knierim	06/23/1980	500	RG	DO	-	-
228247	24269	41.277354	88.647973	099	32N	05E	03	1F	Henery Englehurst	Knierim	08/30/1990	184	RG	DO	-	UN
320623	26122	41.277321	88.65036	099	32N	05E	04	2F	Roger Bols	Area Well & Pump	11/27/1999	170	RG	DO	DL	UN
26912	25041	41.280896	88.652853	099	32N	05E	04	3H	Ron & Sue Marconi	K&K Drilling/Brown	06/10/1995	218	RG	DO	DL	BR
307595	25885	41.268227	88.654873	099	32N	05E	04	4A	Thomas Duncan #1	Arrow W&P/Strange	05/02/1998	151	RG	DO	DL	UN
80958	-	-	-	099	32N	05E	04	4C	Lambert	-	01/30/1934	226	RG	DO	-	-
346273	26772	41.271838	88.654978	099	32N	05E	04	4C	Gary Thorsen #2	Arrow Well & Pump/Mike Strange	09/05/2002	235	RG	DO	DL	UN
80957	-	-	-	099	32N	05E	04	4E	S Barlo	Higgins and Bennett	1929	275	RG	DO	-	-
296111	25596	41.279062	88.655185	099	32N	05E	04	4G	William Bankowski #1	John Rix	06/03/1997	226	RG	DO	DL	UN
81045	22478	41.275416	88.657471	099	32N	05E	04	53	Abbott Contractors	Du Page Pump Inc.	08/21/1974	410	RG	IC	-	-
367155	-	-	-	099	32N	05E	04	7B	IL Dept of Natural Resources	Albrecht Drilling/Harold	1982	55	A	MO	DL	-
367154	-	-	-	099	32N	05E	04	7B	IL Dept of Natural Resources	Albrecht Drilling/Harold	1983	25	A	MO	DL	-
367156	-	-	-	099	32N	05E	04	7B	IL Dept of Natural Resources	Albrecht Drilling/Harold	1984	41	A	MO	DL	-
367157	-	-	-	099	32N	05E	04	7B	IL Dept of Natural Resources	Albrecht Drilling/Harold	2003	53	A	MO	DL	-
357158	-	-	-	099	32N	05E	04	7B	IL Dept of Natural Resources	Albrecht Drilling/Harold	2003	65	A	MO	DL	-
367159	-	-	-	099	32N	05E	04	7B	IL Dept of Natural Resources	Albrecht Drilling/Harold	2003	59	A	MO	DL	-
292392	25477	41.269861	88.664502	099	32N	05E	04	8B	Henry Englehaupt	K&K Drilling/Brown	12/18/1996	229	RG	DO	DL	UN
-	26983	41.271717	88.662155	-	32N	05E	05	-	DNR/National Guard	IL State Geological Survey	10/30/2003	55	-	-	-	-
-	26984	41.271717	88.662155	-	32N	05E	06	-	DNR/National Guard	IL State Geological Survey	-	-	-	-	-	-
-	26985	41.271717	88.662155	-	32N	05E	07	-	DNR/National Guard	IL State Geological Survey	-	-	-	-	-	-

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		*Coordinates*		*Location Information*					*Well Details*							
Well ID	*ISGS Well ID*	*Latitude*	*Longitude*	*FIPS*	*TWN*	*RNG*	*SEC*	*PLOT*	*Owner*	*Driller*	*Drill Date*	*Depth*	*Record Type*	*Use*	*Well Type*	*AQ Type*
81052	-	-	-	099	32N	05E	05	5A	IL Army Natl Guard	-	06/28/1983	18	A	DO	-	-
80961	-	-	-	099	32N	05E	05	5A	VL Briner	-	02/05/1934	11	RG	DO	-	-
81046	23319	41.267958	88.671729	099	32N	05E	05	5A	Marseilles Training	SD Albrecht	06/24/1985	478	RG	DO	-	-
81047	-	-	-	099	32N	05E	05	5A	IL Army Natl Guard	Albrecht	1985	478	I	DO	-	-
81048	-	-	-	099	32N	05E	05	5A	State of Illinois	-	10/01/1982	18	A	DO	-	-
81050	-	-	-	099	32N	05E	05	7A	IL Army Natl Guard	Will Co Well	04/10/1985	239	RG	DO	-	-
81051	-	-	-	099	32N	05E	05	7A	IL Army Natl Guard	Will Co Well	1985	239	I	DO	-	-
80960	-	-	-	099	32N	05E	05	7A	OR Bradley	Shelton	02/06/1934	45	RG	DO	-	-
80959	-	-	-	099	32N	05E	05	8E	W Maddus	-	02/05/1934	22	RG	DO	-	-
-	23318	41.267857	88.681449	-	32N	05E	5	-	Naal Plumbing and Heating Co.	Rob, Ronald Green	04/10/1985	239	-	-	-	-
80962	-	-	-	099	32N	05E	06	4G	J Jugd	-	02/05/1934	28	RG	DO	-	-
81053	23525	41.278765	88.696094	099	32N	05E	06	5G	B Laatz	C Fykes	06/16/1983	485	RG	DO	-	-
81054	2375	41.280597	88.696127	099	32N	05E	06	5H	B Laatz	C Fykes	12/12/1972	535	RG	DO	-	-
275805	25104	41.280597	88.696138	099	32N	05E	06	5H	Al Vanderslvis	RIX	08/28/1995	230	RG	DO	DL	UN
80963	-	-	-	099	32N	05E	06	6A	FN Shaver	-	02/05/1934	46	RG	DO	-	-
258325	-	-	-	099	32N	05E	06	6G	Harry Mobes	Fordonski	02/21/1994	440	RG	DO	DL	BR
81055	-	-	-	099	32N	05E	06	7J	J Brandon	CW Johnnson	1976	232	RG	DO	-	-
80964	-	-	-	099	32N	05E	07	1	C Gage	-	02/05/1934	30	RG	DO	-	-
80965	26467	41.265989	88.686229	099	32N	05E	07	1H	C Gage	B Irwin	1884	220	RG	DO	-	-
338143	-	-	-	099	32N	05E	07	1H	Larry Gage #2	Aneffco Drilling	10/09/2000	254	RG	DO	DL	UN
80967	-	-	-	099	32N	05E	07	8D	J Kuhn	G Henshue	1984	255	RG	DO	-	-
333840	26389	41.258602	88.702806	099	32N	05E	07	8D	Gary Miller	Arrow Well & Pump	06/18/2001	500	RG	DO	DL	BR
80966	-	-	-	099	32N	05E	07	8H	IN Baughman	E Henshue	02/05/1934	191	RG	DO	-	-
-	1744	41.265989	88.686229	-	32N	05E	08	-	Gage Byron	CR Johnson	01/01/2005	238	-	-	-	-
-	23811	41.263399	88.587263	-	32N	05E	08	-	Kruger, Mike	RIX	02/24/2000	190	-	-	-	-
80968	-	-	-	099	32N	05E	08	4H	JE Gage	CW Johnson	1911	187	RG	DO	-	-
-	26669	41.266163	88.669255	-	32N	05E	09	-	Commonwealth Edison	-	-	171	-	-	-	-
80971	-	-	-	099	32N	05E	09	1D	P Godfrey	-	05/09/1958	183	RG	DO	-	-
80972	-	-	-	099	32N	05E	09	1D	P Godfrey	-	05/09/1958	183	C	DO	-	-
80969	-	-	-	099	32N	05E	09	6H	HH Streubler	-	02/06/1934	55	RG	DO	-	-
80970	-	-	-	099	32N	05E	09	8A	WJ Briner	-	02/07/1934	45	RG	DO	-	-
80973	-	-	-	099	32N	05E	10	-	S Duncan	J Schomas	1929	238	RG	DO	-	-
80974	412	41.26659	88.645204	099	32N	05E	10	-	OTT	CW Johnson	1915	232	RG	DO	-	-
80975	-	-	-	099	32N	05E	10	-	Metro Life Ins Co	-	02/07/1934	220	RG	IC	-	-
258506	-	-	-	099	32N	05E	10	8H	Winston OBrien	Fordonski	09/22/1992	100	RG	DO	DL	BR
368133	27430	41.266578	88.645209	099	32N	05E	10	8H	Mike Musser	Area Well & Pump/Robert	-	120	RG	DO	DL	DH
80976	414	41.264293	88.612509	099	32N	05E	11	-	T Crowley	CW Johnson	02/06/1934	215	RG	DO	-	-
-	413	41.254342	88.608581	-	32N	05E	11	-	Couglin Wm	CR Johnson	-	235	-	-	-	-
-	1150	41.256064	88.615911	-	32N	05E	11	-	Kennedy Mike P	-	-	335	-	-	-	-
-	1413	41.254825	88.60753	-	32N	05E	11	-	-	Vickery Drilling Co.,Inc.	06/01/1959	450	-	-	-	-
80977	-	-	-	099	32N	05E	11	-	Schultz	E Henshue	1894	200	RG	DO	-	-
80978	-	-	-	099	32N	05E	12	-	E Henry	-	02/02/1934	-	RG	DO	-	-

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		*Coordinates*		*Location Information*					*Well Details*							
Well ID	*ISGS Well ID*	*Latitude*	*Longitude*	*FIPS*	*TWN*	*RNG*	*SEC*	*PLOT*	*Owner*	*Driller*	*Drill Date*	*Depth*	*Record Type*	*Use*	*Well Type*	*AQ Type*
80979	-	-	-	099	32N	05E	12	-	Talty	-	02/15/1934	90	RG	DO	-	-
80980	266	41.258904	88.590634	099	32N	05E	12	-	Twohey	CR Johnson	1952	19	RG	DO	-	-
346605	26731	41.265314	88.589606	099	32N	05E	12	1G	Chadd Baker #1	K&L Well Drilling/Ken	11/16/2002	190	RG	DO	DL	BR
351742	-	-	-	099	32N	05E	12	1G	Chadd Baker	-	-	147	A	-	DR	-
-	415	41.255267	88.604985	-	32N	05E	12	-	Maier Chas	CR Johnson	-	253	-	-	-	-
80981	-	-	-	099	32N	05E	13	-	C Malady	-	02/09/1934	40	RG	DO	-	-
81056	2102	41.243453	88.58892	099	32N	05E	13	1C	Kuhn	JT Anderson	03/04/1961	113	RG	DO	-	-
81057	2229	41.239459	88.599386	099	32N	05E	13	5A	T Sheedy	JT Anderson	04/25/1970	180	RG	DO	-	-
80982	-	-	-	099	32N	05E	14	-	M Sheedy	CW Johnson	02/15/1934	160	RG	DO	-	-
80983	-	-	-	099	32N	05E	14	-	M Sheedy	CW Johnson	1912	240	RG	DO	-	-
81058	23526	41.250706	88.608453	099	32N	05E	14	1G	D Bedeker	R Scherf	01/12/1983	51	RG	DO	-	-
-	24929	41.247071	88.608322	-	32N	05E	14	-	D Bedeker	Brown, Darwin	10/15/1994	480	-	-	-	-
80984	-	-	-	099	32N	05E	15	-	Zimmerman	CW Johnson	02/14/1934	160	RG	DO	-	-
8095	-	-	-	099	32N	05E	15	-	Peoples Trust Bank	CW Johnson	02/14/1934	301	RG	IC	-	-
-	1149	41.239482	88.634918	-	32N	05E	15	-	Pfeffer Louis	-	01/01/1950	184	-	-	-	-
80986	-	-	-	099	32N	05E	16	-	A Marsh	CW Johnson	02/06/1934	300	RG	DO	-	-
252442	-	-	-	099	32N	05E	16	-	IL Dept of Conservation	Midwest Well & Pump	1992	665	RG	CO	-	BR
-	24641	41.246273	88.663934	-	32N	05E	16	-	Commonwealth Edison	Wehling, Richard H	11/02/1992	730	-	-	-	-
-	416	41.25189	88.652082	-	32N	05E	16	-	Marsh J J	CW Johnson	01/01/1916	265	-	-	-	-
-	22451	41.247326	88.669147	-	32N	05E	17	-	Commonwealth Edison	Wehling, Well Works Inc	01/01/1974	1692	-	-	-	-
81063	2349	41.239924	88.666233	-	32N	05E	17	-	Commonwealth Edison	Wehling, Well Works Inc	05/01/1972	1620	-	-	-	-
-	417	41.251483	88.678538	-	32N	05E	17	-	Rose A D	CW Johnson	01/01/1916	187	-	-	-	-
81059	-	-	-	099	32N	05E	17	-	Con Ed Co	-	12/13/1983	411	RG	IC	-	-
81062	-	-	-	099	32N	05E	17	-	Con Ed Co	-	04/21/1972	980	C	IC	-	-
80987	-	-	-	099	32N	05E	17	-	Henry	-	02/07/1934	38	RG	DO	-	-
80988	-	-	-	099	32N	05E	17	-	IN Baughman	E Henshue	02/05/1934	195	RG	DO	-	-
80989	-	-	-	099	32N	05E	17	-	HA Bevington	-	02/12/1934	29	RG	DO	-	-
81066	-	-	-	099	32N	05E	18	-	C Alvarado	D Santelman	1966	254	RG	DO	-	-
80990	-	-	-	099	32N	05E	18	-	Brookfield Pres Church	-	02/12/1934	22	RG	SC	-	-
80991	-	-	-	099	32N	05E	18	-	F Carr	CW Johnson	03/26/1905	255	RG	DO	-	-
371414	-	-	-	099	32N	05E	18	1H	Rchard Frye #1	K&K Drilling/Ken Knierim	07/28/2004	540	RG	DO	DL	BR
371567	-	-	-	099	32N	05E	18	1H	Richard Frye	John Rix	-	180	A	DO	DL	-
258338	-	-	-	099	32N	05E	18	8C	Greg Hil	Dober	10/28/1993	300	RG	DO	DL	BR
-	1151	41.240471	88.70228	-	32N	05E	18	-	Copp Joseph H	-	01/01/1951	-	-	-	-	-
-	27445	41.251387	88.685745	-	32N	05E	18	-	Richard Frye	RIX	07/28/2004	540	-	-	-	-
-	24642	41.238667	88.702219	-	32N	05E	18	-	Hill, Randy	C R Johnson	09/21/1992	147	-	-	-	-
80992	-	-	-	099	32N	05E	19	-	WG Schutte	J Eyer	03/15/1905	293	RG	DO	-	-
80993	-	-	-	099	32N	05E	19	-	LW Laatz	-	02/12/1934	320	RG	DO	-	-
81067	-	-	-	099	32N	05E	19	1A	Truman F Osmond Agency	CE Woodruff	06/18/1975	231	RG	DO	-	-
816058	-	-	-	099	32N	05E	19	5D	Tri County Well Co	C Fykes	04/30/1979	105	RG	IC	-	-
320642	26141	41.231452	88.702109	099	32N	05E	19	8E	Scott Duffield #1	Aneffco Drilling	07/14/1999	222	RG	DO	DL	UN
-	22583	41.224183	88.685457	-	32N	05E	19	-	Osmond Truman E	-	06/01/1975	231	-	-	-	-

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		*Coordinates*		*Location Information*					*Well Details*							
Well ID	*ISGS Well ID*	*Latitude*	*Longitude*	*FIPS*	*TWN*	*RNG*	*SEC*	*PLOT*	*Owner*	*Driller*	*Drill Date*	*Depth*	*Record Type*	*Use*	*Well Type*	*AQ Type*
-	23527	41.229671	88.694759	-	32N	05E	19	-	Fykes, Charles N	Tri-County Well and Pump	04/30/1979	105	-	-	-	-
-	-	-	-	-	32N	05E	20	-	AC Olsen	CW Johnson	1908	265	RG	DO	-	-
80995	-	-	-	099	32N	05E	20	-	WT Cordial	-	1880	32	RG	DO	-	-
80996	-	-	-	099	32N	05E	20	-	LF Gage	-	02/13/1934	288	RG	DO	-	-
80997	-	-	-	099	32N	05E	20	-	D Stevenson	E Henshue	1907	188	RG	DO	-	-
294363	25478	41.237118	88.673263	099	32N	05E	20	4H	Mike Davis #1	John Rix	01/15/1997	550	RG	DO	DL	BR
81070	-	-	-	099	32N	05E	21	-	Brookfield Township Hall	-	1975	500	C	IC	-	-
80998	-	-	-	099	32N	05E	21	-	P Thompson	-	02/07/1934	28	RG	DO	-	-
80999	-	-	-	099	32N	05E	21	-	D Kelley	CW Johnson	1914	265	RG	DO	-	-
81069	22513	41.227259	88.64606	099	32N	05E	21	2G	B Holmes	C Fykes	07/25/1974	580	RG	DO	-	-
-	1747	41.227585	88.646545	-	32N	05E	21		Loretta Wolf	Bolliger, John And Sons	01/01/1955	206	-	-	-	-
81000	-	-	-	099	32N	05E	22	-	W Spaulding	-	02/14/1934	35	RG	DO	-	-
81001	-	-	-	099	32N	05E	22	-	MC Elroy	-	02/14/1934	235	RG	DO	-	-
81002	-	-	-	099	32N	05E	22	-	J Mair	-	02/14/1934	35	RG	DO	-	-
252483	-	-	-	099	32N	05E	22	-	Barb Spamanto	RIX	11/08/1991	94	RG	DO	-	UN
289546	25419	41.237618	88.644597	099	32N	05E	22	8H	John Rix #1	RIX	06/10/1996	560	RG	DO	-	-
-	23889	41.238066	88.627085	-	32N	05E	22	-	Spaulding, Roy	CR Johnson	-	130	-	-	-	-
81003	-	-	-	099	32N	05E	23	-	G Darby	G Darby	1902	314	RG	DO	-	-
81004	-	-	-	099	32N	05E	23	-	RD Mills	CW Johnson	1904	115	RG	DO	-	-
81005	-	-	-	099	32N	05E	24	-	JJ Sheedy	-	02/06/1934	625	RG	DO	-	-
81006	-	-	-	099	32N	05E	24	-	TJ Dunn	CW Johnson	1904	100	RG	DO	-	-
-	2100	41.235045	88.704548	-	32N	04E	24	-	McCormick Clarence	-	04/01/1963	255	-	-	-	-
-	24930	41.225211	88.595661	-	32N	05E	24	-	Pete Perkins	Brown, Darwin	10/06/1994	110	-	-	-	-
81007	-	-	-	099	32N	05E	25	-	JA Ryan	CW Johnson	1925	590	RG	DO	-	-
1008	-	-	-	099	32N	05E	25	-	JA Ryan	-	12/11/1953	514	RG	DO	-	-
8109	-	-	-	099	32N	05E	25	-	T Green	CW Johnson	1919	158	RG	DO	-	-
81010	-	-	-	099	32N	05E	25	-	LR Raseland	CW Johnson	1917	560	RG	DO	-	-
81011	-	-	-	099	32N	05E	25	1D	LR Roseland	-	03/06/1934	560	C	DO	-	-
81071	-	-	-	099	32N	05E	25	8H	JA Ryan	JT Anderson	1922	513	RG	DO	-	-
-	24069	41.223384	88.605324	-	32N	05E	25	-	Carry, Robert	Scherf Robert William	06/11/1988	50	-	-	-	-
-	2103	41.223384	88.605324	-	32N	05E	25	-	Ryan A J	-	10/01/2002	514	-	-	-	-
81012	-	-	-	099	32N	05E	26	-	N Welch	CW Johnson	1911	220	RG	DO	-	-
81013	-	-	-	099	32N	05E	26	-	N Welch	-	-	210	RG	DO	-	-
81014	-	-	-	099	32N	05E	26	-	JH Divine	CW Johnson	1919	224	RG	DO	-	-
81015	-	-	-	099	32N	05E	27	-	EA Morrow	-	-	112	RG	DO	-	-
81018	-	-	-	099	32N	05E	27	-	E Morrow	CW Johnson	02/16/1934	112	RG	DO	-	-
81016	-	-	-	099	32N	05E	27	3H	EA Morrow	-	05/28/1952	112	C	DO	-	-
81017	-	-	-	099	32N	05E	27	3H	E Morrow	-	06/04/1952	112	C	DO	-	-
81019	-	-	-	099	32N	05E	28	-	RW Debolt	E Henshue	1894	214	RG	DO	-	-
81020	-	-	-	099	32N	05E	28	-	MW OLaughlin	J Eyre	1896	258	RG	DO	-	-
81072	-	-	-	099	32N	05E	29	-	Department of Conservation	-	12/24/1985	16	A	IC	-	-
81021	-	-	-	099	32N	05E	29	-	CS Tryon	E Henshue	02/13/1934	187	RG	DO	-	-

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		*Coordinates*		*Location Information*					*Well Details*							
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81022	-	-	-	099	32N	05E	29	-	J Widman	-	02/12/1934	56	RG	DO	-	-
81023	-	-	-	099	32N	05E	29	-	CA Widman	CW Johnson	1919	167	RG	DO	-	-
81073	-	-	-	099	32N	05E	29	-	Department of Conservation	-	12/24/1985	10	A	IC	-	-
320636	26135	41.211574	88.682007	099	32N	05E	29	8B	Ron Widman #1	K&K Drilling	05/04/1999	184	RG	DO	-	-
-	26800	41.220594	88.698294	-	32N	05E	30	-	Alan V. Anderson	RIX	08/22/2002	-	-	-	-	-
-	1748	41.213692	88.694654	-	32N	05E	30	-	Egeland Elmer	-	01/01/1950	-	-	-	-	-
09964345	-	-	-	099	32N	05E	16	8E	IDNR LaSalle Fish Hathery	WEHLING WELL WORK	1992	770	D	-	-	BR
09914770	-	-	-	099	32N	05E	16	8E	Exelon - LaSalle Co Station	-	-	-	-	-	-	-
-	2357	41.339624	88.704918	-	33N	05E	7	-	City of Marseilles	Miller, J. P. Art. Well	01/01/1972	1466	-	-	-	-
-	473	41.339471	88.679184	-	33N	05E	8	-	Fewel Howard	-	-	197	-	-	-	-
-	2218	41.339855	88.705654	-	33N	05E	12	-	Peters Wm Mrs	CR Johnson	01/01/1970	198	-	-	-	-
81732	-	-	-	099	33N	05E	15	-	L Brei	-	02/01/1934	18	RG	DO	-	-
260864	24890	41.337146	88.633015	099	33N	05E	15	-	Gerald Hubbard	Lockport Well & Pump	07/12/1994	145	RG	DO	DL	BR
81802	-	-	-	099	33N	05E	15	ID	OO Johnson	TF Anderson	1902	165	RG	DO	-	-
81803	-	-	-	099	33N	05E	15	IH	S Betz	J Knierim	03/21/1977	360	RG	DO	-	-
81733	-	-	-	099	33N	05E	16	-	BF Biba	-	1894	35	RG	DO	-	-
81734	-	-	-	099	33N	05E	16	-	S Anderson	C Anderson	1911	425	RG	DO	-	-
81735	664	41.325218	88.66409	099	33N	05E	16	-	HR Smith	JP Miller	1940	140	RG	DO	-	-
231218	24465	41.338642	88.663392	099	33N	05E	16	-	Ken Johnson #2119	Dober	06/10/1991	378	RG	DO	-	BR
81804	23629	41.333316	88.650942	099	33N	05E	16	1E	YMCA	C Fykes	08/12/1977	325	RG	DO	-	-
81736	663	41.338761	88.651171	099	33N	05E	16	1H	C Brei	JT Anderson	09/16/1950	365	RG	DO	-	-
259502	-	-	-	099	33N	05E	16	2H	John Ferguson	K&K Drilling/Brown	09/01/1994	320	RG	DO	DL	BR
296110	25608	41.335023	88.660781	099	33N	05E	16	5F	Whispering Pines Campground #2	Arrow W&P/M Strange	04/12/1997	360	RG	NC	DL	BR
293051	25508	41.33867	88.660948	099	33N	05E	16	5H	Keith Maloney #1	John Rix	09/12/1996	380	RG	DO	DL	BR
81805	-	-	-	099	33N	05E	16	5H	WP Hardin	C Fykes	01/30/1976	405	RG	DO	-	-
329585	-	-	-	099	33N	05E	16	6A	Mike & Debra Wheeler #1	Arrow Well & Pump	07/31/2000	360	RG	DO	DL	BR
279914	25189	41.325873	88.662791	099	33N	05E	16	6A	Paul Borgarding	Fordonski	10/30/1995	305	RG	CS	DL	BR
258128	-	-	-	099	33N	05E	16	6C	Shane Marik	Fordonski	08/27/1993	50	RG	DO	DL	UN
289558	25426	41.331346	88.66305	099	33N	05E	16	6D	Wesley Ness	Comar Drilling	05/22/1996	300	RG	DO	DL	BR
280597	25138	41.33317	88.663134	099	33N	05E	16	6E	Steve & Tiffany Wheeler	K&K Drilling/Brown	10/26/1995	320	RG	DO	DL	BR
320627	26126	41.334993	88.663221	099	33N	05E	16	6F	Don Dudek #1	Arrow Well & Pump	04/28/1999	360	RG	DO	DL	BR
378434	27641	41.327656	88.665288	099	33N	05E	16	7B	Frank Carajohn	Will County Well & Pump/Steve	02/10/2006	340	RG	DO	DL	BR
334602	25607	41.338612	88.665837	099	33N	05E	16	7C	Kenneth Sangston #1	Arrow Well & Pump	08/22/2001	360	RG	DO	DL	BR
346609	26735	41.32949	88.665399	099	33N	05E	16	7C	Bryan & Lanette Strum #1	Arrow Well & Pump/Mike Strange	01/30/2003	380	RG	DO	DL	BR
265573	24982	41.32949	88.665399	099	33N	05E	16	7C	Len Peretta	K&K Drilling/Brown	01/22/1995	320	RG	DO	DL	BR
265374	24966	41.327667	88.661253	099	33N	05E	16	7C	John Kennedy	K&K Drilling/Brown	12/17/1994	340	RG	DO	DL	BR
4576875	26156	26156	41.331316	099	33N	05E	16	7D	Daniel Warning	Lockport Well & Pump	10/09/1999	350	RG	DO	DL	BR
307596	25898	41.331316	88.665487	099	33N	05E	16	7D	Jim Hovious #1	Arrow W&P/Strange	06/04/1998	340	RG	DO	DL	BR
262801	24939	41.331316	88.665487	099	33N	05E	16	7D	Mark & Fawn Rohwer	K&K Drilling/Brown	10/05/1994	317	RG	DO	DL	BR
275833	25108	41.33314	88.665574	099	33N	05E	16	7E	Carol & Janice Richards	K&K Drilling/Brown	09/07/1995	340	RG	DO	DL	BR
346258	26762	41.334966	88.665662	099	33N	05E	16	7F	Steve Brown #1	Arrow Well & Pump/Mike Strange	08/21/2002	360	RG	DO	DL	BR
373124	27500	41.334954	88.665638	099	33N	05E	16	7F	Leo Trompeter #1	Arrow Well & Pump/Mike Strange	06/08/2005	360	RG	DO	DL	BR

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
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JUNE 2006

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-	26399	41.3294	88.665399	-	33N	05E	16	-	Sangston, Kenneth and Jennife	Strange, Michael	08/22/2001	360	-	-	-	-
-	26322	41.325873	88.662791	-	33N	05E	16	-	Wheeler, Mike and Debra	Strange, Michael	07/31/2000	360	-	-	-	-
356888	27034	41.336789	88.665749	099	33N	05E	17	7G	Rich Humphrup	Area Well & Pump/Robert	09/24/2003	360	RG	DO	DL	BR
361125	27171	41.336789	88.665749	099	33N	05E	16	7G	Mike Stropoli #1	Arrow Well & Pump/Mike Strange	04/24/2003	360	RG	DO	DL	BR
327574	26252	41.336789	88.665749	099	33N	05E	16	7G	Johnathan Mavec	Tri County W&P	11/07/2000	360	RG	DO	BD	BR
294359	25507	41.336789	88.665749	099	33N	05E	16	7G	Tim Knott	K&K Drilling/Brown	04/09/1997	400	RG	DO	DL	BR
81806	662	41.33861	88.665822	099	33N	05E	16	7H	S Anderson	CJ Anderson	12/02/1909	417	RG	DO	-	-
296114	-	-	-	099	33N	05E	-	7H	Ralph Sanders	SCCountry W&P/Brian	06/12/1997	340	RG	DO	DL	BR
332235	26335	41.32946	88.667832	099	33N	05E	16	8C	Steve & Sydney Ferris	K&K Drilling	05/20/2001	400	RG	DO	DL	BR
334601	26398	41.331286	88.667923	099	33N	05E	16	8D	Mark Kirkton #1	K&K Drilling	07/02/2001	400	RG	DO	DL	BR
359110	27116	41.331286	88.667923	099	33N	05E	16	8D	Fawn Rohwer #1	Arrow Well & Pump/Mike Strange	08/16/2003	360	RG	DO	DL	BR
311575	25951	41.334936	88.668102	099	33N	05E	16	8F	Brad Kaluzna	K&K Drilling/Knierim	02/24/1999	360	RG	DO	DL	BR
303322	25758	41.338585	88.668281	099	33N	05E	16	8H	Jerry Popplewell #1	AC Drilling/Leasure	02/01/1998	320	RG	DO	DL	BR
27995	25190	41.338585	88.668281	099	33N	05E	16	8H	Barry Underwood	Fordonski	10/26/1995	320	RG	DO	DL	BR
268803	25032	41.338585	88.668281	099	33N	05E	16	8H	Mike Delaurentis	K&K Drilling/Brown	06/07/1995	320	RG	DO	DL	BR
269125	25045	41.338585	88.668281	099	33N	05E	16	8H	Allen Judd	K&K Drilling/Brown	05/20/1995	340	RG	DO	DL	BR
-	25607	41.338612	88.665837	-	33N	05E	16	-	Sanders, Ralph and Laurel	Bisping, Calvin	06/12/1997	340	-	-	-	-
-	26422	41.334993	88.663221	-	33N	05E	16	-	Whispering Pines MHP	-	01/01/1974	460	-	-	-	-
81737	-	-	-	099	33N	05E	17	-	W Stebbins	-	1884	23	RG	DO	-	-
81738	665	41.328542	88.683529	099	33N	05E	17	-	F Kellerman	CR Johnson	1946	171	RG	DO	-	-
336428	26413	41.329447	88.670261	099	33N	05E	17	1C	Larry Machaj	Area Well 7 Pump	07/16/2001	320	RG	DO	DL	BR
320629	26128	41.33127	88.670349	099	33N	05E	17	1D	W Mark Rohwer, Jr. #1	Arrow Well & Pump	07/08/1999	360	RG	DO	DL	BR
362818	27238	41.336746	88.670619	099	33N	05E	17	1G	Tim & Debby Perry #1	Arrow Well & Pump/Mike Strange	08/05/2004	141	RG	DO	DL	UN
81807	23631	41.338569	88.670707	099	33N	05E	17	1H	F Hogue	P Knierim	11/26/1982	360	RG	DO	-	-
341724	26646	41.33127	88.672767	099	33N	05E	17	2D	Scott & Michelle Campbell #1	Area Well & Pump/Robert	04/25/2002	400	RG	DO	DL	BR
320646	26145	41.338566	88.673118	099	33N	05E	17	2H	Stan & Heidi Henry #1	Aroow Well & Pump	06/11/1999	340	RG	DO	DL	BR
269121	25046	41.338566	88.673118	099	33N	05E	17	2H	Iris Denham	K&K Drilling/Brown	05/25/1995	340	RG	DO	DL	BR
285581	25328	41.33856	88.677936	099	33N	05E	17	2H	Steve Cooke	Comar Drilling	09/08/1995	300	RG	DO	DL	BR
286521	25228	41.338566	88.673118	099	33N	05E	17	2H	Eric Denham	K&K Drilling/Brown	02/15/1996	340	RG	DO	DL	BR
258350	-	-	-	099	33N	05E	17	3G	Steven Cooke	K&K Drilling/Brown	11/21/1993	300	RG	DO	DL	BR
262891	24940	41.325806	88.677354	099	33N	05E	17	4A	Dave Raikes	Fordonski	08/23/1994	200	RG	DO	DL	BR
258324	24916	41.338566	88.6731118	099	33N	05E	17	4H	Janelle Denham	K&K Drilling/Brown	03/15/1994	340	RG	DO	DL	BR
300261	25699	41.33856	88.677936	099	33N	05E	17	4H	Wayne Nogue	Comar Drilling/Jeff	09/18/1997	300	RG	DO	DL	BR
280556	25139	41.33856	88.677936	099	33N	05E	17	4H	Arvin Tongate	Fordonski	09/18/1995	320	RG	DO	DL	BR
348496	-	-	-	099	33N	05E	17	4H	Sam Candela	K&K Drilling/Jeff Hieser	04/10/2003	420	RG	DO	DL	BR
310118	25973	41.333093	88.680102	099	33N	05E	17	5E	Jerry Sebby	K&K Drilling/Knierim	05/07/1999	400	RG	DO	DL	BR
342718	26591	41.336737	88.682678	099	33N	05E	17	6G	Henry Nellett	Comar Drilling/Juan	03/12/2002	320	RG	DO	DL	BR
374678	27580	41.333083	88.68491	099	33N	05E	17	7E	Kyle Cepaitis	Mike Strange/Arrow Well & Pump	10/25/2005	360	RG	DO	DL	BR
325880	26225	41.333093	88.684935	099	33N	05E	17	7E	Kevin Gill	Area Well & Pump	07/14/2000	260	RG	DO	DL	BR
228252	24297	41.334913	88.685012	099	33N	05E	17	7F	Harry Keine	Knierim	07/26/1990	150	RG	DO	-	BR
81808	23630	41.339326	88.684271	099	33N	05E	17	7H	Glenwood Farms	P. Knierim	06/12/1979	380	RG	IC	-	-
372993	27501	41.338542	88.685144	099	33N	05E	17	7H	Sally Spencer #1	Arrow Well & Pump/Mike Strange	07/10/2005	320	RG	DO	DL	BR

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		*Coordinates*		*Location Information*					*Well Details*							
Well ID	*ISGS Well ID*	*Latitude*	*Longitude*	*FIPS*	*TWN*	*RNG*	*SEC*	*PLOT*	*Owner*	*Driller*	*Drill Date*	*Depth*	*Record Type*	*Use*	*Well Type*	*AQ Type*
-	26934	41.33856	88.673679	-	33N	05E	17	-	Candela, Sam	Brown, Darwin	04/10/2003	420	-	-	-	-
-	26505	41.338551	88.687577	-	33N	05E	17	-	Glenwood RV Resort	-	-	-	-	-	-	-
-	1111	41.333093	88.684931	-	33N	05E	17	-	Martin Morey	-	01/01/1953	250	-	-	-	-
-	246	41.33355	88.680726	-	33N	05E	17	-	-	-	-	-	-	-	-	-
81739	-	-	-	099	33N	05E	18	-	RG Hinch	E Henshue	1925	165	RG	DO	-	-
81809	2210	41.337529	88.690567	099	33N	05E	18	1G	D Danielson	CE Woodruff	04/07/1970	270	RG	DO	-	-
-	1261	41.326733	88.695538	-	33N	05E	18	-	Littlefair	-	01/01/1954	-	-	-	-	-
-	245	41.331733	88.694243	-	33N	05E	18	-	-	-	-	-	-	-	-	-
81740	-	-	-	099	33N	05E	19	-	CF Berry	J Henshue	1914	200	RG	DO	-	-
81741	-	-	-	099	33N	05E	19	-	F Shultz	E Henshue	1900	177	RG	DO	-	-
81742	666	41.314103	88.696659	099	33N	05E	19	-	EJ Lattz	CE Woodruff	1944	210	RG	DO	-	-
265364	24983	41.316791	88.698171	099	33N	05E	19	5D	Kelly Rarden	K&K Drilling/Brown	01/24/1995	180	RG	DO	DL	BR
305145	25824	41.316791	88.698171	099	33N	05E	19	5D	James J Cuchiarn	Area W&P/Strange	08/19/1998	220	RG	DO	DL	BR
301797	25759	41.314988	88.700379	099	33N	05E	19	6C	George Votava	K&K Drilling/Knierim	01/21/1998	180	RG	DO	DL	BR
359111	27104	41.318603	88.703201	099	33N	05E	19	7E	Robert Satler #1	Arrow Well & Pump/Mike Strange	11/09/2003	260	RG	DO	DL	BR
298819	25700	41.322212	88.703605	099	33N	05E	19	7G	Charles Allen #2	Aneffco Dlg/Efflandt	10/16/1997	203	RG	DO	DL	BR
-	1147	41.31684	88.700585	-	33N	05E	19	-	Hayes J H	-	01/01/1953	210	-	-	-	-
-	1259	41.317737	88.697066	-	33N	05E	19	-	Wise Wm	Woodruff Charles Co	01/01/1942	82	-	-	-	-
81743	-	-	-	099	33N	05E	20	-	F Hobart	-	1840	35	RG	DO	-	-
81744	-	-	-	099	33N	05E	20	-	J Mitchell	J Henshue	1902	95	RG	DO	-	-
346256	26766	41.322216	88.672306	099	33N	05E	20	2G	Jeff & Tina Kiper #1	Arrow Well & Pump/Mike Strange	10/02/2002	240	RG	DO	DL	BR
326698	26204	41.320429	88.674588	099	33N	05E	20	3F	Jim Dowling	K&K Drilling	10/26/2000	220	RG	DO	DL	BR
322068	26031	41.320429	88.674588	099	33N	05E	20	3F	Cecil Lee	Lockport Well & Pump	02/15/2000	305	RG	DO	DL	BR
285589	25329	41.320429	88.674588	099	33N	05E	20	3F	Michael Shelton	Comar Drilling	10/23/1995	200	RG	DO	DL	BR
331057	26295	41.322214	88.674709	099	33N	05E	20	3G	Christian Campa	Will County Well & Pump	03/09/2001	201	RG	DO	DL	BR
81810	22953	41.317799	88.675951	099	33N	05E	20	4E	IL Nitrogen	Wehling Well Works	07/14/1977	360	RG	IC	-	-
81811	-	-	-	099	33N	05E	20	4E	IL Nitrogen	-	07/19/1977	360	C	IC	-	-
-	1116	41.317733	88.677956	-	33N	05E	20	-	Trumbo Riley	Woodruff Charles Co	01/01/1952	158	-	-	-	-
-	232	41.316402	88.676085	-	33N	05E	20	-	unknown	unknown	-	unknown	-	-	-	-
-	248	41.320456	88.667407	-	33N	05E	21	-	unknown	unknown	-	unknown	-	-	-	-
81821	-	-	-	099	33N	05E	21	-	Natl Phosphate Co	WC Johnson	1894	175	A	IC	-	-
81822	-	-	-	099	33N	05E	21	-	Baker Industries Co	-	04/08/1979	583	C	IC	-	-
81745	-	-	-	099	33N	05E	21	-	Spicer	-	1933	12	RG	DO	-	-
81746	-	-	-	099	33N	05E	21	-	K Keller	J Henshue	1894	175	RG	DO	-	-
81812	-	-	-	099	33N	05E	21	-	Natl Phopshate Co	-	-	583	RG	IC	-	-
81813	-	-	-	099	33N	05E	21	-	Natl Phosphate Co	Layne Western	1961	427	RG	IC	-	-
81814	-	-	-	099	33N	05E	21	-	Natl Phosphate Co	Layne Wetern	12/22/1961	421	RG	IC	-	-
81815	-	-	-	099	33N	05E	21	-	Natl Phosphate Co	Layne Western	1961	421	RG	IC	-	-
379750	-	-	-	099	33N	05E	21	1H	Steve Flynn #6	Steve Flynn	-	60	A	DO	DL	-
379751	-	-	-	099	33N	05E	21	1H	Steve Flynn #7	Steve Flynn	-	50	A	DO	DL	-
379744	-	-	-	099	33N	05E	21	2E	Steve Flynn #1	Steve Flynn	-	20	A	DO	DL	-
379745	-	-	-	099	33N	05E	21	2E	Steve Flynn #2	Steve Flynn	-	20	A	DO	DL	-

TABLE A-1

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PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

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81820	-	-	-	099	33N	05E	21	3B	Natl Phosphate Co	-	02/18/1965	583	C	1C	-	-
81817	-	-	-	099	33N	05E	21	3D	Natl Phosphate Co	-	01/13/1961	583	C	1C	-	-
81818	-	-	-	099	33N	05E	21	3D	Natl Phosphate Co	-	12/13/1961	427	C	1C	-	-
81819	-	-	-	099	33N	05E	21	3D	Natl Phosphate Co	-	02/18/1965	583	C	1C	-	-
379746	-	-	-	099	33N	05E	21	3H	Steve Flynn #3	Steve Flynn	-	70	A	DO	DL	-
379747	-	-	-	099	33N	05E	21	3H	Steve Flynn #4	Steve Flynn	-	120	A	DO	DL	-
379749	-	-	-	099	33N	05E	21	3H	Steve Flynn #5	Steve Flynn	-	105	A	DO	DL	-
275821	25124	41.318759	88.657615	099	33N	05E	21	4E	Waste Recovery ILL #3620	Albrecht	04/06/1995	130	RG	IC	DL	BR
310654	25974	41.318759	88.657615	099	33N	05E	21	4E	JW Peters & Sons Inc	Tri County Well & Pump/Cleary	05/12/1999	240	RG	IC	DL	BR
81823	2063	41.320549	88.657681	099	33N	05E	21	4F	WR Woodin	TF Anderson	1938	55	RG	DO	-	-
81816	1605	41.316221	88.655923	099	33N	05E	21	5B	Natl Phosphate Co	Layne Western	1961	583	RC	IC	-	-
279911	-	-	-	099	33N	05E	21	5E	Wste Recovery - IL	Dietzman	10/05/1995	400	RG	NC	DL	BR
-	1117	41.318759	88.6576	-	33N	05E	21	-	Seymour H H	Woodruff Charles Co	01/01/1955	165	-	-	-	-
-	25191	41.31874	88.660044	-	33N	05E	21	-	Waste Recovery ILL	Dietzman	10/05/1995	400	-	-	-	-
-	248	41.320456	88.667407	-	33N	05E	21	-	-	-	-	-	-	-	-	-
237015	24678	41.31987	88.634594	099	33N	05E	22	-	Mike Close	Tri County Well & Pump	06/05/1992	365	RG	DO	-	BR
81747	-	-	-	099	33N	05E	22	-	Wheeler	J Henshue	1904	162	RG	DO	-	-
81748	-	-	-	099	33N	05E	22	-	R Shaver	Venzain	1914	215	RG	DO	-	-
286455	-	-	-	099	33N	05E	22	1D	John Lamb #1	RIX	02/27/1996	110	RG	DO	DL	UN
309113	25917	41.322602	88.631125	099	33N	05E	22	IG	Seneca Twp High School #1	K&K Drilling/Knierim	03/03/1999	440	RG	SC	DL	BR
81824	23632	41.324404	88. 631238	099	33N	05E	22	1H	Tri County Well Co	C Fykes	08/24/1979	425	RG	IC	-	-
287608	-	-	-	099	33N	05E	22	2F	Katherine Bartkus #1	Neely	07/20/1994	360	RG	DO	DL	BR
304663	25788	41.313555	88.635446	099	33N	05E	22	3B	John Bartkus	AC Drilling/Leasure	02/12/1998	340	RGP	DO	DL	BR
304664	25975	41.313531	88.637886	099	33N	05E	22	4B	John Bartus #1	AC Drilling/Leasure	02/02/1998	360	RG	DO	DL	BR
310649	25388	41.32078	88.633434	099	33N	05E	22	4B	John Bartus #1	AC Drilling/Leasure	02/02/1998	360	RG	DO	DL	BR
252446	-	-	-	099	33N	05E	22	6C	Clyde Collins	Tri Co Well & Pump	08/16/1992	230	RG	DO	-	BR
81825	2064	41.320638	88.647979	099	33N	05E	22	8F	Spicer Gravel Co	JT Anderson	09/08/1944	140	RG	IC	-	-
-	25787	41.313531	88.637886	-	33N	05E	22	-	Bartkus, John	Arthur C. Leasure	02/02/1998	360	-	-	-	-
-	14	41.316181	88.642907	-	33N	05E	22	-	Shaver, Roy	Zezain Bros	01/01/2016	101	-	-	-	-
81751	-	-	-	099	33N	05E	23	-	LA Butterfield	Bennett	1915	113	RG	DO	-	-
81752	667	41.316455	88.617374	099	33N	05E	23	-	C Gettler	CW Woodruff	1946	68	RG	DO	-	-
81753	-	-	-	099	33N	05E	23	-	C Santa	CR Johnson	-	60	RG	DO	-	-
81749	-	-	-	099	33N	05E	23	-	AL Irwin	Higgins and Bennett	1917	175	RG	DO	-	-
230920	24580	41.318233	88.619919	099	33N	05E	23	-	Kevin Thomas	Strange	03/07/1991	225	RG	DO	-	BR
321615	26041	41.322855	88.61171	099	33N	05E	23	1G	Alan Wilson/Lambert	K&K Well Drilling	09/10/1999	440	RG	DO	DL	BR
81750	-	-	-	099	33N	05E	23	1G	AL Irwin	-	01/24/1934	175	C	DO	-	-
322219	25993	41.324665	88.611825	099	33N	05E	23	1H	Jay Hendrix	K&K Well Drilling	02/17/2000	420	RG	DO	DL	BR
81826	2318	41.322823	88.614136	099	33N	05E	23	2G	R Rex	P Knierim	1972	108	RG	DO	-	-
-	26175	41.324633	88.614255	099	33N	05E	23	2H	Tony Centracchio	K&K Drilling	05/24/2000	380	RG	DO	DL	BR
346272	26756	41.324633	88.614255	099	33N	05E	23	2H	Bill Longtin #1	K&K Well Drilling/Ken	10/23/2002	520	RG	DO	DL	BR
81831	22515	41.313759	88.615986	099	33N	05E	23	3B	D Fessler	C Fykes	07/12/1974	125	RG	DO	-	-
292378	25509	41.317344	88.618647	099	33N	05E	23	4D	Joe Roas	Comar Drilling	11/22/1996	340	RG	DO	DL	BR

TABLE A-1

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JUNE 2006

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280561	25140	41.317344	88.618647	099	33N	05E	23	4D	Charles Ozze	Fordonski	08/30/1995	350	RG	DO	DL	BR
298816	25701	41.317315	88.621072	099	33N	05E	23	5D	Smith Builders	Tri County W&P/Brian	10/09/1997	300	RG	DO	DL	BR
81827	-	-	-	099	33N	05E	23	5F	R Anderson	K Knierim	11/08/1978	260	RG	DO	-	-
81828	795	41.319858	88.626072	099	33N	05E	23	7E	Fritz Muffler	CE Woodruff	09/16/1970	310	RG	IC	-	-
81829	23353	41.320862	88.626158	099	33N	05E	23	7F	R Stieben	C Fykes	08/06/1985	345	RG	DO	-	-
320645	26144	41.320862	88.626158	099	33N	05E	23	7F	Jerry Morganflash #1	Arrow Well & Pump	06/08/1999	360	RG	DO	DL	BR
352637	-	-	-	099	33N	05E	23	7F	Steve & Fay Davis	Mike Strange	-	200	A	-	DL	-
346255	26765	41.320862	88.626158	099	33N	05E	23	7F	Steve & Fay Davis #2	Arrow Well & Pump/Mike Strange	06/29/2002	360	RG	DO	DL	BR
81832	23898	41.324814	88.626528	099	33N	05E	23	7H	L Hobbs	Neely	06/07/1986	410	RG	DO	-	-
309114	25918	41.319031	88.628471	099	33N	05E	23	83	Jeff & Pat Cumming #1	K&K Drilling/Knierim	03/01/1999	380	RG	DO	DL	BR
366500	27267	41.319031	88.628471	099	33N	05E	23	8E	Larry & Sue Gates	Lockport Well & Pump/Dan Gibson	10/25/2004	340	RG	DO	DL	BR
338156	26454	41.322632	88.6287	099	33N	05E	23	8G	Ross Rod #1	Arrow Well & Pump	08/24/2001	400	RG	DO	DL	BR
81830	2065	41.322632	88.628689	099	33N	05E	23	8G	G Appleby	JT Anderson	05/13/1960	180	RG	DO	-	-
81833	23633	41.32443	88.628816	099	33N	05E	23	8H	Tri County Well Co	C Fykes	12/20/1978	365	RG	IC	-	-
-	25372	41.319031	88.628471	-	33N	05E	23	-	Lamb, John 1	RIX	02/27/1996	110	-	-	-	-
-	2418	41.323744	88.612982	-	33N	05E	23	-	Kelly Dave	Lockport Well & Pump/Dan Gibson	07/01/1973	390	-	-	-	-
-	25372	41.319031	88.628471	-	33N	05E	23	-	Lamb, John 1	RIX	02/27/1996	110	-	-	-	-
-	668	41.318233	88.619915	-	33N	05E	23	-	Santa Charles	CR Johnson	01/01/1945	61	-	-	-	-
-	25068	41.323643	88.611645	-	33N	05E	23	-	Seneca, Village of #3	Layne-Western Co.	08/31/1993	1445	-	-	-	-
-	24152	41.324665	88.611825	-	33N	05E	23	-	Smith, Mike	Knierim, Phil	08/12/1988	400	-	-	-	-
-	1115	41.317317	88.621068	-	33N	05E	23	-	Thompson Josephine	Woodruff Charles Co	01/01/1952	252	-	-	-	-
-	240	41.318304	88.613825	-	33N	05E	23	-	Wilmington Coal Co	-	-	-	-	-	-	-
81754	670	41.318531	88.600486	099	33N	05E	24	-	S Sampson	CR Johnson	1946	65	RG	DO	-	-
341260	26642	41.319499	88.596892	099	33N	05E	24	3E	Frank Vicich	Area Well & Pump/Bob Strange	02/19/2002	240	RG	DO	DL	BR
237058	24603	41.312201	88.59889	099	33N	05E	24	4A	Larry Marco	Fordonski	07/17/1992	245	RG	DO	-	BR
344489	26809	41.317641	88.599214	099	33N	05E	24	4D	Dave Fessler	Area Well & Pump/Robert	08/27/2002	240	RG	DO	DL	BR
304657	25789	41.317596	88.601647	099	33N	05E	24	5D	Seneca Twp High School #3898	Albrecht Dlg/Harold	02/09/1998	614	RG	IR	DL	BR
359112	27105	41.324846	88.602086	099	33N	05E	24	5H	Kevin Kiper #1	Arrow Well & Pump/Mike Strange	12/23/2003	235	RG	DO	DL	BR
367913	27390	41.322961	88.604206	099	33N	05E	24	6G	Merle & Irene Koehler	Area Well & Pump/Robert	12/29/2004	260	RG	DO	DL	BR
-	669	41.322353	88.606808	-	33N	05E	24	-	Kinner V B	-	01/01/1942	326	-	-	-	-
-	671	41.316014	88.609527	-	33N	05E	24	-	Seneca City	Miller, J.P. Art Well	01/01/1943	704	-	-	-	-
-	15	41.316105	88.609552	-	33N	05E	24	-	Seneca City Well	Heflin J C	01/01/1927	700	-	-	-	-
-	26506	41.312286	88.594036	-	33N	05E	24	-	Seneca Hunt Club	-	-	-	-	-	-	-
-	24298	41.313889	88.606282	-	33N	05E	24	-	Wheeler, Bob	Knierim Phil	06/15/1990	240	-	-	-	-
-	26423	41.312243	88.596461	-	33N	05E	24	-	Wildlife MHP	-	01/01/1972	-	-	-	-	-
-	1764	41.318531	88.600486	-	33N	05E	24	-	-	CRI and PR Co.	01/01/2005	450	-	-	-	-
-	22956	41.321043	88.606068	-	33N	05E	24	-	-	K and K Paul Knierim	-	260	-	-	-	-
237119	24679	41.310484	88.593943	099	33N	05E	25	2H	Scott Mann	Knierim	10/15/1992	160	RG	DO	-	BR
258105	24816	41.304999	88.600938	099	33N	05E	25	5E	Willard Weinlich	Rix Well & Pump	04/16/1994	260	RG	DO	DL	BR
81834	23634	41.297147	88.605995	099	33N	05E	25	7A	Anchor Inmaring Inc	P Knierim	04/27/1981	35	RG	IC	-	-
256991	-	-	-	099	33N	05E	25	7H	D&S Const.	K&K Drilling/Brown	01/06/1994	145	RG	DO	DL	BR
81835	-	-	-	099	33N	05E	25	8A	J Brookman	C Johnson	1977	32	RG	DO	-	-

TABLE A-1

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JUNE 2006

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-	26507	41.297148	88.602974	-	33N	05E	25	-	Black Marine Inc. Campground	-	-	-	-	-	-	-
-	154	41.308676	88.59882	-	33N	05E	25	-	Chi'Go Bridge and Iron	Geiger, S.B. and Son	01/01/1942	451	-	-	-	-
-	153	41.30869	88.598088	-	33N	05E	25	-	Chi'Go Bridge and Iron	Geiger, S.B. and Son	01/01/1942	1447	-	-	-	-
-	155	41.303678	88.597931	-	33N	05E	25	-	Chi'Go Bridge and Iron	Miller, J.P. Art Well	01/01/1943	654	-	-	-	-
-	1260	41.298727	88.601817	-	33N	05E	25	-	Hay J-Barge Plant	Woodruff Charles Co	-	196	-	-	-	-
-	156	41.308449	88.608386	-	33N	05E	25	-	Johnson Chas Wm	-	-	410	-	-	-	-
-	26857	41.309365	88.607222	-	33N	05E	25	-	Seneca Elem. School	Whitney and Associates	-	16	-	-	-	-
-	26858	41.309365	88.607222	-	33N	05E	25	-	Seneca Elem. School	Whitney and Associates	-	16	-	-	-	-
-	26860	41.309365	88.607222	-	33N	05E	25	-	Seneca Elem. School	Whitney and Associates	-	16	-	-	-	-
-	26861	41.309365	88.607222	-	33N	05E	25	-	Seneca Elem. School	Whitney and Associates	-	16	-	-	-	-
-	672	41.304127	88.599684	-	33N	05E	25	-	Wicks Arthur	CR Johnson	-	65	-	-	-	-
81755	-	-	-	099	33N	05E	26	-	AB Clark	C Johnson	1919	35	RG	DO	-	-
81756	-	-	-	099	33N	05E	26	-	Hochstatler	-	02/01/1934	43	RG	DO	-	-
360557	-	-	-	099	33N	05E	26	ID	Eric & Jessica Wennberg	K&K Drilling/Darwin	-	24	A	DO	DL	-
367903	27380	41.297869	88.61497	099	33N	05E	26	3A	Jack Cunningham #1	Area Well & Pump/Robert	07/27/2004	42	RG	DO	DL	UN
268589	25030	41.297473	88.627089	099	33N	05E	26	8A	James Thorpe	Fordonski	04/17/1995	50	RG	DO	DL	UN
-	673	41.306633	88.610706	-		05E	26	-	Sampson Arthur	CR Johnson	01/01/1946	65	-	-	-	-
-	674	41.304099	88.609715	-	33N	05E	26	-	Wheeler, James	CR Johnson	01/01/1946	65	-	-	-	-
81757	-	-	-	099	33N	05E	27	-	A Tautz	A Tautz	1907	18	RG	DO	-	-
81758	-	-	-	099	33N	05E	27	-	HJ Mayer	-	01/26/1934	200	RG	DO	-	-
81759	-	-	-	099	33N	05E	27	-	E Mayer	-	01/26/1934	25	RG	DO	-	-
237024	24588	41.297438	88.629499	099	33N	05E	27	1A	Spring Brook Marina	Fordonski	01/23/1992	44	RG	IC	-	BR
264250	-	-	-	099	33N	05E	27	1A	Kevin Steep	Fordonski	04/11/1994	230	RG	DO	DL	BR
293045	25510	41.297398	88.631898	099	33N	05E	27	2A	J Thorpe	Comar Drilling	07/11/1996	45	RG	IC	DL	UN
286517	25217	41.297161	88.646311	099	33N	05E	27	8A	Robert Shufflebocham	K&K Drilling/Brown	01/11/1996	280	RG	DO	DL	BR
-	26424	41.297199	88.643908	-	33N	05E	27	-	Marseilles	-	01/01/2000	1450	-	-	-	-
-	26508	41.298971	88.646376	-	33N	05E	27	-	Spring Brook Marina	-	-	-	-	-	-	-
81760	-	-	-	099	33N	05E	28	-	Hinch Trumbo and Lewis	-	01/26/1934	725	RG	DO	-	-
310650	25976	41.304324	88.656231	099	33N	05E	28	4E	City of Marseilles	Meadow Equip/Kerry	05/19/1998	260	RGS	CS	DL	BR
-	1148	41.303405	88.657398	-	33N	05E	28	-	Chiney Elizabeth	-	01/01/1955	250	-	-	-	-
-	24775	41.309809	88.649174	-	33N	05E	28	-	Fox River Minerals	Fordonski	09/17/1992	40	-	-	-	-
-	26425	41.304324	88.656231	-	33N	05E	28	-	Marseilles	-	01/01/1997	1450	-	-	-	-
81761	-	-	-	099	33N	05E	29	-	S Johnson	J Henshue	1904	115	RG	DO	-	-
81762	-	-	-	099	33N	05E	29	-	C Thompson	-	01/26/1934	14	RG	DO	-	-
359113	27106	41.305935	88.685239	099	33N	05E	29	8F	Matt Bruno #1	Arrow Well & Pump/Mike Strange	10/07/2003	240	RG	DO	DL	BR
-	1765	41.304129	88.685148	-		05E	29	-	Bruno Joe	-	01/01/1955	134	-	-	-	-
81763	-	-	-	099	33N	05E	30	-	F Schultz	G Defenbaugh	1931	201	RG	DO	-	-
81765	-	-	-	099	33N	05E	30	-	VL Briner	J Hensue	01/26/1934	231	RG	DO	-	-
379103	-	-	-	099	33N	05E	30	4D	Michael Chase	Tri County Well & Pump/Steve	03/30/2006	320	RG	DO	DL	BR
364954	27278	41.30055	88.697118	099	33N	05E	30	5C	Rick Schomas #1	K&K Drilling/Ken Knierim	06/16/2004	340	RG	DO	DL	BR
311576	25952	41.30055	88.697118	099	33N	05E	30	5C	John Leininger	Comar Drilling/Rix W&P	04/17/1999	400	RG	DO	DL	BR
334621	26410	41.305961	88.697303	099	33N	05E	30	5F	Premiers Asset Services #1	Arrow Well & Pump	08/27/2001	999	RG	IC	DL	~

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		*Coordinates*		*Location Information*					*Well Details*							
Well ID	*ISGS Well ID*	*Latitude*	*Longitude*	*FIPS*	*TWN*	*RNG*	*SEC*	*PLOT*	*Owner*	*Driller*	*Drill Date*	*Depth*	*Record Type*	*Use*	*Well Type*	*AQ Type*
350162	27018	41.30056	88.699531	099	33N	05E	30	6C	Steven Kent #1	K&K Drilling/Ken Knierim	06/10/2003	340	RG	DO	DL	BR
237066	24680	41.302372	88.702008	099	33N	05E	30	7D	Pete Witkowski	Tri County Well/Pump	11/28/1992	320	RG	DO	-	BR
81764	-	-	-	099	33N	05E	30	7G	F Schultz	-	01/30/1934	201	C	DO	-	-
-	1579	41.221726	88.584727	-	33N	05E	30	-	Perry Joe	-	08/01/1953	114	-	-	-	-
-	233	41.307883	88.699782	-	33N	05E	30	-	-	-	-	-	-	-	-	-
-	234	41.308358	88.702812	-	33N	05E	30	-	-	-	-	-	-	-	-	-
81836	-	-	-	099	33N	05E	31	4A	J Jungles	C Johnson	1976	180	RG	DO	-	-
81766	-	-	-	099	33N	05E	31	5E	E Enockson	-	01/30/1934	218	RG	DO	-	-
81837	23635	41.284231	88.698578	099	33N	05E	31	6B	D Zimmerman	R Scherf	09/04/1984	35	RG	DO	-	-
81838	-	-	-	099	33N	05E	32	8C	R May	Will DuPage Drilling	12/29/1976	295	RG	IC	-	-
-	26862	41.286133	88.669886	-	33N	05E	32	-	Lucie Farm	Becker Oil Co.	-	108	-	-	-	-
81767	676	41.28976	88.665203	099	33N	05E	33	-	J Wylie	CE Woodruff	1942	245	RG	DO	-	-
81768	675	41.28976	88.665203	099	33N	05E	33	-	J Wylie	CE Woodruff	1941	245	RG	DO	-	-
258126	24817	41.282749	88.648154	099	33N	05E	33	1A	Jeff Gallick	Fordonski	03/26/1994	240	RG	DO	DL	UN
239441	-	-	-	099	33N	05E	33	1A	Allen Clark	Knierim	02/16/1992	210	RG	DO	-	BR
264241	-	-	-	099	33N	05E	33	1A	Alan Leyes	K&K Drilling/Brown	09/29/1993	210	RG	DO	DL	UN
300254	25702	41.282694	88.652929	099	33N	05E	33	3A	Bonnie & Ray Linder	Calvin Bisping	10/27/1997	215	RG	DO	DL	UN
258361	-	-	-	099	33N	05E	33	3B	Gary Erickson	K&K Drilling/Brown	11/30/1993	210	RG	DO	-	UN
386631	-	-	-	099	33N	05E	33	3B	Gary Eulkvon	K&K Drilling/Brown	11/30/1993	210	RG	DO	-	UN
274845	24818	41.289809	88.660413	099	33N	05E	33	4A	Donald Sticha	Lockport Well & Pump	07/31/1995	425	RG	DO	DL	BR
285635	25330	41.28267	88.655317	099	33N	05E	33	4A	Bruce Rodomski	RIX	02/29/1996	217	RG	DO	DL	UN
372997	27502	41.282659	88.655293	099	33N	05E	33	4A	Theodore Bartelmey	Tri County Well & Pump/Steve	08/05/2005	440	RG	DO	DL	BR
286513	25218	41.286264	88.65547	099	33N	05E	33	4C	Pete Smith	RIX	03/25/1994	220	RG	DO	DL	UN
259503	24853	41.284414	88.660172	099	33N	05E	33	6B	Ron Berryman	K&K Drilling/Brown	08/25/1994	206	RG	DO	DL	UN
237052	24606	41.286212	88.660252	099	33N	05E	33	6C	Mike Galloway Lot 2685	Fordonski	04/14/1992	210	RG	DO	-	UN
237127	24776	41.286291	88.653078	099	33N	05E	33	6E	Thomas & Mary Lanfear Lot 2695	Fordonski	01/18/1993	210	RG	DO	-	UN
258122	-	-	-	099	33N	05E	33	6E	John Logan	Fordonski	12/06/1993	215	RG	DO	DL	UN
362806	27226	41.286163	88.665035	099	33N	05E	33	8C	Don Podgorny	Area Well & Pump/Robert	04/20/2004	215	RG	DO	DL	UN
260968	24917	41.287961	88.665119	099	33N	05E	33	8D	Ray Eich	Fordonski	08/08/1993	270	RG	DO	DL	UN
-	24605	41.286212	88.660252	-	33N	05E	33	-	Time Sadness	Fordonski	06/23/1992	215	-	-	-	-
-	25080	41.28358	88.654161	-	33N	05E	33	-	Donald Sticha	Fordonski	07/31/1995	425	-	-	-	-
-	675	41.28973	88.665203	-	33N	05E	33	-	Wylie John-Estate	-	01/01/1941	245	-	-	-	-
-	676	41.28976	88.665203	-	33N	05E	33	-	Wylie John-Estate	-	01/01/1942	245	-	-	-	-
81769	-	-	-	099	33N	05E	34	-	-	-	02/02/1934	-	RG	DO	-	-
81770	-	-	-	099	33N	05E	34	-	JJ Farrell	CR Johnson	1945	60	RG	DO	-	-
360335	27172	41.282969	88.628842	099	33N	05E	34	1A	J Connell Group	K&K Drilling/Jeff Hieser	04/16/2004	210	RG	DO	DL	UN
365541	27327	41.282969	88.628842	099	33N	05E	34	1A	J Connell Group	K&K Drilling/Jeff Hieser	10/21/2004	215	RG	DO	DL	UN
367263	27374	41.282957	88.628821	099	33N	05E	34	1A	J Connell Group Contruction	K&K Drilling/Jeff Hieser	01/10/2005	214	RG	DO	DL	BR
288703	25389	41.282969	88.628842	099	33N	05E	34	1A	D&S Construction	K&K Drilling/Brown	04/25/1996	191	RG	DO	DL	UN
288705	25390	41.282969	88.628842	099	33n	05E	34	1A	Tom Small	K&K Drilling/Brown	05/14/1996	215	RG	DO	DL	BR
308133	25940	41.284776	88.628925	099	33N	05E	34	1B	Richard Dazzo	K&K Drilling/Knierim	02/03/1999	205	RG	DO	DL	BR
81839	23636	41.284158	88.628143	099	33N	05E	34	1B	N Higby	P Knierim	06/09/1979	210	RG	DO	-	-

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Well Identification		*Coordinates*		*Location Information*					*Well Details*							
Well ID	*ISGS Well ID*	*Latitude*	*Longitude*	*FIPS*	*TWN*	*RNG*	*SEC*	*PLOT*	*Owner*	*Driller*	*Drill Date*	*Depth*	*Record Type*	*Use*	*Well Type*	*AQ Type*
252426	-	-	-	099	33N	05E	34	1C	Gary Hamilton	K&K Drilling/Brown	07/22/1993	210	RG	DO	-	BR
237154	24467	41.293787	88.631728	099	33N	05E	34	1D	Gary Lurz Lot 2791	Knierim	07/10/1991	210	RG	DO	-	UN
258498	24681	41.288395	88.629084	099	33N	05E	34	1D	Walter Dudley	Knierim	08/29/1991	208	RG	DO	-	UN
268807	25033	41.293824	88.629322	099	33N	05E	34	1G	Jerry Kubinski	K&K Drilling/Brown	06/21/1995	208	RG	DO	DL	UN
356900	27035	41.295634	88.629401	099	33N	05E	34	1H	Mark Kellogg	Area Well & Pump/Robert	11/01/2003	47	RG	DO	DL	UN
367908	27385	41.284738	88.631314	099	33N	05E	34	2B	Lisa Ording	Area Well & Pump/Robert	10/25/2004	200	RG	DO	DL	UN
364962	27286	41.286556	88.631414	099	33N	05E	34	2C	Mike Dooley #1	K&K Drilling/Ken Knierim	09/03/2004	193	RG	DO	DL	UN
280608	-	-	-	099	33N	05E	34	2F	Heritage Lake Estates	K&K Drilling/Brown	11/27/1995	207	RG	DO	DL	UN
237062	24607	41.293787	88.631728	099	33N	05E	34	2G	Jeff & Deanna Berg Lot 2793	Knierim	07/14/1992	214	RG	DO	-	BR
265576	24967	-	-	099	33N	05E	34	2G	Jerry Kubinski	K&K Drilling/Brown	11/11/1994	210	RG	DO	DL	BR
268809	25034	41.295593	88.631808	099	33N	05E	34	2H	Tom Small	K&K Drilling/Brown	06/22/1995	213	RG	DO	DL	UN
81840	-	-	-	099	33N	05E	34	3C	T Safrawski	C Johnson	06/28/1976	63	RG	DO	-	-
375780	27581	41.295544	88.63419	099	33N	05E	34	3H	Zack Malak #1	Area Well & Pump/Robert	10/10/2005	35	RG	DO	DL	UN
275806	25081	41.295556	88.634214	099	33N	05E	34	3H	Mike Mason #1	RIX	08/20/1995	240	RG	DO	DL	BR
258320	-	-	-	099	33N	05E	34	5H	Dave Odell	Fordonski	11/06/1993	130	RG	DO	DL	UN
-	25161	41.29198	88.631652	-	33N	05E	34	-	Heritage Lake Estates	Brown, Darwin	11/27/1995	207	-	-	-	-
-	24941	41.295634	88.629401	-	33N	05E	34	-	Hetelle, David	Fordonski	09/22/1994	50	-	-	-	-
-	27642	41.288419	88.626649	-	33N	05E	34	-	Michelle Altman	Area Well & Pump/Robert	02/08/2006	153	-	-	-	-
-	22541	41.20939	88.633234	-	33N	05E	34	-	Emmet, Moran	-	12/01/1974	545	-	-	-	-
-	24950	41.283039	88.624016	-	33N	05E	35	-	Jim Kolanowski	Fordonski	09/07/1994	420	-	-	-	-
-	26227	41.286621	88.626591	-	33N	05E	35	-	Erickson, Carl	RIX	08/18/2000	192	-	-	-	-
-	23608	41.28843	88.62667	-	33N	05E	35	-	Lamping, Clarence	Rob, Peter	06/17/1983	159	-	-	-	-
-	677	41.293862	88.626912	-	33N	05E	35	-	Schroeder	-	-	564	-	-	-	-
-	26790	41.295672	88.626991	-	33N	05E	35	-	Steve Spangler	Strange, Michael	10/11/2002	43	-	-	-	-
-	26377	41.295672	88.626991	-	33N	05E	35	-	Matrtin Spicer	Strange, Michael	04/15/2001	33	-	-	-	-
-	22710	41.286621	88.626591	-	33N	05E	35	-	Vicich Louis	Stoneberger, Donald	10/01/1976	183	-	-	-	-
-	26259	41.208916	88.595456	-	32N	05E	36	-	Johnson, Howard	RIX, John Richard	09/20/2000	75	-	-	-	-
-	24674	41.282403	88.705632	-	33N	05E	36	-	Donovan, Art	Fordonski	06/20/1992	435	-	-	-	-
-	25401	41.282403	88.705632	-	33N	05E	36	-	Housing Authority - LaSalle Co	Brown, Darwin	07/12/1996	440	-	-	-	-
-	23619	41.284231	88.705655	-	33N	05E	36	-	Rieuf, Clarence	Rob, Ronald Gene	06/16/1981	-	-	-	-	-
-	23620	41.282403	88.705632	-	33N	05E	36	-	Tri County Well and Pump, Inc	Fykes, Charles N	09/30/1978	445	-	-	-	-
-	25079	41.282403	88.705632	-	33N	05E	36	-	RIX	Vidito, Anna	08/06/1995	480	-	-	-	-
09990060	5686	-	-	099	33N	05E	16	6F	Whispering Pines MHP	-	1974	460	I	-	-	-
09934335	11946	-	-	099	33N	05E	20	4C	Royster-Clark, Inc	-	-	-	I	-	-	-
09934335	11945	-	-	099	33N	05E	20	4E	Royster-Clark, Inc	-	-	360	I	-	-	-
09934330	-	-	-	099	33N	05E	21	-	PCS Phosphate-Marseilles Oprtn	-	-	140	I	-	-	-
09934330	11944	-	-	099	33N	05E	21	4C	PCS Phosphate-Marseilles Oprtn	-	-	-	U	-	-	-
09934330	11943	-	-	099	33N	05E	21	5C	PCS Phosphate-Marseilles Oprtn	-	-	440	I	-	-	-
09914770	11927	-	-	099	33N	05E	21	7A	Exelon-LaSalle Co Station	-	-	-	I	-	-	-
09991050	5776	-	-	099	33N	05E	23	1G	Seneca	Albrecht Well Drilling	1993	1445	I	-	D	-
09991050	2811	-	-	099	33N	05E	24	8C	Seneca	J Otis Heflin	1927	700	I	-	D	-
09991050	2810	-	-	099	33N	05E	24	8C	Seneca	JP Miller Art Well	1943	704	I	-	C	-

TABLE A-1

WATER WELL INVENTORY DATABASE SEARCH
PUBLIC, INDUSTRIAL, COMMERCIAL
ILLINOIS STATE WATER SURVEY AND ILLINOIS STATE GEOLOGICAL SURVEY
JUNE 2006

Abbreviations/Definitions

Well ID	Illinois State Water Survey Identification Number
FIPS	County Code Number
TWN	Civil Township
RNG	Range
SEC	Section
PLOT	10-Acre plot location within the Section
ISGS Well ID	Illinois State Geological Survey Identification Number
Depth	Depth of Well to the Nearest Foot
Drill Date	Date Well Initially Drilled / Installed

Record Type:
R - Construction Report
G - Geology
S - Sealed
A - Affidavit
C - Chemical Analysis
I - Inventory
X - Comments in Owners Field Something Unusual
O - Any other type of record
P - Pump installation

Well Type:
Blank - Assumed Drilled
BD - Bored
DL - Drilled
DU - Dug (phased out)
DR - Driven
NW - Non-Well
SP - Sandpoint
SG - Spring
- - Assumed Drilled or Possibly Unknown

Use:
CO - Conservation
CS - Community Supply
DO - Domestic
DW - Dewatering
IC - Industrial / Commercial
IN - Injection Well
IR - Irrigation
MO - Monitoring
NC - Non-Community
NW - Non-Well Source
OB - Observation
PK - Park
RC - Recovery Well
RW - Relief Well
SC - School
ST - State
TB - Test Boring
TH - Test Hole
TW - Test Well
- - Unknown

Aquifer Type:
BR - Bedrock
DH - Dry Hole
SW - Surface Water
UN - Unconsolidated
- - Unknown

ILLINOIS
DEPARTMENT OF
NATURAL
RESOURCES

Illinois State Water Survey

Main Office • 2204 Griffith Drive • Champaign, IL 61820-7495 • Tel (217) 333-2210 • Fax (217) 333-6540
Peoria Office • P.O. Box 697 • Peoria, IL 61652-0697 • Tel (309) 671-3196 • Fax (309) 671-3106

SWS

6/27/2006

Mr. Ken Duwal
CRA
8615 West Bryn Maur
Chicago, IL60631

Dear Mr. Duwal:

As you requested during our telephone conversation on June 26, 2006, we are enclosing printouts from our Private Well Database and Public, Industrial, Commercial Survey (PICS) Database for the following locations:

COUNTY	TOWNSHIP	RANGE	SECTIONS
LASALLE	32 NORTH	5 EAST	1-29
LASALLE	33 NORTH	5 EAST	15-34

No available information is indicated on the printout by the statement "0 records were found for the specified locations." Also enclosed are explanations of the Illinois State Water Survey Private Well and PICS Databases.

The data included in the Private Well Database are those non-municipal wells which are known to the Illinois State Water Survey, and the PICS Database is an inventory of municipal well information and large industrial groundwater users . We may not have a copy of well records for these groundwater users.

The enclosed statement reflects the charges for this request which includes a $35.00 query fee for PICS information, a $35.00 query fee for Private well information, and a $0.10 per page charge for 32 pages, plus a $5.00 shipping and handling fee, totaling $78.20.

If you have any questions or if I can be of further assistance, please call.

Sincerely,

Susie Casey (pi)

Susie Dodd-Casey
Associate Supportive Scientist
Center for Groundwater Science
Phone: (217) 333-9043

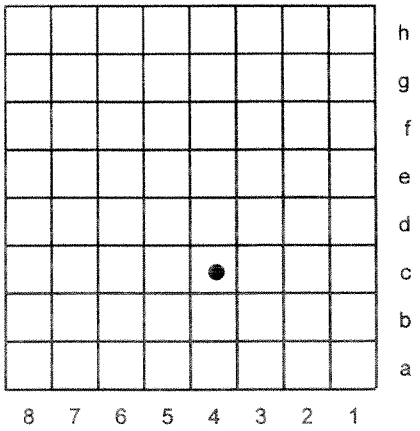
Enclosures as stated

ISWS 10-ACRE PLOT LOCATION SYSTEM

The following is an explanation of the ISWS Private Well Database location system.

The location system uses Township, Range, and Section. The location consists of five parts: County abbreviation, Township, Range, Section, and coordinate within the section (subsection or 10-acre plot). Sections are divided into rows of ⅛-mile squares. Each ⅛-mile square contains 10 acres and corresponds to a quarter of a quarter of a quarter section. A normal section of 1 square mile contains 8 rows of ⅛-mile squares; an odd-sized section contains more or fewer rows. Rows are numbered from east to west and lettered from south to north as shown in the diagram.

Example: St. Clair County, FIP No. 163
T2N, R10W
Section 23



The location of the well shown above is 163 2N10W-23.4c. The well point is located at the center of this 10-acre plot.

ILLINOIS STATE WATER SURVEY

PRIVATE WELL DATABASE EXPLANATION

WID	Illinois State Water Survey Identification Number
FIPS	County Code Number
TWN	Civil Township
RNG	Range
SEC	Section
PLOT	10-acre Plot Location within the Section
OWNER	Well Owner
DRILLER	Well Drilling Contractor of Well
DATE DRILLED	Date Initially Drilled
DEPTH	Depth (well to nearest ft)
RECORD TYPE	Record Type (types of information on file) R - Construction Report G - Geology S - Sealed A - Affidavit C - Chemical Analysis I - Inventory X - Indicates Comment in Owners Field Something Unusual O - Any Other Type of Record P - Pump Installation
USE	Well Use (two-letter code indicating the usage of the well) CO - Conservation CS - Community Supply DO - Domestic DW - De-Watering IC - Industrial/Commercial IN - Injection Well IR - Irrigation MO - Monitoring NC - Non-Community NW - Non-Well Source OB - Observation PK - Park RC - Recovery Well RW - Relief Well SC - School ST - State

USE	(Continued) TB - Test Boring TH - Test Hole TW - Test Well ~ - Unknown
WELL TYPE	Well Type (two-letter code indicating the type of well) BLANK - Assumed Drilled BD - Bored DL - Drilled DU - Dug (Being Phased Out) DR - Driven NW - Non-Well SP - Sand Point SG - Spring ~ - Assumed Drilled or Possibly Unknown
AQUIFER TYPE	Aquifer Type (two-letter code indicating aquifer type) BR - Bedrock DH - Dry Hole SW - Surface Water UN - Unconsolidated ~ - Unknown
STAT LVL	Static Level - Reported non-pumping water level
PUMP LVL	Pumping Level - Reported water level during initial pumping of the well
PUMP GPM	Pumping GPM - Gallons per minute at time of well construction

THE DATA IN THE PRIVATE WELL DATABASE IS A LISTING OF THE NON-COMMUNITY WELLS WHICH ARE KNOWN TO THE ILLINOIS STATE WATER SURVEY (ISWS). THIS INFORMATION HAS BEEN ENTERED VERBATIM FROM WELL LOGS SUBMITTED BY THE DRILLER, FROM CHEMICAL ANALYSIS REPORTS, FROM WELL SEALING FORMS, OR WELL INVENTORY FORMS FROM THE 1930-34 WELL SURVEY AND OTHER SPECIAL PROJECTS. THE ACCURACY OF THIS DATA IS CONTROLLED BY THOSE WHO SUBMITTED THE FORM. INFORMATION IN THE PRIVATE WELL DATABASE HAS NOT BEEN VERIFIED.

ILLINOIS STATE WATER SURVEY
PICS DATABASE EXPLANATION

SWS ID	ISWS Facility ID Number
NAME	Facility Name
WELL #	ISWS Point Source Well/Intake Number
STATUS	Point Source Status of Well/Intake A = Abandoned - no longer in existence, no affidavit on file, or do not know if it has been filled in C = Capped - cap attached to top D = Disconnected - disconnected from system E = Emergency - available for standby use I = In Use - produces major portion of water O = Observation - used for water level measurements S = Sealed - filled in U = Unused - exists but not used
FIPS	County Code Number
TWN	Civil Township
RNG	Range
SEC	Section
PLOT	10-acre Plot Location within the Section
DEPTH	Depth (well to nearest ft)
TYPE LOG	D = Driller's log O = Other X = Chemical C = Correlated log S = Sample study log - = Log not available
YEAR	Year Point Source Initially Constructed
DRILLER	Well Drilling Contractor of Well

May 2002

Illinois State Water Survey Private Well Database

Tuesday, June 27, 2006

County: LASALLE

Township: 32N

Range: 05E

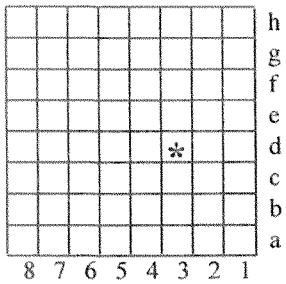
Sections: 01-29

Records Found: 142

Questions: Contact the Illinois State Water Survey's Ground Water Division @ (217)-333-9043

Publication: Please cite the Illinois State Water Survey's Private Well Database in all publications based wholly or partially on this information.

Note: The data in the Private Well Database is a listing of non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, chemical analysis reports, well sealing forms, well inventory forms from the 1930-1934 well survey, and other special projects. The accuracy of this data is controlled by those submitting the forms. Information in the Private Well Database has not been verified.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
80946	099	32N	05E	01		E LARSON	C W JOHNSON	00/00/1924	240	RG	DO	~~	~~			
80947	099	32N	05E	01		E MALADY	C W JOHNSON	00/00/1919	187	RG	DO	~~	~~			
80948	099	32N	05E	01		E MALADY		02/02/1934	40	RG	DO	~~	~~			
80949	099	32N	05E	01		E FARMER	C R JOHNSON	00/00/1954	130	RG	DO	~~	~~			
81040	099	32N	05E	02				07/01/1856		C	DO	~~	~~			
81041	099	32N	05E	02				08/07/1956		RG	DO	~~	~~			
80950	099	32N	05E	02		W A GRAVES	C W JOHNSON	02/06/1934	200	RG	DO	~~	~~			
80951	099	32N	05E	02		P KENNEDY	C W JOHNSON	00/00/1913	488	RG	DO	~~	~~			
80953	099	32N	05E	02		P KENNEDY	M HIGGINS	00/00/1919	217	RG	DO	~~	~~			
80954	099	32N	05E	02		J TALTY	C W JOHNSON	00/00/1914	560	RG	DO	~~	~~			
364963	099	32N	05E	02	3B	RICHARD HAMILTON #1	AREA WELL & PUMP/ROBERT	08/17/2004	126	RG	DO	DL	UN			12
370504	099	32N	05E	02	6C	RYAN WENZEL #1	AREA WELL & PUMP/ROBERT	05/05/2005	460	RG	DO	DL	BR			12
80952	099	32N	05E	02	6C	P KENNEDY		03/06/1934	488	C	DO	~~	~~			
80956	099	32N	05E	03		T OLSON	C W JOHNSON	02/07/1934	186	RG	DO	~~	~~			
80955	099	32N	05E	03		O HETTLE		02/01/1934	30	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
252466	099	32N	05E	03		RONALD NEUNDORF	KNIERIM	12/27/1991	260	RG	DO	--	BR			
REDRILL OF EXISTING WELL																
360563	099	32N	05E	03	3G	RICHARD & BERNICE DUNN	JOHN RIX	00/00/0000	16	A	DO	DU				
								Sealed: 4/20/04								
81042	099	32N	05E	03	4A	J TRIPLETT	D STONEBERGER	10/04/1976	172	RG	DO	~~	~~			
81049	099	32N	05E	03	5A	R TERRY	R SCHERF	07/02/1987	60	RG	DO	~~	~~			
81043	099	32N	05E	03	7A	J PURDUE	J T ANDERSON	00/00/1946	226	RG	DO	~~	~~			
81044	099	32N	05E	03	7A	D WHITE	P KNIERIM	06/23/1980	500	RG	DO	~~	~~			
228247	099	32N	05E	04	1F	HENERY ENGLEHURST	KNIERIM	08/30/1990	184	RG	DO	--	UN	169	175	
320623	099	32N	05E	04	2F	ROGER BOLS	AREA WELL & PUMP	11/27/1999	170	RG	DO	DL	UN	119	139	10
269122	099	32N	05E	04	3H	RON & SUE MARCONI	K & K DRILLING/BROWN	06/10/1995	218	RG	DO	DL	BR	119	179	
307595	099	32N	05E	04	4A	THOMAS DUNCAN #1	ARROW W&P/STRANGE	05/02/1998	151	RG	DO	DL	UN	89	109	12
80958	099	32N	05E	04	4C	LAMBERT		01/30/1934	226	RG	DO	~~	~~			
346273	099	32N	05E	04	4C	GARY THORSEN #2	ARROW WELL & PUMP/MIKE STRANGE	09/05/2002	235	RG	DO	DL	UN	159	179	12
80957	099	32N	05E	04	4E	S BARLO	HIGGINS AND BENNETT	00/00/1929	275	RG	DO	~~	~~			
296111	099	32N	05E	04	4G	WILLIAM BANKOWSKI #1	JOHN RIX	06/03/1997	226	RG	DO	DL	UN	159	159	10
81045	099	32N	05E	04	5E	ABBOTT CONTRACTORS	DU PAGE PUMP INC	08/21/1974	410	RG	IC	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
367155	099	32N	05E	04	7B	IL DEPT. OF NATURAL RESOURCES MO WELL #B2 - RG102	ALBRECHT DRILLING/HAROLD	00/00/1982 Sealed: 12/6/04	55	A	MO	DL				
367154	099	32N	05E	04	7B	IL DEPT. OF NATURAL RESOURCES MO WELL #B1 - RG101	ALBRECHT DRILLING/HAROLD	00/00/1982 Sealed: 12/6/04	25	A	MO	DL				
367156	099	32N	05E	04	7B	IL DEPT. OF NATURAL RESOURCES MO WELL #B3 - RG103	ALBRECHT DRILLING/HAROLD	00/00/1982 Sealed: 12/6/04	41	A	MO	DL				
367157	099	32N	05E	04	7B	IL DEPT. OF NATURAL RESOURCES MO WELL #B4 - RG104	ALBRECHT DRILLING/HAROLD	00/00/2003 Sealed: 12/6/04	53	A	MO	DL				
367158	099	32N	05E	04	7B	IL DEPT. OF NATURAL RESOURCES MW WELL #B5 - RG105	ALBRECHT DRILLING/HAROLD	00/00/2003 Sealed: 12/6/04	65	A	MO	DL				
367159	099	32N	05E	04	7B	IL DEPT. OF NATURAL RESOURCES MO WELL #B6 - RG106	ALBRECHT DRILLING/HAROLD	00/00/2003 Sealed: 12/6/04	59	A	MO	DL				
292392	099	32N	05E	04	8B	HENRY ENGLEHAUPT	K&K DRILLING/BROWN	12/18/1996	229	RG	DO	DL	UN	160	200	
81052	099	32N	05E	05		IL ARMY NATL GUARD		06/28/1983	18	A	DO	~~	~~			
80961	099	32N	05E	05	5A	V L BRINER		02/05/1934	11	RG	DO	~~	~~			
81046	099	32N	05E	05	5A	MARSEILLES TRAINING	S D ALBRECHT	06/24/1985	478	RG	DO	~~	~~			
81047	099	32N	05E	05	5A	IL ARMY NATL GUARD	ALBRECHT	00/00/1985	478	I	DO	~~	~~			
81048	099	32N	05E	05	5A	STATE OF ILLINOIS		10/01/1982	18	A	DO	~~	~~			
81050	099	32N	05E	05	7A	IL ARMY NATL GUARD	WILL CO WELL	04/10/1985	239	RG	DO	~~	~~			
81051	099	32N	05E	05	7A	IL ARMY NATL GUARD	WILL CO WELL	00/00/1985	239	I	DO	~~	~~			
80960	099	32N	05E	05	7A	O R BRADLEY	SHELTON	02/06/1934	45	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
80959	099	32N	05E	05	8E	W MADDUS		02/05/1934	22	RG	DO	~~	~~			
80962	099	32N	05E	06	4G	J JUGD		02/05/1934	28	RG	DO	~~	~~			
81053	099	32N	05E	06	5G	B LAATZ	C FYKES	06/16/1983	485	RG	DO	~~	~~			
81054	099	32N	05E	06	5H	B LAATZ	C FYKES	12/12/1972	435	RG	DO	~~	~~			
275805	099	32N	05E	06	5H	AL VANDERSLVIS	RIX	08/28/1995	230	RG	DO	DL	UN	159	179	
80963	099	32N	05E	06	6A	FN SHAVER		02/05/1934	46	RG	DO	~~	~~			
258325	099	32N	05E	06	6G	HARRY MOBES	FORDONSKI	02/21/1994	440	RG	DO	DL	BR	299	360	
81055	099	32N	05E	06	7H	J BRANDON	C W JOHNNSON	00/00/1976	232	RG	DO	~~	~~			
80964	099	32N	05E	07	1H	C GAGE		02/05/1934	30	RG	DO	~~	~~			
80965	099	32N	05E	07	1H	C GAGE	B IRWIN	00/00/1884	220	RG	DO	~~	~~			
338143	099	32N	05E	07	1H	LARRY GAGE #2	ANEFFCO DRILLING	10/09/2000	254	RG	DO	DL	UN	192	239	30
80967	099	32N	05E	07	8D	J KUHN	G HENSHUE	00/00/1894	255	RG	DO	~~	~~			
333840	099	32N	05E	07	8D	GARY MILLER #2	ARROW WELL & PUMP	06/18/2001	500	RG	DO	DL	BR	299	319	12
80966	099	32N	05E	07	8H	I N BAUGHMAN	E HENSHUE	02/05/1934	191	RG	DO	~~	~~			
80968	099	32N	05E	08	4H	J E GAGE	C W JOHNSON	00/00/1911	187	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
80971	099	32N	05E	09	1D	P GODFREY		05/09/1958	183	RG	DO	~~	~~			
80972	099	32N	05E	09	1D	P GODFREY		05/09/1958	183	C	DO	~~	~~			
80969	099	32N	05E	09	6H	H H STREUBLER		02/06/1934	55	RG	DO	~~	~~			
80970	099	32N	05E	09	8A	W J BRINER		02/07/1934	45	RG	DO	~~	~~			
80973	099	32N	05E	10		S DUNCAN	J SCHOMAS	00/00/1929	238	RG	DO	~~	~~			
80974	099	32N	05E	10		OTT	C W JOHNSON	00/00/1915	232	RG	DO	~~	~~			
80975	099	32N	05E	10		METRO LIFE INS CO		02/07/1934	220	RG	IC	~~	~~			
258506	099	32N	05E	10	8H	WINSTON OBRIEN	FORDONSKI	09/22/1992	100	RG	DO	DL	BR	54	95	
368133	099	32N	05E	10	8H	MIKE MUSSER	AREA WELL & PUMP/ROBERT	00/00/2004	120	RG	DO	DL	DH			
80976	099	32N	05E	11		T CROWLEY	C W JOHNSON	02/06/1934	215	RG	DO	~~	~~			
80977	099	32N	05E	11		SCHULTZ	E HENSHUE	00/00/1894	200	RG	DO	~~	~~			
80978	099	32N	05E	12		E HENRY		02/02/1934		RG	DO	~~	~~			
80979	099	32N	05E	12		TALTY		02/15/1934	90	RG	DO	~~	~~			
80980	099	32N	05E	12			C R JOHNSON	00/00/1952	197	RG	DO	~~	~~			
346605	099	32N	05E	12	1G	CHADD BAKER #1	K & K WELL DRILLING/KEN	11/16/2002	190	RG	DO	DL	BR	79	179	4

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
351742	099	32N	05E	12	1G	CHADD BAKER	????		147	A		DR				
80981	099	32N	05E	13		C MALADY		02/09/1934	40	RG	DO	~~	~~			
81056	099	32N	05E	13	1C	KUHN	J T ANDERSON	03/04/1961	113	RG	DO	~~	~~			
81057	099	32N	05E	13	5A	T SHEEDY	J T ANDERSON	04/25/1970	180	RG	DO	~~	~~			
80982	099	32N	05E	14		M SHEEDY	C W JOHNSON	02/15/1934	160	RG	DO	~~	~~			
80983	099	32N	05E	14		M SHEEDY	C W JOHNSON	00/00/1912	240	RG	DO	~~	~~			
81058	099	32N	05E	14	1G	D BEDEKER	R SCHERF	01/12/1983	51	RG	DO	~~	~~			
80984	099	32N	05E	15		ZIMMERMAN	C W JOHNSON	02/14/1934	160	RG	DO	~~	~~			
80985	099	32N	05E	15		PEOPLES TRUST BANK	C W JOHNSON	02/14/1934	301	RG	IC	~~	~~			
80986	099	32N	05E	16		A MARSH	C W JOHNSON	02/06/1934	300	RG	DO	~~	~~			
252442	099	32N	05E	16		ILL DEPT OF CONSERVATION	MIDWEST WELL & PUMP	01/00/1992	665	RG	CO	--	BR	323		
81059	099	32N	05E	17		CON ED CO		12/13/1983	411	RG	IC	~~	~~			
81062	099	32N	05E	17		CON ED CO		04/21/1972	980	C	IC	~~	~~			
81063	099	32N	05E	17		CON ED CO		05/25/1972	1620	C	IC	~~	~~			
80987	099	32N	05E	17		HENRY		02/07/1934	38	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
80988	099	32N	05E	17		I N BAUGHMAN	E HENSHUE	02/05/1934	195	RG	DO	~~	~~			
80989	099	32N	05E	17		H A BEVINGTON		02/12/1934	29	RG	DO	~~	~~			
81066	099	32N	05E	18		C ALVARADO	D SANTELMAN	00/00/1966	254	RG	DO	~~	~~			
80990	099	32N	05E	18		BROOKFIELD PRES CHURCH		02/12/1934	22	RG	SC	~~	~~			
80991	099	32N	05E	18		F CARR	C W JOHNSON	00/00/1912	255	RG	DO	~~	~~			
371414	099	32N	05E	18	1H	RICHARD FRYE #1	K & K DRILLING/KEN KNIERIM	07/28/2004	540	RG	DO	DL	BR			
371567	099	32N	05E	18	1H	RICHARD FRYE	JOHN RIX	00/00/0000 Sealed: 9/28/04	180	A	DO	DL				
258338 DEEPENED ON 10/28/93	099	32N	05E	18	8C	GREG HILL	DOBER	10/28/1993	300	RG	DO	DL	BR	127	131	
80992	099	32N	05E	19		W G SCHUTTE	J EYER	00/00/1901	293	RG	DO	~~	~~			
80993	099	32N	05E	19		L W LAATZ		02/12/1934	320	RG	DO	~~	~~			
81067	099	32N	05E	19	1A	TRUMAN F OSMOND AGENCY	C E WOODRUFF	06/18/1975	231	RG	DO	~~	~~			
81068	099	32N	05E	19	5D	TRI COUNTY WELL CO	C FYKES	04/30/1979	105	RG	IC	~~	~~			
320642	099	32N	05E	19	8E	SCOTT DUFFIELD #1	ANEFFCO DRILLING	07/14/1999	222	RG	DO	DL	UN	119	184	30
80994	099	32N	05E	20		A C OLSEN	C W JOHNSON	00/00/1908	265	RG	DO	~~	~~			
80995	099	32N	05E	20		W T CORDIAL		00/00/1880	32	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
80996	099	32N	05E	20		L F GAGE		02/13/1934	288	RG	DO	~~	~~			
80997	099	32N	05E	20		D STEVENSON	E HENSHUE	00/00/1907	188	RG	DO	~~	~~			
294363	099	32N	05E	20	4H	MIKE DAVIS #1	JOHN RIX	01/15/1997	550	RG	DO	DL	BR	239	299	12
81070	099	32N	05E	21		BROOKFIELD TOWNSHIP HALL		00/00/1975	500	C	IC	~~	~~			
80998	099	32N	05E	21		P THOMPSON		02/07/1934	28	RG	DO	~~	~~			
80999	099	32N	05E	21		D KELLEY	C W JOHNSON	00/00/1914	265	RG	DO	~~	~~			
81069	099	32N	05E	21	2G	B HOLMES	C FYKES	07/25/1974	580	RG	DO	~~	~~			
81000	099	32N	05E	22		W SPAULDING		02/14/1934	35	RG	DO	~~	~~			
81001	099	32N	05E	22		MC ELROY		02/14/1934	235	RG	DO	~~	~~			
81002	099	32N	05E	22		J MAIR		02/14/1934	35	RG	DO	~~	~~			
252483	099	32N	05E	22		BARB SPAMANTO	RIX	11/08/1991	94	RG	DO	--	UN	59		
289546	099	32N	05E	22	8H	JOHN RIX #1	RIX	06/10/1996	560	RG	DO	DL	BR	264	284	12
81003	099	32N	05E	23		G DARBY	G DARBY	00/00/1902	314	RG	DO	~~	~~			
81004	099	32N	05E	23		R D MILLS	C W JOHNSON	00/00/1904	115	RG	DO	~~	~~			
81005	099	32N	05E	24		J J SHEEDY		02/06/1934	625	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81006	099	32N	05E	24		T J DUNN	C W JOHNSON	00/00/1904	100	RG	DO	~~	~~			
81007	099	32N	05E	25		J A RYAN	C W JOHNSON	00/00/1925	590	RG	DO	~~	~~			
81008	099	32N	05E	25		J A RYAN		12/11/1953	514	RG	DO	~~	~~			
81009	099	32N	05E	25		T GREEN	C W JOHNSON	00/00/1919	158	RG	DO	~~	~~			
81010	099	32N	05E	25		L R RASELAND	C W JOHNSON	00/00/1917	560	RG	DO	~~	~~			
81011	099	32N	05E	25	1D	L R ROSELAND		03/06/1934	560	C	DO	~~	~~			
81071	099	32N	05E	25	8H	J A RYAN	J T ANDERSON	00/00/1922	513	RG	DO	~~	~~			
81012	099	32N	05E	26		N WELCH	C W JOHNSON	00/00/1911	220	RG	DO	~~	~~			
81013	099	32N	05E	26		N WELCH		00/00/0000	210	RG	DO	~~	~~			
81014	099	32N	05E	26		J H DIVINE	C W JOHNSON	00/00/1919	224	RG	DO	~~	~~			
81015	099	32N	05E	27		E A MORROW		00/00/0000	112	RG	DO	~~	~~			
81018	099	32N	05E	27		E MORROW	C W JOHNSON	02/16/1934	112	RG	DO	~~	~~			
81016	099	32N	05E	27	3H	E A MORROW		05/28/1952	112	C	DO	~~	~~			
81017	099	32N	05E	27	3H	E MORROW		06/04/1952	112	C	DO	~~	~~			
81019	099	32N	05E	28		R W DEBOLT	E HENSHUE	00/00/1894	214	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81020	099	32N	05E	28		M W OLAUGHLIN	J EYRE	00/00/1896	258	RG	DO	~~	~~			
81072	099	32N	05E	29		DEPARTMENT OF CONSERVATION		12/24/1985	16	A	IC	~~	~~			
81021	099	32N	05E	29		C S TRYON	E HENSHUE	02/13/1934	187	RG	DO	~~	~~			
81022	099	32N	05E	29		J WIDMAN		02/12/1934	56	RG	DO	~~	~~			
81023	099	32N	05E	29		C A WIDMAN	C W JOHNSON	00/00/1919	167	RG	DO	~~	~~			
81073	099	32N	05E	29		DEPARTMENT OF CONSERVATION		12/24/1985	10	A	IC	~~	~~			
320636	099	32N	05E	29	8B	RON WIDMAN #1	K & K DRILLING	05/04/1999	184	RG	DO	DL	UN	99	159	12

Illinois State Water Survey PICS Database

Tuesday, June 27, 2006

County: LASALLE

Township: 32N

Range: 05E

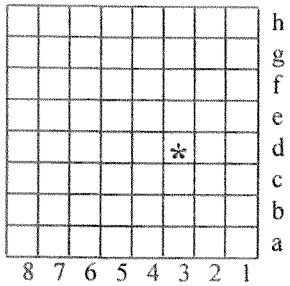
Sections: 01-29

Records Found: 4

Questions: Contact the Illinois State Water Survey's Ground Water Division @ (217)-333-9043

Publication: **Please cite the Illinois State Water Survey's PICS (Public-industrial-Commercial) Database in all publications based wholly or partially on this information.**

Note: The data in the PICS Database is a listing of municipal and commercial wells which are known to the Illinois State Water Survey (ISWS). This information was initially entered from public water supply data and supplemented with the Illinois State Water Inventory Project data . This database is updated as additional information is received and verified.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

SWSID	FIPS	TWN	RNG	SEC	PLOT	NAME	DB ID	WELL #	DEPTH	STATUS	YEAR SEALED	TYPE	YEAR	DRILLER
09964345	099	32N	05E	16	8E	IDNR LASALLE FISH HATCHERY	14050	1	770	I	--	D	1992	WEHLING WELL WORKS
09914770	099	32N	05E	16	8E	EXELON - LASALLE CO STATION	11926	1		I				
09914770	099	32N	05E	17	1A	EXELON - LASALLE CO STATION	11925	2	1620	I	--	D	1972	WEHLING WELL WORKS
09914770	099	32N	05E	17	2F	EXELON - LASALLE CO STATION	11924	1	1629	I	--	D	1974	WEHLING WELL WORKS

Illinois State Water Survey Private Well Database

Tuesday, June 27, 2006

County: LASALLE

Township: 33N

Range: 05E

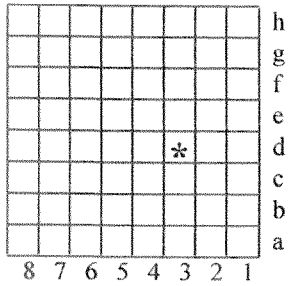
Sections: 15-34

Records Found: 235

Questions: Contact the Illinois State Water Survey's Ground Water Division @ (217)-333-9043

Publication: Please cite the Illinois State Water Survey's Private Well Database in all publications based wholly or partially on this information.

Note: The data in the Private Well Database is a listing of non-municipal wells which are known to the Illinois State Water Survey (ISWS). This information has been entered verbatim from well logs submitted by the driller, chemical analysis reports, well sealing forms, well inventory forms from the 1930-1934 well survey, and other special projects. The accuracy of this data is controlled by those submitting the forms. Information in the Private Well Database has not been verified.



Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81732	099	33N	05E	15		L BREI		02/01/1934	18	RG	DO	~~	~~			
260864	099	33N	05E	15	##	GERALD HUBBARD	LOCKPORT WELL & PUMP	07/12/1994	145	RG	DO	DL	BR	59	100	
60 ACRES																
81802	099	33N	05E	15	1D	O O JOHNSON	T F ANDERSON	00/00/1902	165	RG	DO	~~	~~			
81803	099	33N	05E	15	1H	S BETZ	J KNIERIM	03/21/1977	360	RG	DO	~~	~~			
81733	099	33N	05E	16		B F BIBA		00/00/1894	35	RG	DO	~~	~~			
81734	099	33N	05E	16		S ANDERSON	C ANDERSON	00/00/1911	425	RG	DO	~~	~~			
81735	099	33N	05E	16		H R SMITH	J P MILLER	00/00/1940	140	RG	DO	~~	~~			
231218	099	33N	05E	16		KEN JOHNSON #2119	DOBER	06/10/1991	378	RG	DO	--	BR	220		
permit #993191 also given																
81804	099	33N	05E	16	1E	Y M C A	C FYKES	08/12/1977	325	RG	DO	~~	~~			
81736	099	33N	05E	16	1H	C BREI	J T ANDERSON	09/16/1950	365	RG	DO	~~	~~			
259502	099	33N	05E	16	2H	JOHN FERGUSON	K & K DRILLING/BROWN	09/01/1994	320	RG	DO	DL	BR	119		
296110	099	33N	05E	16	5F	WHISPERING PINES CAMPGROUND #2	ARROW W&P/M. STRANGE	04/12/1997	360	RG	NC	DL	BR	160	280	
293051	099	33N	05E	16	5H	KEITH MALONEY #1	JOHN RIX	09/12/1996	380	RG	DO	DL	BR	199	219	
81805	099	33N	05E	16	5H	W P HARDIN	C FYKES	01/30/1976	405	RG	DO	~~	~~			
329585	099	33N	05E	16	6A	MIKE & DEBRA WHEELER #1	ARROW WELL & PUMP	07/31/2000	360	RG	DO	DL	BR	199	219	12

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
279914	099	33N	05E	16	6A	PAUL BORGARDING	FORDONSKI	10/30/1995	305	RG	CS	DL	BR	179	219	
2 SINGLE FARMS																
258128	099	33N	05E	16	6C	SHANE MARIK	FORDONSKI	08/27/1993	50	RG	DO	DL	UN	39	48	
289558	099	33N	05E	16	6D	WESLEY NESS	COMAR DRILLING	05/22/1996	300	RG	DO	DL	BR	118	218	
LOT 2																
280597	099	33N	05E	16	6E	STEVE & TIFFANY WHEELER	K & K DRILLING/BROWN	10/26/1995	320	RG	DO	DL	BR	159	219	
320627	099	33N	05E	16	6F	DON DUDEK #1	ARROW WELL & PUMP	04/28/1999	360	RG	DO	DL	BR	219	239	12
LOT 2757 ANDERSON ROLLING MEADOWS SUBD.																
378434	099	33N	05E	16	7B	FRANK CARAJOHN	WILL COUNTY WELL & PUMP/STEVE	02/10/2006	340	RG	DO	DL	BR	159	219	22
LOT 4 WOODLAND ESTATES SUBD.																
334602	099	33N	05E	16	7C	KENNETH SANGSTON #1	ARROW WELL & PUMP	08/22/2001	360	RG	DO	DL	BR	209	239	12
LOT 2614 WOODLAND ESTES.																
346609	099	33N	05E	16	7C	BRYAN & LANETTE STRUM #1	ARROW WELL & PUMP/MIKE STRANGE	01/30/2003	380	RG	DO	DL	BR	189	199	12
LOT 2610 WOODLAND ESTATES SUBD.																
265573	099	33N	05E	16	7C	LEN PERETTA	K & K DRILLING/BROWN	01/22/1995	320	RG	DO	DL	BR	149	259	
265374	099	33N	05E	16	7C	JOHN KENNEDY	K & K DRILLING/BROWN	12/17/1994	340	RG	DO	DL	BR	149	239	
323491	099	33N	05E	16	7D	DANIEL WARNING	LOCKPORT WELL & PUMP	10/09/1999	350	RG	DO	DL	BR	119	219	20
LOT 2620 WOODLAND ESTES.																
307596	099	33N	05E	16	7D	JIM HOVIOUS #1	ARROW W&P/STRANGE	06/04/1998	340	RG	DO	DL	BR	179	199	12
262801	099	33N	05E	16	7D	MARK & FAWN ROHWER	K & K DRILLING/BROWN	10/05/1994	317	RG	DO	DL	BR	149		
275833	099	33N	05E	16	7E	CARL & JANICE RICHARDS	K & K DRILLING/BROWN	09/07/1995	340	RG	DO	DL	BR	159	259	
OPEN ROCK WELL																
346258	099	33N	05E	16	7F	STEVE BROWN #1	ARROW WELL & PUMP/MIKE STRANGE	08/21/2002	360	RG	DO	DL	BR	189	199	12
LOT 2769 ANDERSON ROLLING MEADOWS SUBD.																

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
373124	099	33N	05E	16	7F	LEO TROMPETER #1	ARROW WELL & PUMP/MIKE STRANGE	06/08/2005	360	RG	DO	DL	BR	199	219	12
356888	099	33N	05E	16	7G	RICH HUMPHRUP ANDERSON ROLLING MEADOWS SUBD.	AREA WELL & PUMP/ROBERT	09/24/2003	360	RG	DO	DL	BR	199	259	12
361125	099	33N	05E	16	7G	MIKE STROPOLI #1	ARROW WELL & PUMP/MIKE STRANGE	04/24/2003	360	RG	DO	DL	BR			
327574	099	33N	05E	16	7G	JOHNATHAN MAVEC	TRI COUNTY W & P	11/07/2000	360	RG	DO	BD	BR	159	259	10
294359	099	33N	05E	16	7G	TIM KNOTT LOT 2781 ANDERSON ROLLING MEADOWS SUBD.	K&K DRILLING/BROWN	04/09/1997	400	RG	DO	DL	BR	179	299	
81806	099	33N	05E	16	7H	S ANDERSON	C J ANDERSON	12/02/1909	417	RG	DO	~~	~~			
296114	099	33N	05E	16	7H	RALPH SANDERS ANDERSON MEADOWS SUBD.	SCCOUNTRYW&P/BRIAN	06/12/1997	340	RG	DO	DL	BR	99	219	30
332235	099	33N	05E	16	8C	STEVE & SYDNEY FERRIS LOT 8 WOODLAND ESTES.	K & K DRILLING	05/20/2001	400	RG	DO	DL	BR	159	279	
334601	099	33N	05E	16	8D	MARK KIRKTON #1 LOT 2608 WOODLAND ESTES.	K & K DRILLING	07/06/2001	400	RG	DO	DL	BR	159	239	12
359110	099	33N	05E	16	8D	FAWN ROHWER #1 LOT 2609 WOODFIELD SUBD.	ARROW WELL & PUMP/MIKE STRANGE	08/16/2003	360	RG	DO	DL	BR	189	219	12
311575	099	33N	05E	16	8F	BRAD KALUZNA LOT 3 WOODLAND ESTES.	K&K DRILLING/KNIERIM	06/24/1999	360	RG	DO	DL	BR	219	299	
303322	099	33N	05E	16	8H	JERRY POPPLEWELL #1 LOT 2606 ANDERSON ROLLING MEADOWS SUBD.	AC DRLG./LEASURE	02/01/1998	320	RG	DO	DL	BR	209	239	
279915	099	33N	05E	16	8H	BARRY UNDERWOOD	FORDONSKI	10/26/1995	320	RG	DO	DL	BR	179	219	
268803	099	33N	05E	16	8H	MIKE DELAURENTIS	K & K DRILLING/BROWN	06/07/1995	320	RG	DO	DL	BR	99		
269125	099	33N	05E	16	8H	ALLEN JUDD	K & K DRILLING/BROWN	05/20/1995	340	RG	DO	DL	BR	179		

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81737	099	33N	05E	17		W STEBBINS		00/00/1884	23	RG	DO	~~	~~			
81738	099	33N	05E	17		F KELLERMAN	C R JOHNSON	00/00/1946	171	RG	DO	~~	~~			
336428	099	33N	05E	17	1C	LARRY MACHAJ	AREA WELL 7 PUMP	07/16/2001	320	RG	DO	DL	BR	219	259	12
320629	099	33N	05E	17	1D	W. MARK ROHWER, JR. #1	ARROW WELL & PUMP	07/08/1999	360	RG	DO	DL	BR	189	239	12
LOT 2597 WOODLAND ESTES.																
362818	099	33N	05E	17	1G	TIM & DEBBY PERRY #1	ARROW WELL & PUMP/MIKE STRANGE	08/05/2004	141	RG	DO	DL	UN	129	134	12
81807	099	33N	05E	17	1H	F HOGUE	P KNIERIM	11/26/1982	360	RG	DO	~~	~~			
341724	099	33N	05E	17	2D	SCOTT & MICHELLE CAMPBELL #1	AREA WELL & PUMP/ROBERT	04/25/2002	400	RG	DO	DL	BR	219	279	20
LOT 12 WOODLAND ESTES.																
320646	099	33N	05E	17	2H	STAN & HEIDI HENRY #1	ARROW WELL & PUMP	06/11/1999	340	RG	DO	DL	BR	189	219	12
269121	099	33N	05E	17	2H	IRIS DENHAM	K & K DRILLING/BROWN	05/25/1995	340	RG	DO	DL	BR	149		
285581	099	33N	05E	17	2H	STEVE COOKE	COMAR DRILLING	09/08/1995	300	RG	DO	DL	BR	138	258	
286521	099	33N	05E	17	2H	ERIC DENHAM	K&K DRILLING/BROWN	02/15/1996	340	RG	DO	DL	BR	179	259	
258350	099	33N	05E	17	3G	STEVEN COOKE	K & K DRILLING/BROWN	11/21/1993	300	RG	DO	DL	BR	139		
262781	099	33N	05E	17	4A	DAVE RAIKES	FORDONSKI	08/23/1994	200	RG	DO	DL	BR	99	120	
258324	099	33N	05E	17	4H	JANELLE DENHAM	K & K DRILLING/BROWN	03/15/1994	340	RG	DO	DL	BR	119		
300261	099	33N	05E	17	4H	WAYNE NOGUE	COMAR DRILLING/JEFF	09/18/1997	300	RG	DO	DL	BR	119	239	12

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
280556	099	33N	05E	17	4H	ARVIN TONGATE	FORDONSKI	09/18/1995	320	RG	DO	DL	BR	199	239	
348496	099	33N	05E	17	4H	SAM CANDELA	K & K DRILLING/JEFF HIESER	04/10/2003	420	RG	DO	DL	BR	219		
310118	099	33N	05E	17	5E	JERRY SEBBY	K&K DRILLING/KNIERIM	05/07/1999	400	RG	DO	DL	BR	199		
342718	099	33N	05E	17	6G	HENRY NELLETT	COMAR DRILLING/JUAN	03/12/2002	320	RG	DO	DL	BR	99	239	12
374678	099	33N	05E	17	7E	KYLE CEPAITIS	MIKE STRANGE/ ARROW WELL & PUMP	10/25/2005	360	RG	DO	DL	BR	169	179	12
325880	099	33N	05E	17	7E	KEVIN GILL	AREA WELL & PUMP	07/14/2000	260	RG	DO	DL	BR	159	199	20
228252	099	33N	05E	17	7F	HARRY KEINE	KNIERIM	07/26/1990	150	RG	DO	--	BR	119	200	
81808	099	33N	05E	17	7H	GLENWOOD FARMS	P KNIERIM	06/12/1979	380	RG	IC	~~	~~			
372993	099	33N	05E	17	7H	SALLY SPENCER #1	ARROW WELL & PUMP/MIKE STRANGE	07/10/2005	320	RG	DO	DL	BR	189	199	12
81739	099	33N	05E	18		R G HINCH	E HENSHUE	00/00/1925	165	RG	DO	~~	~~			
81809	099	33N	05E	18	1G	D DANIELSON	C E WOODRUFF	04/07/1970	270	RG	DO	~~	~~			
81740	099	33N	05E	19		C F BERRY	J HENSHUE	00/00/1914	200	RG	DO	~~	~~			
81741	099	33N	05E	19		F SHULTZ	E HENSHUE	00/00/1900	177	RG	DO	~~	~~			
81742	099	33N	05E	19		E J LATTZ	C E WOODRUFF	00/00/1944	210	RG	DO	~~	~~			
265364	099	33N	05E	19	5D	KELLY RARDEN	K & K DRILLING/BROWN	01/24/1995	180	RG	DO	DL	BR	39	119	

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
305145	099	33N	05E	19	5D	JAMES J. CUCHIARN	AREA W&P/STRANGE	08/19/1998	220	RG	DO	DL	BR	99	99	25
301797	099	33N	05E	19	6C	GEORGE VOTAVA	K&K DRILLING/KNIERIM	01/21/1998	180	RG	DO	DL	BR	44	119	
359111	099	33N	05E	19	7E	ROBERT SATLER #1	ARROW WELL & PUMP/MIKE STRANGE	11/09/2003	260	RG	DO	DL	BR	29	59	12
298819	099	33N	05E	19	7G	CHARLES ALLEN #2	ANEFFCO DLG/EFFLANDT	10/16/1997	203	RG	DO	DL	BR	74	119	20
81743	099	33N	05E	20		F HOBART		00/00/1840	35	RG	DO	~~	~~			
81744	099	33N	05E	20		J MITCHELL	J HENSHUE	00/00/1902	95	RG	DO	~~	~~			
346256	099	33N	05E	20	2G	JEFF & TINA KIPER #1	ARROW WELL & PUMP/MIKE STRANGE	10/02/2002	240	RG	DO	DL	BR	119	139	12
326698	099	33N	05E	20	3F	JIM DOWLING	K & K DRILLING	10/26/2000	220	RG	DO	DL	BR	59	159	
322068	099	33N	05E	20	3F	CECIL LEE	LOCKPORT WELL & PUMP	02/15/2000	305	RG	DO	DL	BR	99	139	25
285589	099	33N	05E	20	3F	MICHAEL SHELTON	COMAR DRILLING	10/23/1995	200	RG	DO	DL	BR	58	158	
331057	099	33N	05E	20	3G	CHRISTIAN CAMPA	WILL COUNTY WELL & PUMP	03/09/2001	201	RG	DO	DL	BR	99	119	30
LOT 3 COSTELLO FARM SUBD.																
81810	099	33N	05E	20	4E	IL NITROGEN	WEHLING WELL WORKS	07/14/1977	360	RG	IC	~~	~~			
81811	099	33N	05E	20	4E	IL NITROGEN		07/19/1977	360	C	IC	~~	~~			
81821	099	33N	05E	21		NATL PHOSPHATE CO	W C JOHNSON	00/00/1894	175	A	IC	~~	~~			
81822	099	33N	05E	21		BAKER INDUSTRIES CO		04/08/1979	583	C	IC	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81745	099	33N	05E	21		SPICER		00/00/1933	12	RG	DO	~~	~~			
81746	099	33N	05E	21		P KELLER	J HENSHUE	00/00/1894	175	RG	DO	~~	~~			
81812	099	33N	05E	21		NATL PHOSPHATE CO		00/00/0000	583	RG	IC	~~	~~			
81813	099	33N	05E	21		NATL PHOSPHATE CO	LAYNE WESTERN	00/00/1961	427	RG	IC	~~	~~			
81814	099	33N	05E	21		NATL PHOSPHATE CO	LAYNE WESTERN	12/22/1961	421	RG	IC	~~	~~			
81815	099	33N	05E	21		NATL PHOSPHATE CO	LAYNE WESTERN	00/00/1961	421	RG	IC	~~	~~			
379750	099	33N	05E	21	1H	STEVE FLYNN # 6	STEVE FLYNN	00/00/0000 Sealed: 3/17/06	60	A	DO	DL	~~			
379751	099	33N	05E	21	1H	STEVE FLYNN # 7	STEVE FLYNN	00/00/0000 Sealed: 3/17/06	50	A	DO	DL	~~			
379744	099	33N	05E	21	2E	STEVE FLYNN # 1	STEVE FLYNN	00/00/0000 Sealed: 3/17/06	20	A	DO	DL	~~			
379745	099	33N	05E	21	2E	STEVE FLYNN # 2	STEVE FLYNN	00/00/0000 Sealed: 3/17/06	20	A	DO	DL	~~			
81820	099	33N	05E	21	3B	NATL PHOSPHATE CO		02/18/1965	583	C	IC	~~	~~			
81817	099	33N	05E	21	3D	NATL PHOSPHATE CO		12/13/1961	583	C	IC	~~	~~			
81818	099	33N	05E	21	3D	NATL PHOSPHATE CO		12/13/1961	427	C	IC	~~	~~			
81819	099	33N	05E	21	3D	NATL PHOSPHATE CO		02/18/1965	583	C	IC	~~	~~			
379746	099	33N	05E	21	3H	STEVE FLYNN # 3	STEVE FLYNN	00/00/0000 Sealed: 3/17/06	70	A	DO	DL	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
379747	099	33N	05E	21	3H	STEVE FLYNN # 4	STEVE FLYNN	00/00/0000 Sealed: 3/17/06	120	A	DO	DL	~~			
379749	099	33N	05E	21	3H	STEVE FLYNN # 5	STEVE FLYNN	00/00/0000 Sealed: 3/17/06	105	A	DO	DL	~~			
275821	099	33N	05E	21	4E	WASTE RECOVERY ILL. #3620 COMMERCIALTIVE SHREDDING PLANT	ALBRECHT	04/06/1995	130	RG	IC	DL	BR	109	129	
310654	099	33N	05E	21	4E	JW PETERS & SONS INC. FOR BOILER WATER/ WASH EQUIPMENT	TRI CNTY.W&P/CLEARY	05/12/1999	240	RG	IC	DL	BR	98	159	30
81823	099	33N	05E	21	4F	W R WOODIN	T F ANDERSON	00/00/1938	55	RG	DO	~~	~~			
81816	099	33N	05E	21	5B	NATL PHOSPHATE CO	LAYNE WESTERN	00/00/1961	583	RG	IC	~~	~~			
279911	099	33N	05E	21	5E	WASTE RECOVERY-IL.	DIETZMAN	10/05/1995	400	RG	NC	DL	BR	79	144	
237015	099	33N	05E	22		MIKE CLOSE	TRI COUNTY WELL&PUMP	06/05/1992	365	RG	DO	--	BR	199	280	
81747	099	33N	05E	22		WHEELER	J HENSHUE	00/00/1904	162	RG	DO	~~	~~			
81748	099	33N	05E	22		R SHAVER	VENZAIN	00/00/1914	215	RG	DO	~~	~~			
286455	099	33N	05E	22	1D	JOHN LAMB #1	RIX	02/27/1996	110	RG	DO	DL	UN	79	89	
309113	099	33N	05E	22	1G	SENECA TWP. HIGH SCHOOL #1 FFA SALE BARN AND LAND LAB	K&K DRILLING/KNIERIM	03/03/1999	440	RG	SC	DL	BR	158	278	20
81824	099	33N	05E	22	1H	TRI COUNTY WELL CO	C FYKES	08/24/1979	425	RG	IC	~~	~~			
287608	099	33N	05E	22	2F	KATHERINE BARTKUS #1	NEELY	07/20/1994	360	RG	DO	DL	BR	148	188	25
304663	099	33N	05E	22	3B	JOHN BARTKUS	AC DRILLING/LEASURE	02/12/1998	340	RGP	DO	DL	BR	160	270	

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
304664	099	33N	05E	22	4B	JOHN BARTUS #1	AC DRILLING/LEASURE	02/02/1998	360	RG	DO	DL	BR			
310649	099	33N	05E	22	4B	JOHN BARTKUS #1	AC DRILLING/LEASURE	02/02/1998	360	RG	DO	DL	BR	268		
252446	099	33N	05E	22	6C	CLYDE COLLINS	TRI CO. WELL & PUMP	08/16/1992	230	RG	DO	--	BR	139	160	
81825	099	33N	05E	22	8F	SPICER GRAVEL CO	J T ANDERSON	09/08/1944	140	RG	IC	~~	~~			
81751	099	33N	05E	23		L A BUTTERFIELD	BENNETT	00/00/1915	113	RG	DO	~~	~~			
81752	099	33N	05E	23		C GETTLER	C E WOODRUFF	00/00/1946	68	RG	DO	~~	~~			
81753	099	33N	05E	23		C SANTA	C R JOHNSON	00/00/0000	60	RG	DO	~~	~~			
81749	099	33N	05E	23		A L IRWIN	HIGGINS AND BENNETT	00/00/1917	175	RG	DO	~~	~~			
230920	099	33N	05E	23		KEVIN THOMAS	STRANGE	03/07/1991	225	RG	DO	--	BR	169	230	
321615	099	33N	05E	23	1G	ALAN WILSON/ LAMBERT	K & K WELL DRILLING	09/10/1999	440	RG	DO	DL	BR	179	299	
TIMBER TERRACE SUBD.																
81750	099	33N	05E	23	1G	A L IRWIN		01/24/1934	175	C	DO	~~	~~			
322219	099	33N	05E	23	1H	JAY HENDRIX	K & K WELL DRILLING	02/17/2000	420	RG	DO	DL	BR	159	293	
LOT 1 HENDRIX SUBD.																
81826	099	33N	05E	23	2G	R REX	P KNIERIM	00/00/1972	108	RG	DO	~~	~~			
323508	099	33N	05E	23	2H	TONY CENTRACCHIO	K & K DRILLING	05/24/2000	380	RG	DO	DL	BR	179	239	12
TIMBER TERRACE LOT 7																
346272	099	33N	05E	23	2H	BILL LONGTIN #1	K & K WELL DRILLING/KEN	10/23/2002	520	RG	DO	DL	BR	119	299	12
LOT 2 HENDRIX SUBD.																

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81831	099	33N	05E	23	3B	D FESSLER	C FYKES	07/12/1974	125	RG	DO	~~	~~			
292378 LOT 1	099	33N	05E	23	4D	JOE ROAS	COMAR DRILLING	11/22/1996	340	RG	DO	DL	BR	178	278	
280561 LOT 7 JEFFJO ACRES	099	33N	05E	23	4D	CHARLES OZZE	FORDONSKI	08/30/1995	350	RG	DO	DL	BR	149	199	
298816	099	33N	05E	23	5D	SMITH BUILDERS	TRI COUNTY W&P/BRIAN	10/09/1997	300	RG	DO	DL	BR	59	230	30
81827	099	33N	05E	23	5F	R ANDERSON	P KNIERIM	11/08/1978	260	RG	DO	~~	~~			
81828	099	33N	05E	23	7E	FRITZ MUFFLER	C E WOODRUFF	09/16/1970	310	RG	IC	~~	~~			
81829	099	33N	05E	23	7F	R STIEBEN	C FYKES	08/06/1985	345	RG	DO	~~	~~			
320645 JEFFCO SUBD.	099	33N	05E	23	7F	JERRY MORGANFLASH #1	ARROW WELL & PUMP	06/08/1999	360	RG	DO	DL	BR	0	0	0
352637	099	33N	05E	23	7F	STEVE & FAY DAVIS	MIKE STRANGE	Sealed: 6/30/02	200	A		DL				
346255	099	33N	05E	23	7F	STEVE & FAY DAVIS #2	ARROW WELL & PUMP/MIKE STRANGE	06/29/2002	360	RG	DO	DL	BR	209	229	12
81832	099	33N	05E	23	7H	L HOBBS	NEELY	06/07/1986	410	RG	DO	~~	~~			
309114	099	33N	05E	23	8E	JEFF & PAT CUMMING #1	K&K DRILLING/KNIERIM	03/01/1999	380	RG	DO	DL	BR	159	239	12
366500	099	33N	05E	23	8E	LARRY & SUE GATES #1	LOCKPORT WELL & PUMP/DAN GIBSON	10/25/2004	340	RG	DO	DL	BR	159	199	25
338156	099	33N	05E	23	8G	ROSS ROD #1	ARROW WELL & PUMP	08/24/2001	400	RG	DO	DL	BR	179	199	12
81830	099	33N	05E	23	8G	G APPLEBY	J T ANDERSON	05/13/1960	180	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81833	099	33N	05E	23	8H	TRI COUNTY WELL CO	C FYKES	12/20/1978	365	RG	IC	~~	~~			
81754	099	33N	05E	24		S SAMPSON	C R JOHNSON	00/00/1946	65	RG	DO	~~	~~			
341260	099	33N	05E	24	3E	FRANK VICICH	AREA WELL & PUMP/BOB STRANGE	02/19/2002	240	RG	DO	DL	BR	159	219	12
237058	099	33N	05E	24	4A	LARRY MARCO	FORDONSKI	07/17/1992	245	RG	DO	--	BR	99	160	
344489	099	33N	05E	24	4D	DAVE FESSLER	AREA WELL & PUMP/ROBERT	08/27/2002	240	RG	DO	DL	BR	99	209	12
304657	099	33N	05E	24	5D	SENECA TWP. HIGH SCHOOL #3898	ALBRECHT DLG./HAROLD	02/09/1998	614	RG	IR	DL	BR	68	199	300
FIRE PROTECTION ALSO																
359112	099	33N	05E	24	5H	KEVIN KIPER #1	ARROW WELL & PUMP/MIKE STRANGE	12/23/2003	235	RG	DO	DL	BR	139	159	12
367913	099	33N	05E	24	6G	MERLE & IRENE KOEHLER	AREA WELL & PUMP/ROBERT	12/29/2004	260	RG	DO	DL	BR	59	159	20
237119	099	33N	05E	25	2H	SCOTT MANN	KNIERIM	10/15/1992	160	RG	DO	--	BR	59		
258105	099	33N	05E	25	5E	WILLARD WEINLICH	RIX WELL & PUMP	04/16/1994	260	RG	DO	DL	BR			
81834	099	33N	05E	25	7A	ANCHOR INMARING INC	P KNIERIM	04/27/1981	35	RG	IC	~~	~~			
256991	099	33N	05E	25	7H	D & S CONST.	K & K DRILLING/BROWN	01/06/1994	145	RG	DO	DL	BR	129		
81835	099	33N	05E	25	8A	J BROOKMAN	C JOHNSON	00/00/1977	32	RG	DO	~~	~~			
81755	099	33N	05E	26		A B CLARK	C JOHNSON	00/00/1919	35	RG	DO	~~	~~			
81756	099	33N	05E	26		HOCHSTATLER		02/01/1934	43	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
360557	099	33N	05E	26	1D	ERIC & JESSICA WENNBERG	K & K DRILLING/DARWIN	00/00/0000 Sealed: 3/24/04	24	A	DO	DL				
367903	099	33N	05E	26	3A	JACK CUNNINGHAM #1	AREA WELL & PUMP/ROBERT	07/27/2004	42	RG	DO	DL	UN			20
268589	099	33N	05E	26	8A	JAMES THORPE	FORDONSKI	04/17/1995	50	RG	DO	DL	UN	9	39	
81757	099	33N	05E	27		A TAUTZ	A TAUTZ	00/00/1907	18	RG	DO	~~	~~			
81758	099	33N	05E	27		H J MAYER		01/26/1934	200	RG	DO	~~	~~			
81759	099	33N	05E	27		E MYER		01/26/1934	25	RG	DO	~~	~~			
237024	099	33N	05E	27	1A	SPRING BROOK MARINA	FORDONSKI	01/23/1992	44	RG	IC	--	BR	4	20	
264250	099	33N	05E	27	1A	KEVIN STEEP	FORDONSKI	04/11/1994	230	RG	DO	DL	BR	99	119	
293046 SPRINGBROOK MARINA	099	33N	05E	27	2A	J. THORPE	COMAR DRILLING	07/11/1996	45	RG	IC	DL	UN	8	38	
286517	099	33N	05E	27	8A	ROBERT SHUFFLEBOCHAM	K&K DRILLING/BROWN	01/11/1996	280	RG	DO	DL	BR	99	199	
81760	099	33N	05E	28		HINCH TRUMBO AND LEWIS		01/26/1934	725	RG	DO	~~	~~			
310650	099	33N	05E	28	4E	CITY OF MARSEILLES	MEADOW EQUIP./KERRY	05/19/1998 Sealed: 8/30/98	260	RGS	CS	DL	BR	79	119	25
81761	099	33N	05E	29		S JOHNSON	J HENSHUE	00/00/1904	115	RG	DO	~~	~~			
81762	099	33N	05E	29		C THOMPSON		01/26/1934	14	RG	DO	~~	~~			
359113	099	33N	05E	29	8F	MATT BRUNO #1	ARROW WELL & PUMP/MIKE STRANGE	10/07/2003	240	RG	DO	DL	BR	39	79	12

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
81763	099	33N	05E	30		F SHULTZ	G DEFENBAUGH	00/00/1931	201	RG	DO	~~	~~			
81765	099	33N	05E	30		V L BRINER	J HENSHUE	01/26/1934	231	RG	DO	~~	~~			
379103	099	33N	05E	30	4D	MICHAEL CHASE	TRI COUNTY WELL & PUMP/STEVE	03/30/2006	320	RG	DO	DL	BR	119	159	15
364954	099	33N	05E	30	5C	RICK SCHOMAS #1	K & K DRILLING/KEN KNIERIM	06/16/2004	340	RG	DO	DL	BR	139	239	12
311576	099	33N	05E	30	5C	JOHN LEININGER	COMAR DRLG./RIX W&P	04/17/1999	400	RG	DO	DL	BR	124	259	50
334621	099	33N	05E	30	5F	PREMIERS ASSET SERVICES #1	ARROW WELL & PUMP	08/27/2001	-999	RG	IC	DL	~~			
350162	099	33N	05E	30	6C	STEVEN KENT #1	K & K DRILLING/KEN KNIERIM	06/10/2003	340	RG	DO	DL	BR	119	259	12
237066	099	33N	05E	30	7D	PETE WITKOWSKI	TRI COUNTY WELL/PUMP	11/28/1992	320	RG	DO	--	BR	199	280	
81764	099	33N	05E	30	7G	F SHULTZ		01/30/1934	201	C	DO	~~	~~			
81836	099	33N	05E	31	4A	J JUNGLES	C JOHNSON	00/00/1976	180	RG	DO	~~	~~			
81766	099	33N	05E	31	5E	E ENOCKSON		01/30/1934	218	RG	DO	~~	~~			
81837	099	33N	05E	31	6B	D ZIMMERMAN	R SCHERF	09/04/1984	35	RG	DO	~~	~~			
81838	099	33N	05E	32	8C	R MAY	WILL DU PAGE DRILLIN	12/29/1976	295	RG	IC	~~	~~			
81767	099	33N	05E	33		J WYLIE	C E WOODRUFF	00/00/1942	245	RG	DO	~~	~~			
81768	099	33N	05E	33		J WYLIE	C E WOODRUFF	00/00/1941	245	RG	DO	~~	~~			

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
258126	099	33N	05E	33	1A	JEFF GALLICK	FORDONSKI	03/26/1994	240	RG	DO	DL	UN	169	200	
239441	099	33N	05E	33	1A	ALLEN CLARK	KNIERIM	02/16/1992	210	RG	DO	--	BR	119	160	
Hickory Hills Lot 2692																
264241	099	33N	05E	33	1A	ALAN LEYES	K & K DRILLING/BROWN	09/29/1993	210	RG	DO	DL	UN	119		
300254	099	33N	05E	33	3A	BONNIE & RAY LINDER	CALVIN BISPING	10/27/1997	215	RG	DO	DL	UN	199	199	
HICKORY HILLS																
258361	099	33N	05E	33	3B	GARY ERICKSON	K & K DRILLING/BROWN	11/30/1993	210	RG	DO	--	UN	119		
286631	099	33N	05E	33	3B	GARY EULKVON?	K&K DRILLING/BROWN	11/30/1993	210	RG	DO	--	UN	119		
275845	099	33N	05E	33	4A	DONALD STICHA	LOCKPORT WELL & PUMP	07/31/1995	425	RG	DO	DL	BR	119	259	
LOT 3 HICKORY HILL SUBD.																
285635	099	33N	05E	33	4A	BRUCE RODOMSKI	RIX	02/29/1996	217	RG	DO	DL	UN	149	159	
372997	099	33N	05E	33	4A	THEODORE BARTELMEY	TRI COUNTY WELL & PUMP/STEVE	08/05/2005	440	RG	DO	DL	BR	199	229	12
LOT 3 HICKORY HILLS SUBD.																
286513	099	33N	05E	33	4C	PETE SMITH	RIX	03/25/1994	220	RG	DO	DL	UN	119	179	
LOT 2664 HICKORY HILLS																
259503	099	33N	05E	33	6B	RON BERRYMAN	K & K DRILLING/BROWN	08/25/1994	206	RG	DO	DL	UN	119		
LOT 2675 HICKORY HILLS																
237052	099	33N	05E	33	6C	MIKE GALLOWAY LOT 2685	FORDONSKI	04/14/1992	210	RG	DO	--	UN	99	180	
237127	099	33N	05E	33	6E	THOMAS & MARY LANFEAR LOT 2695	FORDONSKI	01/18/1993	210	RG	DO	--	UN	119	180	
258122	099	33N	05E	33	6E	JOHN LOGAN	FORDONSKI	12/06/1993	215	RG	DO	DL	UN	159	180	
HICKORY HILL SUBD.																
362806	099	33N	05E	33	8C	DON PODGORNY	AREA WELL & PUMP/ROBERT	04/20/2004	215	RG	DO	DL	UN	99	159	12

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
260968	099	33N	05E	33	8D	RAY EICH	FORDONSKI	08/08/1993	270	RG	DO	DL	UN	169	180	
LOT 11 HICKORY HILLS SUBD.																
81769	099	33N	05E	34				02/02/1934		RG	DO	~~	~~			
81770	099	33N	05E	34		J J FARRELL	C R JOHNSON	00/00/1946	60	RG	DO	~~	~~			
360335	099	33N	05E	34	1A	J. CONNELL GROUP	K & K DRILLING/JEFF HIESER	04/16/2004	210	RG	DO	DL	UN	119		
LOTS 21 & 22 HUNTER'S RIDGE SUBD.																
365541	099	33N	05E	34	1A	J. CONNELL GROUP	K &K DRILLING/JEFF HIESER	10/21/2004	215	RG	DO	DL	UN			
LOT 3 HUNTERS RIDGE SUBD.																
367263	099	33N	05E	34	1A	J. CONNELL GROUP CONSTRUCTION	K & K DRILLING/JEFF HIESER	01/10/2005	214	RG	DO	DL	BR	119		
LOT 1 HUNTER'S RIDGE SUBD.																
288703	099	33N	05E	34	1A	D & S CONSTRUCTION	K&K DRILLING/BROWN	04/25/1996	191	RG	DO	DL	UN	139	159	
LOT 12 HUNTERS RIDGE SUBD.																
288705	099	33N	05E	34	1A	TOM SMALL	K&K DRILLING/BROWN	05/14/1996	215	RG	DO	DL	BR	139	179	
LOT 2 HUNTERS RIDGE SUBD.																
308133	099	33N	05E	34	1B	RICHARD DAZZO	K&K DRILLING/KNIERIM	02/03/1999	205	RG	DO	DL	BR	139	179	
LOT 18 HUNTER RIDGE SUBD.																
81839	099	33N	05E	34	1B	N HIGBY	P KNIERIM	06/09/1979	210	RG	DO	~~	~~			
252426	099	33N	05E	34	1C	GARY HAMILTON	K & K DRILLING/BROWN	07/22/1993	210	RG	DO	--	BR	119		
LOT 2798 SPRINGBROOK PARK																
237154	099	33N	05E	34	1D	GARY LURZ LOT 2791	KNIERIM	07/10/1991	210	RG	DO	--	UN	119	180	
258498	099	33N	05E	34	1D	WALTER DUDLEY	KNIERIM	08/29/1991	208	RG	DO	--	UN	119	179	
LOT 2787																
268807	099	33N	05E	34	1G	JERRY KUBINSKI	K & K DRILLING/BROWN	06/21/1995	208	RG	DO	DL	UN	109	179	
LOT 2792 SPRINGBROOK PARK																
356900	099	33N	05E	34	1H	MARK KELLOGG	AREA WELL & PUMP/ROBERT	11/01/2003	47	RG	DO	DL	UN	14	29	20
LOT 4 LAKERWER ESTATES SUBD.																

WID	FIPS	TWN	RNG	SEC	PLOT	OWNER	DRILLER	DRILL DATE	DEPTH	RECORD TYPE	USE	WELL TYPE	AQ TYPE	STAT LVL	PUMP LVL	PUMP GPM
367908	099	33N	05E	34	2B	LISA ORDING	AREA WELL & PUMP/ROBERT	10/25/2004	200	RG	DO	DL	UN	79	139	12
LOT 7 HUNTER'S RIDGE SUBD.																
364962	099	33N	05E	34	2C	MIKE DOOLEY #1	K & K DRILLING/KEN KNIERIM	09/03/2004	193	RG	DO	DL	UN	119	159	12
LOT 13 HUNTER'S RIDGE SUBD.																
280608	099	33N	05E	34	2F	HERITAGE LAKE ESTATES	K & K DRILLING/BROWN	11/27/1995	207	RG	DO	DL	UN	119	179	
LOT 2790 SPRINGBROOK PARK																
237062	099	33N	05E	34	2G	JEFF & DEANNA BERG LOT 2793	KNIERIM	07/14/1992	214	RG	DO	--	BR	119	160	
265576	099	33N	05E	34	2G	JERRY KUBINSKI	K & K DRILLING/BROWN	11/11/1994	210	RG	DO	DL	BR	119	179	
LOT 2794 SPRINGBROOK PARK																
268809	099	33N	05E	34	2H	TOM SMALL	K & K DRILLING/BROWN	06/22/1995	213	RG	DO	DL	UN	119	179	
LOT 2795 SPRINGBROOK PARK SUBD.																
81840	099	33N	05E	34	3C	T SAFRAWSKI	C JOHNSON	06/28/1976	63	RG	DO	~~	~~			
375780	099	33N	05E	34	3H	ZACK MALAK #1	AREA WELL & PUMP/ROBERT	10/10/2005	35	RG	DO	DL	UN	14	19	12
LOT 1 LAKE RIVER DRIVE ESTATES SUBD.																
275806	099	33N	05E	34	3H	MIKE MASON #1	RIX	08/20/1995	240	RG	DO	DL	BR	59	79	
258320	099	33N	05E	34	5H	DAVE ODELL	FORDONSKI	11/06/1993	130	RG	DO	DL	UN	79	100	

Illinois State Water Survey PICS Database

Tuesday, June 27, 2006

County: LASALLE

Township: 33N

Range: 05E

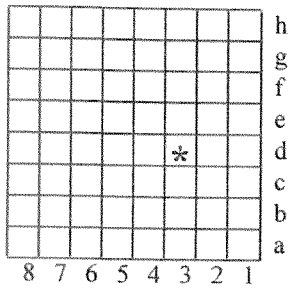
Sections: 15-34

Records Found: 12

Questions: Contact the Illinois State Water Survey's Ground Water Division @ (217)-333-9043

Publication: **Please cite the Illinois State Water Survey's PICS (Public-industrial-Commercial) Database in all publications based wholly or partially on this information.**

Note: The data in the PICS Database is a listing of municipal and commercial wells which are known to the Illinois State Water Survey (ISWS). This information was initially entered from public water supply data and supplemented with the Illinois State Water Inventory Project data . This database is updated as additional information is received and verified.

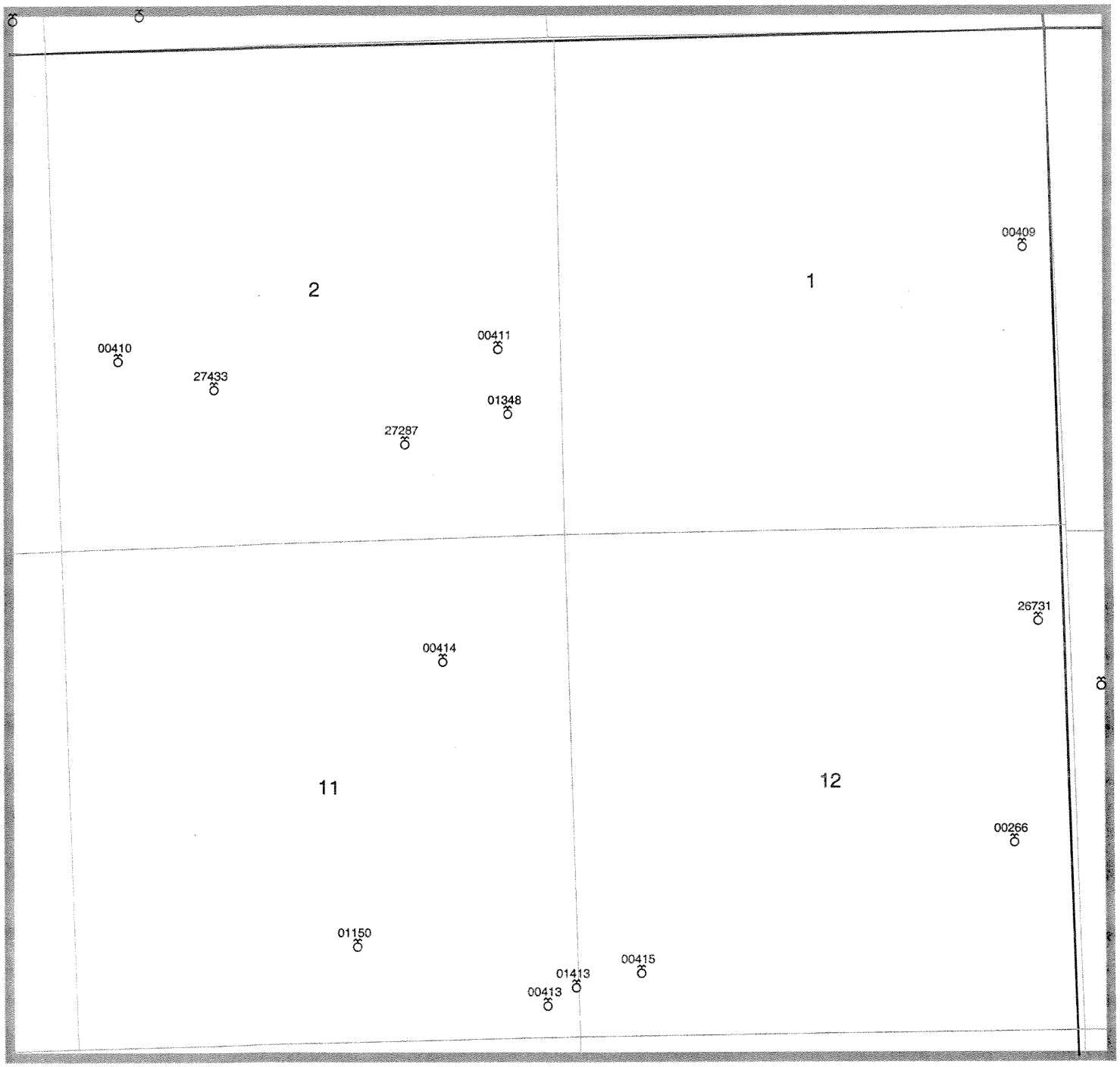


Location of a 10-acre-plot within a section:

The origin can be found at the lower right-hand-corner of an 8 x 8 grid. In this example, the well is in the 10-acre plot '3d'.

SWSID	FIPS	TWN	RNG	SEC	PLOT	NAME	DB ID	WELL #	DEPTH	STATUS	YEAR SEALED	TYPE	YEAR	DRILLER
09990060	099	33N	05E	16	6F	WHISPERING PINES MHP	5686	1	460	I	--	-	1974	--
09934335	099	33N	05E	20	4C	ROYSTER-CLARK, INC.	11946	1		I				
09934335	099	33N	05E	20	4E	ROYSTER-CLARK, INC.	11945	1	360	I				
09934330	099	33N	05E	21		PCS PHOSPHATE - MARSEILLES OPRTN		2	140	I				
09934330	099	33N	05E	21	4C	PCS PHOSPHATE - MARSEILLES OPRTN	11944	1		U				
09934330	099	33N	05E	21	5C	PCS PHOSPHATE - MARSEILLES OPRTN	11943	1	440	I				
09914770	099	33N	05E	21	7A	EXELON - LASALLE CO STATION	11927	2		I				
09991050	099	33N	05E	23	1G	SENECA	5776	3	1445	I	--	D	1993	ALBRECHT WELL DRLG
09991050	099	33N	05E	24	8C	SENECA	2811	1	700	I	--	D	1927	J OTIS HEFLIN
09991050	099	33N	05E	24	8C	SENECA	2810	2	704	I	--	C	1943	J P MILLER ART WELL
09990110	099	33N	05E	27	7A	MARSEILLES SOUTH		7	1450	P				
09990110	099	33N	05E	28	4E	MARSEILLES SOUTH		6	1330	I		D	1998	MEADOW EQUIPMENT

Map Area: 32N-5E-10 m3 to 33N-6E-31 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1538 3076 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:18456

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Non Oil and Gas - Wells

120990040900 Johnson C R 1-32N- 5E
LaSalle Farmer Edwin
Status: WATER SE SE NE Elev: 0
permit: 0 permit date: comp. date: 01/01/54
Lambert X: 3248953 Lambert Y: 3002392 td: 130
producing formation: td formation:
latitude: 41.276158 longitude: 88.590021

120990134800 Vickery Drilling Co., Inc. 2-32N- 5E
LaSalle Fitzgerald Thomas M-1
Status: WATER 25 NL 575 EL SE SE Elev: 663TM
permit: 0 permit date: comp. date: 12/01/58
Lambert X: 3243522 Lambert Y: 3000648 td: 443
producing formation: td formation:
latitude: 41.271497 longitude: 88.609934

120992728700 Area Well & Pump 2-32N- 5E
LaSalle Hamilton, Richard & Julie 1
Status: WATER NE SW SE Elev: 0
permit: permit date: 06/21/04 comp. date: 08/17/04
Lambert X: 3242443 Lambert Y: 3000312 td: 126
producing formation: td formation:
latitude: 41.270599 longitude: 88.613889
Water from sand & gravel at depth 110 to 120 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SCREEN	116	126
5	PVC SDR 21	-1	116

Size hole below casing: in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 90 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	61	63
gravel	10	73
clay	37	110
sand & gravel	12	122
sand & shale	4	126

120990041000 Johnson Charles R 2-32N- 5E
LaSalle Hogg J
Status: WATER NW SW Elev: 685GL
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3239422 Lambert Y: 3001195 td: 276
producing formation: td formation:
latitude: 41.273115 longitude: 88.624899

120990041100 Johnson Chas W 2-32N- 5E
LaSalle Talty Jas
Status: WATER NE SE Elev: 660GL
permit: 0 permit date: comp. date:
Lambert X: 3243415 Lambert Y: 3001320 td: 585
producing formation: td formation:
latitude: 41.273353 longitude: 88.610301

120992743300 Area Well & Pump 2-32N- 5E
LaSalle Wenzel, Ryan 1
Status: WATER SW NE SW Elev: 0
permit: permit date: 04/21/05 comp. date: 05/05/05

Lambert X: 3240431 Lambert Y: 3000900 td: 460
producing formation: td formation:
latitude: 41.272263 longitude: 88.621201
Water from sandstone at depth 420 to 460 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	160
5	PVC SDR 17	160	305

Size hole below casing: in.
Static level 260 ft. below casing top which is 1 ft. above grnd level.
Pumping level 300 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
dirt	2	2
clay	84	86
gravel no water	13	99
clay	32	131
gravel no water	10	141
shale	119	260
limestone	160	420
sandstone	40	460

120990041300 Johnson Charles R 11-32N- 5E
LaSalle Coughlin Wm
Status: WATER SE SE SE Elev: 671GL
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3243953 Lambert Y: 2994431 td: 235
producing formation: td formation:
latitude: 41.254342 longitude: 88.608581

120990041400 Johnson Charles R 11-32N- 5E
LaSalle Crowley Wm
Status: WATER NE Elev: 0
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3242843 Lambert Y: 2998029 td: 242
producing formation: td formation:
latitude: 41.264293 longitude: 88.612509

120990115000 11-32N- 5E
LaSalle Kennedy Mike P
Status: WATER NW SW SE Elev: 0
permit: 0 permit date: comp. date:
Lambert X: 3241941 Lambert Y: 2995036 td: 355
producing formation: td formation:
latitude: 41.256064 longitude: 88.615911

120990141300 Vickery Drilling Co., Inc. 11-32N- 5E
LaSalle 2-M
Status: WATER 500 SL 40 EL Elev: 670GL
permit: 0 permit date: comp. date: 06/01/59
Lambert X: 3244239 Lambert Y: 2994609 td: 450
producing formation: td formation:
latitude: 41.254825 longitude: 88.607530

120992673100 Rix, John Richard 12-32N- 5E
LaSalle Baker, Chadd 1
Status: WATER SE NE NE Elev: 0
permit: permit date: 08/20/02 comp. date: 11/16/02
Lambert X: 3249106 Lambert Y: 2998461 td: 190
producing formation: td formation:
latitude: 41.265314 longitude: 88.589606
Water from gray sandstone at depth 160 to 190 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)

5 PVC -1 163
Size hole below casing: in.
Static level 80 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 4 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gummy gray clay	70	72
sand & gravel (dry)	18	90
gray clay	26	116
shale with streaks of gray sandstone	44	160
gray sandstone	22	182
gray shale	8	190

120990041500 Johnson Charles R 12-32N- 5E
LaSalle Maier Chas
Status: WATER SW SW Elev: 670GL
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3244934 Lambert Y: 2994776 td: 253
producing formation: td formation:
latitude: 41.255267 longitude: 88.604985

120990026600 Johnson C R 12-32N- 5E
LaSalle Twohey
Status: WATER NE SE Elev: 0
permit: 0 permit date: comp. date: 04/01/52
Lambert X: 3248848 Lambert Y: 2996140 td: 197
producing formation: td formation:
latitude: 41.258904 longitude: 88.590634

120632381100 Rix, John Richard 7-32N- 6E
Grundy Kruger, Mike 1
Status: WATER NW SW NW Elev: 0
permit: permit date: 12/06/99 comp. date: 02/24/00
Lambert X: 3249754 Lambert Y: 2997773 td: 190
producing formation: td formation:
latitude: 41.263399 longitude: 88.587263
Water from gray sandstone at depth 107 to 190 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-1	110

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 150 ft. when pumping at 8 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
yellow clay	6	8
gray clay	99	107
gray sandstone	81	188
shale	2	190

120992732700 Brown, Darwin 34-33N- 5E
LaSalle Connell, J. Group Const.
Status: WATER SE SE SE Elev: 0
permit: permit date: 10/12/04 comp. date: 10/21/04
Lambert X: 3238309 Lambert Y: 3004758 td: 215
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sand gravel at depth 210 to 215 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	210

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay	116	116
sand gravel	99	215

120992737400 Brown, Darwin 34-33N- 5E
LaSalle Connell, J. Group Const.
Status: WATER SE SE SE Elev: 0
permit: permit date: 10/26/04 comp. date: 01/10/05
Lambert X: 3238309 Lambert Y: 3004758 td: 214
producing formation: td formation:
latitude: 41.282957 longitude: 88.628821
Water from shale at depth 209 to 214 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	209

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1
clay	115	116
sand gravel	98	214
shale at	0	214

120992538900 Brown, Darwin 34-33N- 5E
LaSalle D & S Contractors, Inc.
Status: WATER SE SE SE Elev: 0
permit: W95-194 permit date: 11/09/95 comp. date: 04/25/96
Lambert X: 3238309 Lambert Y: 3004758 td: 191
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sand gravel at depth 0 to 191 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	181

Size hole below casing: in.
Static level 140 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	79	81
sand gravel	110	191

120992717200 Brown, Darwin 34-33N- 5E
LaSalle J. Connell Group/Redden, John
Status: WATER SE SE SE Elev: 0
permit: permit date: 01/07/04 comp. date: 04/16/04
Lambert X: 3238309 Lambert Y: 3004758 td: 210
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sand gravel at depth 205 to 210 ft.
Screen: Diam. 5 in. Length: 5 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	205

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1
clay	111	112
sand gravel	98	210

120992539000 Brown, Darwin 34-33N- 5E

LaSalle Small, Tom
Status: WATER SE SE SE Elev: 0
permit: W96-061 permit date: 05/01/96 comp. date: 05/14/96
Lambert X: 3238309 Lambert Y: 3004758 td: 215
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sandstone at depth 205 to 215 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	205

Size hole below casing: 5 in.
Static level 140 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	105	107
sand gravel	4	111
clay	14	125
sand gravel	90	215

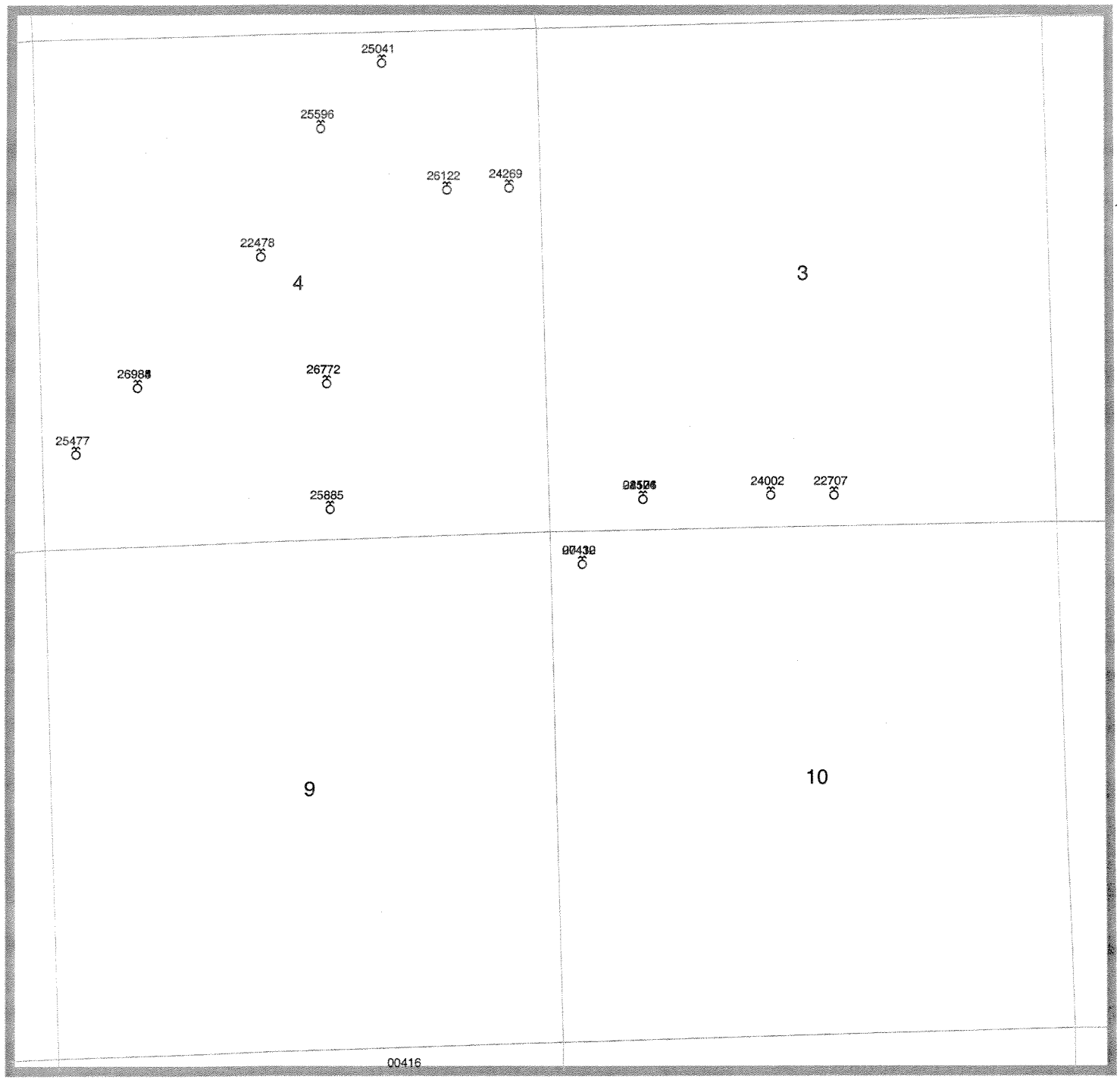
120992495000 Fordonski, Keith 35-33N- 5E
LaSalle Kolanowski, Jim
Status: WATER SE SW SW Elev: 0
permit: W94-092 permit date: 07/01/94 comp. date: 09/07/94
Lambert X: 3239629 Lambert Y: 3004796 td: 420
producing formation: td formation:
latitude: 41.283039 longitude: 88.624016
Water from sandstone at depth 400 to 420 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	290

Size hole below casing: in.
Static level 225 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
yellow clay	10	10
gray clay	160	170
gravel	15	185
gray clay	90	275
limestone	3	278
shale	6	284
limestone	2	286
shale	3	289
limestone	111	400
sandstone	20	420

Map Area: 32N-5E-8 m3 to 33N-5E-35 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1518 3036 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:18216

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Non Oil and Gas - Wells

120992457600 Knierim, Phil 3-32N- 5E
LaSalle Neuendorf, Ronald
Status: WATER SE SW SW Elev: 0
permit: W91-170 permit date: 12/27/91 comp. date:
Lambert X: 3234521 Lambert Y: 2999446 td: 260
producing formation: td formation:
latitude: 41.268421 longitude: 88.642872
Water from shale at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5		0	0

Size hole below casing: 6 in.
Static level 0 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
no record	230	230
shale	30	260

120990210100 3-32N- 5E
LaSalle Purdue J
Status: WATER SE SW SW Elev: 0
permit: 0 permit date: comp. date: 10/01/46
Lambert X: 3234521 Lambert Y: 2999446 td: 226
producing formation: td formation:
latitude: 41.268421 longitude: 88.642872

120992400200 Scherf Robert William 3-32N- 5E
LaSalle Terry, Ronald 1
Status: WATER SE SE SW Elev: 0
permit: 132933 permit date: 06/22/87 comp. date: 07/02/87
Lambert X: 3235840 Lambert Y: 2999476 td: 60
producing formation: td formation:
latitude: 41.268469 longitude: 88.638050
Water from gravel at depth 40 to 43 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
24	CONCRETE	12	60

Size hole below casing: 0 in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
yellow clay	14	16
blue clay	24	40
gravel	3	43
blue clay	17	60

120992270700 Stoneberger, Donald 3-32N- 5E
LaSalle Triplett Jeff
Status: WATER SW SW SE Elev: 0
permit: 0 permit date: comp. date: 10/01/76
Lambert X: 3236500 Lambert Y: 2999491 td: 172
producing formation: td formation:
latitude: 41.268493 longitude: 88.635638

120992352400 Knierim, Phil 3-32N- 5E
LaSalle White, Dan
Status: WATER SE SW SW Elev: 696GL
permit: 94075 permit date: 05/27/80 comp. date: 06/23/80

Lambert X: 3234521 Lambert Y: 2999446 td: 500
producing formation: td formation:
latitude: 41.268421 longitude: 88.642872
Water from rock at depth 380 to 500 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL 15#	0	380

Size hole below casing: 5 in.
Static level 380 ft. below casing top which is 1 ft. above grnd level.
Pumping level 360 ft. when pumping at 35 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
overburden	380	380
rock	120	500

120992247800 Dupage Pump 4-32N- 5E
LaSalle Abbott Contractors
Status: WATER SE SE NW Elev: 0
permit: 0 permit date: comp. date: 08/01/74
Lambert X: 3230503 Lambert Y: 3001945 td: 410
producing formation: td formation:
latitude: 41.275416 longitude: 88.657471

120992559600 Rix, John Richard 4-32N- 5E
LaSalle Bankowski, William J. 1
Status: WATER SW NW NE Elev: 0
permit: W96-231 permit date: 11/05/96 comp. date: 06/03/97
Lambert X: 3231116 Lambert Y: 3003273 td: 226
producing formation: td formation:
latitude: 41.279062 longitude: 88.655185
Water from sand & gravel at depth 136 to 226 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	216

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 10 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	3	3
yellow clay	12	15
blue clay	121	136
sand & gravel	90	226
shale at	0	226

120992612200 Strange, Robert E. 4-32N- 5E
LaSalle Bols, Roger
Status: WATER NW SE NE Elev: 0
permit: permit date: 05/19/99 comp. date: 11/27/99
Lambert X: 3232442 Lambert Y: 3002654 td: 170
producing formation: td formation:
latitude: 41.277321 longitude: 88.650360
Water from gravel at depth 140 to 170 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 21	-1	160

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 140 ft. when pumping at 10 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
earth	10	10
clay	80	90
shale clay	50	140
sand & gravel	30	170

120992698300 IL State Geological Survey 4-32N- 5E
LaSalle DNR/National Guard B-4
Status: MONIT SE NW SW Elev: 650GL
permit: permit date: comp. date: 10/30/03
Lambert X: 3229234 Lambert Y: 3000592 td: 55
producing formation: td formation:
latitude: 41.271717 longitude: 88.662155
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 4 ft. Slot: .01
Casing and Liner Pipe -
Diam. (in.) Kind and Weight From(ft) To(ft)
Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992698400 IL State Geological Survey 4-32N- 5E
LaSalle DNR/National Guard B5
Status: MONIT SE NW SW Elev: 0
permit: permit date: comp. date:
Lambert X: 3229234 Lambert Y: 3000592 td: 0
producing formation: td formation:
latitude: 41.271717 longitude: 88.662155
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -
Diam. (in.) Kind and Weight From(ft) To(ft)
Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992698500 IL State Geological Survey 4-32N- 5E
LaSalle DNR/National Guard B6
Status: MONIT SE NW SW Elev: 0
permit: permit date: comp. date:
Lambert X: 3229234 Lambert Y: 3000592 td: 0
producing formation: td formation:
latitude: 41.271717 longitude: 88.662155
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -
Diam. (in.) Kind and Weight From(ft) To(ft)
Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992588500 Strange, Michael 4-32N- 5E
LaSalle Duncan, Thomas 1
Status: WATER SW SW SE Elev: 0
permit: W97-209 permit date: 12/30/97 comp. date: 05/02/98
Lambert X: 3231238 Lambert Y: 2999345 td: 151
producing formation: td formation:
latitude: 41.268227 longitude: 88.654873
Water from sand & gravel at depth 117 to 149 ft.
Screen: Diam. 5 in. Length: 8 ft. Slot: .015
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21 #200	-1	143

Size hole below casing: in.
Static level 90 ft. below casing top which is 1 ft. above grnd level.
Pumping level 110 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay - rocks	20	20
clay	35	55
sand & gravel	12	67
clay	8	75
sand	2	77
clay	40	117

sand & gravel	32	149
shale	1	150
sandstone	1	151

120992547700 Brown, Darwin 4-32N- 5E
LaSalle Englehaupt, Carol & Henry
Status: WATER NW SW SW Elev: 0
permit: W96-199 permit date: 09/30/96 comp. date: 12/18/96
Lambert X: 3228598 Lambert Y: 2999913 td: 229
producing formation: td formation:
latitude: 41.269861 longitude: 88.664502
Water from sand gravel at depth 219 to 229 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	219

Size hole below casing: in.
Static level 160 ft. below casing top which is 0 ft. above grnd level.
Pumping level 200 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	80	82
sand gravel	147	229

120992426900 Knierim, Phil 4-32N- 5E
LaSalle Englehaupt, Henry
Status: WATER NE SE NE Elev: 0
permit: W90-135 permit date: 08/28/90 comp. date: 08/30/90
Lambert X: 3233095 Lambert Y: 3002672 td: 184
producing formation: td formation:
latitude: 41.277354 longitude: 88.647973
Water from muddy gravel at depth 170 to 184 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	184

Size hole below casing: 5 in.
Static level 170 ft. below casing top which is 1 ft. above grnd level.
Pumping level 175 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	98	100
sand gravel	55	155
muddy gravel	29	184

120992504100 Brown, Darwin 4-32N- 5E
LaSalle Marconi, Ron & Sue
Status: WATER NE NW NE Elev: 0
permit: permit date: 03/09/95 comp. date: 06/10/95
Lambert X: 3231748 Lambert Y: 3003944 td: 218
producing formation: td formation:
latitude: 41.280896 longitude: 88.652853
Water from shale at depth 208 to 218 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	208

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	10	12
shale	98	110
sand - muddy gravel	28	138
shale at	0	218
sand gravel	80	218

120992677200 Strange, Michael 4-32N- 5E
LaSalle Thorsen, Gary 2
Status: WATER SW NW SE Elev: 0
permit: permit date: 08/27/02 comp. date: 09/05/02
Lambert X: 3231197 Lambert Y: 3000654 td: 235
producing formation: td formation:
latitude: 41.271838 longitude: 88.654978
Water from gravel at depth 225 to 235 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 15
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	225
5	PVC SCREEN	225	235

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay with gravel streaks	158	158
sand & gravel	77	235
shale at	0	235

120992743000 Area Well & Pump 10-32N- 5E
LaSalle Musser, Mike
Status: DRYP NW NW NW Elev: 0
permit: permit date: 03/29/04 comp. date:
Lambert X: 3233882 Lambert Y: 2998776 td: 120
producing formation: td formation:
latitude: 41.266578 longitude: 88.645209
Water from dry hole at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

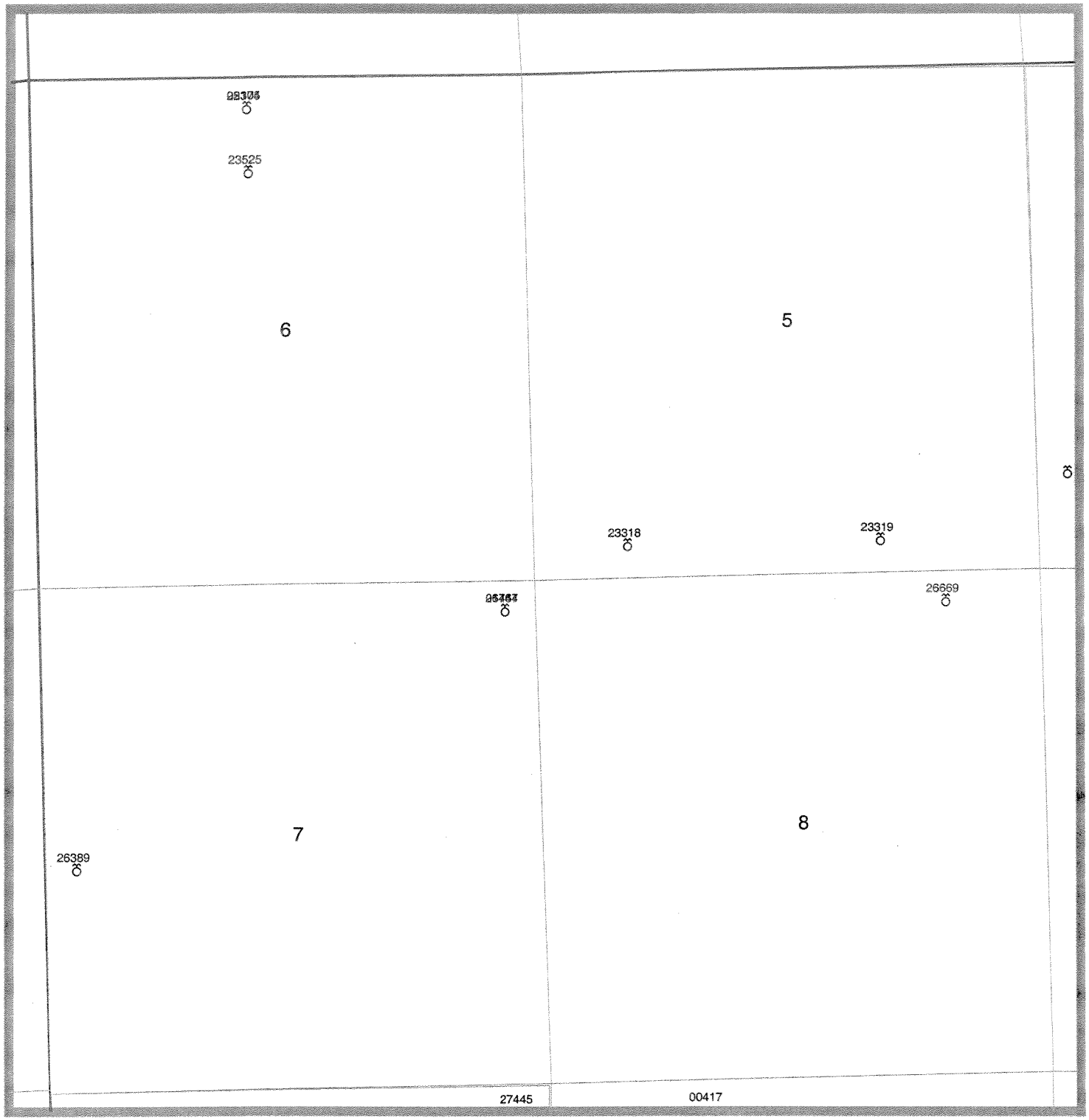
Diam. (in.)	Kind and Weight	From(ft)	To(ft)

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
black dirt	2	2
clay	78	80
shale	40	120

120990041200 Johnson Charles R 10-32N- 5E
LaSalle Ott Chester
Status: WATER NW NW NW Elev: 688GL
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3233881 Lambert Y: 2998775 td: 246
producing formation: td formation:
latitude: 41.266590 longitude: 88.645204

Map Area: 32N-4E-13 m3 to 33N-5E-33 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1498 2996 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:17976

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Non Oil and Gas - Wells

120992547700 Brown, Darwin 4-32N- 5E
LaSalle Englehaupt, Carol & Henry
Status: WATER NW SW SW Elev: 0
permit: W96-199 permit date: 09/30/96 comp. date: 12/18/96
Lambert X: 3228598 Lambert Y: 2999913 td: 229
producing formation: td formation:
latitude: 41.269861 longitude: 88.664502
Water from sand gravel at depth 219 to 229 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	219

Size hole below casing: in.
Static level 160 ft. below casing top which is 0 ft. above grnd level.
Pumping level 200 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	80	82
sand gravel	147	229

120992331900 Albrecht, Dean S. 5-32N- 5E
LaSalle Marseilles Training Area
Status: WATER SE SW SE Elev: 675GL
permit: 117352 permit date: 04/18/85 comp. date: 06/24/85
Lambert X: 3226627 Lambert Y: 2999205 td: 478
producing formation: td formation:
latitude: 41.267958 longitude: 88.671729
Water from rock at depth 402 to 478 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC	0	375

Size hole below casing: 6 in.
Static level 263 ft. below casing top which is 2 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
yellow clay	6	6
soft gray clay	34	40
brown clay	5	45
gray clay	49	94
gravel	42	136
gray clay	10	146
brown clay	6	152
gravel	43	195
sand	36	231
shale	93	324
coal	2	326
shale	4	330
limestone	4	334
shale	28	362
limestone	40	402
sandstone	76	478

120992331800 Rob, Ronald Gene 5-32N- 5E
LaSalle Naal Plumbing & Heating Co.
Status: WATER SE SW SW Elev: 0
permit: 116920 permit date: 03/22/85 comp. date: 04/10/85
Lambert X: 3223968 Lambert Y: 2999144 td: 239
producing formation: td formation:
latitude: 41.267857 longitude: 88.681449
Water from sand & gravel at depth 0 to 0 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK STEEL	0	239

Size hole below casing: 5 in.
Static level 170 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 10 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
shale	100	100
sand & gravel	139	239

120990237500 Lockport Well & Pump 6-32N- 5E
LaSalle Laatz Bruce 1
Status: WATER NE NE NW Elev: 0
permit: 0 permit date: comp. date: 12/01/72
Lambert X: 3219911 Lambert Y: 3003728 td: 435
producing formation: td formation:
latitude: 41.280597 longitude: 88.696127

120992352500 Fykes, Charles N. 6-32N- 5E
LaSalle Laatz, Bruce 1
Status: WATER SE NE NW Elev: 715GL
permit: 107158 permit date: 05/17/83 comp. date: 06/16/83
Lambert X: 3219926 Lambert Y: 3003064 td: 485
producing formation: td formation:
latitude: 41.278765 longitude: 88.696094
Water from St. Peters sand at depth 0 to 485 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15#	0	330

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 270 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	185	185
shale	15	200
sand	40	240
sand gravel & clay	60	300
sandstone	50	350
shale	10	360
limestone & shale	15	375
limestone	65	440
St. Peter sand	45	485

120992510400 Rix, John Richard 6-32N- 5E
LaSalle Vander Sluis, Al
Status: WATER NE NE NW Elev: 0
permit: W95-133 permit date: 08/24/95 comp. date: 08/28/95
Lambert X: 3219908 Lambert Y: 3003728 td: 230
producing formation: td formation:
latitude: 41.280597 longitude: 88.696138
Water from gravel at depth 130 to 230 ft.
Screen: Diam. 5 in. Length: 5 ft. Slot: .015
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	225

Size hole below casing: 5 in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
top soil	3	3
yellow clay	9	12
shale	118	130
gravel	100	230

120990174400 Johnson C R 7-32N- 5E
LaSalle Gage Byron

Status: WATER NE NE NE Elev: 713GL
permit: 0 permit date: comp. date: 01/01/50
Lambert X: 3222666 Lambert Y: 2998455 td: 238
producing formation: td formation:
latitude: 41.265989 longitude: 88.686229

120992646700 Aneffco Well Drilling 7-32N- 5E
LaSalle Gage, Larry 2
Status: WATER NE NE NE Elev: 0
permit: permit date: 09/20/00 comp. date: 10/09/00
Lambert X: 3222666 Lambert Y: 2998455 td: 254
producing formation: td formation:
latitude: 41.265989 longitude: 88.686229
Water from sand & gravel at depth 250 to 254 ft.
Screen: Diam. 4 in. Length: 4 ft. Slot: 15
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 21	-1	189
5	SDR 17	189	249
4	STAINLESS STL SCREEN	250	254

Size hole below casing: in.
Static level 193 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 30 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
yellow clay	12	12
gray clay	118	130
gray shale	16	146
sand & gravel with clay & wood	108	254

120992638900 Strange, Michael 7-32N- 5E
LaSalle Miller, Gary 2
Status: WATER NW NW SW Elev: 0
permit: permit date: 05/21/01 comp. date: 06/18/01
Lambert X: 3218154 Lambert Y: 2995736 td: 500
producing formation: td formation:
latitude: 41.258602 longitude: 88.702806
Water from sandstone at depth 455 to 500 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

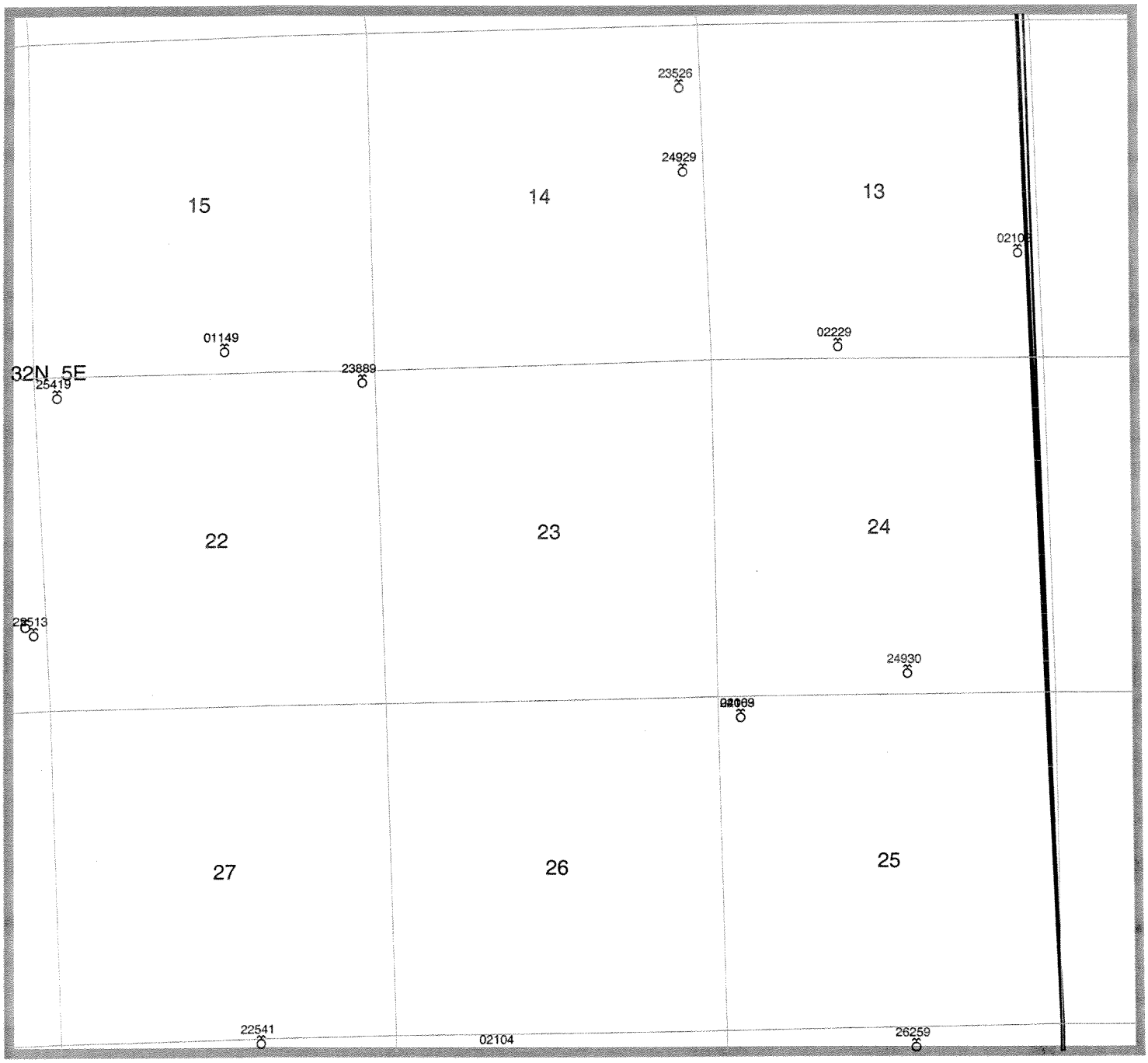
Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	155
5	PVC SDR 17	155	355

Size hole below casing: in.
Static level 300 ft. below casing top which is 1 ft. above grnd level.
Pumping level 320 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	260	260
coal	5	265
shale	85	350
limestone	105	455
sandstone	45	500

120992666900 8-32N- 5E
LaSalle Commonwealth Edison B-4
Status: ENG NW NE NE Elev: 0
permit: permit date: comp. date:
Lambert X: 3227310 Lambert Y: 2998560 td: 171
producing formation: td formation:
latitude: 41.266163 longitude: 88.669255

Map Area: 32N-5E-28 m3 to 32N-6E-7 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 2367 4734 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:28404

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Non Oil and Gas - Wells

120990210200 13-32N- 5E
LaSalle Kuhn
Status: WATER SE NE SE Elev: 0
permit: 0 permit date: comp. date: 03/01/61
Lambert X: 3249373 Lambert Y: 2990536 td: 113
producing formation: td formation:
latitude: 41.243453 longitude: 88.588920

120990222900 13-32N- 5E
LaSalle Sheedy Tim
Status: WATER 200 SL 600 EL SW Elev: 0
permit: 0 permit date: comp. date: 04/01/70
Lambert X: 3246523 Lambert Y: 2989059 td: 180
producing formation: td formation:
latitude: 41.239459 longitude: 88.599386

120992492900 Brown, Darwin 14-32N- 5E
LaSalle Bedeker, Dave
Status: WATER SE SE NE Elev: 0
permit: W94-188 permit date: 09/28/94 comp. date: 10/15/94
Lambert X: 3244050 Lambert Y: 2991795 td: 480
producing formation: td formation:
latitude: 41.247071 longitude: 88.608322
Water from sandstone at depth 450 to 480 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK A53	0	345

Size hole below casing: 5 in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1
clay	54	55
sand gravel	35	90
clay	12	102
shale	65	167
gray sandstone	6	173
coal	3	176
shale	169	345
rock	95	440
sandstone	40	480

120992352600 Scherf Robert William 14-32N- 5E
LaSalle Bedeker, David 1
Status: WATER SE NE NE Elev: 672GL
permit: 105977 permit date: 01/05/83 comp. date: 01/12/83
Lambert X: 3244001 Lambert Y: 2993113 td: 51
producing formation: td formation:
latitude: 41.250706 longitude: 88.608453
Water from gravel at depth 41 to 44 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
24	CONCRETE	13	51

Size hole below casing: 0 in.
Static level 21 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
yellow clay	14	14
blue clay	27	41
gravel	3	44

blue clay 7 51

120990114900 15-32N- 5E
LaSalle Pfeffer Louis
Status: WATER SW SW SE Elev: 691GL
permit: 0 permit date: comp. date: 01/01/50
Lambert X: 3236797 Lambert Y: 2988973 td: 184
producing formation: td formation:
latitude: 41.239482 longitude: 88.634918

120992251300 Lockport Well & Pump 21-32N- 5E
LaSalle Holmes Bill 1
Status: WATER 1200 SL 200 EL Elev: 0
permit: 0 permit date: comp. date: 07/01/74
Lambert X: 3233789 Lambert Y: 2984512 td: 580
producing formation: td formation:
latitude: 41.227259 longitude: 88.646060

120990174700 Bolliger, John & Sons 21-32N- 5E
LaSalle Wolf Loretta
Status: WATER E2 E2 SE Elev: 703GL
permit: 0 permit date: comp. date: 01/01/55
Lambert X: 3233655 Lambert Y: 2984629 td: 206
producing formation: td formation:
latitude: 41.227585 longitude: 88.646545

120992541900 Rix, John Richard 22-32N- 5E
LaSalle Rix, John #1
Status: WATER NW NW NW Elev: 0
permit: W96-086 permit date: 06/07/96 comp. date: 06/10/96
Lambert X: 3234154 Lambert Y: 2988272 td: 560
producing formation: td formation:
latitude: 41.237618 longitude: 88.644597
Water from sandstone at depth 490 to 560 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL 15#	0	390

Size hole below casing: 5 in.
Static level 265 ft. below casing top which is 1 ft. above grnd level.
Pumping level 285 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	3	3
yellow clay	5	8
blue clay	32	40
shale	120	160
blue clay & gravel	5	165
shale	225	390
limestone	100	490
St. Peter sandstone	70	560

120992388900 Johnson, Charles R. 22-32N- 5E
LaSalle Spaulding, Roy 1
Status: WATER 200 NL 200 EL Elev: 0
permit: 123527 permit date: 05/02/86 comp. date:
Lambert X: 3238946 Lambert Y: 2988480 td: 200
producing formation: td formation:
latitude: 41.238066 longitude: 88.627085
Water from sandstone at depth 125 to 130 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
4		0	125

Size hole below casing: 4 in.
Static level 90 ft. below casing top which is 1 ft. above grnd level.

Pumping level 200 ft. when pumping at 1 gpm for 5 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	60	62
sand clay	6	68
clay	27	95
clay & gravel	15	110
fine silt	15	125
sandstone	5	130
thin red shale	70	200

120992493000 Brown, Darwin 24-32N- 5E
LaSalle Perkins, Pete
Status: WATER SW SW SE Elev: 0
permit: W94-189 permit date: 09/28/94 comp. date: 10/06/94
Lambert X: 3247594 Lambert Y: 2983903 td: 110
producing formation: td formation:
latitude: 41.225211 longitude: 88.595661
Water from gray sandstone at depth 80 to 110 ft.
Screen: Diam. 5 in. Length: 5 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	105

Size hole below casing: 5 in.
Static level 80 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1
clay	19	20
sand gravel	3	23
clay	82	105
sand gravel	3	108
gray sandstone	2	110

120992406900 Scherf Robert William 25-32N- 5E
LaSalle Carry, Robert 2
Status: WATER NW NW NW Elev: 0
permit: 138410 permit date: 12/28/87 comp. date: 06/11/88
Lambert X: 3244955 Lambert Y: 2983214 td: 78
producing formation: td formation:
latitude: 41.223384 longitude: 88.605324
Water from gravel at depth 46 to 50 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)

Size hole below casing: 0 in.
Static level 31 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
yellow clay	18	18
blue clay	28	46
gravel	4	50
blue clay	28	78

120990210300 No Company 25-32N- 5E
LaSalle Ryan J A
Status: WATER NW NW NW Elev: 0
permit: 0 permit date: comp. date: 10/01/22
Lambert X: 3244955 Lambert Y: 2983214 td: 514
producing formation: td formation:
latitude: 41.223384 longitude: 88.605324

120992254100 34-32N- 5E
LaSalle Moran Emmett
Status: WATER 80 NL 500 WL NE Elev: 693GL
permit: 0 permit date: comp. date: 12/01/74

Lambert X: 3237362 Lambert Y: 2978066 td: 545
producing formation: td formation:
latitude: 41.209390 longitude: 88.633234

120992625900 Rix, John Richard 36-32N- 5E
LaSalle Johnson, Howard 1
Status: DRYP NW NW NE Elev: 0
permit: permit date: 08/09/00 comp. date: 09/20/00
Lambert X: 3247709 Lambert Y: 2977995 td: 75
producing formation: td formation:
latitude: 41.208916 longitude: 88.595456
Water from dry hole at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

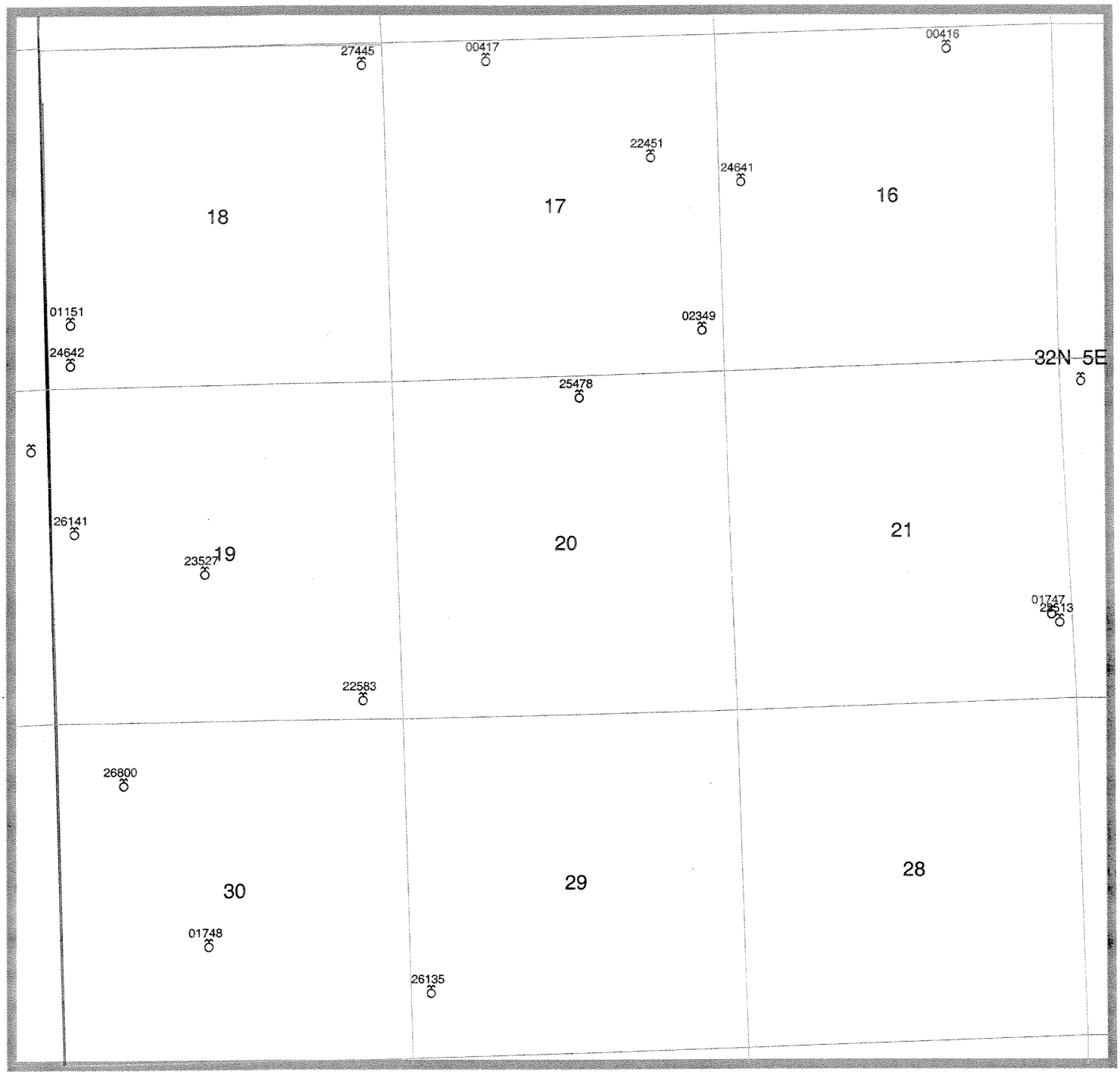
Diam. (in.)	Kind and Weight	From(ft)	To(ft)

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
brown stiff clay	11	13
gray till	6	19
gray sand seam	1	20
gray clay	55	75

120630157900 30-32N- 6E
Grundy Perry Joe
Status: WATER SE NW NW Elev: 0
permit: 0 permit date: comp. date: 08/01/53
Lambert X: 3250600 Lambert Y: 2982625 td: 114
producing formation: td formation:
latitude: 41.221726 longitude: 88.584727

Map Area: 32N-4E-25 m3 to 32N-5E-10 m3



Explanation

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Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 2277 4554 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:27324

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Non Oil and Gas - Wells

120990210000 No Company 24-32N- 4E
LaSalle McCormick Clarence
Status: WATER SE NE NE Elev: 0
permit: 0 permit date: comp. date: 04/01/63
Lambert X: 3217752 Lambert Y: 2987190 td: 255
producing formation: td formation:
latitude: 41.235045 longitude: 88.704548

120992464100 Wehling, Richard H. 16-32N- 5E
LaSalle Commonwealth Edison Co.
Status: WATER SW SW NW Elev: 0
permit: W92-202 permit date: 10/21/92 comp. date: 11/02/92
Lambert X: 3228832 Lambert Y: 2991361 td: 770
producing formation: td formation:
latitude: 41.246273 longitude: 88.663934
Water from sandstone at depth 580 to 730 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
12	BLACK	0	193
9	OD BLACK	0	380

Size hole below casing: in.
Static level 272 ft. below casing top which is 0 ft. above grnd level.
Pumping level 303 ft. when pumping at 0 gpm for 24 hours.

Formations Passed Through	Thickness	Bottom
S.S. #67848 (0'-770')	-770	0
black dirt	10	10
clay	50	60
clay & gravel	130	190
shale	176	366
limestone	24	390
shale	25	415
shale, lime stringers	10	425
lime	55	480
shale	10	490
sandstone	75	565
shale	15	580
sandstone	155	735
limestone	10	745
sandstone/limestone stringers	15	760
limestone	10	770

120990041600 Johnson C W 16-32N- 5E
LaSalle Marsh J J
Status: WATER NE NW NE Elev: 708GL
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3232057 Lambert Y: 2993428 td: 265
producing formation: td formation:
latitude: 41.251890 longitude: 88.652082

120992245100 Wehling Well Works Inc. 17-32N- 5E
LaSalle Commonwealth Edison 1
Status: WATER 3352 SL 1091 EL Elev: 711GL
permit: 0 permit date: comp. date: 01/01/74
Lambert X: 3227402 Lambert Y: 2991730 td: 1629
producing formation: td formation:
latitude: 41.247326 longitude: 88.669147

120990234900 Wehling Well Works Inc. 17-32N- 5E
LaSalle Commonwealth Edison
Status: WATER 652 SL 350 EL Elev: 711GL

permit: 0 permit date: comp. date: 05/01/72
Lambert X: 3228224 Lambert Y: 2989053 td: 1620
producing formation: td formation:
latitude: 41.239924 longitude: 88.666233

120990041700 Johnson C W 17-32N- 5E
LaSalle Rose A D
Status: WATER NW NE NW Elev: 687GL
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3224818 Lambert Y: 2993214 td: 187
producing formation: td formation:
latitude: 41.251483 longitude: 88.678538

120990115100 18-32N- 5E
LaSalle Copp Joseph H
Status: WATER NW SW SW Elev: 0
permit: 0 permit date: comp. date: 01/01/51
Lambert X: 3218355 Lambert Y: 2989163 td: 185
producing formation: td formation:
latitude: 41.240471 longitude: 88.702282

120992744500 Rix, John Richard 18-32N- 5E
LaSalle Frye, Richard 1
Status: WATER NE NE NE Elev: 0
permit: permit date: 07/26/04 comp. date: 07/28/04
Lambert X: 3222840 Lambert Y: 2993166 td: 540
producing formation: td formation:
latitude: 41.251387 longitude: 88.685745
Water from sandstone at depth 480 to 540 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-2	220
4.50	PVC	120	440

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gray clay	108	110
sand	21	131
clay	62	193
clay & gravel	27	220
gray sandstone	25	245
shale	153	398
rock	82	480
sandstone	60	540

120992464200 Johnson, Charles R. 18-32N- 5E
LaSalle Hill, Randy 1
Status: WATER SW SW SW Elev: 0
permit: W92-106 permit date: 06/25/92 comp. date: 09/21/92
Lambert X: 3218378 Lambert Y: 2988509 td: 147
producing formation: td formation:
latitude: 41.238667 longitude: 88.702219
Water from at depth 8 to 147 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL 15#	-1	147

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	4	4
sandy clay	10	14

clay	90	104
clay & gravel (dry)	35	139
sandy gravel	8	147

120992614100 Aneffco Well Drilling 19-32N- 5E
LaSalle Duffield, Scott & Laura 1
Status: WATER SW SW NW Elev: 0
permit: permit date: 05/12/99 comp. date: 07/14/99
Lambert X: 3218431 Lambert Y: 2985893 td: 222
producing formation: td formation:
latitude: 41.231452 longitude: 88.702109
Water from sand & gravel at depth 213 to 222 ft.
Screen: Diam. 4 in. Length: 9 ft. Slot: 10
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC F480	-1	213
4	STEEL A53A	209	213
4	STAINLESS STL SCREEN	213	222

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 185 ft. when pumping at 30 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
black dirt	1	1
yellow clay	7	8
gray shale	30	38
sand	3	41
gray shale with sand streaks	133	174
fine gray sand	30	204
sand gravel & wood	16	220
red shale	2	222

120992258300 19-32N- 5E
LaSalle Osmond Truman E 1
Status: WATER 300 SL 600 EL Elev: 0
permit: 0 permit date: comp. date: 06/01/75
Lambert X: 3222932 Lambert Y: 2983297 td: 231
producing formation: td formation:
latitude: 41.224183 longitude: 88.685754

120992352700 Fykes, Charles N. 19-32N- 5E
LaSalle Tri-County Well & Pump 1
Status: WATER NE NE SW Elev: 735GL
permit: 84831 permit date: 04/24/79 comp. date: 04/30/79
Lambert X: 3220449 Lambert Y: 2985265 td: 105
producing formation: td formation:
latitude: 41.229671 longitude: 88.694759
Water from sand rock at depth 78 to 105 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SCH 40 PVC 2.87#	0	78

Size hole below casing: 5 in.
Static level 40 ft. below casing top which is 1 ft. above grnd level.
Pumping level 70 ft. when pumping at 10 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	12	12
sandstone	6	18
sandstone & shale	17	35
shale	43	78
sand rock	27	105

120992547800 Rix, John Richard 20-32N- 5E
LaSalle Davis, Mike #1
Status: WATER NW NW NE Elev: 0
permit: W96-257 permit date: 12/19/96 comp. date: 01/15/97
Lambert X: 3226309 Lambert Y: 2988018 td: 550

producing formation: td formation:
latitude: 41.237118 longitude: 88.673263
Water from St. Peter sandstone at depth 500 to 540 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL	-1	378

Size hole below casing: 5 in.
Static level 240 ft. below casing top which is 1 ft. above grnd level.
Pumping level 300 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	190	190
shale	80	270
coal	5	275
shale	101	376
limestone	124	500
St. Peter sandstone	50	550

120992251300 Lockport Well & Pump 21-32N- 5E
LaSalle Holmes Bill 1
Status: WATER 1200 SL 200 EL Elev: 0
permit: 0 permit date: comp. date: 07/01/74
Lambert X: 3233789 Lambert Y: 2984512 td: 580
producing formation: td formation:
latitude: 41.227259 longitude: 88.646060

120990174700 Bolliger, John & Sons 21-32N- 5E
LaSalle Wolf Loretta
Status: WATER E2 E2 SE Elev: 703GL
permit: 0 permit date: comp. date: 01/01/55
Lambert X: 3233655 Lambert Y: 2984629 td: 206
producing formation: td formation:
latitude: 41.227585 longitude: 88.646545

120992541900 Rix, John Richard 22-32N- 5E
LaSalle Rix, John #1
Status: WATER NW NW NW Elev: 0
permit: W96-086 permit date: 06/07/96 comp. date: 06/10/96
Lambert X: 3234154 Lambert Y: 2988272 td: 560
producing formation: td formation:
latitude: 41.237618 longitude: 88.644597
Water from sandstone at depth 490 to 560 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL 15#	0	390

Size hole below casing: 5 in.
Static level 265 ft. below casing top which is 1 ft. above grnd level.
Pumping level 285 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	3	3
yellow clay	5	8
blue clay	32	40
shale	120	160
blue clay & gravel	5	165
shale	225	390
limestone	100	490
St. Peter sandstone	70	560

120992613500 Rix, John Richard 29-32N- 5E
LaSalle Widman, Ron 1
Status: WATER NW SW SW Elev: 0
permit: permit date: 03/30/99 comp. date: 05/04/99
Lambert X: 3223999 Lambert Y: 2978734 td: 184
producing formation: td formation:
latitude: 41.211574 longitude: 88.682007

Water from sand & gravel at depth 164 to 174 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-1	164
5	PVC	174	184

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	158	160
sand & gravel	14	174
gummy gray clay	10	184

120992680000 Rix, John Richard 30-32N- 5E
LaSalle Anderson, Alan V. 1
Status: WATER SE NW NW Elev: 0
permit: permit date: 08/08/02 comp. date: 08/22/02
Lambert X: 3219185 Lambert Y: 2981962 td: 253
producing formation: td formation:
latitude: 41.220594 longitude: 88.699482
Water from sand & gravel at depth 170 to 253 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: .02
Casing and Liner Pipe -

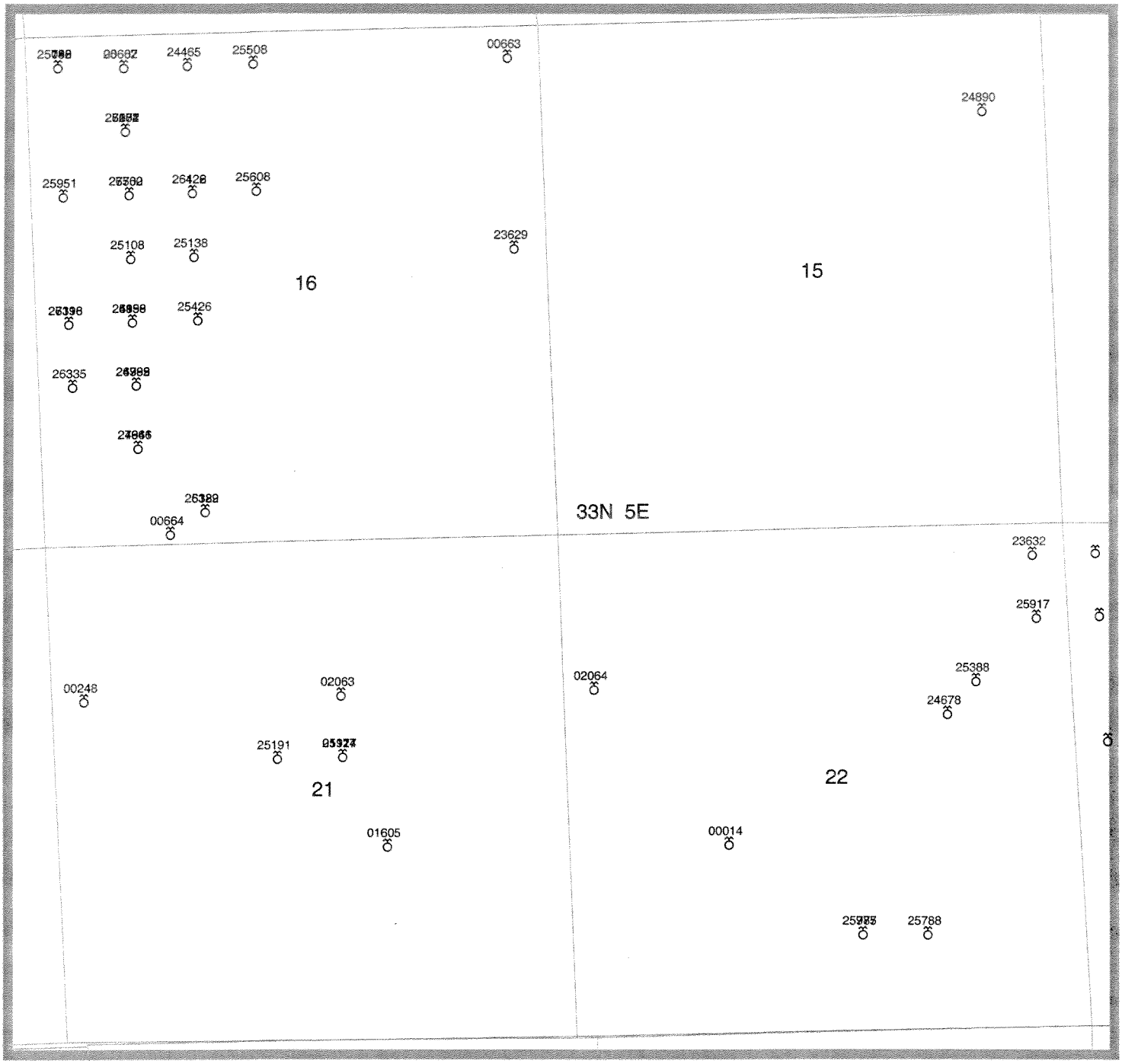
Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-1	243
5	PVC SCREEN	243	253

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 140 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
yellow clay	4	6
gray clay	114	120
gray gummy clay	50	170
sand & gravel	83	253

120990174800 30-32N- 5E
LaSalle Egeland Elmer
Status: WATER 1800 SL 2300 WL Elev: 750GL
permit: 0 permit date: comp. date: 01/01/50
Lambert X: 3220529 Lambert Y: 2979471 td: 585
producing formation: td formation:
latitude: 41.213692 longitude: 88.694654

Map Area: 33N-5E-20 m3 to 33N-5E-14 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1530 3060 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:18360

Displayed data is based upon information supplied to the Illinois State Geological Survey (ISGS) and are not field verified. The ISGS does not guarantee the validity, accuracy or completeness of these data.

Non Oil and Gas - Wells

120992489000 Fykes, Charles N. 15-33N- 5E
LaSalle Hubbard, Gerald
Status: WATER S2 NE NE Elev: 0
permit: W94-106 permit date: 07/11/94 comp. date: 07/12/94
Lambert X: 3236980 Lambert Y: 3024393 td: 145
producing formation: td formation:
latitude: 41.337146 longitude: 88.633015
Water from limestone at depth 100 to 145 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15 LBS	0	100

Size hole below casing: 5 in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 100 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
sandy clay	9	9
sand	16	25
sand & gravel	15	40
river sand	25	65
blue clay	20	85
St. Peter sand	25	110
gray limestone	35	145

120990066200 Anderson 16-33N- 5E
LaSalle Anderson Sam
Status: WATER NE NW NW Elev: 695GL
permit: 0 permit date: comp. date: 01/01/09
Lambert X: 3228008 Lambert Y: 3024840 td: 416
producing formation: td formation:
latitude: 41.338610 longitude: 88.665822

120992518900 Fordonski, Keith 16-33N- 5E
LaSalle Borgarding, Paul
Status: WATER SW SE SW Elev: 0
permit: W95-172 permit date: 10/13/95 comp. date: 10/30/95
Lambert X: 3228879 Lambert Y: 3020229 td: 305
producing formation: td formation:
latitude: 41.325873 longitude: 88.662791
Water from St. Peter at depth 260 to 305 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250# SDR 17	0	235

Size hole below casing: in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	70	70
sandstone	50	120
clay	110	230
limestone	30	260
St. Peter	45	305

120990066300 16-33N- 5E
LaSalle Brei Chas
Status: WATER NE NE NE Elev: 0
permit: 0 permit date: comp. date: 09/01/50
Lambert X: 3232011 Lambert Y: 3024940 td: 365
producing formation: td formation:
latitude: 41.338761 longitude: 88.651171

120992676200 Strange, Michael 16-33N- 5E
LaSalle Brown, Steve 1
Status: WATER NE SW NW Elev: 0
permit: permit date: 07/26/02 comp. date: 08/21/02
Lambert X: 3228064 Lambert Y: 3023519 td: 360
producing formation: td formation:
latitude: 41.334966 longitude: 88.665662
Water from sandstone at depth 300 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	160
5	PVC SDR 17	160	300

Size hole below casing: in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	140	140
shale & coal streaks	150	290
sandstone	70	360

120992764100 Steve Liberg, Jr. 16-33N- 5E
LaSalle Carajohn, Frank 1
Status: WATER NE SW SW Elev: 0
permit: permit date: 09/21/05 comp. date: 02/10/06
Lambert X: 3228184 Lambert Y: 3020873 td: 340
producing formation: td formation:
latitude: 41.327656 longitude: 88.665288
Water from sandstone at depth 308 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	73
5	PVC SDR 17	73	293

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 22 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
tan clay hard	34	34
orange sandstone	5	39
gray clay soft	83	122
gravel coarse	12	134
gray sandstone hard	17	151
gray shale soft	113	264
lime & shale mix	21	285
tan limestone	23	308
white sandstone	32	340

120992503200 Brown, Darwin 16-33N- 5E
LaSalle Delaurentis, Mike
Status: WATER NW NW NW Elev: 0
permit: W95-053 permit date: 05/05/95 comp. date: 06/07/95
Lambert X: 3227336 Lambert Y: 3024825 td: 320
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from St Peter sandstone at depth 288 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	260

Size hole below casing: 5 in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	84	86
sand gravel	18	104

gray sandstone	38	142
shale	103	245
rock	43	288
St Peter sandstone	32	320

120992612600 Strange, Michael 16-33N- 5E
LaSalle Dudek, Don 1
Status: WATER NW SE NW Elev: 0
permit: permit date: 10/08/98 comp. date: 04/28/99
Lambert X: 3228731 Lambert Y: 3023535 td: 360
producing formation: td formation:
latitude: 41.334993 longitude: 88.663221
Water from sandstone at depth 310 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 21 200#	-1	160
5	SDR 17 250#	160	312

Size hole below casing: in.
Static level 220 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	160	160
shale	70	230
coal	1	231
shale	42	273
limestone	31	304
shale	6	310
sandstone	50	360

120992633500 Brown, Darwin 16-33N- 5E
LaSalle Ferris, Steve & Sydney
Status: WATER SW NW SW Elev: 0
permit: permit date: 11/13/00 comp. date: 05/20/01
Lambert X: 3227489 Lambert Y: 3021517 td: 400
producing formation: td formation:
latitude: 41.329460 longitude: 88.667832
Water from sandstone at depth 330 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	0	155
4.5	PVC LINER	10	330

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 280 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1
clay	115	116
sand gravel	26	142
clay	10	152
shale	128	280
rock	21	301
sandstone	99	400

120992589800 Strange, Michael 16-33N- 5E
LaSalle Houious, Jim 1
Status: WATER NE NW SW Elev: 0
permit: permit date: 02/10/98 comp. date: 06/04/98
Lambert X: 3228124 Lambert Y: 3022196 td: 340
producing formation: td formation:
latitude: 41.331316 longitude: 88.665487
Water from sandstone at depth 305 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21 #200	-1	170

5	PVC SDR 17 #250	170	270

Size hole below casing: in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	140	140
shale	25	165
limestone	2	167
shale	98	265
limestone	13	278
soft limestone	2	280
limestone	25	305
sandstone	35	340

120992703400 Area Well & Pump 16-33N- 5E
LaSalle Humphreys, Rick
Status: WATER SE NW NW Elev: 0
permit: permit date: 04/24/03 comp. date: 09/24/03
Lambert X: 3228034 Lambert Y: 3024180 td: 360
producing formation: td formation:
latitude: 41.336789 longitude: 88.665749
Water from sandstone at depth 340 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	160
5	PVC SDR 17	160	340

Size hole below casing: in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	20	20
clay	60	80
shale	240	320
sandstone	40	360

120992446500 Dober, Darrel R. 16-33N- 5E
LaSalle Johnson, Ken
Status: WATER NW NE NW Elev: 0
permit: W91-031 permit date: 04/12/91 comp. date: 07/10/91
Lambert X: 3228672 Lambert Y: 3024858 td: 378
producing formation: td formation:
latitude: 41.338642 longitude: 88.663392
Water from sandstone at depth 302 to 378 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL	1	297

Size hole below casing: in.
Static level 220 ft. below casing top which is 0 ft. above grnd level.
Pumping level 260 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
yellow clay	7	7
gray clay	6	13
brown clay	8	21
gray clay	98	119
brown clay w/sand & gravel streaks	6	125
shale	139	264
coal	3	267
shale	23	290
fractured limestone w/shale	4	294
limestone	7	301
fractured limestone w/shale	1	302
sandstone	76	378

120992504500 Brown, Darwin 16-33N- 5E
LaSalle Judd, Allen

Status: WATER NW NW NW Elev: 0
permit: W95-052 permit date: 05/05/95 comp. date: 05/20/95
Lambert X: 3227336 Lambert Y: 3024825 td: 340
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from St. Peter sandstone at depth 320 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC SDR 21	0	270

Size hole below casing: 5 in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	83	85
sand gravel	5	90
gray sandstone	20	110
shale	160	270
rock	40	310
St. Peter sandstone	30	340

120992595100 Brown, Darwin 16-33N- 5E
LaSalle Kaluzna, Brad
Status: WATER NW SW NW Elev: 0
permit: W98-187 permit date: 12/08/98 comp. date: 06/24/99
Lambert X: 3227397 Lambert Y: 3023502 td: 360
producing formation: td formation:
latitude: 41.334936 longitude: 88.668102
Water from sandstone at depth 324 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	BLK STEL A53 258 15#	0	168
4.5	LINER	144	324

Size hole below casing: in.
Static level 220 ft. below casing top which is 1 ft. above grnd level.
Pumping level 300 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay gray	117	119
sand gravel	27	146
gray shale with sandstone & lime mix	136	282
brown lime	37	319
sandstone	41	360

120992496600 Brown, Darwin 16-33N- 5E
LaSalle Kennedy, John
Status: WATER NE SW SW Elev: 0
permit: W94-201 permit date: 10/12/94 comp. date: 12/17/94
Lambert X: 3228184 Lambert Y: 3020873 td: 340
producing formation: td formation:
latitude: 41.327667 longitude: 88.665312
Water from sandstone at depth 150 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR-21	0	280

Size hole below casing: 5 in.
Static level 150 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay	130	130
sand gravel	10	140
shale	136	276
rock	39	315
sandstone	25	340

120992639800 Rix, John Richard 16-33N- 5E
LaSalle Kirkton, Mark 1
Status: WATER NW NW SW Elev: 0
permit: permit date: 01/31/01 comp. date: 07/06/01
Lambert X: 3227458 Lambert Y: 3022179 td: 400
producing formation: td formation:
latitude: 41.331286 longitude: 88.667923
Water from sandstone at depth 292 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STEEL	-1	147
4.5	PVC	20	380

Size hole below casing: 4 in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gummy gray clay	104	106
sand & gravel	23	129
shale with gray sandstone	143	272
brown limestone	20	292
sandstone	108	400

120992550700 Brown, Darwin 16-33N- 5E
LaSalle Knott, Timothy J.
Status: WATER SE NW NW Elev: 0
permit: W96-245 permit date: 12/03/96 comp. date: 04/09/97
Lambert X: 3228034 Lambert Y: 3024180 td: 400
producing formation: td formation:
latitude: 41.336789 longitude: 88.665749
Water from sandstone at depth 330 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLK STEEL A53 15#	0	330

Size hole below casing: 5 in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 300 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay with streaks of sand & gravel	150	152
shale	144	296
brown lime	14	310
sandstone	90	400

120992550800 Rix, John Richard 16-33N- 5E
LaSalle Maloney, Keith #1
Status: WATER NE NE NW Elev: 0
permit: W96-075 permit date: 05/22/96 comp. date: 09/12/96
Lambert X: 3229340 Lambert Y: 3024874 td: 380
producing formation: td formation:
latitude: 41.338670 longitude: 88.660948
Water from sandstone at depth 315 to 380 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 27	0	327

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 0 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	70	70
sand & gravel	3	73
clay	77	150
gray sandstone	20	170
shale	122	292

limestone	18	310
shale	5	315
sandstone	65	380

120992625200 Bisping, Calvin 16-33N- 5E
LaSalle Mavec, Jonathan
Status: WATER SE NW NW Elev: 0
permit: W00-076 permit date: 05/23/00 comp. date: 11/07/00
Lambert X: 3228034 Lambert Y: 3024180 td: 360
producing formation: td formation:
latitude: 41.336789 longitude: 88.665749
Water from sandstone at depth 298 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	290

Size hole below casing: in.
Static level 160 ft. below casing top which is 2 ft. above grnd level.
Pumping level 260 ft. when pumping at 10 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	40	40
sand/gravel	15	55
clay	105	160
shale	118	278
limestone	20	298
sandstone	62	360

120992542600 Wellendorf, Rodney 16-33N- 5E
LaSalle Ness, Wesley
Status: WATER NW NE SW Elev: 0
permit: W96-041 permit date: 04/24/96 comp. date: 05/22/96
Lambert X: 3228790 Lambert Y: 3022213 td: 300
producing formation: td formation:
latitude: 41.331346 longitude: 88.663050
Water from sandstone at depth 280 to 300 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SC 250	-2	260

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 2 ft. above grnd level.
Pumping level 220 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	92	92
gravel	8	100
gray sandstone	48	148
shale	97	245
lime	35	280
sandstone	20	300

120992498200 Brown, Darwin 16-33N- 5E
LaSalle Peretta, Len & Kathy
Status: WATER SE NW SW Elev: 0
permit: W95-001 permit date: 01/12/95 comp. date: 01/22/95
Lambert X: 3228154 Lambert Y: 3021534 td: 320
producing formation: td formation:
latitude: 41.329490 longitude: 88.665399
Water from sandstone at depth 150 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	258

Size hole below casing: 5 in.
Static level 150 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1

clay	109	110
sand & gravel	14	124
shale	134	258
rock	36	294
sandstone	26	320

120992575800 Arthur C. Leasure 16-33N- 5E
LaSalle Popplewell, Jerry 1
Status: WATER NW NW NW Elev: 0
permit: W97-170 permit date: 10/07/97 comp. date: 02/01/98
Lambert X: 3227336 Lambert Y: 3024825 td: 320
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from sandstone at depth 292 to 315 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	SDR 21 PVC	0	292

Size hole below casing: in.
Static level 210 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	111	113
sandstone	7	120
shale	133	253
limestone	4	257
shale	18	275
limestone - pyrite	17	292
sand	23	315
shale	5	320

120992510800 Brown, Darwin 16-33N- 5E
LaSalle Richards, Carl & Janice
Status: WATER SE SW NW Elev: 0
permit: W95-128 permit date: 08/18/95 comp. date: 09/07/95
Lambert X: 3228094 Lambert Y: 3022857 td: 340
producing formation: td formation:
latitude: 41.333140 longitude: 88.665574
Water from sandstone at depth 314 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	285

Size hole below casing: 5 in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	125	127
sand gravel	16	143
shale with streaks gray sandstone	139	282
rock	32	314
sandstone	26	340

120992711600 Strange, Michael 16-33N- 5E
LaSalle Rohwer, Fawn 1
Status: WATER NW NW SW Elev: 0
permit: permit date: 04/24/03 comp. date: 08/16/03
Lambert X: 3227458 Lambert Y: 3022179 td: 360
producing formation: td formation:
latitude: 41.331286 longitude: 88.667923
Water from sandstone at depth 320 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	1	160

4.5 PVC SDR 17 80 320
Size hole below casing: in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	130	130
shale with coal streaks	125	255
limestone	50	305
shale	5	310
sandstone	50	360

120992493900 Brown, Darwin 16-33N- 5E
LaSalle Rohwer, Mark & Fawn
Status: WATER NE NW SW Elev: 0
permit: W94-141 permit date: 08/11/94 comp. date: 10/05/94
Lambert X: 3228124 Lambert Y: 3022196 td: 340
producing formation: td formation:
latitude: 41.331316 longitude: 88.665487
Water from sandstone at depth 320 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC SDR 21	0	192

Size hole below casing: 5 in.
Static level 150 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1
clay	142	143
sand gravel	5	148
shale	44	192
gray sandstone w/shale	125	317
no record	3	320
sandstone	20	340

120992560700 Bisping, Calvin 16-33N- 5E
LaSalle Sanders, Ralph & Laurel
Status: WATER NE NW NW Elev: 0
permit: W96-193 permit date: 09/26/96 comp. date: 06/12/97
Lambert X: 3228004 Lambert Y: 3024841 td: 340
producing formation: td formation:
latitude: 41.338612 longitude: 88.665837
Water from sandstone at depth 285 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL	0	285

Size hole below casing: in.
Static level 100 ft. below casing top which is 2 ft. above grnd level.
Pumping level 220 ft. when pumping at 30 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	17	17
shale	131	148
shale & rock	12	160
shale	125	285
sandstone	55	340

120992639900 Strange, Michael 16-33N- 5E
LaSalle Sangston, Kenneth & Jennife 1
Status: WATER SE NW SW Elev: 0
permit: permit date: 03/09/01 comp. date: 08/22/01
Lambert X: 3228154 Lambert Y: 3021534 td: 360
producing formation: td formation:
latitude: 41.329490 longitude: 88.665399
Water from sandstone at depth 315 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	160
5	PVC SDR 17	160	315

Size hole below casing: in.
Static level 210 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	125	125
gravel	2	127
shale	8	135
clay	135	270
limestone	35	305
shale	2	307
sandstone	53	360

120990066400 Miller, J. P. Art. Well 16-33N- 5E
LaSalle Smith H R
Status: WATER 100 SL 1300 WL Elev: 0
permit: 0 permit date: comp. date: 08/01/40
Lambert X: 3228526 Lambert Y: 3019988 td: 140
producing formation: td formation:
latitude: 41.325218 longitude: 88.664090

120992717100 Strange, Michael 16-33N- 5E
LaSalle Stropoli, Mike 1
Status: WATER SE NW NW Elev: 0
permit: permit date: 10/15/02 comp. date: 04/24/03
Lambert X: 3228034 Lambert Y: 3024180 td: 360
producing formation: td formation:
latitude: 41.336789 longitude: 88.665749
Water from sandstone at depth 298 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	158
5	PVC SDR 17	158	298

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay w/gravel streaks	93	93
shale	62	155
coal	5	160
shale	110	270
limestone	5	275
shale	15	290
sandstone	70	360

120992673500 Strange, Michael 16-33N- 5E
LaSalle Strum, Bryan & Lanette 1
Status: WATER SE NW SW Elev: 0
permit: permit date: 04/18/02 comp. date: 01/30/03
Lambert X: 3228154 Lambert Y: 3021534 td: 380
producing formation: td formation:
latitude: 41.329490 longitude: 88.665399
Water from sandstone at depth 319 to 380 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	159
5	PVC SDR 21	159	319

Size hole below casing: in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	140	140
gravel	5	145

shale	95	240
coal	5	245
shale	15	260
limestone	37	297
shale	13	310
sandstone	70	380

120992750000 Strange, Michael 16-33N- 5E
LaSalle Trompeter, Leo 1
Status: WATER NE SW NW Elev: 0
permit: permit date: 04/08/05 comp. date: 06/08/05
Lambert X: 3228065 Lambert Y: 3023519 td: 360
producing formation: td formation:
latitude: 41.334954 longitude: 88.665638
Water from sandstone at depth 300 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	-1	150
4.50	PVC SDR 17	120	300

Size hole below casing: in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
brown clay	20	20
gray clay	110	130
gravel	10	140
shale	125	265
limestone	25	290
sandstone	70	360

120992519000 Fordonski, Keith 16-33N- 5E
LaSalle Underwood, Barry
Status: WATER NW NW NW Elev: 0
permit: W95-151 permit date: 09/15/95 comp. date: 10/26/95
Lambert X: 3227336 Lambert Y: 3024825 td: 320
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from limestone at depth 252 to 289 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250# SDR 17	0	260

Size hole below casing: in.
Static level 189 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	20	20
gravel	15	35
clay	125	160
shale	60	220
coal	10	230
shale	22	252
limestone	37	289
St. Peter sandstone	31	320

120992615600 Matherly, Hubert 16-33N- 5E
LaSalle Warning, Daniel
Status: WATER NE NW SW Elev: 0
permit: permit date: 06/20/99 comp. date: 10/09/99
Lambert X: 3228124 Lambert Y: 3022196 td: 350
producing formation: td formation:
latitude: 41.331316 longitude: 88.665487
Water from St. Peter at depth 215 to 350 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)

5 A53 STEEL -1 215
Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 20 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
brown clay	20	20
blue clay	125	145
brown sandstone	50	195
gray limestone	30	225
brown limestone	95	320
St. Peter sand	30	350

120992632200 Strange, Michael 16-33N- 5E
LaSalle Wheeler, Mike & Debra 1
Status: WATER SW SE SW Elev: 0
permit: permit date: 06/08/00 comp. date: 07/31/00
Lambert X: 3228879 Lambert Y: 3020229 td: 360
producing formation: td formation:
latitude: 41.325873 longitude: 88.662791
Water from sandstone at depth 280 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 200#	1	160
5	PVC 250#	160	280

Size hole below casing: in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	60	60
shale	140	200
coal	5	205
shale	70	275
sandstone	85	360

120992513800 Brown, Darwin 16-33N- 5E
LaSalle Wheeler, Steve & Tiffany
Status: WATER SW SE NW Elev: 0
permit: W95-170 permit date: 10/11/95 comp. date: 10/26/95
Lambert X: 3228761 Lambert Y: 3022874 td: 320
producing formation: td formation:
latitude: 41.333170 longitude: 88.663134
Water from sandstone at depth 279 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
	PLASTIC PVC SDR 21	0	252

Size hole below casing: 5 in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	90	92
sand gravel	18	110
gray sandstone	40	150
coal	9	159
shale	90	249
rock	25	274
blue shale	5	279
sandstone	41	320

120992560800 Strange, Michael 16-33N- 5E
LaSalle Whispering Pines Campground 2
Status: WATER NE SE NW Elev: 0
permit: W97-039 permit date: 04/04/97 comp. date: 04/12/97
Lambert X: 3229398 Lambert Y: 3023552 td: 360
producing formation: td formation:

latitude: 41.335023 longitude: 88.660781
Water from sandstone at depth 255 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21 200#	1	164
5	PVC SDR 17 250#	164	244

Size hole below casing: 4.75 in.
Static level 160 ft. below casing top which is 0 ft. above grnd level.
Pumping level 280 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay	125	125
gravel	3	128
clay	22	150
shale	65	215
very hard shale	10	225
shale	5	230
limestone	25	255
sandstone	105	360

120992642200 16-33N- 5E
LaSalle Whispering Pines MHP 1
Status: WATER NW SE NW Elev: 0
permit: permit date: comp. date: 01/01/74
Lambert X: 3228731 Lambert Y: 3023535 td: 460
producing formation: td formation:
latitude: 41.334993 longitude: 88.663221
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
	CASING	0	1

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992362900 Fykes, Charles N. 16-33N- 5E
LaSalle Y.M.C.A. 1
Status: WATER SE SE NE Elev: 633GL
permit: 63978 permit date: 07/22/77 comp. date: 08/12/77
Lambert X: 3232093 Lambert Y: 3022958 td: 325
producing formation: td formation:
latitude: 41.333316 longitude: 88.650942
Water from St. Peter sand at depth 290 to 325 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	A-53 19.45#	0	230

Size hole below casing: 5 in.
Static level 240 ft. below casing top which is 1 ft. above grnd level.
Pumping level 270 ft. when pumping at 15 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	140	140
clay & boulders	10	150
clay	50	200
gravel	30	230
limestone	40	270
shale	20	290
St. Peter sand	35	325

120990160500 Layne Western Co., Inc. 21-33N- 5E
LaSalle Nat'L Phosphate 1
Status: WATER 600 NL 760 WL SE Elev: 499TM
permit: 0 permit date: comp. date: 12/01/61
Lambert X: 3230789 Lambert Y: 3016746 td: 421
producing formation: td formation:
latitude: 41.316221 longitude: 88.655923

120992597400 Donald N. Cleary 21-33N- 5E
LaSalle Peters, JW & Sons Inc.
Status: WATER SW SW NE Elev: 0
permit: W99-020 permit date: 02/12/99 comp. date: 05/12/99
Lambert X: 3230318 Lambert Y: 3017662 td: 240
producing formation: td formation:
latitude: 41.318759 longitude: 88.657615
Water from sandstone at depth 223 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #200	0	155

Size hole below casing: in.
Static level 99 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 30 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
pit run gravel	7	7
gray clay	31	38
red clay	39	77
gravel	6	83
clay	36	119
white shale	9	128
limestone	95	223
sandstone	17	240

120990111700 Woodruff Charles Co 21-33N- 5E
LaSalle Seymour H H
Status: WATER SW SW NE Elev: 0
permit: 0 permit date: comp. date: 01/01/55
Lambert X: 3230322 Lambert Y: 3017662 td: 165
producing formation: td formation:
latitude: 41.318759 longitude: 88.657600

120992519100 Dietzman, Gerald E. 21-33N- 5E
LaSalle Waste Recovery - Illinois
Status: WATER SE SE NW Elev: 0
permit: W95-158 permit date: 09/21/95 comp. date: 10/05/95
Lambert X: 3229654 Lambert Y: 3017649 td: 400
producing formation: td formation:
latitude: 41.318740 longitude: 88.660044
Water from sandstone at depth 175 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
12	BLACK 43.77#	0	116

Size hole below casing: 11.75 in.
Static level 80 ft. below casing top which is 1 ft. above grnd level.
Pumping level 145 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	19	19
shale & rock	31	50
shale	48	98
rock	9	107
shale & rock	3	110
rock	65	175
sandstone	225	400

120992512400 Albrecht, S. Dean 21-33N- 5E
LaSalle Waste Recovery Inc.
Status: WATER SW SW NE Elev: 0
permit: W95-030 permit date: 03/22/95 comp. date: 04/06/95
Lambert X: 3230318 Lambert Y: 3017662 td: 630
producing formation: td formation:
latitude: 41.318759 longitude: 88.657615
Water from rock at depth 0 to 0 ft.

Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STEEL	0	470

Size hole below casing: in.
Static level 110 ft. below casing top which is 2 ft. above grnd level.
Pumping level 130 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
fine sand	15	15
#30 sand & fractured limestone	15	30
soft gray clay	5	35
shale with coal	8	43
gray shale	87	130
gray limestone	85	215
white sandstone (St. Peter 80' static)	205	420
white sandstone with cemented layers	20	440
gray limestone	30	470
gray limestone/siltstone	20	490
red shale/firm siltstone	3	493
red & gray siltstone	17	510
wh ss, fine 8-10 slot & hard 110' static	113	623
white limestone	7	630

120990206300 Anderson & Son, T. F. 21-33N- 5E
LaSalle Woodin W R
Status: WATER NW SW NE Elev: 0
permit: 0 permit date: comp. date: 06/01/38
Lambert X: 3230294 Lambert Y: 3018311 td: 55
producing formation: td formation:
latitude: 41.320549 longitude: 88.657681

120990024800 21-33N- 5E
LaSalle
Status: COAL NW SW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3227635 Lambert Y: 3018253 td: 1
producing formation: td formation:
latitude: 41.320456 longitude: 88.667407

120992578700 Arthur C. Leasure 22-33N- 5E
LaSalle Bartkus, John 1
Status: WATER NW SW SE Elev: 0
permit: W97-175 permit date: 10/09/97 comp. date: 02/02/98
Lambert X: 3235730 Lambert Y: 3015817 td: 360
producing formation: td formation:
latitude: 41.313531 longitude: 88.637886
Water from sandstone at depth 300 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 21 PVC	0	230
4	SCH 40 PVC	220	300

Size hole below casing: in.
Static level 270 ft. below casing top which is 2 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
drift	4	4
clay	226	230
sandstone	6	236
shale	24	260
limestone	20	280
shale	20	300
sandstone	100	360

120992597500 Arthur C. Leasure 22-33N- 5E
LaSalle Bartkus, John 1

Status: WATER NW SW SE Elev: 0
permit: W97-175 permit date: 10/09/97 comp. date: 02/02/98
Lambert X: 3235730 Lambert Y: 3015817 td: 360
producing formation: td formation:
latitude: 41.313531 longitude: 88.637886
Water from sandstone at depth 300 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 21 PVC	0	230
4	SCH 40 PVC	220	300

Size hole below casing: in.
Static level 270 ft. below casing top which is 2 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
drift	4	4
clay	226	230
sandstone	6	236
shale	24	260
limestone	20	280
shale	20	300
sandstone	60	360

120992578800 Arthur C. Leasure 22-33N- 5E
LaSalle Bartkus, John & Katherine 1
Status: WATER NE SW SE Elev: 0
permit: W97-176 permit date: 10/09/97 comp. date: 02/12/98
Lambert X: 3236397 Lambert Y: 3015832 td: 340
producing formation: td formation:
latitude: 41.313555 longitude: 88.635446
Water from sandstone at depth 320 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 21	0	320

Size hole below casing: in.
Static level 270 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
drift	5	5
clay	155	160
sandstone	7	167
clay	53	220
limestone	80	300
shale	17	317
sandstone	23	340

120992538800 Neely, Harry C. 22-33N- 5E
LaSalle Bartkus, Katharine #1
Status: WATER NW SE NE Elev: 0
permit: W94-065 permit date: 06/08/94 comp. date: 07/20/94
Lambert X: 3236922 Lambert Y: 3018457 td: 360
producing formation: td formation:
latitude: 41.320780 longitude: 88.633434
Water from sandstone at depth 215 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC RD 21	-2	53
5	A53 STEEL	53	70

Size hole below casing: 5 in.
Static level 150 ft. below casing top which is 2 ft. above grnd level.
Pumping level 190 ft. when pumping at 25 gpm for 3 hours.

Formations Passed Through	Thickness	Bottom
brown clay gummy	26	26
brown clay	18	44
soft sandstone & streak of clay	22	66
limestone	6	72

shale	133	205
limestone	7	212
shale	3	215
limestone	70	285
sandstone	75	360

120992467800 Strange, Michael K. 22-33N- 5E
LaSalle Close, Michael & Susan
Status: WATER S2 NE Elev: 0
permit: W92-015 permit date: 03/02/92 comp. date: 06/05/92
Lambert X: 3236608 Lambert Y: 3018124 td: 365
producing formation: td formation:
latitude: 41.319870 longitude: 88.634594
Water from sandstone at depth 305 to 365 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250	0	305

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 280 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay	110	110
shale & sandstone	40	150
shale	25	175
rock & shale	105	280
rock	65	345
St. Peter sandstone	20	365

120992591700 Rix, John Richard 22-33N- 5E
LaSalle Seneca Twp. High School 1
Status: WATER SE NE NE Elev: 0
permit: 099-188 permit date: 02/24/99 comp. date: 03/03/99
Lambert X: 3237547 Lambert Y: 3019124 td: 440
producing formation: td formation:
latitude: 41.322602 longitude: 88.631125
Water from sandstone at depth 400 to 440 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STEEL	-2	147
4.5	PVC SDR 21	120	400

Size hole below casing: in.
Static level 160 ft. below casing top which is 2 ft. above grnd level.
Pumping level 280 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gummy gray clay	82	84
red clay	12	96
yellow clay with sandstone	14	110
gray sandstone & shale	60	170
shale	94	264
rock (brown lime)	64	328
soft shale	4	332
St. Peter sandstone	108	440

120990001400 Zezain Bros 22-33N- 5E
LaSalle Shaver Roy
Status: WATER W2 NE SW Elev: 517GL
permit: 0 permit date: comp. date: 01/01/16
Lambert X: 3234348 Lambert Y: 3016765 td: 101
producing formation: td formation:
latitude: 41.316181 longitude: 88.642907

120990206400 22-33N- 5E
LaSalle Spicer Gravel Co

Status: WATER NW SW NW Elev: 0
permit: 0 permit date: comp. date: 09/01/44
Lambert X: 3232946 Lambert Y: 3018368 td: 140
producing formation: td formation:
latitude: 41.320638 longitude: 88.647979

120992363200 Fykes, Charles N. 22-33N- 5E
LaSalle Tri-County Pump & Well 1
Status: WATER NE NE NE Elev: 0
permit: 89081 permit date: 08/24/79 comp. date:
Lambert X: 3237510 Lambert Y: 3019777 td: 425
producing formation: td formation:
latitude: 41.324404 longitude: 88.631238
Water from St. Peter sand at depth 375 to 425 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15#	0	290

Size hole below casing: 5 in.
Static level 125 ft. below casing top which is 1 ft. above grnd level.
Pumping level 270 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	140	140
gravel	20	160
clay	10	170
broken lime	25	195
clay	10	205
limestone	20	225
clay	62	287
limestone	88	375
St. Peter sand	50	425

120990206500 23-33N- 5E
LaSalle Appleby Gerald
Status: WATER SW NW NW Elev: 0
permit: 0 permit date: comp. date: 05/01/60
Lambert X: 3238213 Lambert Y: 3019141 td: 180
producing formation: td formation:
latitude: 41.322632 longitude: 88.628689

120992591800 Rix, John Richard 23-33N- 5E
LaSalle Cumming, Jeff & Pat 1
Status: WATER SW SW NW Elev: 0
permit: permit date: 12/18/98 comp. date: 03/01/99
Lambert X: 3238285 Lambert Y: 3017836 td: 380
producing formation: td formation:
latitude: 41.319031 longitude: 88.628471
Water from sandstone at depth 344 to 380 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STEEL	0	147
4.5	PVC SDR 21	124	344

Size hole below casing: in.
Static level 160 ft. below casing top which is 2 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gray clay	70	72
gummy gray clay	8	80
dark brown clay	10	90
yellow clay & sandstone	14	104
gray clay with shale	68	172
shale with lime streaks	80	252
brown limestone	80	332
St. Peter sandstone	48	380

120992726700 Matherly, Hubert 23-33N- 5E
LaSalle Gates, Larry & Sue 1
Status: WATER SW SW NW Elev: 0
permit: permit date: 12/10/03 comp. date: 10/25/04
Lambert X: 3238285 Lambert Y: 3017836 td: 340
producing formation: td formation:
latitude: 41.319031 longitude: 88.628471
Water from sandstone at depth 305 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-1	245

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 25 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	50	50
shale	60	110
clay	120	230
coal	5	235
limestone	70	305
sandstone	35	340

120992537200 Rix, John Richard 23-33N- 5E
LaSalle Lamb, John #1
Status: WATER SW SW NW Elev: 0
permit: W95-121 permit date: 08/10/95 comp. date: 02/27/96
Lambert X: 3238285 Lambert Y: 3017836 td: 110
producing formation: td formation:
latitude: 41.319031 longitude: 88.628471
Water from gravel at depth 100 to 110 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	100

Size hole below casing: 5 in.
Static level 80 ft. below casing top which is 1 ft. above grnd level.
Pumping level 90 ft. when pumping at 0 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	3	3
yellow clay	7	10
blue clay	90	100
sand & gravel	10	110

120992645400 Strange, Michael 23-33N- 5E
LaSalle Rod, Ross 1
Status: WATER SW NW NW Elev: 0
permit: permit date: 08/07/01 comp. date: 08/24/01
Lambert X: 3238210 Lambert Y: 3019141 td: 400
producing formation: td formation:
latitude: 41.322632 longitude: 88.628700
Water from sandstone at depth 345 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	160
5	PVC SDR 17	160	280

Size hole below casing: in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	100	100
sandy shale	70	170
limestone	4	174
shale	11	185
limestone	2	187
shale	60	247

coal	2	249
shale	3	252
sand & shale	14	266
limestone	73	339
shale	6	345
sandstone	55	400

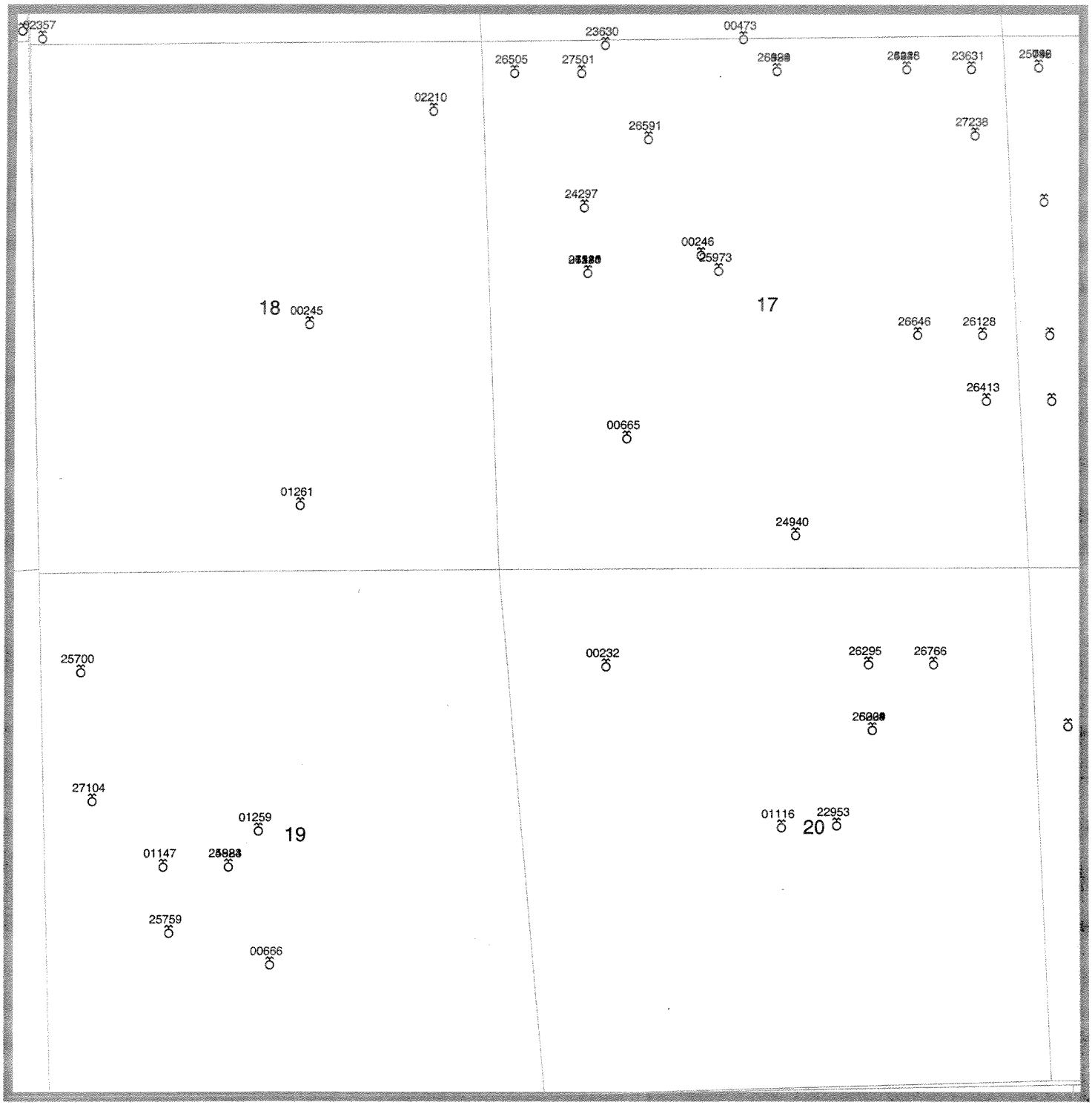
120992363300 Fykes, Charles N. 23-33N- 5E
LaSalle Tri-County Well & Pump 1
Status: WATER NW NW NW Elev: 665GL
permit: 82003 permit date: 11/16/78 comp. date: 12/20/78
Lambert X: 3238172 Lambert Y: 3019793 td: 365
producing formation: td formation:
latitude: 41.324430 longitude: 88.628816
Water from limestone at depth 185 to 365 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15#	0	185

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	135	135
gravel	25	160
clay	25	185
limestone	180	365

Map Area: 33N-4E-24 m3 to 33N-5E-9 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1431 2862 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:17172

Displayed data is based upon information supplied to the Illinois State Geological Survey (ISGS) and are not field verified. The ISGS does not guarantee the validity, accuracy or completeness of these data.

Non Oil and Gas - Wells

120990221800 Johnson C R 12-33N- 4E
LaSalle Peters Wm Mrs 1
Status: WATER 100 SL 75 EL Elev: 0
permit: 0 permit date: comp. date: 01/01/70
Lambert X: 3217117 Lambert Y: 3025194 td: 198
producing formation: td formation:
latitude: 41.339855 longitude: 88.705654

120990235700 Miller, J. P. Art. Well 7-33N- 5E
LaSalle City Of Marseilles 4
Status: WATER 60 SL 125 WL Elev: 655TM
permit: 0 permit date: comp. date: 01/01/72
Lambert X: 3217319 Lambert Y: 3025112 td: 1466
producing formation: td formation:
latitude: 41.339624 longitude: 88.704918

120990047300 No Company 8-33N- 5E
LaSalle Fewel Howard
Status: WATER N E SWc SE Elev: 670GL
permit: 0 permit date: comp. date:
Lambert X: 3224353 Lambert Y: 3025119 td: 197
producing formation: td formation:
latitude: 41.339471 longitude: 88.679184

120992503200 Brown, Darwin 16-33N- 5E
LaSalle Delaurentis, Mike
Status: WATER NW NW NW Elev: 0
permit: W95-053 permit date: 05/05/95 comp. date: 06/07/95
Lambert X: 3227336 Lambert Y: 3024825 td: 320
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from St Peter sandstone at depth 288 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	260

Size hole below casing: 5 in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	84	86
sand gravel	18	104
gray sandstone	38	142
shale	103	245
rock	43	288
St Peter sandstone	32	320

120992633500 Brown, Darwin 16-33N- 5E
LaSalle Ferris, Steve & Sydney
Status: WATER SW NW SW Elev: 0
permit: permit date: 11/13/00 comp. date: 05/20/01
Lambert X: 3227489 Lambert Y: 3021517 td: 400
producing formation: td formation:
latitude: 41.329460 longitude: 88.667832
Water from sandstone at depth 330 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	0	155
4.5	PVC LINER	10	330

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 280 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1
clay	115	116
sand gravel	26	142
clay	10	152
shale	128	280
rock	21	301
sandstone	99	400

120992504500 Brown, Darwin 16-33N- 5E
LaSalle Judd, Allen
Status: WATER NW NW NW Elev: 0
permit: W95-052 permit date: 05/05/95 comp. date: 05/20/95
Lambert X: 3227336 Lambert Y: 3024825 td: 340
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from St. Peter sandstone at depth 320 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC SDR 21	0	270

Size hole below casing: 5 in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	83	85
sand gravel	5	90
gray sandstone	20	110
shale	160	270
rock	40	310
St. Peter sandstone	30	340

120992595100 Brown, Darwin 16-33N- 5E
LaSalle Kaluzna, Brad
Status: WATER NW SW NW Elev: 0
permit: W98-187 permit date: 12/08/98 comp. date: 06/24/99
Lambert X: 3227397 Lambert Y: 3023502 td: 360
producing formation: td formation:
latitude: 41.334936 longitude: 88.668102
Water from sandstone at depth 324 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	BLK STEL A53 258 15#	0	168
4.5	LINER	144	324

Size hole below casing: in.
Static level 220 ft. below casing top which is 1 ft. above grnd level.
Pumping level 300 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay gray	117	119
sand gravel	27	146
gray shale with sandstone & lime mix	136	282
brown lime	37	319
sandstone	41	360

120992639800 Rix, John Richard 16-33N- 5E
LaSalle Kirkton, Mark 1
Status: WATER NW NW SW Elev: 0
permit: permit date: 01/31/01 comp. date: 07/06/01
Lambert X: 3227458 Lambert Y: 3022179 td: 400
producing formation: td formation:
latitude: 41.331286 longitude: 88.667923

Water from sandstone at depth 292 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STEEL	-1	147
4.5	PVC	20	380

Size hole below casing: 4 in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gummy gray clay	104	106
sand & gravel	23	129
shale with gray sandstone	143	272
brown limestone	20	292
sandstone	108	400

120992575800 Arthur C. Leasure 16-33N- 5E
LaSalle Popplewell, Jerry 1
Status: WATER NW NW NW Elev: 0
permit: W97-170 permit date: 10/07/97 comp. date: 02/01/98
Lambert X: 3227336 Lambert Y: 3024825 td: 320
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from sandstone at depth 292 to 315 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	SDR 21 PVC	0	292

Size hole below casing: in.
Static level 210 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	111	113
sandstone	7	120
shale	133	253
limestone	4	257
shale	18	275
limestone - pyrite	17	292
sand	23	315
shale	5	320

120992711600 Strange, Michael 16-33N- 5E
LaSalle Rohwer, Fawn 1
Status: WATER NW NW SW Elev: 0
permit: permit date: 04/24/03 comp. date: 08/16/03
Lambert X: 3227458 Lambert Y: 3022179 td: 360
producing formation: td formation:
latitude: 41.331286 longitude: 88.667923
Water from sandstone at depth 320 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	1	160
4.5	PVC SDR 17	80	320

Size hole below casing: in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	130	130
shale with coal streaks	125	255
limestone	50	305
shale	5	310
sandstone	50	360

120992519000 Fordonski, Keith 16-33N- 5E

LaSalle Underwood, Barry
Status: WATER NW NW NW Elev: 0
permit: W95-151 permit date: 09/15/95 comp. date: 10/26/95
Lambert X: 3227336 Lambert Y: 3024825 td: 320
producing formation: td formation:
latitude: 41.338585 longitude: 88.668281
Water from limestone at depth 252 to 289 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250# SDR 17	0	260

Size hole below casing: in.
Static level 189 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	20	20
gravel	15	35
clay	125	160
shale	60	220
coal	10	230
shale	22	252
limestone	37	289
St. Peter sandstone	31	320

120992664600 Strange, Robert E. 17-33N- 5E
LaSalle Campbell, Scott & Michele
Status: WATER NW NE SE Elev: 0
permit: permit date: 04/08/02 comp. date: 04/25/02
Lambert X: 3226134 Lambert Y: 3022161 td: 400
producing formation: td formation:
latitude: 41.331270 longitude: 88.672767
Water from sandstone at depth 335 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC O-RING SDR 21	-1	160
5	PVC O-RING SDR 17	160	330

Size hole below casing: in.
Static level 220 ft. below casing top which is 1 ft. above grnd level.
Pumping level 280 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	130	130
gravel	4	134
clay	31	165
gravel	5	170
shale	130	300
limestone	25	325
shale	5	330
sandstone	70	400

120992693400 Brown, Darwin 17-33N- 5E
LaSalle Candela, Sam
Status: WATER NW NW NE Elev: 0
permit: permit date: 01/10/03 comp. date: 04/10/03
Lambert X: 3224697 Lambert Y: 3024792 td: 420
producing formation: td formation:
latitude: 41.338560 longitude: 88.677936
Water from sandstone at depth 360 to 420 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	BLK STL A53-258 15#	0	147
4.5	PVC LINER	20	360

Size hole below casing: in.
Static level 220 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1

clay	144	145
shale	125	270
sandstone	150	420

120992758000 Strange, Michael 17-33N- 5E
LaSalle Cepaitis, Kyle 1
Status: WATER SE SW NW Elev: 0
permit: permit date: 09/23/05 comp. date: 10/25/05
Lambert X: 3222803 Lambert Y: 3022793 td: 360
producing formation: td formation:
latitude: 41.333083 longitude: 88.68491
Water from sandstone at depth 300 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	-1	95
4.50	PVC SDR 17	80	300

Size hole below casing: in.
Static level 170 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	60	60
gravel	15	75
shale w/coal streaks	135	210
sandstone	150	360

120992532800 Comar Drilling Co., Inc. 17-33N- 5E
LaSalle Cooke, Steve
Status: WATER NW NW NE Elev: 0
permit: W95-085 permit date: 06/29/95 comp. date: 09/08/95
Lambert X: 3224697 Lambert Y: 3024792 td: 300
producing formation: td formation:
latitude: 41.338560 longitude: 88.677936
Water from sandstone at depth 260 to 300 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SL 250 PVC	-2	260

Size hole below casing: 5 in.
Static level 140 ft. below casing top which is 2 ft. above grnd level.
Pumping level 260 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	120	120
gravel	10	130
sandstone	20	150
shale	105	255
sandstone	45	300

120992522800 Brown, Darwin 17-33N- 5E
LaSalle Denham, Eric
Status: WATER NW NE NE Elev: 0
permit: W96-014 permit date: 02/01/96 comp. date: 02/15/96
Lambert X: 3226014 Lambert Y: 3024806 td: 340
producing formation: td formation:
latitude: 41.338566 longitude: 88.673118
Water from sandstone at depth 280 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	280

Size hole below casing: 5 in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	107	109
sand gravel	5	114

clay	15	129
gray sandstone	25	154
shale	112	266
sandstone	74	340

120992504600 Brown, Darwin 17-33N- 5E
LaSalle Denham, Iris
Status: WATER NW NE NE Elev: 0
permit: W95-017 permit date: 02/28/95 comp. date: 05/25/95
Lambert X: 3226014 Lambert Y: 3024806 td: 340
producing formation: td formation:
latitude: 41.338566 longitude: 88.673118
Water from St. Peter sandstone at depth 300 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	290

Size hole below casing: 5 in.
Static level 150 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	106	108
sand gravel	32	140
gray sandstone	25	165
shale	105	270
rock	5	275
shale	15	290
St. Peter sandstone	50	340

120992491600 Brown, Darwin 17-33N- 5E
LaSalle Denham, Janelle
Status: WATER NW NE NE Elev: 0
permit: W94-018 permit date: 03/11/94 comp. date: 03/15/94
Lambert X: 3226014 Lambert Y: 3024806 td: 340
producing formation: td formation:
latitude: 41.338566 longitude: 88.673118
Water from sandstone at depth 270 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	269

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay	135	135
sandstone	16	151
shale & sandstone	22	173
rock	1	174
shale	89	263
sandstone	77	340

120992622500 Strange, Robert E. 17-33N- 5E
LaSalle Gill, Kevin
Status: WATER SE SW NW Elev: 0
permit: permit date: 07/10/00 comp. date: 07/14/00
Lambert X: 3222802 Lambert Y: 3022792 td: 260
producing formation: td formation:
latitude: 41.333093 longitude: 88.684935
Water from sandstone at depth 220 to 260 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 17	160	225
5	PVC SDR 21	-1	160

Size hole below casing: in.

Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
black dirt	2	2
clay	78	80
shale	140	220
sandstone	40	260

120992363000 Knierim, Phil 17-33N- 5E
LaSalle Glenwood Farms
Status: WATER 50 NL 75 EL NW NW Elev: 620GL
permit: 85303 permit date: 05/07/79 comp. date: 06/12/79
Lambert X: 3222963 Lambert Y: 3025054 td: 380
producing formation: td formation:
latitude: 41.339326 longitude: 88.684271
Water from rock at depth 240 to 380 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL 15#	0	240

Size hole below casing: 5 in.
Static level 240 ft. below casing top which is 1 ft. above grnd level.
Pumping level 273 ft. when pumping at 50 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
overburden	240	240
rock	140	380

120992650500 17-33N- 5E
LaSalle Glenwood RV Resort
Status: WATER NW NW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3222062 Lambert Y: 3024765 td: 0
producing formation: td formation:
latitude: 41.338551 longitude: 88.687577
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992614500 Strange, Michael 17-33N- 5E
LaSalle Henry, Stan & Heidi 1
Status: WATER NW NE NE Elev: 0
permit: permit date: 06/02/99 comp. date: 06/11/99
Lambert X: 3226014 Lambert Y: 3024806 td: 340
producing formation: td formation:
latitude: 41.338566 longitude: 88.673118
Water from sandstone at depth 300 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21 200#	1	160
5	PVC SDR 17 250#	160	300

Size hole below casing: in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	120	120
gravel	20	140
shale	150	290
sandstone	50	340

120992363100 Knierim, Phil 17-33N- 5E
LaSalle Hogue, Fred Sr.

Status: WATER NE NE NE Elev: 680GL
permit: 105586 permit date: 11/17/82 comp. date: 11/26/82
Lambert X: 3226673 Lambert Y: 3024813 td: 360
producing formation: td formation:
latitude: 41.338569 longitude: 88.670707
Water from St. Peter sand at depth 160 to 360 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK	0	270

Size hole below casing: 5 in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 35 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	3	3
clay	117	120
sand gravel	10	130
sand rock	30	160
clay	100	260
rock	18	278
St. Peter sand	82	360

120992569900 Wellendorf, Rodney 17-33N- 5E
LaSalle Hogue, Wayne & Julie
Status: WATER NW NW NE Elev: 0
permit: W97-042 permit date: 04/08/97 comp. date: 09/18/97
Lambert X: 3224697 Lambert Y: 3024792 td: 300
producing formation: td formation:
latitude: 41.338560 longitude: 88.677936
Water from sandstone at depth 252 to 300 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5		-1	255

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1
gray clay	134	135
gray sandstone	30	165
gray shale	87	252
sandstone	48	300

120990066500 Johnson C R 17-33N- 5E
LaSalle Kellerman Mrs F 1
Status: WATER SW Elev: 0
permit: 0 permit date: comp. date: 01/01/46
Lambert X: 3223201 Lambert Y: 3021145 td: 205
producing formation: td formation:
latitude: 41.328542 longitude: 88.683529

120992429700 Knierim, Phil 17-33N- 5E
LaSalle Kline, Harry
Status: WATER NE SW NW Elev: 0
permit: W90-114 permit date: 07/30/90 comp. date: 07/26/90
Lambert X: 3222775 Lambert Y: 3023452 td: 260
producing formation: td formation:
latitude: 41.334913 longitude: 88.685012
Water from St. Peter sandstone at depth 120 to 260 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	236

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	76	78
sand gravel	3	81
sandstone	29	110
shale	40	150

120992641300 Strange, Robert E. 17-33N- 5E
LaSalle Machaj, Larry
Status: WATER SE NE SE Elev: 0
permit: permit date: 08/02/01 comp. date: 07/16/01
Lambert X: 3226825 Lambert Y: 3021506 td: 320
producing formation: td formation:
latitude: 41.329447 longitude: 88.670261
Water from sandstone at depth 285 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 17	-1	275

Size hole below casing: in.
Static level 220 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	265	265
limestone	20	285
sandstone	35	320

120990111100 17-33N- 5E
LaSalle Morey Martin
Status: WATER SE SW NW Elev: 620GL
permit: 0 permit date: comp. date: 01/01/53
Lambert X: 3222803 Lambert Y: 3022792 td: 250
producing formation: td formation:
latitude: 41.333093 longitude: 88.684931

120992659100 Stinnett, David 17-33N- 5E
LaSalle Nellett, Henry & Gaile
Status: WATER SW NE NW Elev: 0
permit: permit date: 01/09/01 comp. date: 03/12/02
Lambert X: 3223407 Lambert Y: 3024119 td: 320
producing formation: td formation:
latitude: 41.336737 longitude: 88.682678
Water from sandstone at depth 268 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-1	268

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
brown clay	15	15
gravel & clay	200	215
sandstone	25	240
white clay	20	260
sandstone	60	320

120992723800 Strange, Michael 17-33N- 5E
LaSalle Perry, Tim & Debby 1
Status: WATER SE NE NE Elev: 0
permit: permit date: 07/30/04 comp. date: 08/05/04
Lambert X: 3226703 Lambert Y: 3024152 td: 141
producing formation: td formation:
latitude: 41.336746 longitude: 88.670619
Water from gravel at depth 131 to 141 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12

Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	131
5	PVC SCREEN	131	141

Size hole below casing: in.
Static level 130 ft. below casing top which is 1 ft. above grnd level.
Pumping level 135 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	93	95
sand & gravel	46	141
shale at	0	141

120992494000 Fordonski, Keith 17-33N- 5E
LaSalle Raikes, Dave
Status: WATER SW SW SE Elev: 0
permit: W94-140 permit date: 08/16/94 comp. date: 08/23/94
Lambert X: 3224898 Lambert Y: 3020168 td: 200
producing formation: td formation:
latitude: 41.325806 longitude: 88.677354
Water from sandstone at depth 170 to 200 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250# SDR #11	0	150

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 120 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	10	10
sand & gravel	10	20
shale	125	145
limestone	25	170
sandstone	30	200

120992612800 Strange, Michael 17-33N- 5E
LaSalle Rohwer, Mark W. Jr. 1
Status: WATER NE NE SE Elev: 0
permit: permit date: 12/31/98 comp. date: 07/08/99
Lambert X: 3226795 Lambert Y: 3022167 td: 360
producing formation: td formation:
latitude: 41.331270 longitude: 88.670349
Water from sandstone at depth 320 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21 200#	1	160
5	PVC SDR 17 250#	160	320

Size hole below casing: in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	120	120
shale	20	140
gravel	10	150
shale	140	290
shale with limestone streaks	20	310
sandstone	50	360

120992597300 Brown, Darwin 17-33N- 5E
LaSalle Sebby, Jerry
Status: WATER SE SE NW Elev: 0
permit: W99-044 permit date: 04/22/99 comp. date: 05/07/99
Lambert X: 3224123 Lambert Y: 3022804 td: 400
producing formation: td formation:
latitude: 41.333093 longitude: 88.680102
Water from sandstone at depth 360 to 400 ft.

Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	BLK STL A53 258 15#	0	147
4.5	LINER	100	360

Size hole below casing: in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gummy gray clay	116	118
sand gravel	16	134
gray sandstone & shale	110	244
shale gray lime & limestone	16	260
sandstone	140	400

120992750100 Strange, Michael 17-33N- 5E
LaSalle Spencer, Sally 1
Status: WATER NE NW NW Elev: 0
permit: permit date: 06/06/05 comp. date: 07/10/05
Lambert X: 3222721 Lambert Y: 3024772 td: 320
producing formation: td formation:
latitude: 41.338542 longitude: 88.685144
Water from sandstone at depth 254 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	154
5	PVC SDR 17	154	254

Size hole below casing: in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
tan clay	20	20
gray clay	90	110
shale w/coal streaks	130	240
sandstone	80	320

120992513900 Fordonski, Keith 17-33N- 5E
LaSalle Tongate, Arvin
Status: WATER NW NW NE Elev: 0
permit: W95-148 permit date: 09/12/95 comp. date: 09/18/95
Lambert X: 3224697 Lambert Y: 3024792 td: 320
producing formation: td formation:
latitude: 41.338560 longitude: 88.677936
Water from sandstone at depth 260 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	265

Size hole below casing: in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 240 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	150	150
sand & gravel	50	200
clay	60	260
sandstone	60	320

120990024600 17-33N- 5E
LaSalle
Status: MSFT NW SE SE NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3223951 Lambert Y: 3022968 td: 1
producing formation: td formation:
latitude: 41.333550 longitude: 88.680726

120990221000 18-33N- 5E
LaSalle Glenwood Farms 2
Status: WATER 700 NL 500 EL Elev: 0
permit: 0 permit date: comp. date: 04/01/70
Lambert X: 3221248 Lambert Y: 3024387 td: 270
producing formation: td formation:
latitude: 41.337529 longitude: 88.690567

120990126100 18-33N- 5E
LaSalle Littlefair Fannie
Status: WATER SW SE Elev: 500GL
permit: 0 permit date: comp. date: 01/01/54
Lambert X: 3219924 Lambert Y: 3020460 td: 90
producing formation: td formation:
latitude: 41.326733 longitude: 88.695538

120990024500 18-33N- 5E
LaSalle
Status: COAL NW NE NW SE Elev: 0
permit: permit date: comp. date:
Lambert X: 3220017 Lambert Y: 3022274 td: 1
producing formation: td formation:
latitude: 41.331733 longitude: 88.694243

120992570000 Aneffco Well Drilling 19-33N- 5E
LaSalle Allen, Charles 2
Status: WATER SE NW NW Elev: 0
permit: W97-169 permit date: 10/01/97 comp. date: 10/16/97
Lambert X: 3217733 Lambert Y: 3018801 td: 203
producing formation: td formation:
latitude: 41.322212 longitude: 88.703605
Water from sandstone at depth 179 to 203 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	ASTM F480 SDR 21	-1	176

Size hole below casing: in.
Static level 75 ft. below casing top which is 1 ft. above grnd level.
Pumping level 120 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
powdery black/gray soil	4	4
yellow sand & gravel	10	14
peat	4	18
dk gry ss w/limestone coal & shale strks	21	39
shale w/coal & limestone streaks	127	166
limestone	13	179
sandstone	24	203

120992582400 Strange, Robert E. 19-33N- 5E
LaSalle Cuchiara, James J.
Status: WATER NE NE SW Elev: 0
permit: 099-104 permit date: 07/02/98 comp. date: 08/19/98
Lambert X: 3219236 Lambert Y: 3016848 td: 220
producing formation: td formation:
latitude: 41.316791 longitude: 88.698171
Water from sandstone at depth 168 to 220 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21 #200 PSI	1	168

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 100 ft. when pumping at 25 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	3	3

shale	5	8
coal	4	12
shaley limestone	73	85
coal	5	90
shale	25	115
limestone	40	155
shale	2	157
sandstone	63	220

120990114700 19-33N- 5E
LaSalle Hayes J H
Status: WATER NW NE SW Elev: 500GL
permit: 0 permit date: comp. date: 01/01/53
Lambert X: 3218577 Lambert Y: 3016843 td: 182
producing formation: td formation:
latitude: 41.316840 longitude: 88.700585

120990066600 19-33N- 5E
LaSalle Lattz E J
Status: WATER S2 Elev: 0
permit: 0 permit date: comp. date: 01/01/44
Lambert X: 3219658 Lambert Y: 3015877 td: 210
producing formation: td formation:
latitude: 41.314103 longitude: 88.696659

120992498300 Brown, Darwin 19-33N- 5E
LaSalle Rardin, Kelly
Status: WATER NE NE SW Elev: 0
permit: W94-254 permit date: 12/28/94 comp. date: 01/24/95
Lambert X: 3219236 Lambert Y: 3016848 td: 180
producing formation: td formation:
latitude: 41.316791 longitude: 88.698171
Water from sandstone at depth 40 to 180 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	118

Size hole below casing: 5 in.
Static level 40 ft. below casing top which is 1 ft. above grnd level.
Pumping level 120 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1
clay	2	3
rock, sandstone	7	10
shale	108	118
sandstone	62	180

120992710400 Strange, Michael 19-33N- 5E
LaSalle Satler, Robert 1
Status: WATER SE SW NW Elev: 0
permit: permit date: 09/18/03 comp. date: 11/09/03
Lambert X: 3217855 Lambert Y: 3017493 td: 260
producing formation: td formation:
latitude: 41.318603 longitude: 88.703201
Water from sandstone at depth 170 to 260 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	1	130

Size hole below casing: in.
Static level 30 ft. below casing top which is 1 ft. above grnd level.
Pumping level 60 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
brown clay	5	5
sandstone tan & gray	3	8
shale	7	15

coal	2	17
shale	1	18
limestone	1	19
shale	91	110
limestone	60	170
sandstone	90	260

120992575900 Brown, Darwin 19-33N- 5E
LaSalle Votava, George
Status: WATER SW NE SW Elev: 0
permit: W97-145 permit date: 09/02/97 comp. date: 01/21/98
Lambert X: 3218638 Lambert Y: 3016189 td: 180
producing formation: td formation:
latitude: 41.314988 longitude: 88.700379
Water from sandstone at depth 146 to 180 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	115

Size hole below casing: in.
Static level 45 ft. below casing top which is 1 ft. above grnd level.
Pumping level 120 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	3	5
yellow sandstone	7	12
shale	100	112
brown lime	34	146
sandstone	34	180

120990125900 Woodruff Charles Co 19-33N- 5E
LaSalle Wise Wm
Status: WATER Elev: 495GL
permit: 0 permit date: comp. date: 01/01/42
Lambert X: 3219535 Lambert Y: 3017194 td: 82
producing formation: td formation:
latitude: 41.317737 longitude: 88.697066

120992629500 Bisping, Calvin 20-33N- 5E
LaSalle Campa, Christian
Status: WATER SE NW NE Elev: 0
permit: permit date: 12/20/00 comp. date: 03/09/01
Lambert X: 3225633 Lambert Y: 3018872 td: 201
producing formation: td formation:
latitude: 41.322214 longitude: 88.674709
Water from limestone at depth 100 to 201 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	120

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 120 ft. when pumping at 30 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
green rock	100	100
brown limestone	20	120
sandstone	81	201

120992620400 Ken Knierim/K & K Well Drlg. 20-33N- 5E
LaSalle Dowling, Jim
Status: WATER NE SW NE Elev: 0
permit: permit date: 04/28/00 comp. date: 10/26/00
Lambert X: 3225672 Lambert Y: 3018225 td: 220
producing formation: td formation:
latitude: 41.320429 longitude: 88.674588
Water from sandstone at depth 180 to 220 ft.

Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	BLACK STEEL A53 15#	0	42
4.5	PLASTIC LINER	20	180

Size hole below casing: in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	26	28
blue rock & shale	78	106
rock	50	156
sandstone	64	220

120992295300 Wehling, R. H. 20-33N- 5E
LaSalle Illinois Nitrogen
Status: WATER 20 SL 550 WL NE Elev: 0
permit: 61432 permit date: 06/07/77 comp. date:
Lambert X: 3225308 Lambert Y: 3017268 td: 360
producing formation: td formation:
latitude: 41.317799 longitude: 88.675951

120992676600 Strange, Michael 20-33N- 5E
LaSalle Kiper, Jeff & Tina 1
Status: WATER SW NE NE Elev: 0
permit: permit date: 06/27/02 comp. date: 10/02/02
Lambert X: 3226290 Lambert Y: 3018879 td: 240
producing formation: td formation:
latitude: 41.322216 longitude: 88.672306
Water from sandstone at depth 175 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	155
5	PVC SDR 17	155	175

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 140 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay & sandy clay	17	17
shale	13	30
limestone	20	50
shaley limestone	40	90
shale with coal streak 90'-93'	25	115
shale & limestone	45	160
sandstone	80	240

120992603100 Matherly, Hubert 20-33N- 5E
LaSalle Lee, Cecil
Status: WATER NE SW NE Elev: 0
permit: permit date: 11/30/99 comp. date: 02/15/00
Lambert X: 3225672 Lambert Y: 3018225 td: 305
producing formation: td formation:
latitude: 41.320429 longitude: 88.674588
Water from St. Peter at depth 110 to 305 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A53 STEEL	-1	110

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 140 ft. when pumping at 25 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
brown clay	5	5
sandy clay	15	20
shale	80	100

brown limestone	70	170
St. Peter	135	305

120992532900 Comar Drilling Co., Inc. 20-33N- 5E
LaSalle Shelton, Michael
Status: WATER NE SW NE Elev: 0
permit: W95-050 permit date: 10/13/95 comp. date: 10/23/95
Lambert X: 3225672 Lambert Y: 3018225 td: 200
producing formation: td formation:
latitude: 41.320429 longitude: 88.674588
Water from sandstone at depth 150 to 200 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SL 200 PVC	0	145

Size hole below casing: 5 in.
Static level 60 ft. below casing top which is 2 ft. above grnd level.
Pumping level 160 ft. when pumping at 0 gpm for 1 hours.

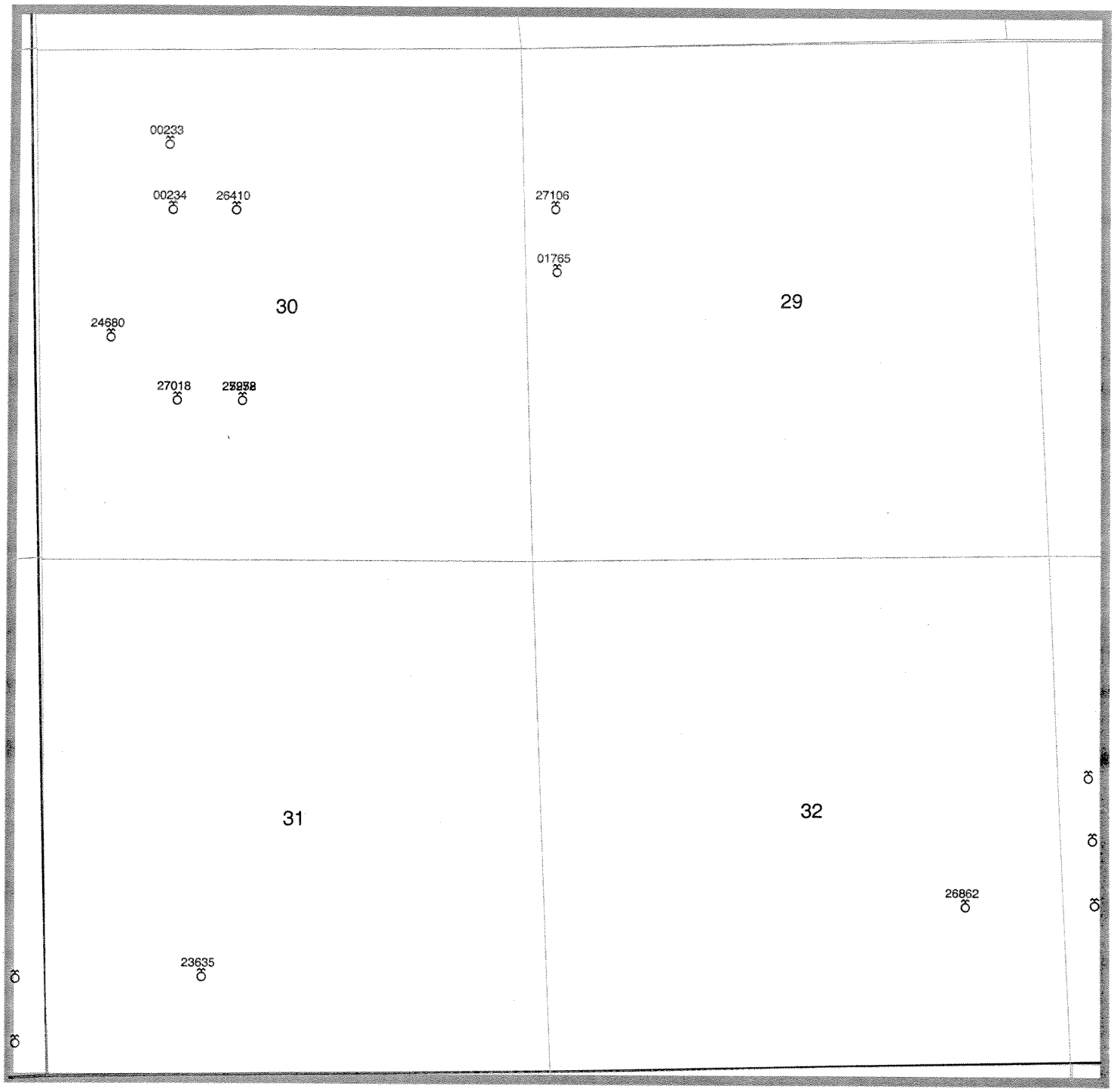
Formations Passed Through	Thickness	Bottom
clay	15	15
sandstone	30	45
shale	90	135
lime	10	145
sandstone	55	200

120990111600 Woodruff Charles Co 20-33N- 5E
LaSalle Trumbo Riley
Status: WATER Elev: 505GL
permit: 0 permit date: comp. date: 01/01/52
Lambert X: 3224760 Lambert Y: 3017239 td: 158
producing formation: td formation:
latitude: 41.317733 longitude: 88.677956

120990023200 20-33N- 5E
LaSalle
Status: COAL SE NW NW Elev: 0
permit: 0 permit date: comp. date:
Lambert X: 3223007 Lambert Y: 3018844 td: 1
producing formation: td formation:
latitude: 41.316402 longitude: 88.676085

120990024800 21-33N- 5E
LaSalle
Status: COAL NW SW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3227635 Lambert Y: 3018253 td: 1
producing formation: td formation:
latitude: 41.320456 longitude: 88.667407

Map Area: 33N-4E-36 m3 to 33N-5E-21 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1496 2992 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:17952

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Non Oil and Gas - Wells

120992467400 Fordonski, Keith 36-33N- 4E
LaSalle Donovan, Art
Status: WATER SE SE SE Elev: 0
permit: W92-096 permit date: 06/16/92 comp. date: 06/20/92
Lambert X: 3217305 Lambert Y: 3004360 td: 435
producing formation: td formation:
latitude: 41.282403 longitude: 88.705632
Water from sandstone at depth 400 to 435 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	400

Size hole below casing: 5 in.
Static level 320 ft. below casing top which is 1 ft. above grnd level.
Pumping level 380 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	150	150
gravel	10	160
shale	200	360
rock	42	402
St. Peter sandstone	33	435

120992540100 Brown, Darwin 36-33N- 4E
LaSalle Housing Authority - LaSalle Co
Status: WATER SE SE SE Elev: 0
permit: W96-113 permit date: 07/03/96 comp. date: 07/12/96
Lambert X: 3217305 Lambert Y: 3004360 td: 440
producing formation: td formation:
latitude: 41.282403 longitude: 88.705632
Water from sandstone at depth 400 to 440 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLK STL A53.258 15#	0	370

Size hole below casing: 5 in.
Static level 240 ft. below casing top which is 1 ft. above grnd level.
Pumping level 340 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	138	140
sand gravel	137	277
shale	90	367
rock	33	400
sandstone	40	440

120992361900 Rob, Ronald Gene 36-33N- 4E
LaSalle Rieuf, Clarence
Status: WATER NE SE SE Elev: 0
permit: 101311 permit date: 09/16/81 comp. date: 09/16/81
Lambert X: 3217293 Lambert Y: 3005023 td: 280
producing formation: td formation:
latitude: 41.284231 longitude: 88.705655
Water from limestone at depth 0 to 0 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK STEEL 14.98	0	270

Size hole below casing: 5 in.
Static level 190 ft. below casing top which is 1 ft. above grnd level.
Pumping level 190 ft. when pumping at 10 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay & gravel	270	270
limestone	10	280

120992362000 Fykes, Charles N. 36-33N- 4E
LaSalle Tri Cnty Well & Pump, Inc. 1
Status: WATER SE SE SE Elev: 0
permit: 79767 permit date: 09/21/78 comp. date: 09/30/78
Lambert X: 3217305 Lambert Y: 3004360 td: 445
producing formation: td formation:
latitude: 41.282403 longitude: 88.705632
Water from St. Peter sand at depth 410 to 445 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15#	0	379

Size hole below casing: 5 in.
Static level 260 ft. below casing top which is 1 ft. above grnd level.
Pumping level 290 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	180	180
gravel	160	340
shale	37	377
limestone	33	410
St. Peter sand	35	445

120992507900 Rix, John Richard 36-33N- 4E
LaSalle Vidito, Anna
Status: WATER SE SE SE Elev: 0
permit: W95-088 permit date: 07/05/95 comp. date: 08/06/95
Lambert X: 3217305 Lambert Y: 3004360 td: 480
producing formation: td formation:
latitude: 41.282403 longitude: 88.705632
Water from sandstone at depth 420 to 480 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK STEEL A53 15#	0	420

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	3	3
clay with gravel	169	172
sand gravel	12	184
clay with gravel	8	192
sabd gravel	85	277
shale	89	366
rock with shale	34	400
shale	14	414
sandstone	66	480

120990176500 29-33N- 5E
LaSalle Bruno Joe
Status: WATER SW SW NW Elev: 528GL
permit: 0 permit date: comp. date: 01/01/55
Lambert X: 3222830 Lambert Y: 3012287 td: 134
producing formation: td formation:
latitude: 41.304129 longitude: 88.685148

120992710600 Strange, Michael 29-33N- 5E
LaSalle Bruno, Matt 1
Status: WATER NW SW NW Elev: 0
permit: permit date: 06/05/03 comp. date: 10/07/03
Lambert X: 3222807 Lambert Y: 3012943 td: 240
producing formation: td formation:
latitude: 41.305935 longitude: 88.685239
Water from sandstone at depth 157 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:

Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	1	139

Size hole below casing: in.
Static level 40 ft. below casing top which is 1 ft. above grnd level.
Pumping level 80 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
dirt	3	3
gravel	6	9
brown sandstone	2	11
gray sandstone	9	20
coal	5	25
shale, limestone 42'-43'	105	130
limestone	25	155
shale	2	157
sandstone	83	240

120992701800 Rix, John Richard 30-33N- 5E
LaSalle Kent, Steven 1
Status: WATER SW NE SW Elev: 0
permit: permit date: 10/09/02 comp. date: 06/10/03
Lambert X: 3218916 Lambert Y: 3010959 td: 340
producing formation: td formation:
latitude: 41.300560 longitude: 88.699531
Water from sandstone at depth 276 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL	-1	104
4.5	PVC	20	300

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
yellow clay	12	14
gray clay with gravel	66	80
gray sandstone with shale streaks	30	110
shale	135	245
limestone	31	276
sandstone	64	340

120992595200 Rix, John Richard 30-33N- 5E
LaSalle Leinlinger, John
Status: WATER SE NE SW Elev: 0
permit: W98-189 permit date: 12/16/98 comp. date: 04/17/99
Lambert X: 3219576 Lambert Y: 3010961 td: 400
producing formation: td formation:
latitude: 41.300550 longitude: 88.697118
Water from sandstone at depth 305 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	275

Size hole below casing: in.
Static level 125 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 50 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
brown clay	15	15
sticky gray	40	55
sandy clay	20	75
gray shale	197	272
limestone	33	305
sandstone	95	400

120992641000 Strange, Michael 30-33N- 5E
LaSalle Premiers Asset Services 1

Status: WATER NE SE NW Elev: 0
permit: permit date: 08/19/01 comp. date: 08/27/01
Lambert X: 3219508 Lambert Y: 3012923 td: 0
producing formation: td formation:
latitude: 41.305961 longitude: 88.697303
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL	-2	5

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
extended well above ground bckfld w/clay	0	0

120992727800 Rix, John Richard 30-33N- 5E
LaSalle Schomas, Rick & Brenda 1
Status: WATER SE NE SW Elev: 0
permit: permit date: 03/02/04 comp. date: 06/16/04
Lambert X: 3219576 Lambert Y: 3010961 td: 340
producing formation: td formation:
latitude: 41.300550 longitude: 88.697118
Water from sandstone at depth 269 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC	-2	110
4.5	PVC	20	300

Size hole below casing: in.
Static level 140 ft. below casing top which is 2 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gray clay	73	75
sand & gravel (dry)	32	107
sandstone gray	30	137
shale & rock streaks	159	296
sandstone	44	340

120992468000 Fordonski, Keith 30-33N- 5E
LaSalle Witkowski, Peter
Status: WATER NE NW SW Elev: 0
permit: W92-208 permit date: 10/29/92 comp. date: 11/28/92
Lambert X: 3218233 Lambert Y: 3011610 td: 320
producing formation: td formation:
latitude: 41.302372 longitude: 88.702008
Water from sandstone at depth 260 to 320 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK STEEL	0	260

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 280 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	40	40
shale	200	240
rock	5	245
shale	15	260
rock	30	290
St.Peter sandstone	30	320

120990023300 30-33N- 5E
LaSalle
Status: COAL SW NE NW Elev: 0
permit: 0 permit date: comp. date:

Lambert X: 3218825 Lambert Y: 3013573 td: 1
producing formation: td formation:
latitude: 41.307883 longitude: 88.699782

120990023400 30-33N- 5E
LaSalle
Status: COAL NW SE NW Elev: 0
permit: 0 permit date: comp. date:
Lambert X: 3218848 Lambert Y: 3012920 td: 1
producing formation: td formation:
latitude: 41.308358 longitude: 88.702812

120992363500 Scherf Robert William 31-33N- 5E
LaSalle Zimmerman, Dale 2
Status: WATER NW SE SW Elev: 0
permit: 114333 permit date: 08/24/84 comp. date: 09/04/84
Lambert X: 3219201 Lambert Y: 3005040 td: 35
producing formation: td formation:
latitude: 41.284231 longitude: 88.698578
Water from gravel at depth 30 to 35 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
24	CONCRETE	10	35

Size hole below casing: 0 in.
Static level 16 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
yellow clay	16	18
blue clay	12	30
gravel	5	35

120992686200 Becker Oil Co. 32-33N- 5E
LaSalle Lucie Farm B-5
Status: STRAT SW NE SE Elev: 0
permit: permit date: comp. date:
Lambert X: 3227071 Lambert Y: 3005800 td: 108
producing formation: td formation:
latitude: 41.286133 longitude: 88.669886

120992491700 Fordonski, Keith 33-33N- 5E
LaSalle Eich, Ray & Pam
Status: WATER NW NW SW Elev: 0
permit: W93-040 permit date: 05/18/93 comp. date: 08/08/93
Lambert X: 3228369 Lambert Y: 3006475 td: 270
producing formation: td formation:
latitude: 41.287961 longitude: 88.665119
Water from clay at depth 200 to 270 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250#	0	270

Size hole below casing: 5 in.
Static level 170 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	95	95
sand	105	200
clay	70	270

120992722600 Strange, Robert E. 33-33N- 5E
LaSalle Podgorny, Don 1
Status: WATER SW NW SW Elev: 0
permit: permit date: 04/08/04 comp. date: 04/20/04

Lambert X: 3228398 Lambert Y: 3005823 td: 215
producing formation: td formation:
latitude: 41.286163 longitude: 88.665035
Water from sand & gravel at depth 205 to 215 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	205
5	PVC SDR 21 SCREEN	205	215

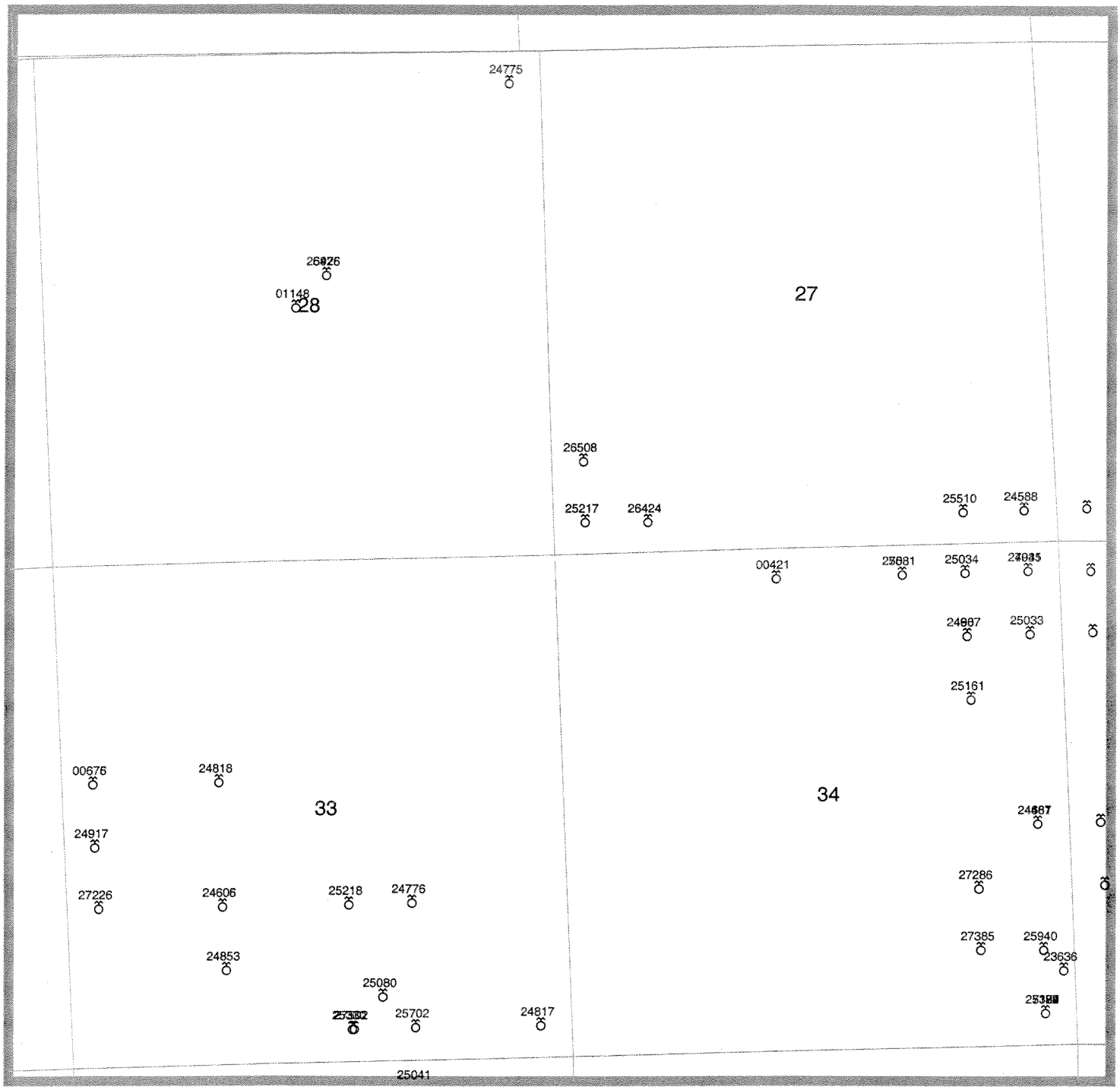
Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	85	87
gravel	34	121
clay	9	130
sand & gravel	84	214
clay	1	215

120990067500 33-33N- 5E
LaSalle Wylie John-Estate 1
Status: WATER SW SW NW Elev: 0
permit: 0 permit date: comp. date: 01/01/41
Lambert X: 3228340 Lambert Y: 3007127 td: 245
producing formation: td formation:
latitude: 41.289760 longitude: 88.665203

120990067600 33-33N- 5E
LaSalle Wylie John-Estate 2
Status: WATER SW SW NW Elev: 0
permit: 0 permit date: comp. date: 01/01/42
Lambert X: 3228340 Lambert Y: 3007127 td: 245
producing formation: td formation:
latitude: 41.289760 longitude: 88.665203

Map Area: 32N-5E-5 m3 to 33N-5E-23 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1530 3060 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:18360

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Non Oil and Gas - Wells

120992503000 Fordonski, Keith 26-33N- 5E
LaSalle Thorpe, James
Status: WATER SW SW SW Elev: 0
permit: W95-036 permit date: 04/13/95 comp. date: 04/17/95
Lambert X: 3238738 Lambert Y: 3010022 td: 50
producing formation: td formation:
latitude: 41.297473 longitude: 88.627089
Water from sand & gravel at depth 40 to 50 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 13
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	50

Size hole below casing: in.
Static level 10 ft. below casing top which is 1 ft. above grnd level.
Pumping level 40 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	40	40
sand & gravel	10	50

120992642400 27-33N- 5E
LaSalle Marseilles 7
Status: WATER SE SW SW Elev: 0
permit: permit date: comp. date: 01/01/00
Lambert X: 3234139 Lambert Y: 3009879 td: 1450
producing formation: td formation:
latitude: 41.297199 longitude: 88.643908
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
	CASING	0	750

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992521700 Brown, Darwin 27-33N- 5E
LaSalle Shufflebocham, Robert
Status: WATER SW SW SW Elev: 0
permit: W95-207 permit date: 11/21/95 comp. date: 01/11/96
Lambert X: 3233482 Lambert Y: 3009859 td: 280
producing formation: td formation:
latitude: 41.297161 longitude: 88.646311
Water from sandstone at depth 250 to 280 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR-21	0	158

Size hole below casing: 5 in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	22	24
sand gravel (orange sand)	50	74
shale	77	151
rock	99	250
sandstone	30	280

120992458800 Fordonski, Keith 27-33N- 5E
LaSalle Spring Brook Marina
Status: WATER SE SE SE Elev: 0
permit: W92-003 permit date: 01/08/92 comp. date: 01/23/92

Lambert X: 3238079 Lambert Y: 3010003 td: 44
producing formation: td formation:
latitude: 41.297438 longitude: 88.629499
Water from shale at depth 15 to 40 ft.
Screen: Diam. 5 in. Length: 4 ft. Slot: 15
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	40

Size hole below casing: 5 in.
Static level 5 ft. below casing top which is 1 ft. above grnd level.
Pumping level 20 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
sand & gravel	25	25
shale	19	44

120992650800 27-33N- 5E
LaSalle Springbrook Marina
Status: WATER NW SW SW Elev: 0
permit: permit date: comp. date:
Lambert X: 3233458 Lambert Y: 3010515 td: 0
producing formation: td formation:
latitude: 41.298971 longitude: 88.646376
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992551000 Wellendorf, Rodney 27-33N- 5E
LaSalle Thorpe, J.
Status: WATER SW SE SE Elev: 0
permit: W96-115 permit date: 07/05/96 comp. date: 07/11/96
Lambert X: 3237423 Lambert Y: 3009982 td: 45
producing formation: td formation:
latitude: 41.297398 longitude: 88.631898
Water from gravel at depth 45 to 0 ft.
Screen: Diam. 5 in. Length: 5 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SC 200	-2	40

Size hole below casing: 5 in.
Static level 10 ft. below casing top which is 2 ft. above grnd level.
Pumping level 40 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	15	15
gravel	5	20
clay	20	40
gravel	5	45

120990114800 28-33N- 5E
LaSalle Chiney Elizabeth
Status: WATER Elev: 520GL
permit: 0 permit date: comp. date: 01/01/55
Lambert X: 3230429 Lambert Y: 3012095 td: 250
producing formation: td formation:
latitude: 41.303405 longitude: 88.657398

120992477500 Fordonski, Keith 28-33N- 5E
LaSalle Fox River Minerals
Status: WATER NE NE NE Elev: 0
permit: W92-159 permit date: 09/02/92 comp. date: 09/17/92
Lambert X: 3232656 Lambert Y: 3014438 td: 40
producing formation: td formation:
latitude: 41.309809 longitude: 88.649174

Water from shale at depth 30 to 40 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 13
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250	0	30
5	10' PVC SCREEN	30	40

Size hole below casing: 5 in.
Static level 2 ft. below casing top which is 1 ft. above grnd level.
Pumping level 20 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	8	8
sand	31	39
shale	1	40

120992642500 28-33N- 5E
LaSalle Marseilles 6
Status: WATER SW SW NE Elev: 0
permit: permit date: comp. date: 01/01/97
Lambert X: 3230745 Lambert Y: 3012431 td: 1450
producing formation: td formation:
latitude: 41.304324 longitude: 88.656231
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
	CASING	0	62

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992597600 Meadow Equipment 28-33N- 5E
LaSalle Marseilles, City of
Status: WATERP SW SW NE Elev: 0
permit: W98-056 permit date: 04/21/98 comp. date: 05/19/98
Lambert X: 3230745 Lambert Y: 3012431 td: 260
producing formation: td formation:
latitude: 41.304324 longitude: 88.656231
Water from sandstone at depth 190 to 260 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STL A53	-1	118
4	LINER W/K PACKER	100	190

Size hole below casing: in.
Static level 80 ft. below casing top which is 1 ft. above grnd level.
Pumping level 120 ft. when pumping at 25 gpm for 24 hours.

Formations Passed Through	Thickness	Bottom
brown sandstone	10	10
hard gray shale	7	17
soft gray shale with limestone	10	27
hard black shale	3	30
hard blk shale mixed with soft gry shale	3	33
hard black shale	4	37
soft gray shale	3	40
light gray limestone	2	42
limestone & shale mix	10	52
hard gray shale	48	100
hard black shale	6	106
black & gray shale mix	11	117
gray limestone	21	138
white shale	3	141
gray limestone	44	185
white shale	5	190
sandstone	70	260

120992750200 Tri County Well & Pump 33-33N- 5E
LaSalle Bartelmey, Theodore & Sheryl

Status: WATER SW SW SE Elev: 0
permit: permit date: 08/09/05 comp. date: 08/05/05
Lambert X: 3231069 Lambert Y: 3004581 td: 440
producing formation: td formation:
latitude: 41.282659 longitude: 88.655293
Water from sandstone at depth 401 to 440 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-1	317

Size hole below casing: in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 230 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	90	90
shale	100	190
hard sand	15	205
hard shale	85	290
brown limestone	111	401
sandstone	39	440

120992485300 Brown, Darwin 33-33N- 5E
LaSalle Berryman, Ron
Status: WATER NW SE SW Elev: 0
permit: W94-069 permit date: 06/14/94 comp. date: 08/25/94
Lambert X: 3229734 Lambert Y: 3005201 td: 206
producing formation: td formation:
latitude: 41.284414 longitude: 88.660172
Water from sand gravel at depth 196 to 206 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	196

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1
clay	81	82
sand gravel	124	206

120992491700 Fordonski, Keith 33-33N- 5E
LaSalle Eich, Ray & Pam
Status: WATER NW NW SW Elev: 0
permit: W93-040 permit date: 05/18/93 comp. date: 08/08/93
Lambert X: 3228369 Lambert Y: 3006475 td: 270
producing formation: td formation:
latitude: 41.287961 longitude: 88.665119
Water from clay at depth 200 to 270 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250#	0	270

Size hole below casing: 5 in.
Static level 170 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	95	95
sand	105	200
clay	70	270

120992481700 Fordonski, Keith 33-33N- 5E
LaSalle Gallick, Jeff
Status: WATER SE SE SE Elev: 0
permit: W94-008 permit date: 02/16/94 comp. date: 03/26/94
Lambert X: 3233027 Lambert Y: 3004628 td: 240
producing formation: td formation:

latitude: 41.282749 longitude: 88.648154
Water from sand & gravel at depth 140 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	240

Size hole below casing: in.
Static level 170 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	140	140
sand & gravel	100	240

120992460600 Fordonski, Keith 33-33N- 5E
LaSalle Galloway, Mike
Status: WATER SW NE SW Elev: 0
permit: W92-030 permit date: 04/06/92 comp. date: 04/14/92
Lambert X: 3229706 Lambert Y: 3005853 td: 210
producing formation: td formation:
latitude: 41.286212 longitude: 88.660252
Water from gravel at depth 120 to 210 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 13
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	210

Size hole below casing: 5 in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	90	90
gravel & shale	120	210

120992477600 Fordonski, Keith 33-33N- 5E
LaSalle Lanfear, Thomas & Mary
Status: WATER SE NW SE Elev: 0
permit: W92-203 permit date: 10/23/92 comp. date: 01/18/93
Lambert X: 3231668 Lambert Y: 3005900 td: 210
producing formation: td formation:
latitude: 41.286291 longitude: 88.653078
Water from gravel at depth 85 to 210 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250#	0	200

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	85	85
gravel	125	210

120992570200 Bisping, Calvin 33-33N- 5E
LaSalle Linder, Bonnie & R.
Status: WATER SE SW SE Elev: 0
permit: W97-082 permit date: 05/12/97 comp. date: 10/27/97
Lambert X: 3231721 Lambert Y: 3004596 td: 215
producing formation: td formation:
latitude: 41.282694 longitude: 88.652929
Water from gravel at depth 137 to 215 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC 250# SDR #17	0	215

Size hole below casing: in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom

clay	27	27
shale	110	137
sand & gravel	78	215
shale at	0	215

120992481800 Fordonski, Keith 33-33N- 5E
LaSalle Logan, John
Status: WATER SW SE NW Elev: 0
permit: W93-035 permit date: 05/05/93 comp. date: 12/06/93
Lambert X: 3229650 Lambert Y: 3007157 td: 215
producing formation: td formation:
latitude: 41.289809 longitude: 88.660413
Water from gravel at depth 95 to 215 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	250# SDR 17	0	205

Size hole below casing: 5 in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
blue clay	95	95
sand & gravel	120	215

120992722600 Strange, Robert E. 33-33N- 5E
LaSalle Podgorny, Don 1
Status: WATER SW NW SW Elev: 0
permit: permit date: 04/08/04 comp. date: 04/20/04
Lambert X: 3228398 Lambert Y: 3005823 td: 215
producing formation: td formation:
latitude: 41.286163 longitude: 88.665035
Water from sand & gravel at depth 205 to 215 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	205
5	PVC SDR 21 SCREEN	205	215

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	85	87
gravel	34	121
clay	9	130
sand & gravel	84	214
clay	1	215

120992533000 Rix Well & Pump 33-33N- 5E
LaSalle Rodomski, Bruce & Karen
Status: WATER SW SW SE Elev: 0
permit: W95-184 permit date: 10/25/95 comp. date: 02/29/96
Lambert X: 3231068 Lambert Y: 3004581 td: 217
producing formation: td formation:
latitude: 41.282670 longitude: 88.655317
Water from sand & gravel at depth 120 to 217 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SDR 21 PVC	0	207
10	.202 PVC SCREEN	207	217

Size hole below casing: 5 in.
Static level 150 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 0 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	3	3
yellow clay	5	8

blue clay & hardpan	112	120
sand & gravel	97	217

120992460500 Fordonski, Keith 33-33N- 5E
LaSalle Sadness, Tim
Status: WATER SW NE SW Elev: 0
permit: W92-094 permit date: 06/17/92 comp. date: 06/23/92
Lambert X: 3229706 Lambert Y: 3005853 td: 215
producing formation: td formation:
latitude: 41.286212 longitude: 88.660252
Water from shale at depth 1 to 215 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 15
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	205

Size hole below casing: 5 in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 140 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	95	95
gravel	119	214
shale	1	215

120992521800 Rix, John Richard 33-33N- 5E
LaSalle Smith, Pete
Status: WATER SW NW SE Elev: 0
permit: W94-022 permit date: 03/18/94 comp. date: 03/25/94
Lambert X: 3231014 Lambert Y: 3005884 td: 220
producing formation: td formation:
latitude: 41.286264 longitude: 88.655470
Water from sand gravel at depth 210 to 220 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC SDR 21	0	210

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	132	132
sand gravel	88	220

120992508000 Fykes, Charles N. 33-33N- 5E
LaSalle Sticha, Donald
Status: WATER SW SE Elev: 0
permit: W95-055 permit date: 05/10/95 comp. date: 07/31/95
Lambert X: 3231381 Lambert Y: 3004914 td: 425
producing formation: td formation:
latitude: 41.283580 longitude: 88.654161
Water from limestone at depth 315 to 425 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15#	0	315

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 260 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	80	80
shale	115	195
sand	58	253
shale	56	309
brown limestone	91	400
St. Peter sand	25	425

120990067500 33-33N- 5E

LaSalle Wylie John-Estate 1
Status: WATER SW SW NW Elev: 0
permit: 0 permit date: comp. date: 01/01/41
Lambert X: 3228340 Lambert Y: 3007127 td: 245
producing formation: td formation:
latitude: 41.289760 longitude: 88.665203

120990067600 33-33N- 5E
LaSalle Wylie John-Estate 2
Status: WATER SW SW NW Elev: 0
permit: 0 permit date: comp. date: 01/01/42
Lambert X: 3228340 Lambert Y: 3007127 td: 245
producing formation: td formation:
latitude: 41.289760 longitude: 88.665203

120992460700 Knierim, Phil 34-33N- 5E
LaSalle Berg, Jeff & Deanna
Status: WATER SW NE NE Elev: 0
permit: W92-110 permit date: 06/30/92 comp. date: 07/14/92
Lambert X: 3237482 Lambert Y: 3008673 td: 214
producing formation: td formation:
latitude: 41.293787 longitude: 88.631728
Water from shale at depth 120 to 214 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	214

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	98	100
sand & gravel	112	212
shale	2	214

120992732700 Brown, Darwin 34-33N- 5E
LaSalle Connell, J. Group Const.
Status: WATER SE SE SE Elev: 0
permit: permit date: 10/12/04 comp. date: 10/21/04
Lambert X: 3238309 Lambert Y: 3004758 td: 215
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sand gravel at depth 210 to 215 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	210

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay	116	116
sand gravel	99	215

120992737400 Brown, Darwin 34-33N- 5E
LaSalle Connell, J. Group Const.
Status: WATER SE SE SE Elev: 0
permit: permit date: 10/26/04 comp. date: 01/10/05
Lambert X: 3238309 Lambert Y: 3004758 td: 214
producing formation: td formation:
latitude: 41.282957 longitude: 88.628821
Water from shale at depth 209 to 214 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)

5 PVC SDR 21 0 209
Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1
clay	115	116
sand gravel	98	214
shale at	0	214

120992538900 Brown, Darwin 34-33N- 5E
LaSalle D & S Contractors, Inc.
Status: WATER SE SE SE Elev: 0
permit: W95-194 permit date: 11/09/95 comp. date: 04/25/96
Lambert X: 3238309 Lambert Y: 3004758 td: 191
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sand gravel at depth 0 to 191 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	181

Size hole below casing: in.
Static level 140 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	79	81
sand gravel	110	191

120992594000 Brown, Darwin 34-33N- 5E
LaSalle Dazzo, Richard
Status: WATER NE SE SE Elev: 0
permit: W98-135 permit date: 09/10/98 comp. date: 02/03/99
Lambert X: 3238280 Lambert Y: 3005413 td: 205
producing formation: td formation:
latitude: 41.284776 longitude: 88.628925
Water from soft green shale at depth 195 to 205 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC SDR 21	0	195

Size hole below casing: in.
Static level 140 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	94	96
sand gravel	108	204
soft green shale	1	205

120992728600 Rix, John Richard 34-33N- 5E
LaSalle Dooley, Mike 1
Status: WATER SW NE SE Elev: 0
permit: permit date: 05/17/04 comp. date: 09/03/04
Lambert X: 3237593 Lambert Y: 3006052 td: 193
producing formation: td formation:
latitude: 41.286556 longitude: 88.631414
Water from sand & gravel at depth 90 to 193 ft.
Screen: Diam. 5 in. Length: 8 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-2	185
5	PVC SCREEN	185	193

Size hole below casing: in.
Static level 120 ft. below casing top which is 2 ft. above grnd level.
Pumping level 160 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gray clay	88	90
sand & gravel	103	193

120992468100 Knierim, Phil 34-33N- 5E
LaSalle Dudley, Walter
Status: WATER NE NE SE Elev: 0
permit: W91-110 permit date: 08/26/91 comp. date: 08/29/91
Lambert X: 3238224 Lambert Y: 3006725 td: 208
producing formation: td formation:
latitude: 41.288395 longitude: 88.629084
Water from sand & gravel at depth 120 to 208 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC	0	208

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	108	110
sand & gravel	98	208

120990042100 Johnson C R 34-33N- 5E
LaSalle Farrell John J 2
Status: WATER NE NE NW Elev: 700GL
permit: 0 permit date: comp. date: 01/01/46
Lambert X: 3235481 Lambert Y: 3009267 td: 60
producing formation: td formation:
latitude: 41.295477 longitude: 88.639023

120992516100 Brown, Darwin 34-33N- 5E
LaSalle Heritage Lake Estates
Status: WATER NW SE NE Elev: 0
permit: W95-169 permit date: 10/11/95 comp. date: 11/27/95
Lambert X: 3237509 Lambert Y: 3008018 td: 207
producing formation: td formation:
latitude: 41.291980 longitude: 88.631652
Water from sand gravel at depth 197 to 207 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	197

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	90	92
shale at	0	207
sand gravel	115	207

120992494100 Fordonski, Keith 34-33N- 5E
LaSalle Hetelle, David
Status: WATER NE NE NE Elev: 0
permit: W94-182 permit date: 09/22/94 comp. date: 09/22/94
Lambert X: 3238112 Lambert Y: 3009349 td: 50
producing formation: td formation:
latitude: 41.295634 longitude: 88.629401
Water from clay at depth 30 to 50 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 13
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	40

Size hole below casing: in.
Static level 20 ft. below casing top which is 1 ft. above grnd level.
Pumping level 40 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	5	5
sand & gravel	25	30
clay	20	50

120992363600 Knierim, Phil 34-33N- 5E
LaSalle Higby, Norm
Status: WATER 100 SL 125 EL NE SE SE Elev: 0
permit: 86426 permit date: 06/08/79 comp. date: 06/09/79
Lambert X: 3238496 Lambert Y: 3005191 td: 210
producing formation: td formation:
latitude: 41.284158 longitude: 88.628143
Water from gravel at depth 202 to 210 ft.
Screen: Diam. 4 in. Length: 8 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL 15#	0	202

Size hole below casing: 5 in.
Static level 202 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 15 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
overburden	202	202
gravel	8	210

120992717200 Brown, Darwin 34-33N- 5E
LaSalle J. Connell Group/Redden, John
Status: WATER SE SE SE Elev: 0
permit: permit date: 01/07/04 comp. date: 04/16/04
Lambert X: 3238309 Lambert Y: 3004758 td: 210
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sand gravel at depth 205 to 210 ft.
Screen: Diam. 5 in. Length: 5 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	205

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	1	1
clay	111	112
sand gravel	98	210

120992703500 Area Well & Pump 34-33N- 5E
LaSalle Kellogg, Mark
Status: WATER NE NE NE Elev: 0
permit: permit date: 07/31/03 comp. date: 11/01/03
Lambert X: 3238112 Lambert Y: 3009349 td: 47
producing formation: td formation:
latitude: 41.295634 longitude: 88.629401
Water from sand & gravel at depth 37 to 47 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	37
5	PVC SCREEN	37	47

Size hole below casing: in.
Static level 15 ft. below casing top which is 1 ft. above grnd level.
Pumping level 30 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
sand & gravel	47	47

120992496700 Brown, Darwin 34-33N- 5E
LaSalle Kubinski, Jerry
Status: WATER SW NE NE Elev: 0
permit: W94-224 permit date: 11/17/94 comp. date: 11/11/94
Lambert X: 3237482 Lambert Y: 3008673 td: 210
producing formation: td formation:
latitude: 41.293787 longitude: 88.631728
Water from shale at depth 120 to 210 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	200

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	108	110
sand gravel	99	209
shale	1	210

120992503300 Brown, Darwin 34-33N- 5E
LaSalle Kubinski, Jerry
Status: WATER SE NE NE Elev: 0
permit: W95-035 permit date: 04/13/95 comp. date: 06/21/95
Lambert X: 3238140 Lambert Y: 3008693 td: 208
producing formation: td formation:
latitude: 41.293824 longitude: 88.629322
Water from sand & gravel at depth 198 to 208 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	198

Size hole below casing: 5 in.
Static level 110 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1
clay	18	19
sand gravel	7	26
clay w/gravel streaks	83	109
sand gravel	99	208

120992446700 Knierim, Phil 34-33N- 5E
LaSalle Lurz, Gary
Status: WATER NE NE SE Elev: 0
permit: W91-077 permit date: 07/05/91 comp. date: 07/10/91
Lambert X: 3238224 Lambert Y: 3006725 td: 210
producing formation: td formation:
latitude: 41.288395 longitude: 88.629084
Water from sand gravel at depth 130 to 210 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC	0	210

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	128	130
sand gravel	80	210

120992758100 Area Well & Pump 34-33N- 5E
LaSalle Malak, Zack 1
Status: WATER NE NW NE Elev: 0
permit: permit date: 09/20/05 comp. date: 10/10/05

Lambert X: 3236797 Lambert Y: 3009308 td: 35
producing formation: td formation:
latitude: 41.295544 longitude: 88.63419
Water from sand & gravel at depth 30 to 35 ft.
Screen: Diam. 5 in. Length: 5 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	30
5	PVC SCREEN	30	35

Size hole below casing: in.
Static level 15 ft. below casing top which is 1 ft. above grnd level.
Pumping level 20 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
dirt	2	2
clay	3	5
sand gravel	30	35

120992508100 Rix, John Richard 34-33N- 5E
LaSalle Mason, Mike #1
Status: WATER NE NW NE Elev: 0
permit: W95-126 permit date: 08/16/95 comp. date: 08/20/95
Lambert X: 3236796 Lambert Y: 3009308 td: 240
producing formation: td formation:
latitude: 41.295556 longitude: 88.634214
Water from sandstone at depth 210 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	105

Size hole below casing: 5 in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 80 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
top soil	3	3
yellow clay	5	8
sandstone	6	14
shale & rock	91	105
limestone	105	210
sandstone	30	240

120992738500 Area Well & Pump 34-33N- 5E
LaSalle Ording, Lisa 1
Status: WATER NW SE SE Elev: 0
permit: permit date: 10/25/04 comp. date: 10/25/04
Lambert X: 3237621 Lambert Y: 3005397 td: 200
producing formation: td formation:
latitude: 41.284738 longitude: 88.631314
Water from sand & gravel at depth 190 to 199 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	160
5	PVC SDR 17	160	190
5	PVC SCREEN	190	200

Size hole below casing: in.
Static level 80 ft. below casing top which is 1 ft. above grnd level.
Pumping level 140 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	93	95
gravel	25	120
clay	5	125
sand & gravel	74	199
clay	1	200

120992503400 Brown, Darwin 34-33N- 5E
LaSalle Small, Tom

Status: WATER NW NE NE Elev: 0
permit: W95-028 permit date: 05/01/95 comp. date: 06/22/95
Lambert X: 3237454 Lambert Y: 3009328 td: 213
producing formation: td formation:
latitude: 41.295593 longitude: 88.631808
Water from sand gravel at depth 203 to 213 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	203

Size hole below casing: 5 in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay w/gravel streaks	105	107
sand gravel	106	213
shale at	0	213

120992539000 Brown, Darwin 34-33N- 5E
LaSalle Small, Tom
Status: WATER SE SE SE Elev: 0
permit: W96-061 permit date: 05/01/96 comp. date: 05/14/96
Lambert X: 3238309 Lambert Y: 3004758 td: 215
producing formation: td formation:
latitude: 41.282969 longitude: 88.628842
Water from sandstone at depth 205 to 215 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC PVC SDR 21	0	205

Size hole below casing: 5 in.
Static level 140 ft. below casing top which is 1 ft. above grnd level.
Pumping level 180 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	105	107
sand gravel	4	111
clay	14	125
sand gravel	90	215

120992764200 Area Well & Pump 35-33N- 5E
LaSalle Altman, Michelle 1
Status: WATER NW NW SW Elev: 609
permit: permit date: 09/08/05 comp. date: 02/08/06
Lambert X: 3238884 Lambert Y: 3006744 td: 155
producing formation: td formation:
latitude: 41.288419 longitude: 88.626649
Water from sand & gravel at depth 145 to 153 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	145
5	PVC SCREEN	145	155

Size hole below casing: in.
Static level 125 ft. below casing top which is 1 ft. above grnd level.
Pumping level 135 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	105	105
gravel	48	153
clay	2	155

120992622700 Rix, John Richard 35-33N- 5E
LaSalle Erickson, Carl 1
Status: WATER SW NW SW Elev: 0
permit: permit date: 08/09/00 comp. date: 08/18/00
Lambert X: 3238912 Lambert Y: 3006088 td: 192

producing formation: td formation:
latitude: 41.286621 longitude: 88.626591
Water from sand & gravel at depth 106 to 192 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: .02
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-2	182

Size hole below casing: in.
Static level 140 ft. below casing top which is 2 ft. above grnd level.
Pumping level 160 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gummy gray clay	104	106
sand & gravel	86	192
bottom on rock at	0	192

120992363800 Rob, Peter 35-33N- 5E
LaSalle Lamping, Clarence
Status: WATER NW NW SW Elev: 0
permit: 107400 permit date: 06/01/83 comp. date: 06/17/83
Lambert X: 3238884 Lambert Y: 3006744 td: 159
producing formation: td formation:
latitude: 41.288430 longitude: 88.626670
Water from at depth 0 to 0 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK STEEL	0	153

Size hole below casing: 5 in.
Static level 140 ft. below casing top which is 1 ft. above grnd level.
Pumping level 150 ft. when pumping at 10 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	90	90
sand & gravel	69	159

120990067700 No Company 35-33N- 5E
LaSalle Schroeder
Status: WATER SW NW NW Elev: 525GL
permit: 0 permit date: comp. date:
Lambert X: 3238799 Lambert Y: 3008713 td: 564
producing formation: td formation:
latitude: 41.293862 longitude: 88.626912

120992679000 Strange, Michael 35-33N- 5E
LaSalle Spangler, Steve 1
Status: WATER NW NW NW Elev: 0
permit: permit date: 08/14/02 comp. date: 10/11/02
Lambert X: 3238771 Lambert Y: 3009369 td: 43
producing formation: td formation:
latitude: 41.295672 longitude: 88.626991
Water from sand & gravel at depth 33 to 43 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 15
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	33
5	PVC SCREEN	33	43

Size hole below casing: in.
Static level 10 ft. below casing top which is 1 ft. above grnd level.
Pumping level 20 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
sand & gravel	43	43
shale at	0	43

120992637700 Strange, Michael 35-33N- 5E
LaSalle Spicer, Martin 1
Status: WATER NW NW NW Elev: 0

permit: permit date: 04/10/01 comp. date: 04/15/01
Lambert X: 3238771 Lambert Y: 3009369 td: 33
producing formation: td formation:
latitude: 41.295672 longitude: 88.626991
Water from sand & gravel at depth 23 to 33 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

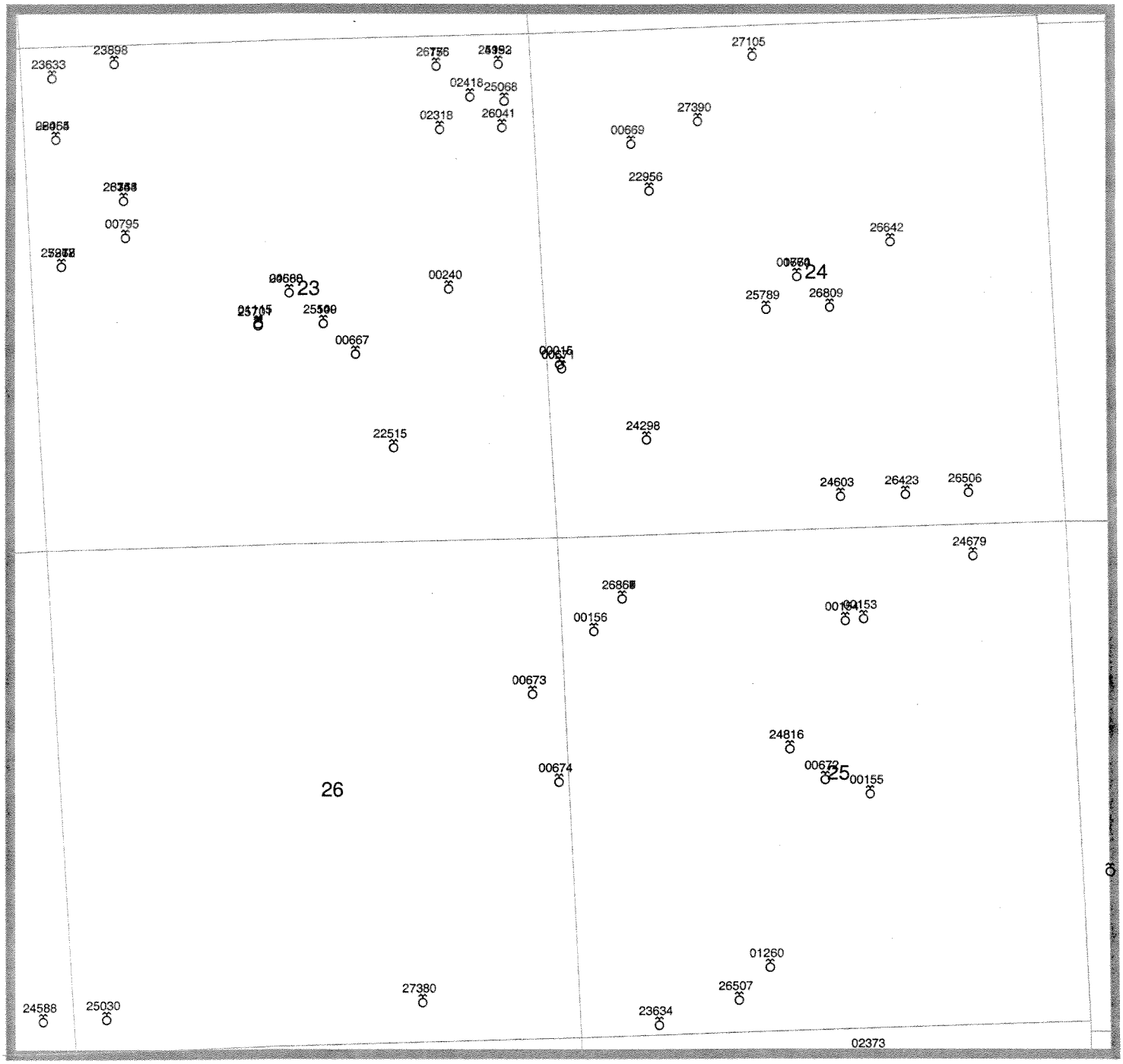
Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	1	23
5	PVC SCREEN	23	33

Size hole below casing: in.
Static level 10 ft. below casing top which is 1 ft. above grnd level.
Pumping level 12 ft. when pumping at 12 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	10	10
sand & gravel	22	32
shale	1	33

120992271000 Stoneberger, Donald 35-33N- 5E
LaSalle Vicich Louis
Status: WATER SW NW SW Elev: 0
permit: 0 permit date: comp. date: 10/01/76
Lambert X: 3238912 Lambert Y: 3006088 td: 183
producing formation: td formation:
latitude: 41.286621 longitude: 88.626591

Map Area: 33N-5E-27 m3 to 33N-6E-18 m3



Explanation

Oil	Gas Injection	Junked
Oil & Gas	Gas Storage	Temporarily Abandoned
Gas	Salt Water Disposal	Observation
D&A - Oil Show	Water Injection	Other Injection
D&A - Gas Show	Water Supply	Confidential
D&A - Oil & Gas Show	Permit	Other Well Type
D&A	Water	Status Unknown

/ through any symbol indicates well is currently plugged

N

0 1525 3050 ft

Illinois State Geological Survey

QuEStoR: Custom Map

Date: 26-JUN-06 Scale: 1:18300

Displayed data is based upon information supplied to the Illinois State Geological Survey (ISGS) and are not field verified. The ISGS does not guarantee the validity, accuracy or completeness of these data.

Non Oil and Gas - Wells

120990206500 23-33N- 5E
LaSalle Appleby Gerald
Status: WATER SW NW NW Elev: 0
permit: 0 permit date: comp. date: 05/01/60
Lambert X: 3238213 Lambert Y: 3019141 td: 180
producing formation: td formation:
latitude: 41.322632 longitude: 88.628689

120992617500 Rix, John Richard 23-33N- 5E
LaSalle Centracchio, Tony 1
Status: WATER NW NE NE Elev: 0
permit: permit date: 03/20/00 comp. date: 05/24/00
Lambert X: 3242152 Lambert Y: 3019905 td: 380
producing formation: td formation:
latitude: 41.324633 longitude: 88.614255
Water from sandstone at depth 362 to 380 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STEEL	-1	126
4.5	PVC	10	360

Size hole below casing: in.
Static level 180 ft. below casing top which is 2 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
clay	84	86
green clay	6	92
gray clay with gravel	7	99
shale with lime streaks	155	254
brown lime	76	330
brown lime with soft blue shale	32	362
sandstone	18	380

120992591800 Rix, John Richard 23-33N- 5E
LaSalle Cumming, Jeff & Pat 1
Status: WATER SW SW NW Elev: 0
permit: permit date: 12/18/98 comp. date: 03/01/99
Lambert X: 3238285 Lambert Y: 3017836 td: 380
producing formation: td formation:
latitude: 41.319031 longitude: 88.628471
Water from sandstone at depth 344 to 380 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STEEL	0	147
4.5	PVC SDR 21	124	344

Size hole below casing: in.
Static level 160 ft. below casing top which is 2 ft. above grnd level.
Pumping level 240 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gray clay	70	72
gummy gray clay	8	80
dark brown clay	10	90
yellow clay & sandstone	14	104
gray clay with shale	68	172
shale with lime streaks	80	252
brown limestone	80	332
St. Peter sandstone	48	380

120992676500 Strange, Michael 23-33N- 5E

LaSalle Davis, Steve & Fay 2
Status: WATER NE SW NW Elev: 0
permit: permit date: 06/25/02 comp. date: 06/29/02
Lambert X: 3238911 Lambert Y: 3018506 td: 360
producing formation: td formation:
latitude: 41.320862 longitude: 88.626158
Water from sandstone at depth 325 to 360 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	160
5	PVC SDR 17	160	254

Size hole below casing: in.
Static level 210 ft. below casing top which is 1 ft. above grnd level.
Pumping level 230 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	100	100
gravel	40	140
sandstone & shale, sandstone 130'-140'	50	190
limestone	3	193
shale	37	230
coal	4	234
shale	11	245
limestone	80	325
sandstone	35	360

120992251500 Lockport Well & Pump 23-33N- 5E
LaSalle Fisslu D 1
Status: WATER NE SW SE Elev: 0
permit: 0 permit date: comp. date: 07/01/74
Lambert X: 3241717 Lambert Y: 3015957 td: 125
producing formation: td formation:
latitude: 41.313759 longitude: 88.615986

120992614400 Strange, Michael 23-33N- 5E
LaSalle Flash, Jerry Morgan 1
Status: WATER NE SW NW Elev: 0
permit: permit date: 05/21/99 comp. date: 06/08/99
Lambert X: 3238911 Lambert Y: 3018506 td: 360
producing formation: td formation:
latitude: 41.320862 longitude: 88.626158
Water from sandstone at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21 #200	0	160
5	PVC SDR 17 #250	160	254

Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
clay	100	100
gravel	30	130
sandstone	10	140
shale	50	190
limestone	3	193
shale	37	230
coal	4	234
shale	11	245
limestone	80	325
sandstone	35	360

120992726700 Matherly, Hubert 23-33N- 5E
LaSalle Gates, Larry & Sue 1
Status: WATER SW SW NW Elev: 0
permit: permit date: 12/10/03 comp. date: 10/25/04
Lambert X: 3238285 Lambert Y: 3017836 td: 340

producing formation: td formation:
latitude: 41.319031 longitude: 88.628471
Water from sandstone at depth 305 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	-1	245

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 25 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	50	50
shale	60	110
clay	120	230
coal	5	235
limestone	70	305
sandstone	35	340

120990066700 23-33N- 5E
LaSalle Gettler Clarence
Status: WATER NW SE Elev: 0
permit: 0 permit date: comp. date: 01/01/46
Lambert X: 3241328 Lambert Y: 3016931 td: 68
producing formation: td formation:
latitude: 41.316455 longitude: 88.617374

120992599300 Brown, Darwin 23-33N- 5E
LaSalle Hendrix, Jay A.
Status: WATER NE NE NE Elev: 0
permit: permit date: 09/23/99 comp. date: 02/17/00
Lambert X: 3242816 Lambert Y: 3019923 td: 420
producing formation: td formation:
latitude: 41.324665 longitude: 88.611825
Water from sandstone at depth 380 to 420 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	BLK STL A53 15#	0	110
4.5	PLASTIC LINER	60	380

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 294 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gray clay	86	88
shale with lime streaks	167	255
brown lime with shale streaks	101	356
sandstone	64	420

120992389800 Neeley, Harry C. 23-33N- 5E
LaSalle Hobbs, Lawrence & Lynn
Status: WATER 200 NL 300 WL NE NW NW Elev: 660GL
permit: 123963 permit date: 05/23/86 comp. date: 06/07/86
Lambert X: 3238796 Lambert Y: 3019938 td: 410
producing formation: td formation:
latitude: 41.324814 longitude: 88.626528
Water from sandstone at depth 340 to 410 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	STL #A53 15#/FT	-2	276
		0	0

Size hole below casing: 5 in.
Static level 190 ft. below casing top which is 2 ft. above grnd level.
Pumping level 210 ft. when pumping at 15 gpm for 21 hours.

Formations Passed Through	Thickness	Bottom
brown clay	115	115

sand & stones	5	120
brown clay	53	173
sand & stones	5	178
brn clay & stones	3	181
limestone	3	184
green shale	54	238
coal	3	241
green shale	7	248
grn shl & limestone	17	265
brn limestone & shl	75	340
soft sandstone	70	410

120990241800 Lockport Well & Pump 23-33N- 5E
LaSalle Kelly Dave 1
Status: WATER NE NE Elev: 0
permit: 0 permit date: comp. date: 07/01/73
Lambert X: 3242503 Lambert Y: 3019586 td: 390
producing formation: td formation:
latitude: 41.323744 longitude: 88.612982

120992537200 Rix, John Richard 23-33N- 5E
LaSalle Lamb, John #1
Status: WATER SW SW NW Elev: 0
permit: W95-121 permit date: 08/10/95 comp. date: 02/27/96
Lambert X: 3238285 Lambert Y: 3017836 td: 110
producing formation: td formation:
latitude: 41.319031 longitude: 88.628471
Water from gravel at depth 100 to 110 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 20
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	0	100

Size hole below casing: 5 in.
Static level 80 ft. below casing top which is 1 ft. above grnd level.
Pumping level 90 ft. when pumping at 0 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	3	3
yellow clay	7	10
blue clay	90	100
sand & gravel	10	110

120992675600 Rix, John Richard 23-33N- 5E
LaSalle Longtin, Bill 1
Status: WATER NW NE NE Elev: 0
permit: permit date: 09/25/02 comp. date: 10/23/02
Lambert X: 3242152 Lambert Y: 3019905 td: 520
producing formation: td formation:
latitude: 41.324633 longitude: 88.614255
Water from sandstone at depth 378 to 520 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	STEEL	-1	186
4.5	PVC	20	480

Size hole below casing: in.
Static level 120 ft. below casing top which is 1 ft. above grnd level.
Pumping level 300 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
gray clay	90	92
green clay	8	100
shale	167	267
rock, brown & white	111	378
sandstone	142	520

120990079500 23-33N- 5E

LaSalle Muffler Fritz 1
Status: WATER 2000 NL 1000 WL Elev: 0
permit: 0 permit date: comp. date: 09/01/70
Lambert X: 3238938 Lambert Y: 3018142 td: 310
producing formation: td formation:
latitude: 41.319858 longitude: 88.626072

120992514000 Fordonski, Keith 23-33N- 5E
LaSalle Ozze, Charles
Status: WATER NW NW SE Elev: 0
permit: W95-103 permit date: 07/27/95 comp. date: 08/30/95
Lambert X: 3240977 Lambert Y: 3017250 td: 350
producing formation: td formation:
latitude: 41.317344 longitude: 88.618647
Water from St. Peter sand at depth 305 to 350 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	240

Size hole below casing: in.
Static level 150 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	235	235
soft limestone	70	305
St. Peter sand	45	350

120990231800 Knierin Paul 23-33N- 5E
LaSalle Rix Robert 1
Status: WATER SW NE NE Elev: 0
permit: 0 permit date: comp. date: 03/01/72
Lambert X: 3242191 Lambert Y: 3019249 td: 380
producing formation: td formation:
latitude: 41.322823 longitude: 88.614136

120992645400 Strange, Michael 23-33N- 5E
LaSalle Rod, Ross 1
Status: WATER SW NW NW Elev: 0
permit: permit date: 08/07/01 comp. date: 08/24/01
Lambert X: 3238210 Lambert Y: 3019141 td: 400
producing formation: td formation:
latitude: 41.322632 longitude: 88.628700
Water from sandstone at depth 345 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	1	160
5	PVC SDR 17	160	280

Size hole below casing: in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 200 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	100	100
sandy shale	70	170
limestone	4	174
shale	11	185
limestone	2	187
shale	60	247
coal	2	249
shale	3	252
sand & shale	14	266
limestone	73	339
shale	6	345
sandstone	55	400

120992550900 Wellendorf, Rodney 23-33N- 5E

LaSalle Roos, Joe & Janet
Status: WATER NW NW SE Elev: 0
permit: W96-135 permit date: 07/30/96 comp. date: 11/22/96
Lambert X: 3240977 Lambert Y: 3017250 td: 340
producing formation: td formation:
latitude: 41.317344 longitude: 88.618647
Water from sandstone at depth 273 to 340 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	SC 250 PVC	-2	273

Size hole below casing: 5 in.
Static level 180 ft. below casing top which is 2 ft. above grnd level.
Pumping level 280 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	155	155
gravel	5	160
shale	95	255
lime	4	259
shale	4	263
lime	67	330
sandstone	10	340

120990066800 Johnson C R 23-33N- 5E
LaSalle Santa Charles 1
Status: WATER Elev: 0
permit: 0 permit date: comp. date: 01/01/45
Lambert X: 3240627 Lambert Y: 3017569 td: 61
producing formation: td formation:
latitude: 41.318233 longitude: 88.619915

120992506800 Layne-Western Co. 23-33N- 5E
LaSalle Seneca, Village of #3
Status: WATER 700 S 300 W NEc Elev: 635GL
permit: E921490 permit date: 05/11/92 comp. date: 08/31/93
Lambert X: 3242869 Lambert Y: 3019553 td: 1445
producing formation: td formation:
latitude: 41.323643 longitude: 88.611645
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
16		0	227
10		0	755

Size hole below casing: in.
Static level 208 ft. below casing top which is 0 ft. above grnd level.
Pumping level 280 ft. when pumping at 250 gpm for 8 hours.

Formations Passed Through	Thickness	Bottom
clay	4	4
brown, gray & black shale	149	153
limestone & gray & black shale	67	220
black shale or coal	10	230
gray shale	4	234
gray tan & white ls, Shakoppee top @ 535	358	592
pink gray & white dolomite	18	610
red shale & gray limestone	45	655
white - clean white sandstone	35	690
wh dol - gray ls, N. Richmond bottom 705	220	910
tan limestone	20	930
white-tan dolomite to white sandstone	75	1005
white pink gray & tan limestone	175	1180
gray siltstone & fine sandstone	125	1305
tan & gray dolomite	20	1325
gray siltstone to gray sandstone	45	1370
pinkish sandy dolomite	2	1372
white sandstone	3	1375
sandy dolomite	10	1385
sandstone & dolomite	11	1396

sandstone	3	1399
tan dolomite	1	1400
sandstone	10	1410
sandstone & hard dolomite streaks	5	1415
sandstone & dolomite	4	1419
dolomite	1	1420
sandstone	23	1443
hard dolomite & sandstone	2	1445

120992570100 Bisping, Calvin 23-33N- 5E
LaSalle Smith Builders
Status: WATER NE NE SW Elev: 0
permit: W97-104 permit date: 07/29/97 comp. date: 10/09/97
Lambert X: 3240314 Lambert Y: 3017233 td: 300
producing formation: td formation:
latitude: 41.317315 longitude: 88.621072
Water from limestone at depth 215 to 300 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	200

Size hole below casing: in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 231 ft. when pumping at 30 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	24	24
shale	176	200
limestone	5	205
shale	10	215
limestone	85	300

120992415200 Knierim, Phil 23-33N- 5E
LaSalle Smith, Mike
Status: WATER NE NE NE Elev: 0
permit: 004662 permit date: 08/15/88 comp. date: 08/12/88
Lambert X: 3242816 Lambert Y: 3019923 td: 400
producing formation: td formation:
latitude: 41.324665 longitude: 88.611825
Water from sandstone at depth 180 to 400 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	180

Size hole below casing: 5 in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 230 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	18	20
shale	158	178
rock	12	190
shale	70	260
rock	120	380
sandstone	20	400

120992335300 Fykes, Charles N. 23-33N- 5E
LaSalle Stieben, Ronald 1
Status: WATER NE SW NW Elev: 0
permit: 119315 permit date: 07/30/85 comp. date: 08/06/85
Lambert X: 3238911 Lambert Y: 3018506 td: 345
producing formation: td formation:
latitude: 41.320862 longitude: 88.626158
Water from St. Peter sand at depth 315 to 345 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15#	0	170

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 245 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	100	100
sand	30	130
clay	40	170
limestone	15	185
shale	75	260
limestone	55	315
St. Peter sand	30	345

120992458000 Strange, Robert E. 23-33N- 5E
LaSalle Thomas, Kevin
Status: WATER Elev: 0
permit: W91-016 permit date: 03/07/91 comp. date: 03/07/91
Lambert X: 3240626 Lambert Y: 3017569 td: 225
producing formation: td formation:
latitude: 41.318233 longitude: 88.619919
Water from limestone at depth 120 to 225 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	245

Size hole below casing: 5 in.
Static level 170 ft. below casing top which is 1 ft. above grnd level.
Pumping level 230 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	20	20
shale	85	105
limestone	120	225

120990111500 Woodruff Charles Co 23-33N- 5E
LaSalle Thompson Josephine
Status: WATER NE NE SW Elev: 0
permit: 0 permit date: comp. date: 01/01/52
Lambert X: 3240315 Lambert Y: 3017234 td: 252
producing formation: td formation:
latitude: 41.317317 longitude: 88.621068

120992363300 Fykes, Charles N. 23-33N- 5E
LaSalle Tri-County Well & Pump 1
Status: WATER NW NW NW Elev: 665GL
permit: 82003 permit date: 11/16/78 comp. date: 12/20/78
Lambert X: 3238172 Lambert Y: 3019793 td: 365
producing formation: td formation:
latitude: 41.324430 longitude: 88.628816
Water from limestone at depth 185 to 365 ft.
Screen: Diam. 0 in. Length: 0 ft. Slot: 0
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	A-53 15#	0	185

Size hole below casing: 5 in.
Static level 200 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	135	135
gravel	25	160
clay	25	185
limestone	180	365

120992604100 Brown, Darwin 23-33N- 5E
LaSalle Wilson, Alan
Status: WATER SE NE NE Elev: 0
permit: permit date: 05/18/99 comp. date: 09/10/99
Lambert X: 3242854 Lambert Y: 3019267 td: 440

producing formation: td formation:
latitude: 41.322855 longitude: 88.611710
Water from sandstone at depth 400 to 440 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	BLK STL A53 258 15#	0	126
4.5	PLASTIC LINER	100	400

Size hole below casing: in.
Static level 180 ft. below casing top which is 1 ft. above grnd level.
Pumping level 300 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
brown clay	28	30
gummy gray clay	54	84
gray clay with gravel	6	90
green clay	6	96
gray clay with gravel mix	14	110
shale	76	186
rock	2	188
shale	88	276
brown lime	59	335
soft blue shale	15	350
soft blue shale with white lime	29	379
sandstone	61	440

120990024000 Wilmington Coal Co 23-33N- 5E
LaSalle 1
Status: COAL SL 990 EL NE Elev: 0
permit: permit date: comp. date:
Lambert X: 3242292 Lambert Y: 3017611 td: 1
producing formation: td formation:
latitude: 41.318304 longitude: 88.613825

120992680900 Strange, Robert E. 24-33N- 5E
LaSalle Fessler, Dave
Status: WATER NW NW SE Elev: 0
permit: permit date: 08/21/02 comp. date: 08/27/02
Lambert X: 3246289 Lambert Y: 3017410 td: 240
producing formation: td formation:
latitude: 41.317641 longitude: 88.599214
Water from sandstone at depth 235 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	119

Size hole below casing: in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 210 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
clay	2	2
gray sandstone	10	12
hard & soft shale	98	110
brown rock & shale streak	7	117
limestone, no water	118	235
sandstone	5	240

120990066900 24-33N- 5E
LaSalle Kiner V B
Status: WATER 1200 NL 1000 WL Elev: 535ES
permit: 0 permit date: comp. date: 01/01/42
Lambert X: 3244196 Lambert Y: 3019098 td: 326
producing formation: td formation:
latitude: 41.322353 longitude: 88.606808

120992710500 Strange, Michael 24-33N- 5E

LaSalle Kiper, Kevin 1
Status: WATER NE NE NW Elev: 0
permit: permit date: 10/20/03 comp. date: 12/23/03
Lambert X: 3245478 Lambert Y: 3020015 td: 235
producing formation: td formation:
latitude: 41.324846 longitude: 88.602086
Water from sandstone at depth 340 to 380 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
6	PVC SDR 21	1	79
4.5	PVC SDR 17	20	340

Size hole below casing: in.
Static level 140 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
brown clay	20	20
gray clay	30	50
sandstone	20	70
shale, coal 115'-118'	125	195
limestone	35	230
shale	5	235
limestone with shale streaks	105	340
sandstone with shale streaks	40	380

120992739000 Area Well & Pump 24-33N- 5E
LaSalle Koehler, Merle & Irene
Status: WATER SW NE NW Elev: 0
permit: permit date: 12/30/04 comp. date: 12/29/04
Lambert X: 3244899 Lambert Y: 3019330 td: 260
producing formation: td formation:
latitude: 41.322961 longitude: 88.604206
Water from sandstone at depth 240 to 260 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	119

Size hole below casing: in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 20 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
topsoil	2	2
brown clay	6	8
shale with coal streaks	109	117
rock	123	240
St. Peter sandstone	20	260

120992460300 Fordonski, Keith 24-33N- 5E
LaSalle Marco, Larry
Status: WATER SW SW SE Elev: 0
permit: W92-122 permit date: 07/15/92 comp. date: 07/17/92
Lambert X: 3246397 Lambert Y: 3015438 td: 245
producing formation: td formation:
latitude: 41.312201 longitude: 88.598890
Water from rock at depth 232 to 245 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	BLACK	0	125

Size hole below casing: 5 in.
Static level 100 ft. below casing top which is 1 ft. above grnd level.
Pumping level 160 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
clay	12	12
sandstone	53	65
shale	45	110
rock	2	112
shale	120	232

rock 13 245

120990067000 Johnson Charles R 24-33N- 5E
LaSalle Sampson Sigurd 1
Status: WATER Elev: 0
permit: 0 permit date: comp. date: 01/01/46
Lambert X: 3245938 Lambert Y: 3017729 td: 65
producing formation: td formation:
latitude: 41.318531 longitude: 88.600486

120990067100 Miller, J. P. Art. Well 24-33N- 5E
LaSalle Seneca City 2
Status: WATER 1770 SL 146 WL Elev: 511DF
permit: 0 permit date: comp. date: 01/01/43
Lambert X: 3243476 Lambert Y: 3016784 td: 704
producing formation: td formation:
latitude: 41.316014 longitude: 88.609527

120990001500 Heflin J C 24-33N- 5E
LaSalle Seneca City Well
Status: WATER 822 NL 140 WL SW Elev: 510GL
permit: 0 permit date: comp. date: 01/01/27
Lambert X: 3243468 Lambert Y: 3016825 td: 700
producing formation: td formation:
latitude: 41.316105 longitude: 88.609552

120992650600 24-33N- 5E
LaSalle Seneca Hunt Club
Status: WATER SW SE SE Elev: 0
permit: permit date: comp. date:
Lambert X: 3247724 Lambert Y: 3015482 td: 0
producing formation: td formation:
latitude: 41.312286 longitude: 88.594036
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -
Diam. (in.) Kind and Weight From(ft) To(ft)
Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120992578900 Albrecht, S. Dean 24-33N- 5E
LaSalle Seneca Twp. High School
Status: WATER NE NE SW Elev: 0
permit: W97-161 permit date: 11/20/97 comp. date: 02/09/98
Lambert X: 3245624 Lambert Y: 3017387 td: 614
producing formation: td formation:
latitude: 41.317596 longitude: 88.601647
Water from rock at depth 114 to 614 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
8	STEEL	0	114

Size hole below casing: in.
Static level 69 ft. below casing top which is 2 ft. above grnd level.
Pumping level 200 ft. when pumping at 300 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
fill	8	8
black shale with coal	4	12
gray shale	78	90
black shale/coal	5	95
gray shale	7	102
hard tan limestone	23	125
soft white shale	3	128
white limestone	85	213

white sandstone	199	412
tan limestone	20	432
sandstone	10	442
gray limestone with sandstone layers	38	480
red & gray siltstone	10	490
white limestone	50	540
white sandstone	74	614

120992664200 Strange, Robert E. 24-33N- 5E
LaSalle Vicich, Frank& Dawn
Status: WATER SE SW NE Elev: 0
permit: permit date: 02/11/02 comp. date: 02/19/02
Lambert X: 3246917 Lambert Y: 3018090 td: 240
producing formation: td formation:
latitude: 41.319499 longitude: 88.596892
Water from sandstone at depth 230 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	120

Size hole below casing: in.
Static level 160 ft. below casing top which is 1 ft. above grnd level.
Pumping level 220 ft. when pumping at 12 gpm for 2 hours.

Formations Passed Through	Thickness	Bottom
dirt	4	4
sandstone	11	15
shale	80	95
coal	5	100
shale	15	115
limestone	115	230
sandstone	10	240

120992429800 Knierim, Phil 24-33N- 5E
LaSalle Wheeler, Bob
Status: WATER NE SW SW Elev: 0
permit: W90-091 permit date: 06/15/90 comp. date: 06/15/90
Lambert X: 3244370 Lambert Y: 3016030 td: 240
producing formation: td formation:
latitude: 41.313889 longitude: 88.606282
Water from sandstone at depth 90 to 240 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	108

Size hole below casing: 5 in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 110 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	1	3
rock	7	10
shale	98	108
no record	1	109
shale	21	130

120992642300 24-33N- 5E
LaSalle Wildlife MHP 1
Status: WATER SE SW SE Elev: 0
permit: permit date: comp. date: 01/01/72
Lambert X: 3247061 Lambert Y: 3015460 td: 425
producing formation: td formation:
latitude: 41.312243 longitude: 88.596461
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)

Size hole below casing: in.

Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120990176400 C R I & P R Co. 24-33N- 5E
LaSalle
Status: WATER Elev: 0
permit: 0 permit date: comp. date: 01/01/05
Lambert X: 3245938 Lambert Y: 3017729 td: 450
producing formation: td formation:
latitude: 41.318531 longitude: 88.600486

120992295600 K & K Paul Knierim 24-33N- 5E
LaSalle
Status: COAL 950 SL 1180 WL SW NW Elev: 529GL
permit: permit date: comp. date:
Lambert X: 3244403 Lambert Y: 3018625 td: 260
producing formation: td formation:
latitude: 41.321043 longitude: 88.606068

120992363400 Knierim, Phil 25-33N- 5E
LaSalle Anchor-Inn Marina Inc.
Status: WATER 100 SL 150 WL SE SW SW Elev: 510GL
permit: 99301 permit date: 04/20/81 comp. date: 04/27/81
Lambert X: 3244508 Lambert Y: 3009960 td: 35
producing formation: td formation:
latitude: 41.297147 longitude: 88.605995
Water from gravel at depth 22 to 35 ft.
Screen: Diam. 4 in. Length: 4 ft. Slot: 10
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SCH 80	0	27

Size hole below casing: 5 in.
Static level 22 ft. below casing top which is 1 ft. above grnd level.
Pumping level 25 ft. when pumping at 10 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
overburden	27	27
gravel	8	35

120992650700 25-33N- 5E
LaSalle Black Marine Inc. Campground
Status: WATER SW SE SW Elev: 0
permit: permit date: comp. date:
Lambert X: 3245332 Lambert Y: 3010210 td: 0
producing formation: td formation:
latitude: 41.297814 longitude: 88.602974
Water from at depth 0 to 0 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -
Diam. (in.) Kind and Weight From(ft) To(ft)
Size hole below casing: in.
Static level 0 ft. below casing top which is 0 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

120990015400 Geiger, S. B. & Son 25-33N- 5E
LaSalle Chi'Go Bridge & Iron 1
Status: WATER 950 NL 300 WL NE Elev: 509TM
permit: 0 permit date: comp. date: 01/01/42
Lambert X: 3246429 Lambert Y: 3014160 td: 451
producing formation: td formation:
latitude: 41.308676 longitude: 88.598820

120990015300 Geiger, S. B. & Son 25-33N- 5E
LaSalle Chi'Go Bridge & Iron 2
Status: WATER 950 NL 500 WL NE Elev: 510GL

permit: 0 permit date: comp. date: 01/01/42
Lambert X: 3246629 Lambert Y: 3014167 td: 1447
producing formation: td formation:
latitude: 41.308690 longitude: 88.598088

120990015500 Miller, J. P. Art. Well 25-33N- 5E
LaSalle Chi'Go Bridge & Iron 3
Status: WATER 173 NL 473 WL SE Elev: 510TM
permit: 0 permit date: comp. date: 01/01/43
Lambert X: 3246690 Lambert Y: 3012350 td: 654
producing formation: td formation:
latitude: 41.303678 longitude: 88.597931

120990126000 Woodruff Charles Co 25-33N- 5E
LaSalle Hay J-Barge Plant
Status: WATER SE SW Elev: 0
permit: 0 permit date: comp. date:
Lambert X: 3245645 Lambert Y: 3010544 td: 196
producing formation: td formation:
latitude: 41.298727 longitude: 88.601817

120990015600 No Company 25-33N- 5E
LaSalle Johnson Chas Wm
Status: WATER SW NW NW Elev: 506GL
permit: 0 permit date: comp. date:
Lambert X: 3243814 Lambert Y: 3014052 td: 410
producing formation: td formation:
latitude: 41.308449 longitude: 88.608386

120992467900 Knierim, Phil 25-33N- 5E
LaSalle Mann, Scott
Status: WATER NW NE NE Elev: 0
permit: W92-176 permit date: 09/21/92 comp. date: 10/15/92
Lambert X: 3247756 Lambert Y: 3014829 td: 160
producing formation: td formation:
latitude: 41.310484 longitude: 88.593943
Water from rock at depth 60 to 160 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	140

Size hole below casing: 5 in.
Static level 60 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	2	2
clay	3	5
shale	125	130
rock	30	160

120992685700 Whitney & Associates 25-33N- 5E
LaSalle Seneca Elem. School B-1
Status: ENG NW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3244129 Lambert Y: 3014387 td: 16
producing formation: td formation:
latitude: 41.309365 longitude: 88.607222

120992685800 Whitney & Associates 25-33N- 5E
LaSalle Seneca Elem. School B-2
Status: ENG NW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3244129 Lambert Y: 3014387 td: 16
producing formation: td formation:

latitude: 41.309365 longitude: 88.607222

120992685900 Whitney & Associates 25-33N- 5E
LaSalle Seneca Elem. School B-3
Status: ENG NW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3244129 Lambert Y: 3014387 td: 16
producing formation: td formation:
latitude: 41.309365 longitude: 88.607222

120992686000 Whitney & Associates 25-33N- 5E
LaSalle Seneca Elem. School B-4
Status: ENG NW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3244129 Lambert Y: 3014387 td: 16
producing formation: td formation:
latitude: 41.309365 longitude: 88.607222

120992686100 Whitney & Associates 25-33N- 5E
LaSalle Seneca Elem. School B-5
Status: ENG NW NW Elev: 0
permit: permit date: comp. date:
Lambert X: 3244129 Lambert Y: 3014387 td: 21
producing formation: td formation:
latitude: 41.309365 longitude: 88.607222

120992481600 Rix, John Richard 25-33N- 5E
LaSalle Weinreich, Willard
Status: WATER SE SE NW Elev: 0
permit: W94-030 permit date: 04/06/94 comp. date: 04/16/94
Lambert X: 3245863 Lambert Y: 3012821 td: 260
producing formation: td formation:
latitude: 41.304999 longitude: 88.600938
Water from sandstone at depth 240 to 260 ft.
Screen: Diam. in. Length: 0 ft. Slot:
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PLASTIC	0	78

Size hole below casing: 5 in.
Static level 0 ft. below casing top which is 1 ft. above grnd level.
Pumping level 0 ft. when pumping at 0 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
top soil	1	1
sandstone	34	35
shale	43	78
sandstone	16	94
shale	44	138
rock & white lime	102	240
sandstone	20	260

120990067200 Johnson C R 25-33N- 5E
LaSalle Wicks Arthur 1
Status: WATER Elev: 0
permit: 0 permit date: comp. date:
Lambert X: 3246209 Lambert Y: 3012508 td: 65
producing formation: td formation:
latitude: 41.304127 longitude: 88.599684

120992738000 Area Well & Pump 26-33N- 5E
LaSalle Cunningham, Jack 1
Status: WATER SE SW SE Elev: 0
permit: permit date: 07/26/04 comp. date: 07/27/04
Lambert X: 3242045 Lambert Y: 3010202 td: 42
producing formation: td formation:

latitude: 41.297869 longitude: 88.61497
Water from gravel at depth 31 to 41 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 12
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC SDR 21	-1	31
5	PVC SCREEN	31	41

Size hole below casing: in.
Static level 10 ft. below casing top which is 0 ft. above grnd level.
Pumping level 15 ft. when pumping at 20 gpm for 0 hours.

Formations Passed Through	Thickness	Bottom
sand	3	3
clay	14	17
gravel	24	41
shale	1	42

120990067300 Johnson C R 26-33N- 5E
LaSalle Sampson Arthur 1
Status: WATER NE SE NE Elev: 0
permit: 0 permit date: comp. date: 01/01/46
Lambert X: 3243186 Lambert Y: 3013387 td: 65
producing formation: td formation:
latitude: 41.306633 longitude: 88.610706

120992503000 Fordonski, Keith 26-33N- 5E
LaSalle Thorpe, James
Status: WATER SW SW SW Elev: 0
permit: W95-036 permit date: 04/13/95 comp. date: 04/17/95
Lambert X: 3238738 Lambert Y: 3010022 td: 50
producing formation: td formation:
latitude: 41.297473 longitude: 88.627089
Water from sand & gravel at depth 40 to 50 ft.
Screen: Diam. 5 in. Length: 10 ft. Slot: 13
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC #250	0	50

Size hole below casing: in.
Static level 10 ft. below casing top which is 1 ft. above grnd level.
Pumping level 40 ft. when pumping at 0 gpm for 1 hours.

Formations Passed Through	Thickness	Bottom
clay	40	40
sand & gravel	10	50

120990067400 Johnson Charles R 26-33N- 5E
LaSalle Wheeler James
Status: WATER 50 N 100 W SEc NE Elev: 0
permit: 0 permit date: comp. date: 01/01/46
Lambert X: 3243466 Lambert Y: 3012471 td: 65
producing formation: td formation:
latitude: 41.304099 longitude: 88.609715

120992458800 Fordonski, Keith 27-33N- 5E
LaSalle Spring Brook Marina
Status: WATER SE SE SE Elev: 0
permit: W92-003 permit date: 01/08/92 comp. date: 01/23/92
Lambert X: 3238079 Lambert Y: 3010003 td: 44
producing formation: td formation:
latitude: 41.297438 longitude: 88.629499
Water from shale at depth 15 to 40 ft.
Screen: Diam. 5 in. Length: 4 ft. Slot: 15
Casing and Liner Pipe -

Diam. (in.)	Kind and Weight	From(ft)	To(ft)
5	PVC	0	40

Size hole below casing: 5 in.
Static level 5 ft. below casing top which is 1 ft. above grnd level.
Pumping level 20 ft. when pumping at 0 gpm for 4 hours.

Formations Passed Through	Thickness	Bottom
sand & gravel	25	25
shale	19	44

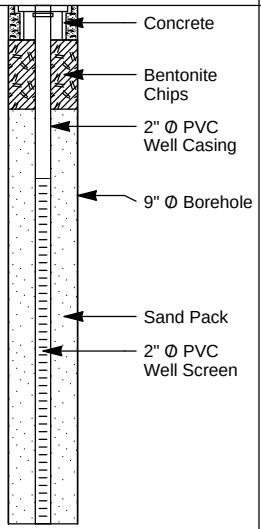
APPENDIX B

MONITORING WELL STRATIGRAPHIC AND INSTRUMENTATION LOGS

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-101S
DATE COMPLETED: May 9, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	GROUND SURFACE TOP OF CASING	705.90 705.52						
2, 4, 6	Soils removed by "soft dig", no stratigraphy defined. Silty Clay at approximately 1.0ft BGS							
8, 10, 12, 14	CL SILTY CLAY - trace fine subangular gravels, stiff, low plasticity, competent, gray, dry to moist	699.10				100 100		0.0 0.0
16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38	END OF BOREHOLE @ 15.0ft BGS	690.90						

WELL DETAILS
Screened interval:
700.90 to 690.90ft AMSL
5.00 to 15.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
702.90 to 690.90ft AMSL
3.00 to 15.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-102S
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: N. KUHL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	GROUND SURFACE TOP OF CASING	707.54 706.96						
	FILL - asphalt, compacted fill, dry		Concrete					
2	Soils removed by "soft dig", no stratigraphy defined. Silty Clay at approximately 1.0ft BGS	705.54	2" Ø PVC Well Casing					
4	CL CLAY - trace gravel, medium to soft, low plasticity, brown/gray, mottled, dry	703.54	Bentonite Chips 9" Ø Borehole				7	0.0
6							6	0.0
8	- soft at 7.5ft BGS CL CLAY-trace gravel, firm, medium plasticity, gray, wet	699.54					11	0.0
10	- soft from 9.5 to 9.8 ft BGS						13	0.0
12							19	0.0
14			Sand Pack					
16	CL CLAY-trace gravel, firm, medium plasticity, brown, dry - <1/8" sand seam at 15.0 ft BGS	692.54	2" Ø PVC Well Screen				28	0.0
18	- soft at 16.0 ft BGS CL CLAY-trace gravel, soft, low plasticity, gray, moist	691.04					23	0.0
20							22	0.0
22							15	0.0
24							12	0.0
26	- sand seam, fine grained 1/4-1/8" thick, gray at 25.0ft BGS		Bentonite Chips				11	0.0
28							10	0.0
30	END OF BOREHOLE @ 30.0ft BGS	677.54					10	0.0
32								
34								
36								
38								

WELL DETAILS
Screened interval:
697.54 to 687.54ft AMSL
10.00 to 20.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
699.54 to 687.04ft AMSL
8.00 to 20.50ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-103S
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	GROUND SURFACE 709.26 TOP OF CASING 708.91							
	Soils removed by "soft dig", no stratigraphy defined. Silty Clay at approximately 1.5ft BGS		Concrete Bentonite Chips 2" Ø PVC Well Casing					
2								
4								
	CL SILTY CLAY - high silt content, trace fine subangular gravels, stiff, low to medium plasticity, brown/gray, dry to moist	704.26	9" Ø Borehole					
6								
	- olive/gray, mottle at 7.0ft BGS					100		0.0
8								
			Sand Pack 2" Ø PVC Well Screen					
10	- brown, increase in gravel content at 10.5ft BGS							
12	- some medium sands, trace plasticity at 12.0ft BGS					100		0.0
14								
	- decrease in brown, more gray at 15.0ft BGS							
16								
						100		0.0
18	- trace medium gravel, subangular to angular at 18.5ft BGS							
20	- sample stuck in geoprobe line, no recovery for 5 ft at 20.0ft BGS							
22						0		0.0
24								
	CL SILTY CLAY - high silt content, medium plasticity, gray, moist	684.26						
26								
28						100		0.0
30								
32			Bentonite Chips			100		0.0
34								
36								
38	- decrease in plasticity at 38.0ft BGS					100		0.0

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-103S
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

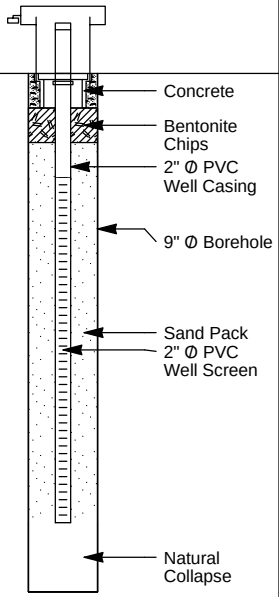
DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
42	- medium to high plasticity, trace fine gravels, angular at 43.0ft BGS					100		0.0
44								
46								
48						100		0.0
50	END OF BOREHOLE @ 50.0ft BGS	659.26	WELL DETAILS Screened interval: 704.26 to 694.26ft AMSL 5.00 to 15.00ft BGS Length: 10ft Diameter: 2in Slot Size: 0.010 Sand Pack: 706.26 to 694.26ft AMSL 3.00 to 15.00ft BGS Material: #5 Sand					
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-104S
DATE COMPLETED: May 11, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	TOP OF RISER GROUND SURFACE	712.16 708.61						
2 4 6 8	SW-GW SANDS AND GRAVELS - fine to coarse grained, fine to medium gravel, well graded, compact, brown/gray, moist - wet at 4.0ft BGS							
10 12 14	CL SILTY CLAY - trace fine and medium gravel, stiff, low plasticity, dark gray, dry to moist	698.61						0.0
16 18 20 22 24 26 28 30 32 34 36 38	END OF BOREHOLE @ 15.0ft BGS	693.61						

WELL DETAILS
Screened interval:
705.61 to 695.61ft AMSL
3.00 to 13.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
706.61 to 695.61ft AMSL
2.00 to 13.00ft BGS
Material: #5 Sand

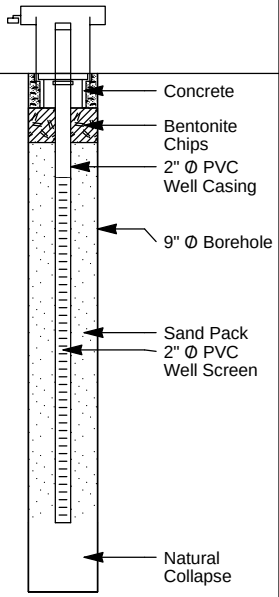
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-105S
DATE COMPLETED: May 11, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	TOP OF RISER GROUND SURFACE	712.41 708.96						
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38	SW-GW (FILL) SANDS AND GRAVELS - fine to coarse grained, fine to medium gravel, trace cobbles, well graded, dense, brown/gray, dry to moist - wet at 4.5ft BGS							
	CL SILTY CLAY - trace fine subangular gravel, trace fine sands, stiff, low plasticity, dark gray, dry to moist	698.96						0.0
	END OF BOREHOLE @ 15.0ft BGS	693.96						



WELL DETAILS
Screened interval:
705.96 to 695.96ft AMSL
3.00 to 13.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
706.96 to 695.96ft AMSL
2.00 to 13.00ft BGS
Material: #5 Sand

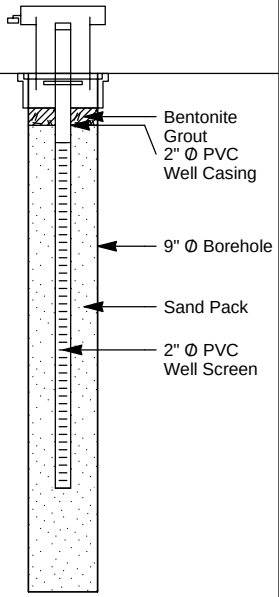
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-106S
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: N. KUHL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	TOP OF RISER GROUND SURFACE	711.41 708.58						
2	FILL - fill material, gravelly sand, damp							
4	CL CLAY - trace gravel, firm, medium plasticity, brown/gray, mottled, wet	704.58					13	0.0
6	- soft at 7.0ft BGS							
8							5	0.0
							19	0.0
10	- <1/8" sand seam at 9.6ft BGS - <1/8" sand seam at 10.5ft BGS						14	0.0
12	CL CLAY-medium to firm, high plasticity, dark gray	697.08					8	0.0
14							14	0.0
	END OF BOREHOLE @ 15.0ft BGS	693.58						
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								
36								
38								



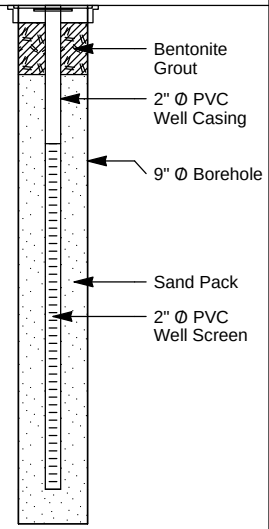
WELL DETAILS
Screened interval:
706.58 to 696.58ft AMSL
2.00 to 12.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
707.08 to 693.58ft AMSL
1.50 to 15.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-107S
DATE COMPLETED: May 11, 2006
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: N. KUHL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	GROUND SURFACE TOP OF CASING	709.27 708.72						
2, 4, 6	Soils removed by "soft dig", no stratigraphy defined. Sand, Gravel and Cobble Fill to approximately 6.0 ft BGS. Silty Clay at approximately 6.0 ft BGS							
8, 10, 12, 14	CL CLAY - trace gravel, sand seams, soft, medium plasticity, gray, moist - <1/4" gravel seam at 9.5ft BGS	702.27						
16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38	END OF BOREHOLE @ 15.0ft BGS	694.27						

SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
			7	0.0
			7	0.0
			12	0.0
			12	0.0

WELL DETAILS
Screened interval:
705.27 to 695.27ft AMSL
4.00 to 14.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
707.27 to 694.27ft AMSL
2.00 to 15.00ft BGS
Material: #5 Sand

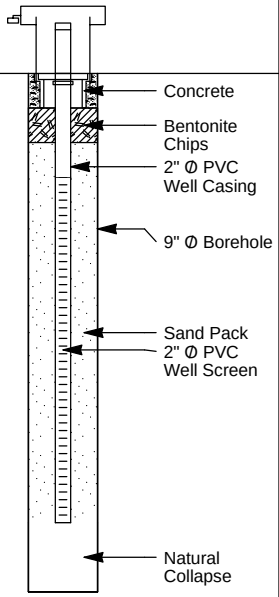
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-108S
DATE COMPLETED: May 10, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	TOP OF RISER GROUND SURFACE	714.02 711.17						
2 4 6 8	Soils removed by "soft dig", no stratigraphy defined. Silty Clay at approximately 0.4 ft BGS - gravel seam, saturated at 3.5ft BGS							
10	CL SILTY CLAY - trace fine and medium gravel, subangular, stiff, low plasticity, gray, dry to moist	702.67				100		0.0
12 14	CL SILTY CLAY - high silt content, trace fine gravels, medium to high plasticity	701.17				100		0.0
16 18 20 22 24 26 28 30 32 34 36 38	END OF BOREHOLE @ 15.0ft BGS	696.17						



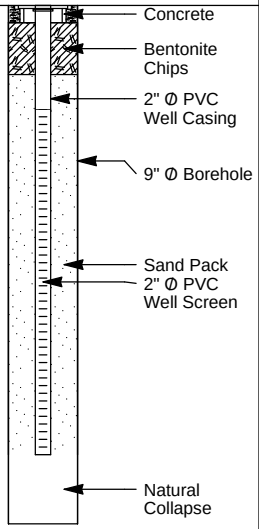
WELL DETAILS
Screened interval:
708.17 to 698.17ft AMSL
3.00 to 13.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
709.17 to 698.17ft AMSL
2.00 to 13.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-109S
DATE COMPLETED: May 11, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	GROUND SURFACE TOP OF CASING	711.64 711.27						
2, 4, 6, 8	SW-GW (FILL) SANDS AND GRAVELS - fine to coarse grained, fine to medium gravel, subangular to subrounded, well graded, dense, brown - wet at 3.0ft BGS							
10, 12, 14	CL SILTY CLAY - some fine gravel, angular to subangular, competent, stiff, low plasticity, gray, dry to moist	701.94				100		0.0
16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38	END OF BOREHOLE @ 15.0ft BGS	696.64						

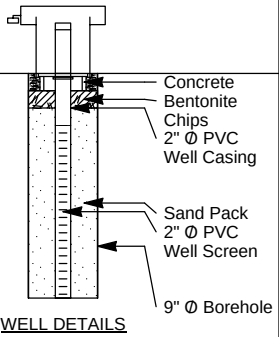
WELL DETAILS
Screened interval:
708.64 to 698.64ft AMSL
3.00 to 13.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
709.64 to 698.64ft AMSL
2.00 to 13.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-110S
DATE COMPLETED: May 4, 2006
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	TOP OF RISER GROUND SURFACE	505.85 502.35						
2	Soils removed by "soft dig", no stratigraphy defined. Silty Clay at approximately 1.5ft BGS - 2" sandstone layer, refusal, continue with 4-1/4" HSA at 4.0 ft BGS					100		0.0
4	SILTY CLAY	498.35						
6	- SANDSTONE (BEDROCK), very granular, redish tint, refusal at 6.5ft BGS	495.85						
8	END OF BOREHOLE @ 6.5ft BGS							
10								
12								
14								
16								
18								
20								
22								
24								
26								
28								
30								
32								
34								
36								
38								

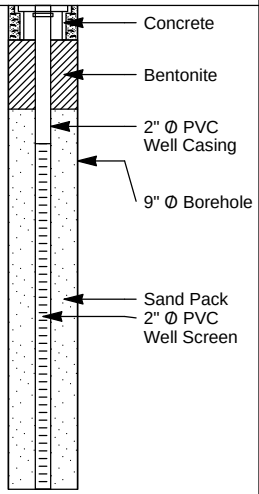
WELL DETAILS
Screened interval:
500.85 to 495.85ft AMSL
1.50 to 6.50ft BGS
Length: 5ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
501.35 to 495.85ft AMSL
1.00 to 6.50ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-111S
DATE COMPLETED: May 12, 2006
DRILLING METHOD: 4-1/4" HSA
FIELD PERSONNEL: N. KUHL

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	GROUND SURFACE TOP OF CASING	706.04 705.41						
	Soils removed by "soft dig", no stratigraphy defined. Clay at approximately 2 ft BGS							
6	CLAY, low plasticity, trace gravels, medium to firm, gray	700.04				11		0
						9		0
	- possible sand seam at 11.0ft BGS					11		0
						12		0
14	END OF BOREHOLE @ 14.0ft BGS	692.04						

WELL DETAILS
Screened interval:
702.04 to 692.04ft AMSL
4.00 to 14.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
703.04 to 692.04ft AMSL
3.00 to 14.00ft BGS
Material: #5 Sand

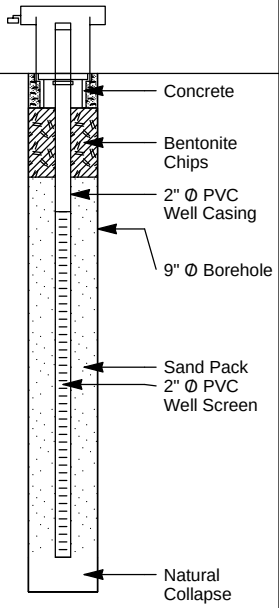
NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-112S
DATE COMPLETED: May 12, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	TOP OF RISER GROUND SURFACE	718.67 715.65						
2 4 6	Soils removed by "soft dig" - silty clay at approximately 5ft BGS							
8 10 12 14	CL SILTY CLAY - high slit content, trace fine subangular gravel, stiff, low plasticity, gray, dry to moist	708.65				60		0.0
16 18 20 22 24 26 28 30 32 34 36 38	END OF BOREHOLE @ 15.0ft BGS	700.65						



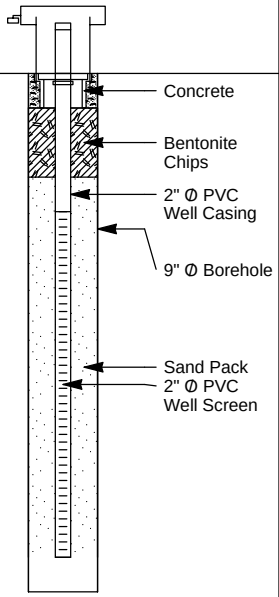
WELL DETAILS
Screened interval:
711.65 to 701.65ft AMSL
4.00 to 14.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
712.65 to 701.65ft AMSL
3.00 to 14.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: LASALLE GENERATING STATION
PROJECT NUMBER: 45136-24
CLIENT: EXELON GENERATION COMPANY LLC
LOCATION: MARSEILLES, ILLINOIS

HOLE DESIGNATION: MW-LS-113S
DATE COMPLETED: May 15, 2006
DRILLING METHOD: 4-1/4" HSA/DIRECT PUSH
FIELD PERSONNEL: B. WILLIAMS

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	ELEV. ft AMSL	Monitoring Well	SAMPLE NUMBER	INTERVAL	REC (%)	'N' VALUE	PID (PPM)
	TOP OF RISER GROUND SURFACE	714.21 711.23						
2 4	Soils removed by "soft dig", stratigraphy not defined							
6	- silty clay at approximately 5ft BGS							
	CL SILTY CLAY - high slit content, trace fine subangular gravel, trace vegetation, stiff, low plasticity, brown/gray, dry to moist	705.23				40		0.0
8 10 12 14						50		0.0
	END OF BOREHOLE @ 15.0ft BGS	696.23						
16 18 20 22 24 26 28 30 32 34 36 38								

WELL DETAILS
Screened interval:
707.23 to 697.23ft AMSL
4.00 to 14.00ft BGS
Length: 10ft
Diameter: 2in
Slot Size: 0.010
Sand Pack:
708.23 to 697.23ft AMSL
3.00 to 14.00ft BGS
Material: #5 Sand

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

APPENDIX C

QUALITY ASSURANCE PROGRAM - TELEDYNE BROWN ENGINEERING, INC.

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company

Rev. 8 Effective October 26, 2005
Document K-QAM-1

Quality Assurance Manual

For

Teledyne Brown Engineering

Environmental Services

2508 Quality Lane
Knoxville, Tennessee 37931-3133
865-690-6819

Generated by: Lynne Perry
Lynne Perry, QA Manager

Approved by: Keith Jeter
Keith Jeter, Operations Manager

Copy No.: Original
Issued To: Lynne Perry
Date: 10/26/05

TABLE OF CONTENTS

TABLE OF CONTENTS - Continued

TABLE OF CONTENTS - Continued

TABLE OF CONTENTS - Continued

REVISION HISTORY

Revision 7	Complete re-write	January 1, 2005	Bill Meyer
Revision 8	Updated organization chart, minor change to 1.0, 4.4, 7.5.3.2, 10.2.3, and 12.3		

1.0 Knoxville QAM Section Introduction

This Quality Assurance Manual (QAM) and related Procedures describes the Knoxville Environmental Services Laboratory's QA system. This system is designed to meet multiple quality standards imposed by Customers and regulatory agencies including:

NRC's 10 CFR 50 Appendix B
NRC's Regulatory Guide 4.15
DOE's Order 414.1
DOE's QSAS
ANSI N 42.23
ANSI N 13.30
NELAC Standard, Chapter 5

The Environmental Services (ES) Laboratory does low level radioactivity analyses for Power Plants and other customers. It primarily analyzes environmental samples (natural products from around plants such as milk), in-plant samples (air filters, waters), bioassay samples from customer's employees, and waste disposal samples (liquids and solids).

Potable and non-potable water samples are tested using methods based on EPA standards as cited in State licenses (see Procedure 4010). The listing [current as of initial printing of this Manual – see current index for revision status and additions / deletions] of implementing Procedures (SOPs) covering Administration, Methods, Counting Instruments, Technical, Miscellaneous, and LIMS is shown in Table 1-1. Reference to these Procedures by number is made throughout this QAM.

Table 1-1

Number	Title
Part 1	**Administrative Procedures**
1001	Validation and Verification of Computer Programs for Radiochemistry Data Reduction
1002	Organization and Responsibility
1003	Control, Retention, and Disposal of Quality Assurance Records
1004	Definitions
1005	Data Integrity
1006	Job Descriptions
1007	Training and Certifications
1008	Procedure and Document Control
1009	Calibration System
1010	Nonconformance Controls
1011	10CFR21 Reporting
1012	Corrective Action and Preventive Action

Number	Title
1013	Internal Audits and Management Reviews
1014	RFP, Contract Review, and Order Entry (formerly 4001)
1015	Procurement Controls
Part 2	**Method Procedures**
2001	Alpha Isotopic and Plutonium-241
2002	Carbon-14 Activity in Various Matrices
2003	Carbon-14 and Tritium in Soils, Solids, and Biological Samples; Harvey Oxidizer Method
2004	Cerium-141 and Cerium-144 by Radiochemical Separation
2005	Cesium-137 by Radiochemical Separation
2006	Iron-55 Activity in Various Matrices
2007	Gamma Emitting Radioisotope Analysis
2008	Gross Alpha and/or Gross Beta Activity in Various Matrices
2009	Gross Beta Minus Potassium-40 Activity in Urine and Fecal Samples
2010	Tritium and Carbon-14 Analysis by Liquid Scintillation
2011	Tritium Analysis in Drinking Water by Liquid Scintillation
2012	Radioiodine in Various Matrices
2013	Radionickel Activity in Various Matrices
2014	Phosphorus-32 Activity in Various Matrices
2015	Lead-210 Activity in Various Matrices
2016	Radium-226 Analysis in Various Matrices
2017	Total Radium in Water Samples
2018	Radiostrontium Analysis by Chemical Separation
2019	Radiostrontium Analysis by Ion Exchange
2020	Sulfur-35 Analysis
2021	Technetium-99 Analysis by Eichrom Resin Separation
2022	Total Uranium Analysis by KPA
2023	Compositing of Samples
2024	Dry Ashing of Environmental Samples
2025	Preparation and Standardization of Carrier Solutions
2026	Radioactive Reference Standard Solutions and Records
2027	Glassware Washing and Storage
2028	Moisture Content of Various Matrices
2029	Polonium-210 Activity in Various Matrices
2030	Promethium-147 Analysis

Number	Title
Part 3	**Instrument Procedures**
3001	Calibration and Control of Gamma-Ray Spectrometers
3002	Calibration of Alpha Spectrometers
3003	Calibration and Control of Alpha and Beta Counting Instruments
3004	Calibration and Control of Liquid Scintillation Counters
3005	Calibration and Operation of pH Meters
3006	Balance Calibration and Check
3008	Negative Results Evaluation Policy
3009	Use and Maintenance of Mechanical Pipettors
3010	Microwave Digestion System Use and Maintenance
Part 4	**Technical Procedures**
4001	Not Used
4002	QC Checks on Data
4003	Sample Regent and Control
4004	Data Package Preparation and Reporting
4005	Blank, Spike, and Duplicate Controls
4006	Inter-Laboratory Comparison Study Process
4007	Method Basis and Initial Validation Process
4008	Not Used
4009	MDL Controls
4010	State Certification Process
4011	Accuracy, Precision, Efficiency, and Bias Controls and Data Quality Objectives
4012	Not Used
4013	Not Used
4014	Facility Operation and Control
4015	Documentation of Analytical Laboratory Logbooks (formerly 1002)
4016	Total Propagated Uncertainty (formerly 1004)
4017	LIMS Operation
4018	Instrument Calibration System
4019	Radioactive Reference Material Standards
Part 5	**Miscellaneous Procedures**
5001	Laboratory Hood Operations
5002	Operation and Maintenance of Deionized Water System
5003	Waste Management
5004	Acid Neutralization and Purification System Operation Procedure

Part 6	LIMS
6001	LIMS Raw Data Processing and Reporting
6002	Software Development and/or Pilots of COTS Packages
6003	Software Change and Version Control
6004	Backup of Data and System Files
6005	Disaster Recovery Plan
6006	LIMS Hardware
6007	LIMS User Access
6008	LIMS Training
6009	LIMS Security

2.0 QUALITY SYSTEM

The TBE-ES QA system is designed to comply with multiple customer- and regulatory agency-imposed specifications related to quality. This quality system applies to all activities of TBE-ES that affect the quality of analyses performed by the laboratory.

2.1 Policy

The TBE quality policy, given in Company Policy P-501, is "TBE will continually improve our processes and effectiveness in providing products and services that exceed our customer's expectations."

This policy is amplified by this Laboratory's commitment, as attested to by the title page signatures, to perform all work to good professional practices and to deliver high quality services to our customers with full data integrity. (See Section 4.0 and Procedure 1005).

2.2 Quality System Structure

The Quality System is operated by the organizations described in Section 3.0 of this Manual. The Quality System is described in this Manual and in the Procedures Manual, both of which are maintained by the QA Manager. Procedures are divided into 6 sections – Administrative, Methods, Equipments, Technical, Miscellaneous, and LIMS. This Manual is structured as shown in the Table of Contents and refers to Procedures when applicable. Cross references to the various imposed quality specifications are contained in Appendices to this Manual.

2.3 Quality System Objectives

The Quality System is established to meet the objective of assuring all operations are planned and executed in accordance with system requirements. The Quality System also assures that performance evaluations are performed (see Procedure 4006), and that appropriate verifications are performed (see Procedures in the 1000 and 4000 series) to further assure compliance. Verification includes

examination of final reports (prior to submittal to customers) to determine their quality (see Procedure 4004).

To further these objectives, various in-process assessments of data, as well as assessments of the system, via internal audits and management reviews, are performed. Both internal experts and customer / regulatory agencies perform further assessments of the system and compliance to requirements.

2.4 Personnel Orientation, Training, and Qualification

TBE provides indoctrination and training to employees and performs proficiency evaluation of technical personnel. This effort is described in Section 4.0.

3.0 ORGANIZATION, AUTHORITY, AND RESPONSIBILITY

TBE has established an effective organization for conducting laboratory analyses at the Knoxville Environmental Services Laboratory. The basic organization is shown in Figure 3-1. Detail organization charts with names, authorities, and responsibilities are given in Procedure 1002. Job descriptions are given in Procedure 1006.

This organization provides clearly established Quality Assurance authorities, duties, and functions. QA has the organizational freedom needed to:

(1) Identify problems
(2) Stop nonconforming work
(3) Initiate investigations
(4) Recommend corrective and preventive actions
(5) Provide solutions or recommend solutions
(6) Verify implementation of actions

All Laboratory personnel have the authority and resources to do their assigned duties and have the freedom to act on problems. The QA personnel have direct, independent access to Company management as shown in Figure 3-1.

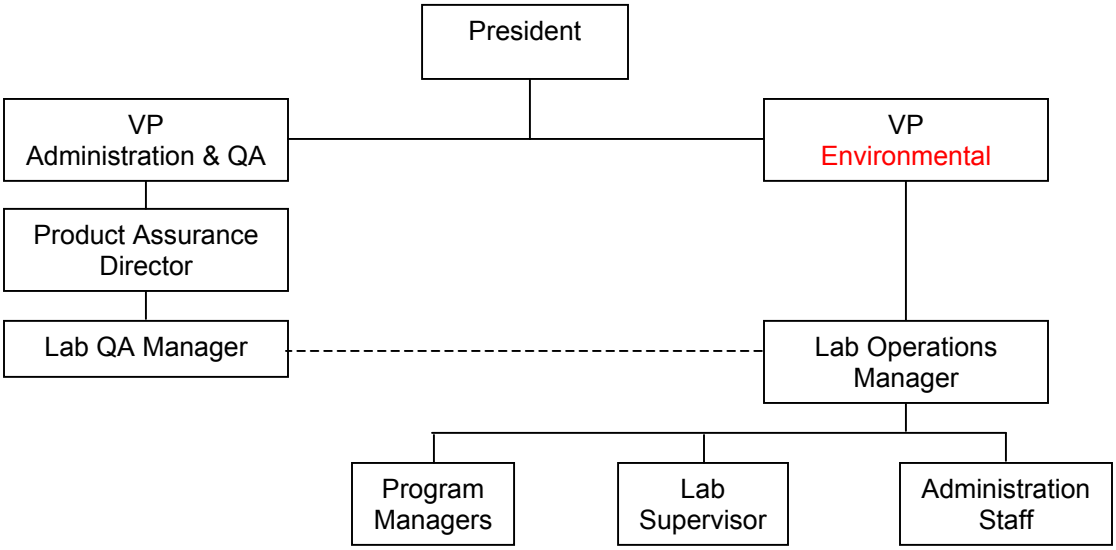


Figure 3.1. Laboratory Organization

4.0 PERSONNEL ORIENTATION, DATA INTEGRITY, TRAINING, AND QUALIFICATION

4.1 Orientation

All laboratory personnel must receive orientation to the quality program if their work can affect quality. Orientation includes a brief review of customer- and regulatory agency-imposed quality requirements, the structure of the QAM, and the implementing procedures. The goal of orientation is to cover the nature and goals of the QA program.

4.2 Data Integrity

The primary output of the Laboratory is data. Special emphasis and training in data integrity is given to all personnel whose work provides or supports data delivery. The Laboratory Data Integrity Procedure (Procedure 1005) describes training, personnel attestations, and monitoring operations. Annual reviews are required.

4.3 Training

The Quality Assurance Manager (QAM) maintains a training matrix indicating which laboratory personnel need training in which specific Procedures. This matrix is updated when personnel change or change assignments. All personnel are trained per these requirements and procedures. This training program is described in Procedure 1007. The assigned responsibilities for employees are described in Procedure 1002 (See Section 3.0) on Organization and in Procedure 1006, Job Descriptions. Refresher training or re-training is given annually as appropriate.

4.4 Qualification

Personnel are qualified as required by their job description. Management and non-analysts are evaluated based on past experience, education, and management's assessment of their capabilities. Formal qualification is required of analysts and related technical personnel who perform laboratory functions. Each applicable person is given training and then formally evaluated by the Operations Manager (or his designees) and by QA. Each analyst must initially demonstrate capability to perform each assigned analytical effort. Each year, thereafter, he or she must perform similar analyses on Interlab Comparison Samples (see Procedure 4006) or on equivalent blanks and spikes samples. Acceptable results extend qualifications (certification). Unacceptable results require retraining in the subject method / Procedures. (See Procedure 1007 for added information, records, forms, etc. used.)

4.5 Records

Records of training subjects, contents, attendees, instructors, and certifications are maintained by QA.

5.0 CUSTOMER INTERFACES

5.1 Interface Personnel

The Laboratory has designated Program Managers as the primary interface with all customers. Other interfaces may be the QA Manager or the Lab Operations Manager.

5.2 Bid Requests and Tenders

The Program Managers respond to customer requests for bids and proposals per Procedure 1014 for bids, proposals, and contract reviews. They clarify customer requests so both the customer and the lab staff understand requests. As responses are developed, internal reviews are conducted to ensure that requirements are adequately defined and documented and to verify that the Laboratory has adequate resources in physical capabilities, personal skills, and technical information to perform the work. Accreditation needs are reviewed. If subcontracts are required to perform any analysis, the subcontractor is similarly evaluated and the client notified in writing of the effort. Most qualifications are routine with standard pricing and the review of these quotes is performed by the Program Manager. Larger or more complex quotes are reviewed by the Operations Manager and the QA Manager (or designees). Evidence of review is by initialing and dating applicable papers, signatures on quotations, or by memo.

5.3 Contracts

The Program Manager's receive contract awards (oral or written) and generate the work planning for initiation preparation (charge numbers, data structure or contents in LIMS, etc.). They review contracts for possible differences from quotations and, if acceptable, contracts are processed. Documentation of the review is by initials and date as a minimum. Contract changes receive similar reviews and planning.

5.4 TBE's Expectation of Customers

TBE expects customers to provide samples suitable for lab analysis. These expectations include:

- Accurate and unambiguous identification of samples
- Proper collection and preservation of samples
- Use of appropriate containers free from external and internal contamination
- Integrity preservation during shipment and timely delivery of samples that are age sensitive
- Adequate sized samples that allow for retest, if needed
- Specification of unique MOA/MDC requirements
- Alerting the lab about abnormal samples (high activity, different chemical contents, etc.)
- Chain of custody initiation, when required.

5.5 Customer Satisfaction

TBE's quality policy centers on customer satisfaction (See 2.0). TBE will work to satisfy customers through full compliance with contract requirements, providing accurate data and properly responding to any questions or complaints. Customers are provided full cooperation in their monitoring of Laboratory performance. Customers are notified if any applicable State Accreditation is withdrawn, revoked, or suspended.

5.5.1 Customer Complaints

Any customer complaints are documented and tracked to closure. Most complaints concern analysis data and are received by Program Managers. They log each such complaint, order retests for verification, and provide documented results to customers. Complaints may also be received by QA or Operations.

If complaints are other than re-test type, the nonconformance and corrective action systems (Sections 12 and 13) are used to resolve them and record all actions taken.

5.5.2 Customer Confidentiality

All laboratory personnel maintain confidentiality of customer-unique information.

6.0 DOCUMENTATION GENERATION & CONTROL

6.1 General

The documentation generation and control system is detailed in Procedure 1008. An overview is given below. The basic quality system documents are described in Section 2.0.

6.2 New Documentation

Each Procedure and this QAM is written by appropriate personnel, validated if applicable (see Section 7.0), reviewed for adequacy, completeness, and correctness, and, if acceptable, accepted by the authorized approver [QA Manager, Operations Manager (or their designee)]. Both approvals are required if a Procedure affects both QA and Operations. (See Responsibilities in Section 3.0). These procedures control the quality measurements and their accuracy.

Each document carries a unique identification number, a revision level, dates, page numbers and total page count, and approver identification and sign off. If TBE writes code for software, the software is version identified and issued after Verification and Validation per Section 7.0.

6.3 Documentation Changes

Each change is reviewed in the same manner and by the same people as new documentation. Revision identifications are updated and changes indicated by side bars, italicized words, or by revision description when practical. Obsolete revisions are maintained by QA after being identified as obsolete.

6.4 Documentation Lists and Distributions

Computer indexes of documents are maintained by Quality showing the current authorized revision level of each document. These revisions are placed on the Laboratory server and obsolete ones are removed so that all personnel have only the current documents. If hard copies are produced and distributed, separate distribution lists are maintained indicating who has them and their revision level(s). Copies downloaded off the server are uncontrolled unless verified by the user (on the computer) to be the latest revision.

6.5 Other Documentation

In addition to TBE-generated documentation, QA maintains copies of applicable specifications, regulations, and standard methods.

6.6 Documentation Reviews

Each issued document is reviewed at least every third year by the approving personnel. This review determines continued suitability for use and compliance with requirements.

7.0 DESIGN OF LABORATORY CONTROLS

7.1 General

The Laboratory and its operating procedures are designed specifically for low level (environmental and in-plant) radioactive sample analysis. The various aspects of the laboratory design include the following which are discussed in subsequent paragraphs of this Section:

(a) Facility
(b) Technical Processes and Methods
(c) Verification of Design of Processes, Methods, and Software.
(d) Design of Quality Controls
(e) Counting Instrument Controls

7.2 Facility

The facility was designed and built in 2000 to facilitate correct performance of operations in accordance with good laboratory practices and regulatory requirements. It provides security for operations and samples. It separates sample storage areas based on activity levels, separates wet chemistry from counting instrumentation for contamination control, and provides space and electronic systems for documentation, analysis, and record storage. Procedure 4014 describes the facility, room uses, layouts, etc.

7.3 Technical Processes and Methods

7.3.1 Operational Flow

The laboratory design provides for sample receipt and storage (including special environmental provisions for perishable items) where samples are received from clients and other labs (see Section 9.0). The samples are logged into the computer based Laboratory Information Management System (LIMS) and receive unique identification numbers and bar code labels. (See Procedure 4017 for LIMS description and user procedures). The Program Managers then plan the work and assure LIMS contains any special instructions to analysts. Samples then go to sample preparation, wet chemistry (for chemical separation), and counting based on the radionuclides. See Procedures in the 2000 and 3000 series. Analysts perform the required tasks with data being entered into logbooks, LIMS, and counting equipment data systems as appropriate. Results are collected and reviewed by the Operations Manager and Program Managers and reports to clients are generated (See Section 14.0). All records (electronic or hard copy) are maintained in files or in back-up electronic copies (see Section 15.0). After the required hold periods and client notification and approval, samples are disposed of in compliance with regulatory requirements (see Procedures 5003 and 5004).

7.3.2 Methods

The laboratory methods documented in the 2000 and 3000 series of Procedures were primarily developed by senior TBE laboratory personnel based on years of experience at our prior facility in New Jersey. They have been improved, supplemented and implemented here. Where EPA or other accepted national methods exist (primarily for water analyses under State certification programs - see Procedure 4010), the TBE methods conform to the imposed requirements or State accepted alternate requirements. Any method modifications are documented and described in the Procedure. There are no nationally recognized methods for most other analysis methods but references to other method documents are noted where applicable.

7.3.3 Data Reduction and Analysis

Whenever possible automatic data capture and computerized data reduction programs are used. Calculations are either performed using commercial software (counting system operating systems) or TBE developed and validated software is used (see 7.4 below). Analysis of reduced data is performed as described in Section 14.0 and Procedure 4004.

7.4 Verification of Technical Processes, Methods, and Software

7.4.1 Operational Flow Verification

The entire QA Manual and related procedures describe the verification of elements of the technical process flow and the establishment of quality check points, reviews, and controls.

7.4.2 Method Verifications

Methods are verified and validated per Procedure 4007 prior to use unless otherwise agreed to by the client. For most TBE methods initial validation occurred well in the past. New or significantly revised Methods receive initial validation by demonstration of their performance using known analytes (NIST traceable) in appropriate matrices. Sufficient samples are run to obtain statistical data that provides evidence of process capability and control, establishes detection levels (see procedure 4009), bias and precision data (see Procedure 4011). All method procedures and validation data are available to respective clients. Also see Section 7.5 below for the Demonstration of Capability program.

7.4.3 Data Reduction and Analysis Verification

Data reduction and analysis verification is performed by personnel who did not generate the data. (See Section 14.0).

7.5 Design of Quality Controls

7.5.1 General

There are multiple quality controls designed into the laboratory operations. Many of these are described elsewhere in this manual and include personnel qualification (Section 4.0), Document control (6.0), Sample identification and control (9.0), Use of reference standards (10.0), intra- and inter- laboratory tests (10.0), etc. This Section describes the basic quality control systems used to verify Method capability and performance.

7.5.2 Demonstration of Capability (D of C)

The demonstration of capability system verifies and documents that the method, analyst, and the equipment can perform within acceptable limits. The D of C is certified for each combination of analyte, method, and instrument type. D of C's are certified based on objective evidence at least annually. This program is combined with the analyst D of C program (See Section 4.0). Initial D of C's use the method validation effort as covered above. Subsequent D of C's use Inter-Laboratory samples (Procedure 4006) or, if necessary, laboratory generated samples using NIST traceable standards. If results are outside of control limits, re-demonstration is required after investigation and corrective action is accomplished (See Sections 12.0 and 13.0)

7.5.3 Process Control Checks

Process control checks are designed to include Inter-Lab samples, Intra-lab QC check samples, and customer provided check samples. 10% of laboratory analysis samples are for process control purposes.

7.5.3.1 Inter- Lab Samples. Inter-lab samples are procured or obtained from sources providing analytes of interest in matrices similar to normal client samples. These samples may be used for Demonstration of Capability of analyst's, equipment and methods. They also provide for independent insight into the lab's process capabilities. Any value reported as being in the warning zone (over 2 sigma) is reviewed and improvements taken. Any value failing (over 3 sigma) is documented on an NCR and formal investigation per Section 12.0 and 13.0 is performed. If root causes are not clearly understood and fixed, re-tests are required using lab prepared samples (See Procedure 4006).

7.5.3.2 QC Samples. QC samples, along with Inter-lab samples and customer check samples, are 10% of the annual lab workload for the applicable analyte and method. If batch processing is used, some specifications require specific checks with each batch or each day rather than as continuous process controls. (See Procedure 4005)

QC samples consist of multiple types of samples including:

(a) Method blanks
(b) Blank spikes
(c) Matrix spikes

(d) Duplicates
(e) Tracers and carriers

Acceptance limits for these samples are given in Procedures or in lab standards. The number, frequency, and use of these sample types varies with the method, matrix, and supplemental requirements. The patterns of use versus method and the use of the resulting test data is described in Procedure 4005.

7.5.3.3 Customer Provided Check Samples. Customers may provide blind check samples and duplicates to aid in their evaluation of the Laboratory. When the lab is notified that samples are check samples their results are included in the QC sample percentage counts. Any reported problems are treated as formal complaints and investigated per Section 5.

7.6 Counting Instrument Controls

The calibration of instruments is their primary control and is described in Section 11.0. In addition, counting procedures (3000 series) also specify use of background checks (method blank data is not used for this) to evaluate possible counting equipment contamination. Instrument calibration checks using a lab standard from a different source than the one used for calibration are also used. Background data can be used to adjust client and test data. Checks with lab standards indicate potential calibration changes.

8.0 PURCHASING AND SUBCONTRACT CONTROLS

8.1 General

Procurement and Subcontracts efforts use the Huntsville-based Cost Point computer system to process orders. The Laboratory-generated Purchase Requisitions are electronically copied into Purchase Orders in Huntsville. The Laboratory also specifies sources to be used. Procured items and services are received at the Laboratory where receiving checks and inspections are made. Laboratory Procedure 1015 provides details on the procurement control system at the Laboratory and references the Huntsville procedures as applicable.

8.2 Source Selection

Sources for procurements of items and services are evaluated and approved by QA as described in Procedure 1015. Nationally recognized catalog item sources are approved by the QA Manager based on reputation. Maintenance services by an approved distributor or the equipment manufacturing company are pre-approved. Sources for other services are evaluated by QA, based on service criticality to the quality system, by phone, mail out, or site visit.

Subcontract sources for laboratory analysis services are only placed with accredited laboratories (by NELAP, NUPIC, State, Client, etc.) as applicable for the type of analysis to be performed. QA maintains lists of approved vendors and records of evaluations performed.

8.3 Procurement of Supplies and Support Services

8.3.1 Catalog Supplies

The Laboratory procures reagents, processing chemicals, laboratory "glassware," consumables, and other catalog items from nationally known vendors and to applicable laboratory grades, purities, concentrations, accuracy levels, etc. Purchase Requisitions for these items specify catalog numbers or similar call-outs for these off-the-shelf items. Requisitions are generated by the personnel in the lab needing the item and are approved by the Operations or Production Manager. Reagents are analytical reagent grade only.

8.3.2 Support Services

Purchase Requisitions for support services (such as balance calibration, equipment maintenance, etc.) are processed as in 8.3.1 but technical requirements are specified and reviewed before approvals are given.

8.3.3 Equipment and Software

Purchase Requisitions for new equipment, software programs, and major facility modifications affecting the quality system are reviewed and approved by the Operations Manager and the QA Manager.

8.4 Subcontracting of Analytical Services

When necessary, the Laboratory may subcontract analytical services required by a client. This may be because of special needs, infrequency of analysis, etc. Applicable quality and regulatory requirements are imposed in the Purchase Requisition and undergo a technical review by QA. TBE reserves the right of access by TBE and our client for verification purposes.

8.5 Acceptance of Items or Services

Items and services affecting the quality system are verified at receipt based on objective evidence supplied by the vendor. Supply items are reviewed by the requisitioner and, if acceptable, are accepted via annotation on the vendor packing list or similar document. Similarly, equipment services are accepted by the requisitioning lab person. Calibration services are accepted by QA based on certification reviews. (See Section 11.0.)

Data reports from analytical subcontractors are evaluated by Program Managers and subsequently by the Operations Manager (or designee) as part of client report reviews.

Items are not used until accepted and if items or services are rejected, QA is notified and nonconformance controls per Section 12.0 are followed. Vendors may be removed from the approved vendor's list if their performance is unacceptable.

9.0 TEST SAMPLE IDENTIFICATION AND CONTROL

9.1 Sample Identification

Incoming samples are inspected for customer identification, container condition, chain of custody forms, and radioactivity levels. If acceptable, the sample information is entered into LIMS which generates bar coded labels for attachment to the sample(s). The labels are attached and samples stored in the assigned location. If environmental controls are needed (refrigeration, freezing, etc.), the samples are placed in these storage locations. If not acceptable, the Program Manager is notified, the customer contacted, and the problem resolved (return of sample, added data receipts, etc.). See Procedure 4003 for more information on sample receipt.

9.2 LIMS

The LIMS is used to schedule work, provide special information to analysts, and record all actions taken on samples. See Procedure 4017 and the 6000 series of procedures for more information on LIMS operations.

9.3 Sample Control

The sample, with its bar coded label, is logged out to the applicable lab operation where the sample is processed per the applicable methods (Procedures 2000 and 3000). The LIMS-assigned numbers are used for identification through all operations to record data. Data is entered into LIMS, log books (kept by the analysts) or equipment data systems to record data. The combination of LIMS, logbooks, and equipment data systems provide the Chain of Custody data and document all actions taken on samples. Unused sample portions are returned to its storage area for possible verification use. Samples are discarded after required time limits are passed and after client notification and approval, if required.

10.0 SPECIAL PROCESSES, INSPECTION, AND TEST

10.1 Special Processes

The Laboratory's special processes are the methods used to analyze a sample and control equipment. These methods are defined in Procedures in the 2000 and 3000 series. These processes are performed to the qualified methods (see Section 7.0) by qualified people (see 4.0).

10.2 Inspections and Tests

The quality of the process is monitored by indirect means. This program involves calibration checks on counting equipments (see Section 11.0), intra-laboratory checks, and inter-laboratory checks. In addition, some customers submit quality control check samples (blinds, duplicates, external reference standards). All generated data gets independent reviews.

10.2.1 Intra Laboratory Checks (QC Checks)

The quantity and types of checks varies with the method, but basic checks which may include blanks, spiked blanks, matrix spikes, matrix spike duplicates, and duplicates are used as appropriate for customer samples. This process is described in Procedure 4005 and in Section 7.0.

10.2.2 Inter Laboratory Checks

TBE participates in Inter-lab performance evaluation (check) programs with multiple higher level labs. These programs provide blind matrices for the types of matrix/analyte combinations routinely processed by the Lab, if available. This program is described in Procedure 4006.

10.2.3 Data Reviews

Raw data and reports are reviewed by the Operations Manager, or designees. This review checks for data logic, expected results, procedure compliance, etc. (See Section 14.0).

10.3 Control of Sampling of Samples

Samples for analysis are supplied by customers preferably in quantities sufficient to allow re-verification analyses if needed. The samples are prepared for analysis by analysts and then an aliquot (partial sample extraction) is taken from the homogeneous customer sample for the initial analysis. Methods specify standard volumes of sample material required. Sampling data is recorded in LIMS and/or logbooks.

10.4 Reference Standards / Material

10.4.1 Weights and Temperatures

Reference standards are used by the Laboratory's calibration vendor to calibrate the Labs working instruments measuring weights and thermometers.

10.4.2 Radioactive Materials

Reference radioactive standards, traceable to NIST, are procured from higher level laboratories. These reference materials are maintained in the standards area and are diluted down for use by laboratory analysts. All original and diluted volumes are fully traceable to source, procedure, analyst, dilution, and acquisition dates. See Section 11.0 and Procedure 1009.

11.0 EQUIPMENT MAINTENANCE AND CALIBRATION

11.1 General

There are two types of equipment used by the Laboratory: support equipment (scales, glassware, weights, thermometers, etc.) and instruments for counting. Standards traceable to NIST are used for calibration and are of the needed accuracy for laboratory operations. Procedures 1009, 4018, and 4019 describe the calibration and maintenance programs.

11.2 Support Equipment

Analytical support equipment is purchased with the necessary accuracies and appropriate calibration data. If needed, initial calibration by the Laboratory or its calibration vendor is performed. Recalibration schedules are established and equipment recalibrated by the scheduled date by a calibration vendor or by Laboratory personnel. Maintenance is performed, as needed, per manufacturer's manuals or lab procedures.

In addition to calibrations and recalibrations, checks are made on the continued accuracy of items as described in Procedure 1009. Records are maintained of calibration and specified checks.

11.3 Instruments

Instruments receive initial calibration using radioactive sources traceable to NIST. The initial calibration establishes statistical limits of variation that are used to set control limits for future checks and recalibration. This process is described in Procedure 4018. Instruments are maintained per Instrument Manual requirements. Recalibrations are performed per the Procedure.

Between calibrations, check sources are used to assure no significant changes have occurred in the calibration of items. Background checks are performed to check for possible radioactive contamination. Background values are used to adjust sample results. Hardware and software are safeguarded from adjustments that could invalidate calibrations or results.

11.4 Nonconformances and Corrective Actions

If calibrations or checks indicate a problem, the nonconformance system (Section 12.0) and corrective action system (Section 13.0) are initiated to document the problem and its resolution. Equipment is promptly removed from service if questionable.

11.5 Records

Records of calibrations are maintained. Calibration certificates from calibration vendors are maintained by QA. Other calibration data and check data is maintained in log books, LIMS, or instrument software as appropriate and as described in Procedures 1009, 4018, and 4019.

12.0 NONCONFORMANCE CONTROLS

12.1 General

The nonconformance control system is implemented whenever a nonconforming condition on any aspect of Laboratory analysis, testing, or results exist. The system takes graded actions based on the nature and severity of the nonconformance. Nonconforming items or processes are controlled to prevent inadvertent use. Nonconformances are documented and dispositioned. Notification is made to affected organizations, including clients. Procedure 1010 describes the procedures followed. Sample results are only reported after resolution.

12.2 Responsibility and Authority

Each Laboratory employee has the responsibility to report nonconformances and the authority to stop performing nonconforming work or using nonconforming equipment. Laboratory supervision can disposition and take corrective actions on minor problems. Any significant problem is documented by QA using the Laboratory's NCR system per Procedure 1010. QA conducts or assures the conduct of cause analyses, disposition of items or data, and initiation of corrective action if the nonconformance could recur.

12.3 10CFR21 Reporting

The QA Manager reviews NCRs for possible need of customer and/or NRC notification per the requirements of 10CFR21. Procedure 1011 is followed in this review and for any required reporting.

13.0 CORRECTIVE AND PREVENTIVE ACTIONS

13.1 General

The Laboratory takes corrective actions on significant nonconformances (see Section 12.0). It also initiates preventive and improvement actions per the Company Quality Policy (see Section 2.0). The procedures for Corrective Action/Preventive Action systems are contained in Procedure 1012.

13.2 Corrective Actions

Corrective actions are taken by Operations and Quality to promptly correct significant conditions adverse to quality. The condition is identified and cause analysis is performed to identify root causes. Solutions are evaluated and the optimum one selected that will prevent recurrence, can be implemented by the Laboratory, allows the Laboratory to meet its other goals, and is commensurate with the significance of the problem. All steps are documented, action plans developed for major efforts, and reports made to Management. QA verifies the implementation effectiveness. Procedure 1012 provides instructions and designates authorities and responsibilities.

13.3 Preventive Actions

Preventive actions are improvements intended to reduce the potential for nonconformances. Possible preventive actions are developed from suggestions from employees and from analysis of Laboratory technical and quality systems by management. If preventive actions or improvements are selected for investigation, the issues, investigation, recommendations, and implementation actions are documented. Follow up verifies effectiveness.

14.0 RESULTS ANALYSIS AND REPORTING

14.1 General

The Laboratory's role is to provide measurement-based information to clients that is technically valid, legally defensible, and of known quality.

14.2 Results Review

The results obtained from analytical efforts are collected and reviewed by the Operations Manager and the Program Manager. This review verifies the reasonableness and consistency of the results. It includes review of sample and the related QC activity data. Procedure 4002 describes the process. Any deficiencies are corrected by re-analyses, recalculations, or corrective actions per Sections 12.0 and 13.0. Use of the LIMS with its automatic data loading features (see Procedure 4017) minimizes the possibility of transcription or calculation errors.

14.3 Reports

Reports range from simple results reporting to elaborate analytical reports based on the client requirements and imposed specifications and standards. (See Procedure 4004.) Reports present results accurately, clearly, unambiguously, objectively, and as required by the applicable Method(s). Reports include reproduction restrictions, information on any deviations from methods, and any needed data qualifiers based on QC data. If any data is supplied by analytical subcontractors (see Section 8.0), it is clearly identified and attributed to that Laboratory by either name or accreditation number.

If results are faxed or transmitted electronically, confidentiality statements are included in case of receipt by other than the intended client.

Reports are approved by the Program Manager and Operations Manager and record copies kept in file (See Section 15.0).

15.0 RECORDS

15.1 General

The Laboratory collects generated data and information related to quality or technical data and maintains them as records. Records are identified, prepared, reviewed, placed in storage, and maintained as set forth in Procedure 1003.

15.2 Type of Records

All original observations, calculations, derived data, calibration data, and test reports are included. In addition QA data such as audits, management reviews, corrective and preventive actions, manuals, and procedures are included.

15.3 Storage and Retention

Records are stored in files after completion in the lab. Files are in specified locations and under the control of custodians. Filing systems provide for retrieval. Electronic files are kept on Company servers (with regular back up) or on media stored in fireproof file cabinets. Records are kept in Laboratory files for at least 2 years after the last entry and then in Company files for another year as a minimum. Some customers specify larger periods – up to 7 years – which is also met. Generic records supporting multiple customers are kept for the longest applicable period.

15.4 Destruction or Disposal

Records may be destroyed after the retention period and after client notification and acceptance, if required. If the Laboratory closes, records will go in to company storage in Huntsville unless otherwise directed by customers. If the Laboratory is sold, either the new owner will accept record ownership or the records will go into Company storage as stated above.

16.0 ASSESSMENTS

16.1 General

Assessments consist of internal audits and management reviews as set forth in Procedure 1013.

16.2 Audits

Internal audits are planned, performed at least annually on all areas of the quality system, and are performed by qualified people who are as independent as possible from the activity audited. (The Laboratory's small size inhibits full independence in some technical areas.) Audits are coordinated by the Quality Manager who assures audit plans and checklists are generated and the results documented. Reports include descriptions of any findings and provide the auditor's assessment of the effectiveness of the audited activity. Report data includes personnel contacted.

Audit findings are reviewed with management and corrective actions agreed to and scheduled. Follow up is performed by QA to verify accomplishment and effectiveness of the corrective action.

16.3 Management Reviews

The Annual Quality Assurance Report, prepared for some clients, is the Management Review vehicle. These reports cover audit results, corrective and preventive actions, external assessments, and QC and inter-laboratory performance checks. The report is reviewed with Management by the QA Manager for the continued suitability of the Quality Program and its effectiveness. Any needed improvements are defined, documented, and implemented. Follow ups are made to verify implementation and effectiveness.

APPENDIX D

LABORATORY ANALYTICAL REPORTS

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28614

Exelon - LaSalle

June 2, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28614
EX001-3ESPSALLE-06

06/02/2006 15:24

Sample Receipt

The following samples were received on May 12, 2006 in good condition, unless otherwise noted.

Only a partial report is being issued at this time. The strontium analyses have failed due to matrix interference. The laboratory is reran the samples and the rerun results are being reported.

On May 24, 2006, CRA requested the sample IDs be changed.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-LS-TS-LS-101S-050906-BW-001	L28614-1	
WG-LS-TS-LS-102S-050506-BW-002	L28614-2	
WG-LS-TS-LS-103S-050506-BW-003	L28614-3	
WG-LS-TS-LS-104S-050506-BW-004	L28614-4	
WG-LS-TS-LS-105S-050906-BW-005	L28614-5	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28614
EX001-3ESPSALLE-06

06/02/2006 15:24

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG3984.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
GW-45136-050906-BW-001	L28614-1	WG3984-1

H-3

Quality Control

Quality control samples were analyzed as WG3994,WG3995.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
GW-45136-050906-BW-005	L28614-5	WG3995-3

SR-90

Quality Control

Quality control samples were analyzed as WG4065.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28614
EX001-3ESPSALLE-06

06/02/2006 15:24

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4065.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WS-LR-SW-LR-1-052206-LRM-01	L28762-1	WG4065-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

05/12/06 14:39

SR #: SR08349

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPSALLE-06

LIMS #: L28614

Initiated By: PMARSHALL
Init Date: 05/12/06 Receive Date: 05/12/06

Notification of Variance

Person Notified:

Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	NA	
9	Other (Describe)	N	pH of Gamma portion at or below 2.

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

L28614 5-28

PAGE 1 OF 1

ID # № D 1754

SSOW Ref. Code:

Required Client Information:

Company: CRA, Inc.	Report To:
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: Exelon LaSalle
Fax: 734-453-5201	Project Number: 45136-24
Email:	

Laboratory:	Teledyne Brown
Laboratory Location:	Knoxville TN
Laboratory Contact:	
Requested Due Date:	TAT:
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater, WB Borehole Water, WS Surface Water, SO Soil, SE Sediment, See Back for Additional Codes

Analysis and Method

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Tritium	★	Remarks/Lab ID
1.	GW-45136-050906-BW-001	WG	5/9/06	1055	2	✓			✓			x	x	★ - strontium 89/90
2.	GW-45136-050506-BW-002	↓	5/5/06	1045	2	✓			✓			x	x	Gamma Spec:
3.	↓ ↓ ↓ -003		↓	1355	2	✓			✓			x	x	Mn-54
4.	-004			1600	2	✓			✓			x	x	Fe-59
5.	GW-45136-050906-BW-005		5/9/06	0915	2	✓			✓			x	x	Co-58
6.														Co-60
7.														Zn-65
8.														Zr-Nb-95
9.														I-131
10.														Cs-134
11.														Cs-137
12.														Ba-La-140
13.														
14.														
15.														
	TOTAL NUMBER OF CONTAINERS													

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
	2	Dennis Hoyt CRA	5/11/06	9:30 CST	EXELON SHIPPING	5/11/06	9:30 CST
AIRBILL NO.		[illegible] Exelon	5/11/06	3:00 CST	Pat Marshall / TBC	5/12/06	1100

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Dennis Hoyt

Sampler Signature: DENNIS HOYT Date: 5/11/06

5/12/06

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

ACKNOWLEDGEMENT
This is not an invoice

May 12, 2006

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on May 12, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by May 19, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPSALLE-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, kshaw@craworld.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
GW-45136-050906-BW-0	L28614-1		05/09/06:1055	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
GW-45136-050506-BW-0	L28614-2		05/05/06:1045	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
GW-45136-050506-BW-0	L28614-3		05/05/06:1355	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
GW-45136-050506-BW-0	L28614-4		05/05/06:1600	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
GW-45136-050906-BW-0	L28614-5		05/09/06:0915	

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		

End of document

Charles, Rebecca

From: Shaw, Kathy [kshaw@craworld.com]
Sent: Wednesday, May 24, 2006 3:01 PM
To: Charles, Rebecca
Cc: Reid, James; Hoyt, Dennis; Larry.Walton@exeloncorp.com
Subject: FW: 45136-24

Hi Rebecca,

This is a revised COC for the LaSalle samples collected 5/5/2006 and 5/9/2006. the sample IDs have been changed to include the sample location. Please make these changes in LIMs for these samples.

Thank you,
Kathy

From: Hoyt, Dennis
Sent: Wednesday, May 24, 2006 2:22 PM
To: Shaw, Kathy
Cc: Reid, James
Subject: RE: 45136-24

Kathy,
Here is the translation for the temporary sampling locations:

COC ID	NEW ID
GW-45136-050906-BW-001	WG-LS-TS-LS-101S-050906-BW-001
GW-45136-050506-BW-002	WG-LS-TS-LS-102S-050506-BW-002
GW-45136-050506-BW-003	WG-LS-TS-LS-103S-050506-BW-003
GW-45136-050506-BW-004	WG-LS-TS-LS-104S-050506-BW-004
GW-45136-050906-BW-005	WG-LS-TS-LS-105S-050906-BW-005

How do you want me to revise the COC? Cross out everything and re-write it below the old ID names??
Thanks Dennis

From: Shaw, Kathy
Sent: Wednesday, May 24, 2006 11:28 AM
To: Hoyt, Dennis
Subject: 45136-24

Hi Dennis,

I have attached the COC for LaSalle samples collected on May 5th and 9th because their IDs are incomplete. The naming convention is GW-site identifier-sample location-date-sampler initials -sample number, so it should look like this - GW-LS-MW01-050506-BW-001. Please revise the attached COC to include the site id and location and send back to me.

Thanks,
Kathy

Kathy Shaw - Chemist

Conestoga-Rovers & Associates
45 Farmington Valley Drive
Plainville, Connecticut 06062
PH 860 747-1800
Fax 860 747-1900
CRAWORLD.COM

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

L28614 5-28

PAGE 1 OF 1

ID # № D 1754

SSOW Ref. Code:

Required Client Information:

Company: CRA, Inc.	Report To:
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: Exelon LaSalle
Fax: 734-453-5201	Project Number: 45136-24
Email:	

Laboratory:	Teledyne Brown
Laboratory Location:	Knoxville TN
Laboratory Contact:	
Requested Due Date:	TAT:
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WB Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Tritium	Sr	Remarks/Lab ID
1.	~~GW-45136-050906-BW-001~~	WG	5/9/06	1055	2	✓			✓			X	X	Sr-strontium 89/90
2.	~~GW-45136-050506-BW-002~~		5/5/06	1045	2	✓			✓			X	X	Gamma Spec:
3.	~~-003~~			1355	2	✓			✓			X	X	Mn-54
4.	~~-004~~			1600	2	✓			✓			X	X	Fe-59
5.	~~GW-45136-050906-BW-005~~		5/9/06	0915	2	✓			✓			X	X	Co-58
6.	KMS 5/24/06													Co-60
7.														Zn-65
8.														Zr-Nb-95
9.	WG-LS-TS-LS-1015-050906-BW-001	WG	5/9/06	1055	2	✓			✓			X	X	I-131
10.	WG-LS-TS-LS-1025-050506-BW-002	WG	5/5/06	1045	2	✓			✓			X	X	Cs-134
11.	WG-LS-TS-LS-1035-050506-BW-003	WG		1355	2	✓			✓			X	X	Cs-137
12.	WG-LS-TS-LS-1045-050506-BW-004	WG		1600	2	✓			✓			X	X	Ba-La-140
13.	WG-LS-TS-LS-1055-050906-BW-005	WG	5/9/06	0915	2	✓			✓			X	X	
14.														
15.														
	TOTAL NUMBER OF CONTAINERS													

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
	2	Dennis Hoyt CRA	5/11/06	9:30 CST	EXELON SHIPPING	5/11/06	9:30 CST
AIRBILL NO.		[illegible] Exelon	5/11/06	3:00 CST	Pat Marshall / TBC	5/12/06	1100

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: Dennis Hoyt

Sampler Signature: DENNIS HOYT Date: 5/11/06

L28614 12 of 61

Internal Chain of Custody

06/02/06 15:25 Teledyne Brown Engineering

Internal Chain of Custody

****

Sample # L28614-1 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian
05/15/2006 12:56	030854	Donna Webb	029728	Lauren Larsen
05/15/2006 12:56	099999	Sample Custodian	030854	Donna Webb
05/17/2006 15:38	029728	Lauren Larsen	030854	Donna Webb
05/17/2006 15:38	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28614-1 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian

****

Sample # L28614-2 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian
05/15/2006 12:56	030854	Donna Webb	029728	Lauren Larsen
05/15/2006 12:56	099999	Sample Custodian	030854	Donna Webb
05/17/2006 15:38	029728	Lauren Larsen	030854	Donna Webb
05/17/2006 15:38	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28614-2 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian

****

Sample # L28614-3 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By

Internal Chain of Custody

****

Sample # L28614-3 Containernum 1

Relinquish Date			Received By	
05/12/2006 00:00			099999	Sample Custodian
05/15/2006 12:56	030854	Donna Webb	029728	Lauren Larsen
05/15/2006 12:56	099999	Sample Custodian	030854	Donna Webb
05/17/2006 15:38	029728	Lauren Larsen	030854	Donna Webb
05/17/2006 15:38	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28614-3 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian

****

Sample # L28614-4 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian
05/15/2006 12:56	030854	Donna Webb	029728	Lauren Larsen
05/15/2006 12:56	099999	Sample Custodian	030854	Donna Webb
05/17/2006 15:38	029728	Lauren Larsen	030854	Donna Webb
05/17/2006 15:38	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28614-4 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian

****

Sample # L28614-5 Containernum 1

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By		Received By	
05/12/2006 00:00			099999	Sample Custodian
05/15/2006 12:56	030854	Donna Webb	029728	Lauren Larsen
05/15/2006 12:56	099999	Sample Custodian	030854	Donna Webb
05/17/2006 15:38	029728	Lauren Larsen	030854	Donna Webb

Internal Chain of Custody

****

Sample # L28614-5 Containernum 1

Relinquish Date			Received By	
05/17/2006 15:38	030854	Donna Webb	099999	Sample Custodian

****

Sample # L28614-5 Containernum 2

Prod	Analyst
GELI	DW
H-3	EJ
SR-90 (FAST)	CJF

Relinquish Date	Relinquish By	Received By	
05/12/2006 00:00		099999	Sample Custodian

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28614

****

L28614-1 **WG** **WG-LS-TS-LS-101S-050906-BW-001**

Process step	Prod	Analyst	Date
Login		RCHARLES	05/12/06
Aliquot	GELI	DW	05/15/06
Aliquot	H-3	EJ	05/17/06
Aliquot	SR-90 (FAST)	CJF	05/30/06
Count Room	GELI	KPW	05/16/06
Count Room	H-3	KOJ	05/18/06
Count Room	SR-90 (FAST)	KOJ	05/31/06

****

L28614-2 **WG** **WG-LS-TS-LS-102S-050506-BW-002**

Process step	Prod	Analyst	Date
Login		RCHARLES	05/12/06
Aliquot	GELI	DW	05/15/06
Aliquot	H-3	EJ	05/17/06
Aliquot	SR-90 (FAST)	CJF	05/30/06
Count Room	GELI	KPW	05/16/06
Count Room	H-3	KOJ	05/18/06
Count Room	SR-90 (FAST)	KOJ	05/31/06

****

L28614-3 **WG** **WG-LS-TS-LS-103S-050506-BW-003**

Process step	Prod	Analyst	Date
Login		RCHARLES	05/12/06
Aliquot	GELI	DW	05/15/06
Aliquot	H-3	EJ	05/17/06
Aliquot	SR-90 (FAST)	CJF	05/30/06
Count Room	GELI	KPW	05/16/06
Count Room	H-3	KOJ	05/18/06
Count Room	SR-90 (FAST)	KOJ	05/31/06

****

L28614-4 **WG** **WG-LS-TS-LS-104S-050506-BW-004**

Process step	Prod	Analyst	Date
Login		RCHARLES	05/12/06
Aliquot	GELI	DW	05/15/06
Aliquot	H-3	EJ	05/17/06
Aliquot	SR-90 (FAST)	CJF	05/30/06
Count Room	GELI	KPW	05/16/06
Count Room	H-3	KOJ	05/18/06
Count Room	SR-90 (FAST)	KOJ	05/31/06

****

L28614-5 **WG** **WG-LS-TS-LS-105S-050906-BW-005**

Process step	Prod	Analyst	Date
Login		RCHARLES	05/12/06
Aliquot	GELI	DW	05/15/06
Aliquot	H-3	EJ	05/17/06
Aliquot	SR-90 (FAST)	CJF	05/30/06
Count Room	GELI	KPW	05/16/06

06/02/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28614

L28614-5	**WG**	**WG-LS-TS-LS-105S-050906-BW-005**		
Count Room	H-3		KOJ	05/18/06
Count Room	SR-90 (FAST)		KOJ	05/31/06

Analytical Results Summary

Report of Analysis

06/02/06 15:14

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28614

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPSALLE-06

Sample ID: **WG-LS-TS-LS-101S-050906-BW-001**
Station:
Description:
LIMS Number: L28614-1

Collect Start: 05/09/2006 10:55
Collect Stop:
Receive Date: 05/12/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	2.19E+00	1.02E+02	**1.68E+02**	pCi/L		10	ml		05/18/06	135	M	U		
TOTAL SR	2018	-2.78E-01	5.34E-01	**1.05E+00**	pCi/L		450	ml	05/09/06 10:55	05/31/06	200	M	U		
MN-54	2007	2.90E-01	1.85E+00	**3.03E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
CO-58	2007	-2.18E+00	1.86E+00	**2.89E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
FE-59	2007	-2.90E-01	3.89E+00	**6.33E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
CO-60	2007	-7.44E-01	1.91E+00	**3.09E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
ZN-65	2007	1.42E+01	4.81E+00	**7.80E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U*		No
NB-95	2007	1.81E+00	1.91E+00	**3.23E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
ZR-95	2007	4.43E-01	3.33E+00	**5.50E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
CS-134	2007	1.02E+01	3.29E+00	**3.65E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U*		No
CS-137	2007	-8.26E-02	1.93E+00	**3.20E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
BA-140	2007	-1.33E+00	9.51E+00	**1.55E+01**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No
LA-140	2007	2.87E+00	3.03E+00	**5.28E+00**	pCi/L		3599.52	ml	05/09/06 10:55	05/16/06	40000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/02/06 15:14

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28614

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPSALLE-06

Sample ID: **WG-LS-TS-LS-102S-050506-BW-002**
Station:
Description:
LIMS Number: L28614-2

Collect Start: 05/05/2006 10:45
Collect Stop:
Receive Date: 05/12/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.83E+02**	1.05E+02	1.64E+02	pCi/L		10	ml		05/18/06	135	M	+		
TOTAL SR	2018	-2.61E-01	9.41E-01	**1.57E+00**	pCi/L		450	ml	05/05/06 10:45	05/31/06	400	M	U		
K-40	2007	**4.34E+02**	4.39E+01	3.06E+01	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	+		Yes
MN-54	2007	2.44E+00	2.02E+00	**3.43E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
CO-58	2007	-2.12E+00	2.18E+00	**3.44E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
FE-59	2007	4.61E+00	4.64E+00	**7.89E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
CO-60	2007	5.38E-01	2.04E+00	**3.42E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
ZN-65	2007	1.82E+01	5.85E+00	**9.31E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U*		No
NB-95	2007	3.47E+00	2.26E+00	**3.88E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
ZR-95	2007	2.47E+00	3.89E+00	**6.51E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
CS-134	2007	2.61E+01	4.14E+00	**4.75E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U*		No
CS-137	2007	1.61E+00	2.10E+00	**3.55E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
BA-140	2007	4.01E+00	1.27E+01	**2.09E+01**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
LA-140	2007	-1.97E+00	4.28E+00	**6.80E+00**	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	U		No
RA-226	2007	**9.34E+01**	5.36E+01	7.62E+01	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	+		Yes
TH-228	2007	**1.49E+01**	3.34E+00	6.02E+00	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	+		Yes
TH-232	2007	**1.55E+01**	6.94E+00	1.45E+01	pCi/L		3653.19	ml	05/05/06 10:45	05/16/06	40000	Sec	+		Yes

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/02/06 15:14

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28614

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPSALLE-06

Sample ID: **WG-LS-TS-LS-103S-050506-BW-003**
Station:
Description:
LIMS Number: L28614-3

Collect Start: 05/05/2006 13:55
Collect Stop:
Receive Date: 05/12/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
H-3	2010	1.36E+02	1.05E+02	**1.66E+02**	pCi/L		10	ml		05/18/06	135	M	U			
TOTAL SR	2018	-9.32E-01	1.08E+00	**1.84E+00**	pCi/L		450	ml	05/05/06 13:55	05/31/06	400	M	U			
K-40	2007	**2.45E+02**	4.12E+01	2.99E+01	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	+		Yes	
MN-54	2007	9.01E-01	1.88E+00	**3.16E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
CO-58	2007	-1.73E-01	1.98E+00	**3.27E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
FE-59	2007	7.35E+00	4.40E+00	**7.81E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
CO-60	2007	4.53E-01	2.00E+00	**3.59E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		Yes	
ZN-65	2007	1.23E+01	5.06E+00	**8.16E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U*		No	
NB-95	2007	1.80E+00	2.07E+00	**3.47E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
ZR-95	2007	-4.70E-01	3.46E+00	**5.58E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
CS-134	2007	5.29E+00	3.22E+00	**3.65E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U*		No	
CS-137	2007	2.09E+00	1.97E+00	**3.37E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
BA-140	2007	1.43E+00	1.17E+01	**1.90E+01**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
LA-140	2007	4.12E+00	4.11E+00	**7.14E+00**	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	U		No	
TH-228	2007	**1.16E+01**	3.28E+00	5.31E+00	pCi/L		3574.55	ml	05/05/06 13:55	05/16/06	32000	Sec	+		Yes	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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MDC - Minimum Detectable Concentration

Report of Analysis

06/02/06 15:14

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28614

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPSALLE-06

Sample ID: **WG-LS-TS-LS-104S-050506-BW-004**
Station:
Description:
LIMS Number: L28614-4

Collect Start: 05/05/2006 16:00
Collect Stop:
Receive Date: 05/12/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-4.99E+01	9.97E+01	**1.67E+02**	pCi/L		10	ml		05/18/06	135	M	U		
TOTAL SR	2018	-6.93E-02	3.59E-01	**6.93E-01**	pCi/L		450	ml	05/05/06 16:00	05/31/06	200	M	U		
K-40	2007	**7.45E+01**	3.16E+01	2.81E+01	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	+	Yes	
MN-54	2007	2.57E+00	1.83E+00	**3.17E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
CO-58	2007	2.43E-01	1.96E+00	**3.24E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
FE-59	2007	1.98E+00	3.94E+00	**6.63E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
CO-60	2007	1.37E+00	1.80E+00	**3.09E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
ZN-65	2007	1.17E+01	4.58E+00	**7.34E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U*	No	
NB-95	2007	2.79E+00	1.97E+00	**3.42E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
ZR-95	2007	-1.54E+00	3.46E+00	**5.65E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
CS-134	2007	5.69E+00	2.85E+00	**3.29E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U*	No	
CS-137	2007	-4.95E-01	1.94E+00	**3.15E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
BA-140	2007	1.17E+01	1.13E+01	**1.93E+01**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	
LA-140	2007	4.81E-01	3.75E+00	**6.25E+00**	pCi/L		3537.26	ml	05/05/06 16:00	05/16/06	32000	Sec	U	No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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MDC - Minimum Detectable Concentration

Report of Analysis

06/02/06 15:14

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28614

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPSALLE-06

Sample ID: **WG-LS-TS-LS-105S-050906-BW-005**
Station:
Description:
LIMS Number: L28614-5

Collect Start: 05/09/2006 09:15
Collect Stop:
Receive Date: 05/12/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	4.34E+01	1.03E+02	**1.67E+02**	pCi/L		10	ml		05/18/06	135	M	U		
TOTAL SR	2018	-3.30E-01	3.58E-01	**7.24E-01**	pCi/L		450	ml	05/09/06 09:15	05/31/06	200	M	U		
K-40	2007	**1.90E+02**	3.74E+01	3.30E+01	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	+	Yes	
MN-54	2007	1.65E+00	2.12E+00	**3.59E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
CO-58	2007	6.11E-01	2.17E+00	**3.61E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
FE-59	2007	4.57E+00	4.46E+00	**7.69E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
CO-60	2007	-1.16E+00	2.09E+00	**3.30E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
ZN-65	2007	1.21E+01	5.53E+00	**8.69E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U*	No	
NB-95	2007	5.63E-01	2.18E+00	**3.63E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
ZR-95	2007	-1.74E+00	3.93E+00	**6.41E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
CS-134	2007	1.20E+01	4.54E+00	**4.18E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U*	No	
CS-137	2007	-4.07E-01	2.27E+00	**3.68E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
BA-140	2007	-3.00E+00	1.10E+01	**1.80E+01**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
LA-140	2007	1.38E+00	3.39E+00	**5.72E+00**	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	U	No	
TH-228	2007	**6.86E+00**	3.34E+00	6.57E+00	pCi/L		3573.46	ml	05/09/06 09:15	05/16/06	32000	Sec	+	Yes	

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H = High recovery

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MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28614

6/2/2006 3:25:51PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG3994-1	H-3	WO	05/17/2006 21:45	< 1.590E+00	pCi/Total	U	P
WG3995-1		WO	05/21/2006 21:53	< 6.330E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG3994-2	H-3	WO	05/18/2006 0:03	5.05E+002	4.460E+02	pCi/Total	88.4	70-130	+	P
Spike ID: 3H-041706-1 Spike conc: 5.05E+002 Spike Vol: 1.00E+000										
WG3995-2		WO	05/21/2006 22:04	5.05E+002	5.180E+02	pCi/Total	102.6	70-130	+	P
Spike ID: 3H-041706-1 Spike conc: 5.05E+002 Spike Vol: 1.00E+000										

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG3995-3 L28614-5	H-3	WG	05/19/2006 5:10	< 1.670E+02	< 5.990E+01	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28614

6/2/2006 3:25:51PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28614 **H-3**

Associated Samples for **WG3995**

SAMPLENUM	CLIENTID
L28614-5	WG-LS-TS-LS-105S-050906-BW-005

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28614

6/2/2006 3:25:51PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

SR-90

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4065-1	SR-90	WO	05/31/2006 18:41	< 4.660E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4065-2	SR-90	WO	05/31/2006 18:41	5.84E+001	5.830E+01	pCi/Total	99.9	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

L28614 **SR-90 (FAST)**

Associated Samples for **WG4065**

SAMPLENUM	CLIENTID
L28614-1	WG-LS-TS-LS-101S-050906-BW-001
L28614-2	WG-LS-TS-LS-102S-050506-BW-002
L28614-3	WG-LS-TS-LS-103S-050506-BW-003
L28614-4	WG-LS-TS-LS-104S-050506-BW-004
L28614-5	WG-LS-TS-LS-105S-050906-BW-005

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28614

6/2/2006 3:25:51PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4065-3	TOTAL SR	WG	05/31/2006 18:41	< 1.500E+00	< 1.210E+00	pCi/L		<30	**	NE
L28762-1										

L28614 SR-90 (FAST)

Associated Samples for WG4065

SAMPLENUM	CLIENTID
L28614-1	WG-LS-TS-LS-101S-050906-BW-001
L28614-2	WG-LS-TS-LS-102S-050506-BW-002
L28614-3	WG-LS-TS-LS-103S-050506-BW-003
L28614-4	WG-LS-TS-LS-104S-050506-BW-004
L28614-5	WG-LS-TS-LS-105S-050906-BW-005

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Jun 02 2006, 03:28 pm

Work Order: *L28614* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPSALLE-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28614-1		H-3					0		18-may-06 02:21	LS5	498	135	3.68	135	.206		EJ
WG-LS-TS-LS-101S-05090				10 ml													
Activity: 2.19E+00 Error: 1.02E+02				MDC: 1.68E+02 *													
L28614-2		H-3					0		18-may-06 04:39	LS5	613	135	3.68	135	.212		EJ
WG-LS-TS-LS-102S-05050				10 ml													
Activity: 1.83E+02 * Error: 1.05E+02				MDC: 1.64E+02													
L28614-3		H-3					0		18-may-06 06:57	LS5	582	135	3.68	135	.209		EJ
WG-LS-TS-LS-103S-05050				10 ml													
Activity: 1.36E+02 Error: 1.05E+02				MDC: 1.66E+02 *													
L28614-4		H-3					0		18-may-06 09:16	LS5	466	135	3.68	135	.208		EJ
WG-LS-TS-LS-104S-05050				10 ml													
Activity: -4.99E+01 Error: 9.97E+01				MDC: 1.67E+02 *													
L28614-5		H-3					0		18-may-06 11:34	LS5	524	135	3.68	135	.208		EJ
WG-LS-TS-LS-105S-05090				10 ml													
Activity: 4.34E+01 Error: 1.03E+02				MDC: 1.67E+02 *													

Raw Data Sheet (rawdata)
Jun 02 2006, 03:28 pm

Work Order: *L28614* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPSALLE-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28614-1		TOTAL SR	09-may-06		31-may-06		0		31-may-06	Y1A	125	200	279	400	.341	.999	CJF
WG-LS-TS-LS-101S-05090			10:55	450 ml	12:00			76.88	17:39								
Activity: -2.78E-01 Error: 5.34E-01 MDC: 1.05E+00 *																	
L28614-2		TOTAL SR	05-may-06		31-may-06		0		31-may-06	Y2A	267	400	280	400	.349	.998	CJF
WG-LS-TS-LS-102S-05050			10:45	450 ml	12:00			35.75	22:05								
Activity: -2.61E-01 Error: 9.41E-01 MDC: 1.57E+00 *																	
L28614-3		TOTAL SR	05-may-06		31-may-06		0		31-may-06	Y2B	273	400	315	400	.356	.998	CJF
WG-LS-TS-LS-103S-05050			13:55	450 ml	12:00			31.72	22:05								
Activity: -9.32E-01 Error: 1.08E+00 MDC: 1.84E+00 *																	
L28614-4		TOTAL SR	05-may-06		31-may-06		0		31-may-06	Y1B	134	200	279	400	.351	.998	CJF
WG-LS-TS-LS-104S-05050			16:00	450 ml	12:00			113.44	17:39								
Activity: -6.93E-02 Error: 3.59E-01 MDC: 6.93E-01 *																	
L28614-5		TOTAL SR	09-may-06		31-may-06		0		31-may-06	Y1C	124	200	300	400	.345	.999	CJF
WG-LS-TS-LS-105S-05090			09:15	450 ml	12:00			114.52	17:39								
Activity: -3.3E-01 Error: 3.58E-01 MDC: 7.24E-01 *																	

Sec. Review: Analyst: KS LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 17-MAY-2006 05:47:39.26
TBE10 12892256 HpGe ********** Aquisition Date/Time: 16-MAY-2006 18:40:48.96

LIMS No., Customer Name, Client ID: WG L28614-1 LASALLE

Sample ID : 10L28614-1
Sample Type : WG
Quantity : 3.59950E+00 L
Start Channel : 80 Energy Tol : 1.30000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 9-MAY-2006 10:55:00.0
Geometry : 1035L091004
BKGFILE : 10BG050506MT
Real Time : 0 11:06:46.94
Live time : 0 11:06:40.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.30*	350	1383	1.38	131.83	6.33E-01	8.76E-03	20.3	2.50E+00
2	3	76.82*	130	1135	1.09	152.90	9.36E-01	3.25E-03	47.0	2.22E+00
3	1	139.94	198	1361	0.88	279.21	1.68E+00	4.94E-03	33.0	5.98E-01
4	1	185.73*	72	1071	1.59	370.86	1.59E+00	1.79E-03	89.5	1.50E+00
5	1	198.26*	126	1086	1.45	395.94	1.55E+00	3.15E-03	52.1	1.40E+00
6	1	238.68*	16	788	1.41	476.83	1.40E+00	3.93E-04	350.4	2.89E-01
7	1	242.15	150	679	1.45	483.78	1.39E+00	3.76E-03	29.9	6.55E-01
8	1	295.11*	202	569	1.24	589.78	1.21E+00	5.04E-03	23.2	6.64E-01
9	1	351.95*	336	575	1.40	703.53	1.07E+00	8.40E-03	16.8	1.19E+00
10	1	583.38*	15	257	2.00	1166.78	7.18E-01	3.72E-04	240.6	1.96E+00
11	1	595.82	158	274	1.78	1191.68	7.06E-01	3.95E-03	22.6	1.59E+00
12	1	609.13*	334	365	1.47	1218.33	6.94E-01	8.36E-03	14.8	1.89E+00
13	1	1120.20*	77	127	1.81	2241.55	4.33E-01	1.92E-03	35.5	2.52E+00
14	1	1460.49*	83	113	2.02	2922.98	3.56E-01	2.08E-03	40.2	1.34E+00
15	1	1764.27*	49	80	1.83	3531.44	3.13E-01	1.22E-03	49.3	1.28E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	83	10.67*	3.560E-01	4.110E+01	4.110E+01	80.47
RA-226	186.21	72	3.28*	1.595E+00	2.573E+01	2.573E+01	179.01
TH-228	238.63	16	44.60*	1.400E+00	4.724E-01	4.759E-01	700.88
	240.98	150	3.95	1.388E+00	5.152E+01	5.191E+01	59.80
U-235	143.76	------	10.50*	1.683E+00	------	Line Not Found	------
	163.35	------	4.70	1.659E+00	------	Line Not Found	------
	185.71	72	54.00	1.595E+00	1.563E+00	1.563E+00	179.01
	205.31	------	4.70	1.524E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28614-1

Acquisition date : 16-MAY-2006 18:40:48

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.110E+01	4.110E+01	3.308E+01	80.47	
RA-226	1600.00Y	1.00	2.573E+01	2.573E+01	4.605E+01	179.01	
TH-228	1.91Y	1.01	4.724E-01	4.759E-01	33.36E-01	700.88	
U-235	7.04E+08Y	1.00	1.563E+00	1.563E+00	2.797E+00	179.01	K
			---	---			
	Total Activity :		6.887E+01	6.887E+01			

Grand Total Activity : 6.887E+01 6.887E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28614-1

Acquisition date : 16-MAY-2006 18:40:48

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.30	350	1383	1.38	131.83	128	8	8.76E-03	40.6	6.33E-01	
3	76.82	130	1135	1.09	152.90	143	14	3.25E-03	93.9	9.36E-01	
1	139.94	198	1361	0.88	279.21	276	8	4.94E-03	66.0	1.68E+00	
1	198.26	126	1086	1.45	395.94	391	9	3.15E-03	****	1.55E+00	
1	295.11	202	569	1.24	589.78	586	8	5.04E-03	46.4	1.21E+00	
1	351.95	336	575	1.40	703.53	698	12	8.40E-03	33.6	1.07E+00	
1	583.38	15	257	2.00	1166.78	1162	11	3.72E-04	****	7.18E-01	T
1	595.82	158	274	1.78	1191.68	1186	12	3.95E-03	45.1	7.06E-01	
1	609.13	334	365	1.47	1218.33	1210	14	8.36E-03	29.5	6.94E-01	
1	1120.20	77	127	1.81	2241.55	2237	13	1.92E-03	71.1	4.33E-01	
1	1764.27	49	80	1.83	3531.44	3523	16	1.22E-03	98.6	3.13E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.110E+01	4.110E+01	3.308E+01	80.47	
RA-226	1600.00Y	1.00	2.573E+01	2.573E+01	4.605E+01	179.01	
TH-228	1.91Y	1.01	4.724E-01	4.759E-01	33.36E-01	700.88	
			---	---			
	Total Activity :		6.730E+01	6.731E+01			

Grand Total Activity : 6.730E+01 6.731E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.110E+01	3.308E+01	2.827E+01	0.000E+00	1.454
RA-226	2.573E+01	4.605E+01	7.163E+01	0.000E+00	0.359
TH-228	4.759E-01	3.336E+00	5.450E+00	0.000E+00	0.087

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.001E+01		1.621E+01	2.716E+01	0.000E+00	0.368
NA-24	-6.818E+03		8.489E+03	1.337E+04	0.000E+00	-0.510
CR-51	-1.414E+01		1.846E+01	2.970E+01	0.000E+00	-0.476
MN-54	2.895E-01		1.850E+00	3.032E+00	0.000E+00	0.095
CO-57	-1.316E+00		1.808E+00	2.969E+00	0.000E+00	-0.443
CO-58	-2.180E+00		1.859E+00	2.887E+00	0.000E+00	-0.755
FE-59	-2.896E-01		3.886E+00	6.333E+00	0.000E+00	-0.046
CO-60	-7.440E-01		1.912E+00	3.085E+00	0.000E+00	-0.241
ZN-65	1.415E+01		4.813E+00	7.801E+00	0.000E+00	1.814
SE-75	6.525E-02		2.478E+00	4.102E+00	0.000E+00	0.016
SR-85	1.693E+01		2.275E+00	4.320E+00	0.000E+00	3.918
Y-88	2.462E+00		2.081E+00	3.655E+00	0.000E+00	0.674
NB-94	1.007E-01		1.787E+00	2.951E+00	0.000E+00	0.034
NB-95	1.814E+00		1.906E+00	3.233E+00	0.000E+00	0.561
ZR-95	4.426E-01		3.334E+00	5.496E+00	0.000E+00	0.081
MO-99	3.994E+01		8.747E+01	1.462E+02	0.000E+00	0.273
RU-103	2.650E-02		2.066E+00	3.394E+00	0.000E+00	0.008
RU-106	-2.320E+01		1.663E+01	2.635E+01	0.000E+00	-0.880
AG-110m	-5.275E-01		1.792E+00	2.938E+00	0.000E+00	-0.180
SN-113	-1.213E+00		2.330E+00	3.831E+00	0.000E+00	-0.317
SB-124	2.593E+00		3.950E+00	3.092E+00	0.000E+00	0.839
SB-125	1.607E+00		5.219E+00	8.722E+00	0.000E+00	0.184
TE-129M	8.719E+00		2.380E+01	3.968E+01	0.000E+00	0.220
I-131	-1.555E+00		3.444E+00	5.531E+00	0.000E+00	-0.281
BA-133	9.582E+00		2.981E+00	4.565E+00	0.000E+00	2.099
CS-134	1.023E+01		3.294E+00	3.647E+00	0.000E+00	2.805
CS-136	1.112E+00		2.523E+00	4.190E+00	0.000E+00	0.265
CS-137	-8.259E-02		1.934E+00	3.197E+00	0.000E+00	-0.026
CE-139	1.447E+00		1.857E+00	3.079E+00	0.000E+00	0.470
BA-140	-1.331E+00		9.514E+00	1.548E+01	0.000E+00	-0.086
LA-140	2.869E+00		3.027E+00	5.275E+00	0.000E+00	0.544
CE-141	3.095E+00		4.206E+00	6.008E+00	0.000E+00	0.515
CE-144	-8.080E+00		1.609E+01	2.333E+01	0.000E+00	-0.346
EU-152	-2.407E+00		6.901E+00	9.408E+00	0.000E+00	-0.256
EU-154	-3.063E+00		3.744E+00	6.135E+00	0.000E+00	-0.499
AC-228	3.647E+00		7.461E+00	1.206E+01	0.000E+00	0.302
TH-232	3.638E+00		7.443E+00	1.203E+01	0.000E+00	0.302
U-235	1.277E+01		1.691E+01	2.382E+01	0.000E+00	0.536
U-238	8.003E+01		1.881E+02	3.156E+02	0.000E+00	0.254
AM-241	-7.940E-01		1.624E+01	2.462E+01	0.000E+00	-0.032

```
A,10L28614-1        ,05/17/2006 05:47,05/09/2006 10:55,   3.599E+00,WG L28614-1 LA
B,10L28614-1        ,LIBD                   ,06/09/2005 08:04,1035L091004
C,K-40     ,YES,    4.110E+01,   3.308E+01,   2.827E+01,,    1.454
C,RA-226   ,YES,    2.573E+01,   4.605E+01,   7.163E+01,,    0.359
C,TH-228   ,YES,    4.759E-01,   3.336E+00,   5.450E+00,,    0.087
C,BE-7     ,NO ,    1.001E+01,   1.621E+01,   2.716E+01,,    0.368
C,NA-24    ,NO ,   -6.818E+03,   8.489E+03,   1.337E+04,,   -0.510
C,CR-51    ,NO ,   -1.414E+01,   1.846E+01,   2.970E+01,,   -0.476
C,MN-54    ,NO ,    2.895E-01,   1.850E+00,   3.032E+00,,    0.095
C,CO-57    ,NO ,   -1.316E+00,   1.808E+00,   2.969E+00,,   -0.443
C,CO-58    ,NO ,   -2.180E+00,   1.859E+00,   2.887E+00,,   -0.755
C,FE-59    ,NO ,   -2.896E-01,   3.886E+00,   6.333E+00,,   -0.046
C,CO-60    ,NO ,   -7.440E-01,   1.912E+00,   3.085E+00,,   -0.241
C,ZN-65    ,NO ,    1.415E+01,   4.813E+00,   7.801E+00,,    1.814
C,SE-75    ,NO ,    6.525E-02,   2.478E+00,   4.102E+00,,    0.016
C,SR-85    ,NO ,    1.693E+01,   2.275E+00,   4.320E+00,,    3.918
C,Y-88     ,NO ,    2.462E+00,   2.081E+00,   3.655E+00,,    0.674
C,NB-94    ,NO ,    1.007E-01,   1.787E+00,   2.951E+00,,    0.034
C,NB-95    ,NO ,    1.814E+00,   1.906E+00,   3.233E+00,,    0.561
C,ZR-95    ,NO ,    4.426E-01,   3.334E+00,   5.496E+00,,    0.081
C,MO-99    ,NO ,    3.994E+01,   8.747E+01,   1.462E+02,,    0.273
C,RU-103   ,NO ,    2.650E-02,   2.066E+00,   3.394E+00,,    0.008
C,RU-106   ,NO ,   -2.320E+01,   1.663E+01,   2.635E+01,,   -0.880
C,AG-110m  ,NO ,   -5.275E-01,   1.792E+00,   2.938E+00,,   -0.180
C,SN-113   ,NO ,   -1.213E+00,   2.330E+00,   3.831E+00,,   -0.317
C,SB-124   ,NO ,    2.593E+00,   3.950E+00,   3.092E+00,,    0.839
C,SB-125   ,NO ,    1.607E+00,   5.219E+00,   8.722E+00,,    0.184
C,TE-129M  ,NO ,    8.719E+00,   2.380E+01,   3.968E+01,,    0.220
C,I-131    ,NO ,   -1.555E+00,   3.444E+00,   5.531E+00,,   -0.281
C,BA-133   ,NO ,    9.582E+00,   2.981E+00,   4.565E+00,,    2.099
C,CS-134   ,NO ,    1.023E+01,   3.294E+00,   3.647E+00,,    2.805
C,CS-136   ,NO ,    1.112E+00,   2.523E+00,   4.190E+00,,    0.265
C,CS-137   ,NO ,   -8.259E-02,   1.934E+00,   3.197E+00,,   -0.026
C,CE-139   ,NO ,    1.447E+00,   1.857E+00,   3.079E+00,,    0.470
C,BA-140   ,NO ,   -1.331E+00,   9.514E+00,   1.548E+01,,   -0.086
C,LA-140   ,NO ,    2.869E+00,   3.027E+00,   5.275E+00,,    0.544
C,CE-141   ,NO ,    3.095E+00,   4.206E+00,   6.008E+00,,    0.515
C,CE-144   ,NO ,   -8.080E+00,   1.609E+01,   2.333E+01,,   -0.346
C,EU-152   ,NO ,   -2.407E+00,   6.901E+00,   9.408E+00,,   -0.256
C,EU-154   ,NO ,   -3.063E+00,   3.744E+00,   6.135E+00,,   -0.499
C,AC-228   ,NO ,    3.647E+00,   7.461E+00,   1.206E+01,,    0.302
C,TH-232   ,NO ,    3.638E+00,   7.443E+00,   1.203E+01,,    0.302
C,U-235    ,NO ,    1.277E+01,   1.691E+01,   2.382E+01,,    0.536
C,U-238    ,NO ,    8.003E+01,   1.881E+02,   3.156E+02,,    0.254
C,AM-241   ,NO ,   -7.940E-01,   1.624E+01,   2.462E+01,,   -0.032
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 17-MAY-2006 05:47:59.89
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 16-MAY-2006 18:40:51.90

LIMS No., Customer Name, Client ID: WG L28614-2 LASALLE

Sample ID : 11L28614-2
Sample Type : WG
Quantity : 3.65320E+00 L
Start Channel : 40 Energy Tol : 1.30000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 5-MAY-2006 10:45:00.0
Geometry : 1135L090204
BKGFILE : 11BG050506MT
Real Time : 0 11:06:56.49
Live time : 0 11:06:40.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	7	63.94	568	3274	2.09	127.04	5.33E-01	1.42E-02	20.0	1.50E+00
2	7	66.29	212	1773	1.14	131.77	6.02E-01	5.30E-03	35.9	
3	0	77.22*	244	1318	1.16	153.69	9.14E-01	6.11E-03	25.3	
4	0	87.04*	76	1186	1.12	173.37	1.16E+00	1.91E-03	76.7	
5	0	92.91*	162	1673	1.56	185.16	1.28E+00	4.04E-03	49.1	
6	0	139.88	258	1640	1.15	279.37	1.69E+00	6.45E-03	29.0	
7	0	185.99*	267	1410	1.02	371.83	1.61E+00	6.69E-03	28.7	
8	0	198.20*	247	1215	1.62	396.33	1.57E+00	6.16E-03	27.4	
9	2	238.62*	505	790	1.18	477.38	1.42E+00	1.26E-02	11.2	9.69E-01
10	2	241.96	481	920	1.47	484.07	1.41E+00	1.20E-02	12.5	
11	0	269.73	91	812	1.60	539.76	1.31E+00	2.28E-03	57.4	
12	0	295.14*	674	926	1.27	590.70	1.23E+00	1.68E-02	9.9	
13	0	338.19*	138	648	1.13	677.03	1.11E+00	3.46E-03	37.2	
14	0	351.82*	1266	782	1.44	704.36	1.08E+00	3.17E-02	5.6	
15	0	582.83*	155	430	1.44	1167.44	7.27E-01	3.87E-03	31.4	
16	0	596.60	216	458	1.44	1195.04	7.14E-01	5.39E-03	23.3	
17	0	609.03*	1084	432	1.49	1219.94	7.02E-01	2.71E-02	5.5	
18	0	727.21	124	158	2.09	1456.77	6.12E-01	3.10E-03	20.9	
19	0	910.77*	130	209	1.61	1824.56	5.14E-01	3.25E-03	28.0	
20	0	968.44*	95	156	1.50	1940.09	4.90E-01	2.38E-03	30.1	
21	0	1119.95*	240	140	1.77	2243.54	4.37E-01	6.01E-03	12.8	
22	0	1237.89	96	155	1.66	2479.72	4.04E-01	2.40E-03	27.9	
23	0	1376.27	74	107	1.78	2756.78	3.71E-01	1.85E-03	31.7	
24	0	1460.00*	885	148	2.06	2924.39	3.54E-01	2.21E-02	5.1	
25	0	1508.29	37	62	1.46	3021.04	3.45E-01	9.30E-04	42.4	
26	0	1762.33*	176	78	2.16	3529.44	3.04E-01	4.40E-03	14.7	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	885	10.67*	3.541E-01	4.335E+02	4.335E+02	10.13
RA-226	186.21	267	3.28*	1.615E+00	9.339E+01	9.340E+01	57.34
AC-228	835.50	------	1.75	5.493E-01	------	Line Not Found	------
	911.07	130	27.70*	5.137E-01	1.687E+01	1.694E+01	55.96

TH-228	238.63	505	44.60*	1.421E+00	1.474E+01	1.491E+01	22.37
	240.98	481	3.95	1.409E+00	1.598E+02	1.616E+02	24.91
TH-232	583.14	155	30.25	7.269E-01	1.303E+01	1.303E+01	62.85
	911.07	130	27.70*	5.137E-01	1.687E+01	1.687E+01	55.96
	969.11	95	16.60	4.897E-01	2.167E+01	2.167E+01	60.17
U-235	143.76	------	10.50*	1.695E+00	------	Line Not Found	------
	163.35	------	4.70	1.678E+00	------	Line Not Found	------
	185.71	267	54.00	1.615E+00	5.673E+00	5.673E+00	57.34
	205.31	------	4.70	1.546E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28614-2

Acquisition date : 16-MAY-2006 18:40:51

Total number of lines in spectrum	26	
Number of unidentified lines	19	
Number of lines tentatively identified by NID	7	26.92%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.335E+02	4.335E+02	0.439E+02	10.13	
RA-226	1600.00Y	1.00	9.339E+01	9.340E+01	5.355E+01	57.34	
AC-228	5.75Y	1.00	1.687E+01	1.694E+01	0.948E+01	55.96	
TH-228	1.91Y	1.01	1.474E+01	1.491E+01	0.334E+01	22.37	
TH-232	1.41E+10Y	1.00	1.687E+01	1.687E+01	0.944E+01	55.96	
U-235	7.04E+08Y	1.00	5.673E+00	5.673E+00	3.253E+00	57.34	K
			---	---			
	Total Activity :		5.810E+02	5.812E+02			

Grand Total Activity : 5.810E+02 5.812E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28614-2

Acquisition date : 16-MAY-2006 18:40:51

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
7	63.94	568	3274	2.09	127.04	122	14	1.42E-02	40.0	5.33E-01	
7	66.29	212	1773	1.14	131.77	122	14	5.30E-03	71.8	6.02E-01	
0	77.22	244	1318	1.16	153.69	152	6	6.11E-03	50.7	9.14E-01	
0	87.04	76	1186	1.12	173.37	172	6	1.91E-03	****	1.16E+00	
0	92.91	162	1673	1.56	185.16	181	9	4.04E-03	98.3	1.28E+00	
0	139.88	258	1640	1.15	279.37	275	9	6.45E-03	58.1	1.69E+00	
0	198.20	247	1215	1.62	396.33	393	9	6.16E-03	54.8	1.57E+00	
0	269.73	91	812	1.60	539.76	536	9	2.28E-03	****	1.31E+00	
0	295.14	674	926	1.27	590.70	585	11	1.68E-02	19.8	1.23E+00	
0	338.19	138	648	1.13	677.03	673	10	3.46E-03	74.4	1.11E+00	
0	351.82	1266	782	1.44	704.36	698	13	3.17E-02	11.2	1.08E+00	
0	596.60	216	458	1.44	1195.04	1187	16	5.39E-03	46.5	7.14E-01	
0	609.03	1084	432	1.49	1219.94	1212	16	2.71E-02	11.0	7.02E-01	
0	727.21	124	158	2.09	1456.77	1453	10	3.10E-03	41.9	6.12E-01	
0	1119.95	240	140	1.77	2243.54	2238	12	6.01E-03	25.6	4.37E-01	
0	1237.89	96	155	1.66	2479.72	2473	12	2.40E-03	55.9	4.04E-01	
0	1376.27	74	107	1.78	2756.78	2751	14	1.85E-03	63.4	3.71E-01	
0	1508.29	37	62	1.46	3021.04	3017	10	9.30E-04	84.9	3.45E-01	
0	1762.33	176	78	2.16	3529.44	3522	17	4.40E-03	29.4	3.04E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	26	
Number of unidentified lines	19	
Number of lines tentatively identified by NID	7	26.92%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.335E+02	4.335E+02	0.439E+02	10.13	
RA-226	1600.00Y	1.00	9.339E+01	9.340E+01	5.355E+01	57.34	
AC-228	5.75Y	1.00	1.400E+00	1.405E+00	11.76E+00	837.10	
TH-228	1.91Y	1.01	1.474E+01	1.491E+01	0.334E+01	22.37	
TH-232	1.41E+10Y	1.00	1.547E+01	1.547E+01	0.693E+01	44.82	
			---	---			
	Total Activity :		5.585E+02	5.586E+02			

Grand Total Activity : 5.585E+02 5.586E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering Nuclide	Interfering Line	Interfered Nuclide	Interfered Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.335E+02	4.389E+01	3.060E+01	0.000E+00	14.163
RA-226	9.340E+01	5.355E+01	7.617E+01	0.000E+00	1.226
AC-228	1.405E+00	1.176E+01	1.134E+01	0.000E+00	0.124
TH-228	1.491E+01	3.337E+00	6.020E+00	0.000E+00	2.477
TH-232	1.547E+01	6.935E+00	1.448E+01	0.000E+00	1.069

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	6.211E+00		1.845E+01	3.055E+01	0.000E+00	0.203
NA-24	-5.088E-01		4.286E-01	Half-Life too short		
CR-51	-3.027E+01		2.206E+01	3.490E+01	0.000E+00	-0.867
MN-54	2.438E+00		2.021E+00	3.430E+00	0.000E+00	0.711
CO-57	-1.820E+00		1.974E+00	3.199E+00	0.000E+00	-0.569
CO-58	-2.122E+00		2.183E+00	3.440E+00	0.000E+00	-0.617
FE-59	4.611E+00		4.641E+00	7.887E+00	0.000E+00	0.585
CO-60	5.377E-01		2.044E+00	3.417E+00	0.000E+00	0.157
ZN-65	1.824E+01		5.853E+00	9.307E+00	0.000E+00	1.960
SE-75	-1.220E+00		3.257E+00	4.494E+00	0.000E+00	-0.272
SR-85	2.097E+01		2.465E+00	4.718E+00	0.000E+00	4.445
Y-88	-2.317E+00		2.227E+00	3.423E+00	0.000E+00	-0.677
NB-94	-1.014E-01		1.893E+00	3.114E+00	0.000E+00	-0.033
NB-95	3.469E+00		2.262E+00	3.884E+00	0.000E+00	0.893
ZR-95	2.466E+00		3.887E+00	6.506E+00	0.000E+00	0.379
MO-99	1.451E+02		2.581E+02	4.267E+02	0.000E+00	0.340
RU-103	2.166E+00		2.320E+00	3.895E+00	0.000E+00	0.556
RU-106	-1.348E+00		1.850E+01	2.982E+01	0.000E+00	-0.045
AG-110m	-5.774E-01		1.930E+00	3.163E+00	0.000E+00	-0.183
SN-113	3.509E+00		2.661E+00	4.543E+00	0.000E+00	0.772
SB-124	4.847E+00		4.313E+00	3.524E+00	0.000E+00	1.376
SB-125	1.771E-01		5.579E+00	9.220E+00	0.000E+00	0.019
TE-129M	1.967E+01		2.737E+01	4.583E+01	0.000E+00	0.429
I-131	-3.121E+00		5.092E+00	8.365E+00	0.000E+00	-0.373
BA-133	2.402E+01		3.437E+00	5.649E+00	0.000E+00	4.251
CS-134	2.607E+01		4.135E+00	4.753E+00	0.000E+00	5.486
CS-136	1.570E+00		3.395E+00	5.632E+00	0.000E+00	0.279
CS-137	1.610E+00		2.097E+00	3.548E+00	0.000E+00	0.454
CE-139	1.897E+00		2.059E+00	3.386E+00	0.000E+00	0.560
BA-140	4.014E+00		1.272E+01	2.093E+01	0.000E+00	0.192
LA-140	-1.970E+00		4.280E+00	6.801E+00	0.000E+00	-0.290
CE-141	-3.535E+00		5.006E+00	6.842E+00	0.000E+00	-0.517
CE-144	-1.935E+01		1.805E+01	2.459E+01	0.000E+00	-0.787
EU-152	-5.461E-02		1.287E+01	9.737E+00	0.000E+00	-0.006
EU-154	-1.925E+00		4.040E+00	6.585E+00	0.000E+00	-0.292
U-235	-2.601E+01		1.827E+01	2.462E+01	0.000E+00	-1.057
U-238	-7.293E+00		2.242E+02	3.547E+02	0.000E+00	-0.021
AM-241	-2.988E+01		2.919E+01	3.964E+01	0.000E+00	-0.754

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A,11L28614-2       ,05/17/2006 05:48,05/05/2006 10:45,   3.653E+00,WG L28614-2 LA
B,11L28614-2       ,LIBD                ,09/01/2005 07:43,1135L090204
C,K-40     ,YES,   4.335E+02,   4.389E+01,   3.060E+01,,   14.163
C,RA-226   ,YES,   9.340E+01,   5.355E+01,   7.617E+01,,    1.226
C,AC-228   ,YES,   1.405E+00,   1.176E+01,   1.134E+01,,    0.124
C,TH-228   ,YES,   1.491E+01,   3.337E+00,   6.020E+00,,    2.477
C,TH-232   ,YES,   1.547E+01,   6.935E+00,   1.448E+01,,    1.069
C,BE-7     ,NO ,   6.211E+00,   1.845E+01,   3.055E+01,,    0.203
C,CR-51    ,NO ,  -3.027E+01,   2.206E+01,   3.490E+01,,   -0.867
C,MN-54    ,NO ,   2.438E+00,   2.021E+00,   3.430E+00,,    0.711
C,CO-57    ,NO ,  -1.820E+00,   1.974E+00,   3.199E+00,,   -0.569
C,CO-58    ,NO ,  -2.122E+00,   2.183E+00,   3.440E+00,,   -0.617
C,FE-59    ,NO ,   4.611E+00,   4.641E+00,   7.887E+00,,    0.585
C,CO-60    ,NO ,   5.377E-01,   2.044E+00,   3.417E+00,,    0.157
C,ZN-65    ,NO ,   1.824E+01,   5.853E+00,   9.307E+00,,    1.960
C,SE-75    ,NO ,  -1.220E+00,   3.257E+00,   4.494E+00,,   -0.272
C,SR-85    ,NO ,   2.097E+01,   2.465E+00,   4.718E+00,,    4.445
C,Y-88     ,NO ,  -2.317E+00,   2.227E+00,   3.423E+00,,   -0.677
C,NB-94    ,NO ,  -1.014E-01,   1.893E+00,   3.114E+00,,   -0.033
C,NB-95    ,NO ,   3.469E+00,   2.262E+00,   3.884E+00,,    0.893
C,ZR-95    ,NO ,   2.466E+00,   3.887E+00,   6.506E+00,,    0.379
C,MO-99    ,NO ,   1.451E+02,   2.581E+02,   4.267E+02,,    0.340
C,RU-103   ,NO ,   2.166E+00,   2.320E+00,   3.895E+00,,    0.556
C,RU-106   ,NO ,  -1.348E+00,   1.850E+01,   2.982E+01,,   -0.045
C,AG-110m  ,NO ,  -5.774E-01,   1.930E+00,   3.163E+00,,   -0.183
C,SN-113   ,NO ,   3.509E+00,   2.661E+00,   4.543E+00,,    0.772
C,SB-124   ,NO ,   4.847E+00,   4.313E+00,   3.524E+00,,    1.376
C,SB-125   ,NO ,   1.771E-01,   5.579E+00,   9.220E+00,,    0.019
C,TE-129M  ,NO ,   1.967E+01,   2.737E+01,   4.583E+01,,    0.429
C,I-131    ,NO ,  -3.121E+00,   5.092E+00,   8.365E+00,,   -0.373
C,BA-133   ,NO ,   2.402E+01,   3.437E+00,   5.649E+00,,    4.251
C,CS-134   ,NO ,   2.607E+01,   4.135E+00,   4.753E+00,,    5.486
C,CS-136   ,NO ,   1.570E+00,   3.395E+00,   5.632E+00,,    0.279
C,CS-137   ,NO ,   1.610E+00,   2.097E+00,   3.548E+00,,    0.454
C,CE-139   ,NO ,   1.897E+00,   2.059E+00,   3.386E+00,,    0.560
C,BA-140   ,NO ,   4.014E+00,   1.272E+01,   2.093E+01,,    0.192
C,LA-140   ,NO ,  -1.970E+00,   4.280E+00,   6.801E+00,,   -0.290
C,CE-141   ,NO ,  -3.535E+00,   5.006E+00,   6.842E+00,,   -0.517
C,CE-144   ,NO ,  -1.935E+01,   1.805E+01,   2.459E+01,,   -0.787
C,EU-152   ,NO ,  -5.461E-02,   1.287E+01,   9.737E+00,,   -0.006
C,EU-154   ,NO ,  -1.925E+00,   4.040E+00,   6.585E+00,,   -0.292
C,U-235    ,NO ,  -2.601E+01,   1.827E+01,   2.462E+01,,   -1.057
C,U-238    ,NO ,  -7.293E+00,   2.242E+02,   3.547E+02,,   -0.021
C,AM-241   ,NO ,  -2.988E+01,   2.919E+01,   3.964E+01,,   -0.754
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 17-MAY-2006 03:44:08.67
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 16-MAY-2006 18:50:37.06

LIMS No., Customer Name, Client ID: WG L28614-3 LASALLE

Sample ID : 04L28614-3
Sample Type : WG
Quantity : 3.57450E+00 L
Start Channel : 90 Energy Tol : 1.70000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 5-MAY-2006 13:55:00.0
Geometry : 0435L090804
BKGFILE : 04BG050506MT
Real Time : 0 08:53:26.08
Live time : 0 08:53:20.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.15*	300	1234	1.68	132.86	6.42E-01	9.37E-03	22.4	3.48E+00
2	1	77.17*	194	639	0.88	154.90	9.92E-01	6.07E-03	23.1	3.93E+00
3	2	87.27*	56	649	0.84	175.11	1.27E+00	1.75E-03	74.5	1.54E+00
4	1	92.72*	96	1116	1.14	186.01	1.39E+00	2.99E-03	67.9	1.22E+00
5	1	139.77*	166	871	0.78	280.12	1.82E+00	5.18E-03	31.9	1.02E+00
6	1	185.90*	72	943	0.96	372.39	1.73E+00	2.26E-03	82.1	7.83E-01
7	1	198.54*	344	831	1.38	397.67	1.68E+00	1.08E-02	16.9	2.86E+00
8	2	238.68*	328	531	1.09	477.97	1.52E+00	1.02E-02	14.2	2.94E+00
9	2	241.93*	192	557	1.25	484.47	1.51E+00	6.00E-03	23.6	
10	1	295.20*	316	614	1.15	591.02	1.32E+00	9.86E-03	16.8	1.34E+00
11	1	337.91*	117	556	2.42	676.45	1.20E+00	3.66E-03	44.1	5.79E+00
12	1	351.95*	544	499	1.18	704.52	1.17E+00	1.70E-02	9.7	1.33E+00
13	1	583.12*	114	196	1.68	1166.86	7.99E-01	3.55E-03	28.8	1.92E-01
14	1	595.68	129	224	1.36	1191.97	7.86E-01	4.03E-03	23.3	1.65E+00
15	1	609.31*	493	292	1.33	1219.22	7.73E-01	1.54E-02	9.0	1.34E+00
16	1	727.75*	49	106	1.68	1456.09	6.74E-01	1.53E-03	43.3	2.64E+00
17	1	768.71	53	135	1.99	1538.00	6.46E-01	1.65E-03	42.1	1.65E+00
18	1	911.49*	56	172	2.13	1823.52	5.66E-01	1.74E-03	60.7	1.65E+00
19	1	969.19*	47	116	2.29	1938.90	5.39E-01	1.48E-03	51.5	5.38E-01
20	1	1120.24*	171	77	3.37	2240.92	4.81E-01	5.33E-03	14.4	4.68E+00
21	1	1173.69*	9	77	2.21	2347.78	4.64E-01	2.77E-04	221.2	1.57E+00
22	1	1460.99*	434	110	2.23	2922.17	3.92E-01	1.36E-02	8.4	1.30E+00
23	1	1764.32*	48	54	2.54	3528.54	3.43E-01	1.49E-03	38.0	1.01E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	434	10.67*	3.920E-01	2.454E+02	2.454E+02	16.78
RA-226	186.21	72	3.28*	1.726E+00	3.018E+01	3.018E+01	164.30
AC-228	835.50	------	1.75	6.054E-01	------	Line Not Found	------
	911.07	56	27.70*	5.655E-01	8.404E+00	8.436E+00	121.45
TH-228	238.63	328	44.60*	1.520E+00	1.143E+01	1.156E+01	28.34
	240.98	192	3.95	1.508E+00	7.616E+01	7.703E+01	47.13
TH-232	583.14	114	30.25	7.993E-01	1.110E+01	1.110E+01	57.53

	911.07	56	27.70*	5.655E-01	8.404E+00	8.404E+00	121.45
	969.11	47	16.60	5.389E-01	1.252E+01	1.252E+01	103.09
U-235	143.76	------	10.50*	1.822E+00	------	Line Not Found	------
	163.35	------	4.70	1.796E+00	------	Line Not Found	------
	185.71	72	54.00	1.726E+00	1.833E+00	1.833E+00	164.30
	205.31	------	4.70	1.652E+00	------	Line Not Found	------

Nuclide Type: activation

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
CO-60	1173.22	9	100.00	4.636E-01	4.510E-01	4.529E-01	442.41
	1332.49	------	100.00*	4.202E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28614-3

Acquisition date : 16-MAY-2006 18:50:37

Total number of lines in spectrum	23	
Number of unidentified lines	15	
Number of lines tentatively identified by NID	8	34.78%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.454E+02	2.454E+02	0.412E+02	16.78	
RA-226	1600.00Y	1.00	3.018E+01	3.018E+01	4.958E+01	164.30	
AC-228	5.75Y	1.00	8.404E+00	8.436E+00	10.25E+00	121.45	
TH-228	1.91Y	1.01	1.143E+01	1.156E+01	0.327E+01	28.34	
TH-232	1.41E+10Y	1.00	8.404E+00	8.404E+00	10.21E+00	121.45	
U-235	7.04E+08Y	1.00	1.833E+00	1.833E+00	3.012E+00	164.30	K
			---	---			
	Total Activity :		3.056E+02	3.058E+02			

Nuclide Type : activation

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	4.510E-01	4.529E-01	20.04E-01	442.41	K
			---	---			
	Total Activity :		4.510E-01	4.529E-01			

Grand Total Activity : 3.061E+02 3.062E+02

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28614-3 Acquisition date : 16-MAY-2006 18:50:37

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.15	300	1234	1.68	132.86	129	9	9.37E-03	44.8	6.42E-01	
1	77.17	194	639	0.88	154.90	153	5	6.07E-03	46.2	9.92E-01	
2	87.27	56	649	0.84	175.11	166	13	1.75E-03	****	1.27E+00	
1	92.72	96	1116	1.14	186.01	183	9	2.99E-03	****	1.39E+00	
1	139.77	166	871	0.78	280.12	277	7	5.18E-03	63.8	1.82E+00	
1	198.54	344	831	1.38	397.67	393	10	1.08E-02	33.8	1.68E+00	
1	295.20	316	614	1.15	591.02	586	11	9.86E-03	33.7	1.32E+00	
1	337.91	117	556	2.42	676.45	672	13	3.66E-03	88.1	1.20E+00	
1	351.95	544	499	1.18	704.52	700	12	1.70E-02	19.4	1.17E+00	
1	595.68	129	224	1.36	1191.97	1188	10	4.03E-03	46.6	7.86E-01	
1	609.31	493	292	1.33	1219.22	1213	13	1.54E-02	18.0	7.73E-01	
1	727.75	49	106	1.68	1456.09	1453	8	1.53E-03	86.6	6.74E-01	
1	768.71	53	135	1.99	1538.00	1534	9	1.65E-03	84.1	6.46E-01	
1	1120.24	171	77	3.37	2240.92	2233	14	5.33E-03	28.8	4.81E-01	
1	1764.32	48	54	2.54	3528.54	3523	12	1.49E-03	76.0	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	23	
Number of unidentified lines	15	
Number of lines tentatively identified by NID	8	34.78%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.454E+02	2.454E+02	0.412E+02	16.78	
RA-226	1600.00Y	1.00	3.018E+01	3.018E+01	4.958E+01	164.30	
TH-228	1.91Y	1.01	1.143E+01	1.156E+01	0.327E+01	28.34	
TH-232	1.41E+10Y	1.00	1.067E+01	1.067E+01	0.499E+01	46.80	
		Total Activity :	2.976E+02	2.978E+02			

Nuclide Type : activation

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	4.510E-01	4.529E-01	20.04E-01	442.41	
		Total Activity :	4.510E-01	4.529E-01			

Grand Total Activity : 2.981E+02 2.982E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line

TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.454E+02	4.116E+01	2.986E+01	0.000E+00	8.218
CO-60	4.529E-01	2.004E+00	3.590E+00	0.000E+00	0.126
RA-226	3.018E+01	4.958E+01	7.056E+01	0.000E+00	0.428
TH-228	1.156E+01	3.275E+00	5.309E+00	0.000E+00	2.177
TH-232	1.067E+01	4.992E+00	1.080E+01	0.000E+00	0.988

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.086E+01		1.713E+01	2.913E+01	0.000E+00	0.716
NA-24	-9.733E-01		3.024E-01	Half-Life too short		
CR-51	-2.834E+01		1.993E+01	3.115E+01	0.000E+00	-0.910
MN-54	9.013E-01		1.875E+00	3.162E+00	0.000E+00	0.285
CO-57	-6.819E-01		1.695E+00	2.791E+00	0.000E+00	-0.244
CO-58	-1.726E-01		1.978E+00	3.267E+00	0.000E+00	-0.053
FE-59	7.352E+00		4.396E+00	7.807E+00	0.000E+00	0.942
ZN-65	1.229E+01		5.061E+00	8.159E+00	0.000E+00	1.507
SE-75	-2.828E+00		2.533E+00	4.063E+00	0.000E+00	-0.696
SR-85	1.844E+01		2.394E+00	4.623E+00	0.000E+00	3.988
Y-88	6.590E-01		2.236E+00	3.759E+00	0.000E+00	0.175
NB-94	-3.050E-01		1.693E+00	2.746E+00	0.000E+00	-0.111
NB-95	1.803E+00		2.065E+00	3.470E+00	0.000E+00	0.520
ZR-95	-4.701E-01		3.456E+00	5.578E+00	0.000E+00	-0.084
MO-99	4.324E+01		2.392E+02	3.922E+02	0.000E+00	0.110
RU-103	2.419E+00		2.173E+00	3.673E+00	0.000E+00	0.659
RU-106	-4.282E+00		1.720E+01	2.811E+01	0.000E+00	-0.152
AG-110m	-3.007E-01		1.816E+00	2.964E+00	0.000E+00	-0.101
SN-113	-2.419E+00		2.445E+00	3.939E+00	0.000E+00	-0.614
SB-124	-4.147E+00		5.017E+00	3.325E+00	0.000E+00	-1.247
SB-125	4.403E+00		5.103E+00	8.631E+00	0.000E+00	0.510
TE-129M	1.456E+01		2.488E+01	4.157E+01	0.000E+00	0.350
I-131	3.177E+00		4.491E+00	7.636E+00	0.000E+00	0.416
BA-133	6.124E+00		2.839E+00	4.374E+00	0.000E+00	1.400
CS-134	5.286E+00		3.218E+00	3.647E+00	0.000E+00	1.450
CS-136	1.755E+00		3.199E+00	5.423E+00	0.000E+00	0.324
CS-137	2.087E+00		1.970E+00	3.365E+00	0.000E+00	0.620
CE-139	7.823E-01		1.780E+00	2.929E+00	0.000E+00	0.267
BA-140	1.427E+00		1.165E+01	1.896E+01	0.000E+00	0.075
LA-140	4.115E+00		4.113E+00	7.135E+00	0.000E+00	0.577
CE-141	1.427E+00		4.252E+00	6.054E+00	0.000E+00	0.236
CE-144	-1.502E+01		1.494E+01	2.154E+01	0.000E+00	-0.697
EU-152	6.046E-01		9.429E+00	9.020E+00	0.000E+00	0.067
EU-154	-1.307E+00		3.496E+00	5.760E+00	0.000E+00	-0.227
AC-228	8.436E+00		1.025E+01	1.276E+01	0.000E+00	0.661
U-235	8.353E+00		1.542E+01	2.209E+01	0.000E+00	0.378
U-238	1.291E+02		1.982E+02	3.335E+02	0.000E+00	0.387
AM-241	-1.697E+01		1.655E+01	2.499E+01	0.000E+00	-0.679

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A,04L28614-3       ,05/17/2006 03:44,05/05/2006 13:55,   3.575E+00,WG L28614-3 LA
B,04L28614-3       ,LIBD                ,03/14/2005 09:04,0435L090804
C,K-40     ,YES,   2.454E+02,   4.116E+01,   2.986E+01,,    8.218
C,CO-60    ,YES,   4.529E-01,   2.004E+00,   3.590E+00,,    0.126
C,RA-226   ,YES,   3.018E+01,   4.958E+01,   7.056E+01,,    0.428
C,TH-228   ,YES,   1.156E+01,   3.275E+00,   5.309E+00,,    2.177
C,TH-232   ,YES,   1.067E+01,   4.992E+00,   1.080E+01,,    0.988
C,BE-7     ,NO ,   2.086E+01,   1.713E+01,   2.913E+01,,    0.716
C,CR-51    ,NO ,  -2.834E+01,   1.993E+01,   3.115E+01,,   -0.910
C,MN-54    ,NO ,   9.013E-01,   1.875E+00,   3.162E+00,,    0.285
C,CO-57    ,NO ,  -6.819E-01,   1.695E+00,   2.791E+00,,   -0.244
C,CO-58    ,NO ,  -1.726E-01,   1.978E+00,   3.267E+00,,   -0.053
C,FE-59    ,NO ,   7.352E+00,   4.396E+00,   7.807E+00,,    0.942
C,ZN-65    ,NO ,   1.229E+01,   5.061E+00,   8.159E+00,,    1.507
C,SE-75    ,NO ,  -2.828E+00,   2.533E+00,   4.063E+00,,   -0.696
C,SR-85    ,NO ,   1.844E+01,   2.394E+00,   4.623E+00,,    3.988
C,Y-88     ,NO ,   6.590E-01,   2.236E+00,   3.759E+00,,    0.175
C,NB-94    ,NO ,  -3.050E-01,   1.693E+00,   2.746E+00,,   -0.111
C,NB-95    ,NO ,   1.803E+00,   2.065E+00,   3.470E+00,,    0.520
C,ZR-95    ,NO ,  -4.701E-01,   3.456E+00,   5.578E+00,,   -0.084
C,MO-99    ,NO ,   4.324E+01,   2.392E+02,   3.922E+02,,    0.110
C,RU-103   ,NO ,   2.419E+00,   2.173E+00,   3.673E+00,,    0.659
C,RU-106   ,NO ,  -4.282E+00,   1.720E+01,   2.811E+01,,   -0.152
C,AG-110m  ,NO ,  -3.007E-01,   1.816E+00,   2.964E+00,,   -0.101
C,SN-113   ,NO ,  -2.419E+00,   2.445E+00,   3.939E+00,,   -0.614
C,SB-124   ,NO ,  -4.147E+00,   5.017E+00,   3.325E+00,,   -1.247
C,SB-125   ,NO ,   4.403E+00,   5.103E+00,   8.631E+00,,    0.510
C,TE-129M  ,NO ,   1.456E+01,   2.488E+01,   4.157E+01,,    0.350
C,I-131    ,NO ,   3.177E+00,   4.491E+00,   7.636E+00,,    0.416
C,BA-133   ,NO ,   6.124E+00,   2.839E+00,   4.374E+00,,    1.400
C,CS-134   ,NO ,   5.286E+00,   3.218E+00,   3.647E+00,,    1.450
C,CS-136   ,NO ,   1.755E+00,   3.199E+00,   5.423E+00,,    0.324
C,CS-137   ,NO ,   2.087E+00,   1.970E+00,   3.365E+00,,    0.620
C,CE-139   ,NO ,   7.823E-01,   1.780E+00,   2.929E+00,,    0.267
C,BA-140   ,NO ,   1.427E+00,   1.165E+01,   1.896E+01,,    0.075
C,LA-140   ,NO ,   4.115E+00,   4.113E+00,   7.135E+00,,    0.577
C,CE-141   ,NO ,   1.427E+00,   4.252E+00,   6.054E+00,,    0.236
C,CE-144   ,NO ,  -1.502E+01,   1.494E+01,   2.154E+01,,   -0.697
C,EU-152   ,NO ,   6.046E-01,   9.429E+00,   9.020E+00,,    0.067
C,EU-154   ,NO ,  -1.307E+00,   3.496E+00,   5.760E+00,,   -0.227
C,AC-228   ,NO ,   8.436E+00,   1.025E+01,   1.276E+01,,    0.661
C,U-235    ,NO ,   8.353E+00,   1.542E+01,   2.209E+01,,    0.378
C,U-238    ,NO ,   1.291E+02,   1.982E+02,   3.335E+02,,    0.387
C,AM-241   ,NO ,  -1.697E+01,   1.655E+01,   2.499E+01,,   -0.679
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 17-MAY-2006 04:05:28.91
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 16-MAY-2006 19:11:47.06

LIMS No., Customer Name, Client ID: WG L28614-4 LASALLE

Sample ID : 13L28614-4
Sample Type : WG
Quantity : 3.53730E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 5-MAY-2006 16:00:00.0
Geometry : 1335L090904
BKGFILE : 13BG050506MT
Real Time : 0 08:53:29.84
Live time : 0 08:53:20.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.17*	225	942	1.76	132.29	7.19E-01	7.03E-03	23.4	8.20E+00
2	1	92.67*	68	1211	1.03	185.25	1.52E+00	2.11E-03	105.3	6.53E-01
3	1	139.70*	286	1168	1.10	279.24	2.02E+00	8.95E-03	23.1	2.54E+00
4	1	185.77*	60	944	1.03	371.32	1.95E+00	1.86E-03	105.5	1.47E+00
5	1	198.23*	340	902	1.49	396.22	1.90E+00	1.06E-02	17.4	7.57E+00
6	1	238.62*	97	697	1.10	476.93	1.73E+00	3.02E-03	53.9	3.10E-01
7	1	295.17*	74	448	0.80	589.97	1.52E+00	2.31E-03	54.4	8.85E-01
8	1	351.88*	175	621	1.03	703.32	1.34E+00	5.48E-03	31.7	7.56E-01
9	1	595.80	121	307	1.91	1190.98	9.11E-01	3.79E-03	29.3	5.26E+00
10	1	609.34*	312	321	1.51	1218.04	8.96E-01	9.74E-03	14.0	9.50E-01
11	1	911.62*	18	203	1.71	1822.57	6.64E-01	5.61E-04	187.7	1.93E+00
12	1	969.44*	28	131	1.97	1938.23	6.34E-01	8.87E-04	89.5	1.32E+00
13	1	1120.62*	77	110	1.75	2240.67	5.69E-01	2.41E-03	32.8	6.59E-01
14	1	1378.51*	15	87	2.71	2756.73	4.89E-01	4.61E-04	138.1	1.81E+00
15	1	1461.52*	156	90	1.97	2922.88	4.69E-01	4.87E-03	21.2	1.73E+00
16	1	1765.34*	66	53	2.49	3531.09	4.11E-01	2.06E-03	34.5	9.77E-01
17	1	1954.03	25	42	1.68	3908.95	3.85E-01	7.71E-04	49.8	6.03E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	156	10.67*	4.687E-01	7.447E+01	7.447E+01	42.36
RA-226	186.21	60	3.28*	1.946E+00	2.228E+01	2.228E+01	210.94
AC-228	835.50	------	1.75	7.084E-01	------	Line Not Found	------
	911.07	18	27.70*	6.638E-01	2.331E+00	2.340E+00	375.32
TH-228	238.63	97	44.60*	1.733E+00	2.988E+00	3.022E+00	107.76
	240.98	------	3.95	1.723E+00	------	Line Not Found	------
TH-232	583.14	------	30.25	9.262E-01	------	Line Not Found	------
	911.07	18	27.70*	6.638E-01	2.331E+00	2.331E+00	375.32
	969.11	28	16.60	6.340E-01	6.442E+00	6.442E+00	179.06
U-235	143.76	------	10.50*	2.023E+00	------	Line Not Found	------
	163.35	------	4.70	2.011E+00	------	Line Not Found	------
	185.71	60	54.00	1.946E+00	1.353E+00	1.353E+00	210.94
	205.31	------	4.70	1.871E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Page : 2
Sample ID : 13L28614-4
Acquisition date : 16-MAY-2006 19:11:47

Total number of lines in spectrum	17	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	5	29.41%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.447E+01	7.447E+01	3.155E+01	42.36	
RA-226	1600.00Y	1.00	2.228E+01	2.228E+01	4.700E+01	210.94	
AC-228	5.75Y	1.00	2.331E+00	2.340E+00	8.783E+00	375.32	
TH-228	1.91Y	1.01	2.988E+00	3.022E+00	3.256E+00	107.76	
TH-232	1.41E+10Y	1.00	2.331E+00	2.331E+00	8.750E+00	375.32	
U-235	7.04E+08Y	1.00	1.353E+00	1.353E+00	2.855E+00	210.94	K
			---	---			
	Total Activity :		1.058E+02	1.058E+02			

Grand Total Activity : 1.058E+02 1.058E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28614-4 Acquisition date : 16-MAY-2006 19:11:47

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.17	225	942	1.76	132.29	130	6	7.03E-03	46.9	7.19E-01	
1	92.67	68	1211	1.03	185.25	182	9	2.11E-03	****	1.52E+00	
1	139.70	286	1168	1.10	279.24	275	9	8.95E-03	46.1	2.02E+00	
1	198.23	340	902	1.49	396.22	393	9	1.06E-02	34.7	1.90E+00	
1	295.17	74	448	0.80	589.97	587	7	2.31E-03	****	1.52E+00	
1	351.88	175	621	1.03	703.32	697	12	5.48E-03	63.3	1.34E+00	
1	595.80	121	307	1.91	1190.98	1186	11	3.79E-03	58.6	9.11E-01	
1	609.34	312	321	1.51	1218.04	1212	12	9.74E-03	28.0	8.96E-01	
1	1120.62	77	110	1.75	2240.67	2235	11	2.41E-03	65.6	5.69E-01	
1	1378.51	15	87	2.71	2756.73	2751	12	4.61E-04	****	4.89E-01	
1	1765.34	66	53	2.49	3531.09	3525	18	2.06E-03	69.0	4.11E-01	
1	1954.03	25	42	1.68	3908.95	3905	8	7.71E-04	99.6	3.85E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	17	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	5	29.41%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.447E+01	7.447E+01	3.155E+01	42.36	
RA-226	1600.00Y	1.00	2.228E+01	2.228E+01	4.700E+01	210.94	
TH-228	1.91Y	1.01	2.988E+00	3.022E+00	3.256E+00	107.76	
TH-232	1.41E+10Y	1.00	3.833E+00	3.833E+00	6.971E+00	181.88	
		Total Activity :	1.036E+02	1.036E+02			
		Grand Total Activity :	1.036E+02	1.036E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering Nuclide	Interfering Line	Interfered Nuclide	Interfered Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	7.447E+01	3.155E+01	2.809E+01	0.000E+00	2.651

RA-226	2.228E+01	4.700E+01	6.394E+01	0.000E+00	0.348
TH-228	3.022E+00	3.256E+00	4.796E+00	0.000E+00	0.630
TH-232	3.833E+00	6.971E+00	1.111E+01	0.000E+00	0.345

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.118E+01		1.689E+01	2.810E+01	0.000E+00	0.398
NA-24	2.329E-01		3.197E-01	Half-Life too short		
CR-51	-1.307E+01		1.901E+01	3.040E+01	0.000E+00	-0.430
MN-54	2.566E+00		1.833E+00	3.173E+00	0.000E+00	0.809
CO-57	5.884E-01		1.613E+00	2.708E+00	0.000E+00	0.217
CO-58	2.434E-01		1.956E+00	3.244E+00	0.000E+00	0.075
FE-59	1.981E+00		3.939E+00	6.625E+00	0.000E+00	0.299
CO-60	1.369E+00		1.801E+00	3.092E+00	0.000E+00	0.443
ZN-65	1.169E+01		4.582E+00	7.344E+00	0.000E+00	1.591
SE-75	-1.217E+00		2.390E+00	3.899E+00	0.000E+00	-0.312
SR-85	1.889E+01		2.363E+00	4.503E+00	0.000E+00	4.194
Y-88	-1.259E+00		2.037E+00	3.196E+00	0.000E+00	-0.394
NB-94	-1.858E+00		1.780E+00	2.791E+00	0.000E+00	-0.666
NB-95	2.785E+00		1.967E+00	3.421E+00	0.000E+00	0.814
ZR-95	-1.538E+00		3.459E+00	5.653E+00	0.000E+00	-0.272
MO-99	1.059E+02		2.221E+02	3.758E+02	0.000E+00	0.282
RU-103	3.764E+00		2.135E+00	3.656E+00	0.000E+00	1.030
RU-106	-6.232E+00		1.677E+01	2.725E+01	0.000E+00	-0.229
AG-110m	-4.071E-01		1.790E+00	2.906E+00	0.000E+00	-0.140
SN-113	3.880E-01		2.356E+00	3.921E+00	0.000E+00	0.099
SB-124	1.071E+00		4.214E+00	3.217E+00	0.000E+00	0.333
SB-125	-3.306E+00		4.950E+00	7.991E+00	0.000E+00	-0.414
TE-129M	1.787E+01		2.442E+01	4.083E+01	0.000E+00	0.438
I-131	-1.177E-01		4.440E+00	7.391E+00	0.000E+00	-0.016
BA-133	2.606E+00		2.686E+00	3.956E+00	0.000E+00	0.659
CS-134	5.685E+00		2.852E+00	3.290E+00	0.000E+00	1.728
CS-136	7.577E-01		3.089E+00	5.144E+00	0.000E+00	0.147
CS-137	-4.949E-01		1.941E+00	3.147E+00	0.000E+00	-0.157
CE-139	-7.991E-01		1.716E+00	2.786E+00	0.000E+00	-0.287
BA-140	1.166E+01		1.125E+01	1.930E+01	0.000E+00	0.604
LA-140	4.811E-01		3.746E+00	6.251E+00	0.000E+00	0.077
CE-141	8.058E-01		4.035E+00	5.755E+00	0.000E+00	0.140
CE-144	8.510E+00		1.451E+01	2.104E+01	0.000E+00	0.404
EU-152	-8.354E+00		6.674E+00	8.736E+00	0.000E+00	-0.956
EU-154	1.835E+00		3.347E+00	5.633E+00	0.000E+00	0.326
AC-228	2.340E+00		8.783E+00	1.194E+01	0.000E+00	0.196
U-235	1.622E+00		1.505E+01	2.108E+01	0.000E+00	0.077
U-238	-1.348E-02		2.177E+02	3.449E+02	0.000E+00	0.000
AM-241	-2.974E+01		1.441E+01	2.295E+01	0.000E+00	-1.296

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A,13L28614-4       ,05/17/2006 04:05,05/05/2006 16:00,   3.537E+00,WG L28614-4 LA
B,13L28614-4       ,LIBD                ,08/05/2005 08:16,1335L090904
C,K-40     ,YES,   7.447E+01,   3.155E+01,   2.809E+01,,    2.651
C,RA-226   ,YES,   2.228E+01,   4.700E+01,   6.394E+01,,    0.348
C,TH-228   ,YES,   3.022E+00,   3.256E+00,   4.796E+00,,    0.630
C,TH-232   ,YES,   3.833E+00,   6.971E+00,   1.111E+01,,    0.345
C,BE-7     ,NO ,   1.118E+01,   1.689E+01,   2.810E+01,,    0.398
C,CR-51    ,NO ,  -1.307E+01,   1.901E+01,   3.040E+01,,   -0.430
C,MN-54    ,NO ,   2.566E+00,   1.833E+00,   3.173E+00,,    0.809
C,CO-57    ,NO ,   5.884E-01,   1.613E+00,   2.708E+00,,    0.217
C,CO-58    ,NO ,   2.434E-01,   1.956E+00,   3.244E+00,,    0.075
C,FE-59    ,NO ,   1.981E+00,   3.939E+00,   6.625E+00,,    0.299
C,CO-60    ,NO ,   1.369E+00,   1.801E+00,   3.092E+00,,    0.443
C,ZN-65    ,NO ,   1.169E+01,   4.582E+00,   7.344E+00,,    1.591
C,SE-75    ,NO ,  -1.217E+00,   2.390E+00,   3.899E+00,,   -0.312
C,SR-85    ,NO ,   1.889E+01,   2.363E+00,   4.503E+00,,    4.194
C,Y-88     ,NO ,  -1.259E+00,   2.037E+00,   3.196E+00,,   -0.394
C,NB-94    ,NO ,  -1.858E+00,   1.780E+00,   2.791E+00,,   -0.666
C,NB-95    ,NO ,   2.785E+00,   1.967E+00,   3.421E+00,,    0.814
C,ZR-95    ,NO ,  -1.538E+00,   3.459E+00,   5.653E+00,,   -0.272
C,MO-99    ,NO ,   1.059E+02,   2.221E+02,   3.758E+02,,    0.282
C,RU-103   ,NO ,   3.764E+00,   2.135E+00,   3.656E+00,,    1.030
C,RU-106   ,NO ,  -6.232E+00,   1.677E+01,   2.725E+01,,   -0.229
C,AG-110m  ,NO ,  -4.071E-01,   1.790E+00,   2.906E+00,,   -0.140
C,SN-113   ,NO ,   3.880E-01,   2.356E+00,   3.921E+00,,    0.099
C,SB-124   ,NO ,   1.071E+00,   4.214E+00,   3.217E+00,,    0.333
C,SB-125   ,NO ,  -3.306E+00,   4.950E+00,   7.991E+00,,   -0.414
C,TE-129M  ,NO ,   1.787E+01,   2.442E+01,   4.083E+01,,    0.438
C,I-131    ,NO ,  -1.177E-01,   4.440E+00,   7.391E+00,,   -0.016
C,BA-133   ,NO ,   2.606E+00,   2.686E+00,   3.956E+00,,    0.659
C,CS-134   ,NO ,   5.685E+00,   2.852E+00,   3.290E+00,,    1.728
C,CS-136   ,NO ,   7.577E-01,   3.089E+00,   5.144E+00,,    0.147
C,CS-137   ,NO ,  -4.949E-01,   1.941E+00,   3.147E+00,,   -0.157
C,CE-139   ,NO ,  -7.991E-01,   1.716E+00,   2.786E+00,,   -0.287
C,BA-140   ,NO ,   1.166E+01,   1.125E+01,   1.930E+01,,    0.604
C,LA-140   ,NO ,   4.811E-01,   3.746E+00,   6.251E+00,,    0.077
C,CE-141   ,NO ,   8.058E-01,   4.035E+00,   5.755E+00,,    0.140
C,CE-144   ,NO ,   8.510E+00,   1.451E+01,   2.104E+01,,    0.404
C,EU-152   ,NO ,  -8.354E+00,   6.674E+00,   8.736E+00,,   -0.956
C,EU-154   ,NO ,   1.835E+00,   3.347E+00,   5.633E+00,,    0.326
C,AC-228   ,NO ,   2.340E+00,   8.783E+00,   1.194E+01,,    0.196
C,U-235    ,NO ,   1.622E+00,   1.505E+01,   2.108E+01,,    0.077
C,U-238    ,NO ,  -1.348E-02,   2.177E+02,   3.449E+02,,    0.000
C,AM-241   ,NO ,  -2.974E+01,   1.441E+01,   2.295E+01,,   -1.296
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Sec. Review: Analyst: KED LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 17-MAY-2006 03:55:52.91
TBE14 P-10933A HpGe ********** Aquisition Date/Time: 16-MAY-2006 19:02:18.73

LIMS No., Customer Name, Client ID: WG L28614-5 LASALLE

Sample ID : 14L28614-5
Sample Type : WG
Quantity : 3.57350E+00 L
Start Channel : 90 Energy Tol : 1.30000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 5-MAY-2006 09:15:00.0
Geometry : 1435L091304
BKGFILE : 14BG050506MT
Real Time : 0 08:53:25.68
Live time : 0 08:53:20.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.27*	208	1350	1.27	133.67	4.51E-01	6.50E-03	33.6	9.19E-01
2	1	92.67*	110	1156	1.60	186.66	1.15E+00	3.44E-03	60.9	3.31E+00
3	1	139.77	361	1107	1.51	281.20	1.67E+00	1.13E-02	17.4	4.23E-01
4	1	185.67*	149	1236	1.61	373.30	1.64E+00	4.67E-03	48.6	8.74E-01
5	1	198.32*	219	955	1.48	398.67	1.60E+00	6.84E-03	28.5	9.16E-01
6	3	238.84*	179	596	1.18	479.92	1.47E+00	5.60E-03	25.7	6.75E-01
7	3	241.88	121	619	1.29	486.02	1.46E+00	3.79E-03	37.5	
8	1	295.40*	201	889	1.51	593.30	1.29E+00	6.28E-03	33.3	1.31E+00
9	1	338.47*	23	485	1.49	679.60	1.17E+00	7.09E-04	197.8	1.41E+00
10	1	352.28*	200	595	1.51	707.27	1.14E+00	6.26E-03	27.7	4.74E+00
11	1	583.24*	48	253	1.59	1169.45	7.91E-01	1.49E-03	73.5	1.12E+00
12	1	596.26	87	343	1.79	1195.49	7.78E-01	2.72E-03	45.1	1.86E+00
13	1	609.38*	367	337	2.28	1221.71	7.66E-01	1.15E-02	13.9	1.32E+00
14	1	911.20*	35	165	1.75	1824.22	5.65E-01	1.09E-03	89.8	2.32E+00
15	1	968.66*	5	154	1.53	1938.77	5.38E-01	1.41E-04	582.2	6.52E-01
16	1	1120.43*	86	148	2.44	2241.03	4.81E-01	2.67E-03	36.6	8.66E-01
17	1	1461.44*	337	72	2.41	2918.79	3.93E-01	1.05E-02	9.8	1.53E+00
18	1	1766.41*	72	58	2.65	3523.30	3.43E-01	2.25E-03	30.7	1.39E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	337	10.67*	3.926E-01	1.899E+02	1.899E+02	19.70
RA-226	186.21	149	3.28*	1.641E+00	6.562E+01	6.562E+01	97.17
AC-228	835.50	------	1.75	6.034E-01	------	Line Not Found	------
	911.07	35	27.70*	5.645E-01	5.285E+00	5.305E+00	179.57
TH-228	238.63	179	44.60*	1.468E+00	6.465E+00	6.540E+00	51.42
	240.98	121	3.95	1.458E+00	4.977E+01	5.035E+01	75.02
TH-232	583.14	48	30.25	7.912E-01	4.714E+00	4.714E+00	146.91
	911.07	35	27.70*	5.645E-01	5.285E+00	5.285E+00	179.57
	969.11	5	16.60	5.385E-01	1.191E+00	1.191E+00	1164.45
U-235	143.76	------	10.50*	1.680E+00	------	Line Not Found	------
	163.35	------	4.70	1.685E+00	------	Line Not Found	------
	185.71	149	54.00	1.641E+00	3.986E+00	3.986E+00	97.17

205.31	------	4.70	1.582E+00	------	Line Not Found ------

Flag: "*" = Keyline

Summary of Nuclide Activity

Sample ID : 14L28614-5 Acquisition date : 16-MAY-2006 19:02:18

Total number of lines in spectrum	18	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	7	38.89%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.899E+02	1.899E+02	0.374E+02	19.70	
RA-226	1600.00Y	1.00	6.562E+01	6.562E+01	6.377E+01	97.17	
AC-228	5.75Y	1.00	5.285E+00	5.305E+00	9.526E+00	179.57	
TH-228	1.91Y	1.01	6.465E+00	6.540E+00	3.363E+00	51.42	
TH-232	1.41E+10Y	1.00	5.285E+00	5.285E+00	9.490E+00	179.57	
U-235	7.04E+08Y	1.00	3.986E+00	3.986E+00	3.873E+00	97.17	K
			---	---			
	Total Activity :		2.766E+02	2.767E+02			

Grand Total Activity : 2.766E+02 2.767E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 14L28614-5 Acquisition date : 16-MAY-2006 19:02:18

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.27	208	1350	1.27	133.67	130	9	6.50E-03	67.2	4.51E-01	
1	92.67	110	1156	1.60	186.66	182	9	3.44E-03	****	1.15E+00	
1	139.77	361	1107	1.51	281.20	277	9	1.13E-02	34.8	1.67E+00	
1	198.32	219	955	1.48	398.67	394	10	6.84E-03	57.1	1.60E+00	
1	295.40	201	889	1.51	593.30	587	14	6.28E-03	66.6	1.29E+00	
1	338.47	23	485	1.49	679.60	675	10	7.09E-04	****	1.17E+00	
1	352.28	200	595	1.51	707.27	701	12	6.26E-03	55.5	1.14E+00	
1	596.26	87	343	1.79	1195.49	1188	13	2.72E-03	90.1	7.78E-01	
1	609.38	367	337	2.28	1221.71	1214	18	1.15E-02	27.8	7.66E-01	
1	1120.43	86	148	2.44	2241.03	2234	17	2.67E-03	73.2	4.81E-01	
1	1766.41	72	58	2.65	3523.30	3514	18	2.25E-03	61.3	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	18	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	7	38.89%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.899E+02	1.899E+02	0.374E+02	19.70	
RA-226	1600.00Y	1.00	6.562E+01	6.562E+01	6.377E+01	97.17	
AC-228	5.75Y	1.00	1.273E+00	1.278E+00	11.38E+00	890.08	
TH-228	1.91Y	1.01	6.806E+00	6.885E+00	3.350E+00	48.66	
TH-232	1.41E+10Y	1.00	4.012E+00	4.012E+00	6.196E+00	154.46	
	Total Activity :		2.677E+02	2.677E+02			
	Grand Total Activity :		2.677E+02	2.677E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering Nuclide	Interfering Line	Interfered Nuclide	Interfered Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.899E+02	3.742E+01	3.298E+01	0.000E+00	5.759

RA-226	6.562E+01	6.377E+01	8.405E+01	0.000E+00	0.781
AC-228	1.278E+00	1.138E+01	1.253E+01	0.000E+00	0.102
TH-228	6.885E+00	3.350E+00	6.597E+00	0.000E+00	1.044
TH-232	4.012E+00	6.196E+00	1.368E+01	0.000E+00	0.293

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.445E+01		2.052E+01	3.338E+01	0.000E+00	-0.433
NA-24	-1.070E+00		4.142E-01	Half-Life too short		
CR-51	-5.605E+00		2.355E+01	3.858E+01	0.000E+00	-0.145
MN-54	1.665E+00		2.139E+00	3.623E+00	0.000E+00	0.459
CO-57	-1.875E+00		2.204E+00	3.609E+00	0.000E+00	-0.520
CO-58	6.348E-01		2.255E+00	3.759E+00	0.000E+00	0.169
FE-59	4.860E+00		4.743E+00	8.180E+00	0.000E+00	0.594
CO-60	-1.161E+00		2.088E+00	3.305E+00	0.000E+00	-0.351
ZN-65	1.222E+01		5.594E+00	8.788E+00	0.000E+00	1.391
SE-75	-3.314E-01		2.990E+00	4.954E+00	0.000E+00	-0.067
SR-85	2.107E+01		2.653E+00	5.119E+00	0.000E+00	4.116
Y-88	-1.434E-01		2.278E+00	3.697E+00	0.000E+00	-0.039
NB-94	-8.825E-01		2.125E+00	3.402E+00	0.000E+00	-0.259
NB-95	5.882E-01		2.271E+00	3.794E+00	0.000E+00	0.155
ZR-95	-1.816E+00		4.105E+00	6.692E+00	0.000E+00	-0.271
MO-99	-2.438E+02		2.813E+02	4.519E+02	0.000E+00	-0.540
RU-103	1.190E+00		2.504E+00	4.200E+00	0.000E+00	0.283
RU-106	3.302E+01		2.134E+01	3.376E+01	0.000E+00	0.978
AG-110m	-1.554E-01		2.108E+00	3.427E+00	0.000E+00	-0.045
SN-113	1.561E+00		2.906E+00	4.806E+00	0.000E+00	0.325
SB-124	2.945E+00		4.967E+00	3.747E+00	0.000E+00	0.786
SB-125	-1.965E+00		6.186E+00	9.958E+00	0.000E+00	-0.197
TE-129M	-2.459E+01		2.927E+01	4.752E+01	0.000E+00	-0.517
I-131	1.854E+00		5.799E+00	9.569E+00	0.000E+00	0.194
BA-133	1.336E+01		3.573E+00	5.562E+00	0.000E+00	2.401
CS-134	1.206E+01		4.553E+00	4.195E+00	0.000E+00	2.876
CS-136	-1.819E+00		3.511E+00	5.667E+00	0.000E+00	-0.321
CS-137	-4.066E-01		2.271E+00	3.678E+00	0.000E+00	-0.111
CE-139	1.106E+00		2.221E+00	3.678E+00	0.000E+00	0.301
BA-140	-3.721E+00		1.364E+01	2.230E+01	0.000E+00	-0.167
LA-140	1.712E+00		4.212E+00	7.100E+00	0.000E+00	0.241
CE-141	6.769E+00		5.352E+00	7.728E+00	0.000E+00	0.876
CE-144	6.216E+00		1.990E+01	2.820E+01	0.000E+00	0.220
EU-152	-2.443E+00		1.503E+01	1.085E+01	0.000E+00	-0.225
EU-154	2.270E-01		4.495E+00	7.465E+00	0.000E+00	0.030
U-235	4.347E+01		1.974E+01	2.909E+01	0.000E+00	1.494
U-238	1.228E+02		2.408E+02	4.004E+02	0.000E+00	0.307
AM-241	-2.254E+01		3.371E+01	4.809E+01	0.000E+00	-0.469

```
A,14L28614-5       ,05/17/2006 03:55,05/05/2006 09:15,   3.573E+00,WG L28614-5 LA
B,14L28614-5       ,LIBD                ,06/22/2005 08:57,1435L091304
C,K-40     ,YES,   1.899E+02,   3.742E+01,   3.298E+01,,    5.759
C,RA-226   ,YES,   6.562E+01,   6.377E+01,   8.405E+01,,    0.781
C,AC-228   ,YES,   1.278E+00,   1.138E+01,   1.253E+01,,    0.102
C,TH-228   ,YES,   6.885E+00,   3.350E+00,   6.597E+00,,    1.044
C,TH-232   ,YES,   4.012E+00,   6.196E+00,   1.368E+01,,    0.293
C,BE-7     ,NO ,  -1.445E+01,   2.052E+01,   3.338E+01,,   -0.433
C,CR-51    ,NO ,  -5.605E+00,   2.355E+01,   3.858E+01,,   -0.145
C,MN-54    ,NO ,   1.665E+00,   2.139E+00,   3.623E+00,,    0.459
C,CO-57    ,NO ,  -1.875E+00,   2.204E+00,   3.609E+00,,   -0.520
C,CO-58    ,NO ,   6.348E-01,   2.255E+00,   3.759E+00,,    0.169
C,FE-59    ,NO ,   4.860E+00,   4.743E+00,   8.180E+00,,    0.594
C,CO-60    ,NO ,  -1.161E+00,   2.088E+00,   3.305E+00,,   -0.351
C,ZN-65    ,NO ,   1.222E+01,   5.594E+00,   8.788E+00,,    1.391
C,SE-75    ,NO ,  -3.314E-01,   2.990E+00,   4.954E+00,,   -0.067
C,SR-85    ,NO ,   2.107E+01,   2.653E+00,   5.119E+00,,    4.116
C,Y-88     ,NO ,  -1.434E-01,   2.278E+00,   3.697E+00,,   -0.039
C,NB-94    ,NO ,  -8.825E-01,   2.125E+00,   3.402E+00,,   -0.259
C,NB-95    ,NO ,   5.882E-01,   2.271E+00,   3.794E+00,,    0.155
C,ZR-95    ,NO ,  -1.816E+00,   4.105E+00,   6.692E+00,,   -0.271
C,MO-99    ,NO ,  -2.438E+02,   2.813E+02,   4.519E+02,,   -0.540
C,RU-103   ,NO ,   1.190E+00,   2.504E+00,   4.200E+00,,    0.283
C,RU-106   ,NO ,   3.302E+01,   2.134E+01,   3.376E+01,,    0.978
C,AG-110m  ,NO ,  -1.554E-01,   2.108E+00,   3.427E+00,,   -0.045
C,SN-113   ,NO ,   1.561E+00,   2.906E+00,   4.806E+00,,    0.325
C,SB-124   ,NO ,   2.945E+00,   4.967E+00,   3.747E+00,,    0.786
C,SB-125   ,NO ,  -1.965E+00,   6.186E+00,   9.958E+00,,   -0.197
C,TE-129M  ,NO ,  -2.459E+01,   2.927E+01,   4.752E+01,,   -0.517
C,I-131    ,NO ,   1.854E+00,   5.799E+00,   9.569E+00,,    0.194
C,BA-133   ,NO ,   1.336E+01,   3.573E+00,   5.562E+00,,    2.401
C,CS-134   ,NO ,   1.206E+01,   4.553E+00,   4.195E+00,,    2.876
C,CS-136   ,NO ,  -1.819E+00,   3.511E+00,   5.667E+00,,   -0.321
C,CS-137   ,NO ,  -4.066E-01,   2.271E+00,   3.678E+00,,   -0.111
C,CE-139   ,NO ,   1.106E+00,   2.221E+00,   3.678E+00,,    0.301
C,BA-140   ,NO ,  -3.721E+00,   1.364E+01,   2.230E+01,,   -0.167
C,LA-140   ,NO ,   1.712E+00,   4.212E+00,   7.100E+00,,    0.241
C,CE-141   ,NO ,   6.769E+00,   5.352E+00,   7.728E+00,,    0.876
C,CE-144   ,NO ,   6.216E+00,   1.990E+01,   2.820E+01,,    0.220
C,EU-152   ,NO ,  -2.443E+00,   1.503E+01,   1.085E+01,,   -0.225
C,EU-154   ,NO ,   2.270E-01,   4.495E+00,   7.465E+00,,    0.030
C,U-235    ,NO ,   4.347E+01,   1.974E+01,   2.909E+01,,    1.494
C,U-238    ,NO ,   1.228E+02,   2.408E+02,   4.004E+02,,    0.307
C,AM-241   ,NO ,  -2.254E+01,   3.371E+01,   4.809E+01,,   -0.469
```

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28786

Exelon

June 9, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28786
EX001-3ESPSALLE-06

06/09/2006 12:05

Sample Receipt

The following samples were received on May 30, 2006 in good condition, unless otherwise noted.

WS-LS-SW-LS-102-052306-NK-003 leaked during shipment.
The IDs on the sample bottles for RB-LS-052306-NK-005 and WG-LS-MW-LS-1015-052406-NK-006 did not match the IDs on the sample containers. CRA submitted revised COCs and the IDs were corrected.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-LS-MW-LS-1015-052406-NK-006	L28786-1	
WG-LS-HP-2-052406-NK-012	L28786-2	
WG-LS-HP-5-052406-NK-013	L28786-3	
WG-LS-HP-10-052406-NK-014	L28786-4	
WG-LS-HP-7-052406-NK-015	L28786-5	
WS-LS-SW-LS-106-052406-NK-007	L28786-6	
WG-LS-MW-LS-103S-052306-NK-001	L28786-7	
WG-LS-SW-LS-101-052306-NK-002	L28786-8	
WG-LS-SW-LS-102-052306-NK-003	L28786-9	
WG-LS-SW-LS-103-052306-NK-004	L28786-10	
RB-LS-052306-NK-005	L28786-11	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28786
EX001-3ESPSALLE-06

06/09/2006 12:05

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4073.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-LS-MW-LS-1015-052406-NK-006	L28786-1	WG4073-1

H-3

Quality Control

Quality control samples were analyzed as WG4090.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-LS-MW-LS-1015-052406-NK-006	L28786-1	WG4090-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28785
EX001-3ESPCLINTON-06

06/09/2006 12:05

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4101,WG4103.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
RB-CL-MW-CL-99-052206-JKAD-01	L28785-1	WG4103-3
WG-LS-MW-LS-1015-052406-NK-006	L28786-1	WG4101-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

R. Charles for K. Jeter

Keith Jeter
Operations Manager

Sample Receipt Summary

06/01/06 08:54

SR #: SR08647

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPSALLE-06 LIMS #: L28786

Initiated By: PMARSHALL
Init Date: 05/31/06 Receive Date: 05/30/06

Notification of Variance

Person Notified: Kshaw
Contacted By: R. Charles
Notify Date: 6/1/06
Notify Method: email
Notify Comment: attached

Client Response

Person Responding: Kshaw
Response Date: 6/1/06
Response Method: email
Response Comment attached

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	Y	
2	Sample container custody seals present and intact.	Y	
3	Sample containers received in good condition WS-LS-SW-LS-102-052306-NK-003	N	Container leaked during shipment due to damage. Only approx. 2 L remains.
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody RB-LS-052306-NK-005 WG-LS-MW-LS-1015-052406-NK-006	N	Container: RB-LS-052306-NK-105 Container:WG-LS-MW-LS-1015-052306-NK-006
8	Sample(s) properly preserved and in appropriate container(s)	Y	pH of Gamma portion at or below 2
9	Other (Describe)	N	Sample collection times not found on containers.

Charles, Rebecca

From: Charles, Rebecca

Sent: Thursday, June 01, 2006 1:15 PM

To: Ziggy Karpa (zigmund.karpa@exeloncorp.com); Joyce Tomlinson (joyce.tomlinson@exeloncorp.com); Julie Czech (jczech@craworld.com); Larry.Walton@exeloncorp.com; Rick Maldanado (Rick.maldonado@exeloncorp.com); Scott Sklenar (Scott.sklenar@exeloncorp.com); Shaw, Kathy

Subject: Acknowledgement and variance report.

LaSalle sample WS-LS-SW-LS-102-052306-NK-003 was damaged in shipment and some of the sample leaked out. We still have 2 liters and should be able to extend the count times and perform the analyses with that volume.

No sample collection times were provided for samples 1 through 6 (see acknowledgement)

Also
ID on COC was RB-LS-052306-NK-005 ID on container RB-LS-052306-NK-105
ID on COC was WG-LS-MW-LS-1015-052406 ID on container WG-LS-MW-LS-1015-052306

Samples were logged using ID on COC.

Rebecca Charles
Teledyne Brown Engineering
Project Manager
(865) 934-0379
(865) 934-0396 (fax)

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Teledyne Brown (CRA Samples)

L28786

REFERENCE NUMBER: 45136-24-003

PROJECT NAME: Exelon fleetwide Tritium Assessment

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Nathan Kuhl

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	Tritium	gamma spec	Sr-89/90							REMARKS
1	5/24/06		WG-LS-MW-LS-101S-052406-NK-006		2	X	X	X							CRA Contact: Kathy Shaw
2	↓		-HP-2- 012		2	X	X	X							
3			-HP-5- 013		2	X	X	X							
4			-HP-10- 014		2	X	X	X							
5			-HP-7- 015		2	X	X	X							
6			WS-LS-SW-LS-106-052406-NK-007		2	X	X	X							Max HNO3 used: 20mL (%70)
			TOTAL NUMBER OF CONTAINERS		12										

RELINQUISHED BY: 1. [signature]	DATE: 5/26/06 TIME: 0830	RECEIVED BY: 1. [signature]	DATE: 5/26/06 TIME: 8:30 AM
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT:

AIR BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

28687

SAMPLE TEAM: N. Kuhl, E. Vanning

RECEIVED FOR LABORATORY BY: Pat Marshall

DATE: 5/30/06 TIME: 1200

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

L28786

SHIPPED TO (Laboratory Name): Teledyne Brown (CRA Samples)

REFERENCE NUMBER: 45136-24-003

PROJECT NAME: Exelon Fleetwide Tritium Assessment

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Nathan Kuhl

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: tritium	gamma spec	Sr-89/90							REMARKS
1	5/23/06	1100	WG-LS-MW-LS-103S-052306-NK-001	WG	2	X	X	X							CRA contact Kathy Shaw
2	↓	1230	WS-LS-SW-LS-101-052306-NK-002	WS	2	X	X	X							
3	↓	1300	WS-LS-SW-LS-102-052306-NK-003	WS	2	X	X	X							
4	↓	1330	WS-LS-SW-LS-103-052306-NK-004	WS	2	X	X	X							
~~6~~	~~5/23/06~~	~~1400~~	~~RB-LS-052306-NK-005~~	~~RB~~	~~2~~										
5	5/23/06	1400	RB-LS-052306-NK-005	RB	2	X	X	X							max HNO_3 used: 20mL
TOTAL NUMBER OF CONTAINERS					10										

RELINQUISHED BY: 1. [signature]	DATE: 5/25/06 TIME: 0800	RECEIVED BY: 1. [signature]	DATE: 5/25/06 TIME: 0805AM
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT:

AIR BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27860

SAMPLE TEAM: N. Kuhl [signature]

RECEIVED FOR LABORATORY BY: Pat Marshall

DATE: 5/30/06 TIME: 1200

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

Charles, Rebecca

From: Shaw, Kathy [kshaw@craworld.com]
Sent: Thursday, June 01, 2006 4:10 PM
To: Charles, Rebecca; zigmund.karpa@exeloncorp.com; joyce.tomlinson@exeloncorp.com; Czech, Julie; Larry.Walton@exeloncorp.com; Rick.maldonado@exeloncorp.com; Scott.sklenar@exeloncorp.com
Subject: RE: Acknowledgement and variance report.

This is the revised COC, please let me know if you have any questions - Kathy

---

From: Charles, Rebecca [mailto:Rebecca.Charles@tbe.com]
Sent: Thursday, June 01, 2006 1:15 PM
To: zigmund.karpa@exeloncorp.com; joyce.tomlinson@exeloncorp.com; Czech, Julie; Larry.Walton@exeloncorp.com; Rick.maldonado@exeloncorp.com; Scott.sklenar@exeloncorp.com; Shaw, Kathy
Subject: Acknowledgement and variance report.

LaSalle sample WS-LS-SW-LS-102-052306-NK-003 was damaged in shipment and some of the sample leaked out. We still have 2 liters and should be able to extend the count times and perform the analyses with that volume.

No sample collection times were provided for samples 1 through 6 (see acknowledgement)

Also

ID on COC was RB-LS-052306-NK-005	ID on container RB-LS-052306-NK-105
ID on COC was WG-LS-MW-LS-1015-052406	ID on container WG-LS-MW-LS-1015-052306

Samples were logged using ID on COC.

Rebecca Charles
Teledyne Brown Engineering
Project Manager
(865) 934-0379
(865) 934-0396 (fax)

REVISED

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Teledyne Brown (CRA Samples)

REFERENCE NUMBER: 45136-24-003

PROJECT NAME: Exelon - Peekskill Tritium Assessment

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Nathan Kuhl

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: Tritium	PARAMETERS: Gamma Spec 8140								REMARKS
1	5/23/06	1100	WG-LS-MW2-LS-103S-052306-NK-001	WG	2	X	X	X							CRA contact Kathy Shand
2	↓	1230	WS-LS-SW-LS-101-052306-NK-002	WS	2	X	X	X							
3	↓	1300	WS-LS-SW-LS-102-052306-NK-003	WS	2	X	X	X							
4	↓	1330	WS-LS-SW-LS-103-052306-NK-004	WS	2	X	X	X							
~~6~~	~~[illegible]~~	~~[illegible]~~	~~RB-LS-[illegible]~~	~~[illegible]~~	~~[illegible]~~										
5	5/23/06	1400	RB-LS-052306-NK-005	RB	2	X	X	X							max HNO_3 used; 20mL
			TOTAL NUMBER OF CONTAINERS		10										

RELINQUISHED BY: 1. [signature]	DATE: 5/25/06 TIME: 0820	RECEIVED BY: 1. [signature]	DATE: 5/25/06 TIME: 0805AM
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: AIR BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

27860

SAMPLE TEAM: N. Kuhl [signature]

RECEIVED FOR LABORATORY BY:

DATE: TIME:

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

REVISED

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Teledyne Brown (CRA Samples)

REFERENCE NUMBER: 45136-24-003

PROJECT NAME: Exelon Fleetwide Tritium Assessment

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Nathan Kuhl

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	Tritium	Gamma Spec	Sr-89/90	REMARKS
1	5/24/06	1050	WG-LS-MW-LS-101S-052406-NK-006		2	X	X	X	CRA Contact:
2	↓	1100	-HP-2-	012	2	X	X	X	Kathy Shaw
3	↓	1200	-HP-5-	013	2	X	X	X	
4	↓	1245	-HP-10-	014	2	X	X	X	
5	↓	1340	-HP-7-	015	2	X	X	X	
6	↓	1330	WS-LS-SW-LS-106-052406-NK-007		2	X	X	X	
									Max HNO3 used: 20mL (8%)
TOTAL NUMBER OF CONTAINERS					12				

RELINQUISHED BY: 1. [signature]	DATE: 5/26/06 TIME: 0830	RECEIVED BY: 1. [signature]	DATE: 5/26/06 TIME: 8:30 AM
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT:

AIR BILL No.

White - Fully Executed Copy; Yellow - Receiving Laboratory Copy; Pink - Shipper Copy; Goldenrod - Sampler Copy

SAMPLE TEAM: N. Kuhl, F. Vanns

RECEIVED FOR LABORATORY BY:

DATE: TIME:

28687

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L28786-1 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-1 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-2 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-2 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-3 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

06/09/06 12:07

Teledyne Brown Engineering
Internal Chain of Custody

****

Sample # L28786-3 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-4 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-4 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-5 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-5 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen

06/09/06 12:07

Teledyne Brown Engineering
Internal Chain of Custody

****

Sample # L28786-5 Containernum 2

Relinquish Date			Received By	
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-6 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-6 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-7 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-7 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-8 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

06/09/06 12:07

Teledyne Brown Engineering
Internal Chain of Custody

****

Sample # L28786-8 Containernum 1

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-8 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-9 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-9 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-10 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-10 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW

06/09/06 12:07

Teledyne Brown Engineering
Internal Chain of Custody

****

Sample # L28786-10 Containernum 2

SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

****

Sample # L28786-11 Containernum 1

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/06/2006 08:42	099999	Sample Custodian	029709	Susan Ogletree

****

Sample # L28786-11 Containernum 2

Prod	Analyst
H-3	SO
GELI	DW
SR-90 (FAST)	LCB

Relinquish Date	Relinquish By		Received By	
05/30/2006 00:00			099999	Sample Custodian
06/02/2006 15:25	030854	Donna Webb	029728	Lauren Larsen
06/02/2006 15:25	099999	Sample Custodian	030854	Donna Webb

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28786

****

L28786-1 **WG** **WG-LS-MW-LS-1015-052406-NK-006**

Process step	Prod	Analyst	Date
Login		PMARSHALL	05/30/06
Aliquot	GELI	DW	06/02/06
Aliquot	H-3	SO	06/06/06
Aliquot	SR-90 (FAST)	LCB	06/06/06
Count Room	GELI	ILL	06/05/06
Count Room	H-3	KPW	06/07/06
Count Room	SR-90 (FAST)	KPW	06/07/06

****

L28786-2 **WG** **WG-LS-HP-2-052406-NK-012**

Process step	Prod	Analyst	Date
Login		RCHARLES	05/30/06
Aliquot	GELI	DW	06/02/06
Aliquot	H-3	SO	06/06/06
Aliquot	SR-90 (FAST)	LCB	06/06/06
Count Room	GELI	ILL	06/05/06
Count Room	H-3	KPW	06/07/06
Count Room	SR-90 (FAST)	MVW	06/08/06

****

L28786-3 **WG** **WG-LS-HP-5-052406-NK-013**

Process step	Prod	Analyst	Date
Login		PMARSHALL	05/30/06
Aliquot	GELI	DW	06/02/06
Aliquot	H-3	SO	06/06/06
Aliquot	SR-90 (FAST)	LCB	06/06/06
Count Room	GELI	ILL	06/05/06
Count Room	H-3	KPW	06/08/06
Count Room	SR-90 (FAST)	KPW	06/07/06

****

L28786-4 **WG** **WG-LS-HP-10-052406-NK-014**

Process step	Prod	Analyst	Date
Login		PMARSHALL	05/30/06
Aliquot	GELI	DW	06/02/06
Aliquot	H-3	SO	06/06/06
Aliquot	SR-90 (FAST)	LCB	06/06/06
Count Room	GELI	KPW	06/05/06
Count Room	H-3	KPW	06/08/06
Count Room	SR-90 (FAST)	KPW	06/07/06

****

L28786-5 **WG** **WG-LS-HP-7-052406-NK-015**

Process step	Prod	Analyst	Date
Login		PMARSHALL	05/30/06
Aliquot	GELI	DW	06/02/06
Aliquot	H-3	SO	06/06/06
Aliquot	SR-90 (FAST)	LCB	06/06/06
Count Room	GELI	KPW	06/05/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28786

L28786-5	**WG**	**WG-LS-HP-7-052406-NK-015**		
Count Room	H-3		KPW	06/08/06
Count Room	SR-90 (FAST)		KPW	06/07/06

****

L28786-6	**WG**	**WS-LS-SW-LS-106-052406-NK-007**		
Process step	Prod		Analyst	Date
Login			PMARSHALL	05/30/06
Aliquot	GELI		DW	06/02/06
Aliquot	H-3		SO	06/06/06
Aliquot	SR-90 (FAST)		LCB	06/06/06
Count Room	GELI		KOJ	06/05/06
Count Room	H-3		KPW	06/08/06
Count Room	SR-90 (FAST)		KPW	06/07/06

****

L28786-7	**WG**	**WG-LS-MW-LS-103S-052306-NK-001**		
Process step	Prod		Analyst	Date
Login			PMARSHALL	05/30/06
Aliquot	GELI		DW	06/02/06
Aliquot	H-3		SO	06/06/06
Aliquot	SR-90 (FAST)		LCB	06/06/06
Count Room	GELI		KOJ	06/05/06
Count Room	H-3		KPW	06/08/06
Count Room	SR-90 (FAST)		KPW	06/07/06

****

L28786-8	**WG**	**WG-LS-SW-LS-101-052306-NK-002**		
Process step	Prod		Analyst	Date
Login			PMARSHALL	05/30/06
Aliquot	GELI		DW	06/02/06
Aliquot	H-3		SO	06/06/06
Aliquot	SR-90 (FAST)		LCB	06/06/06
Count Room	GELI		KOJ	06/05/06
Count Room	H-3		KPW	06/08/06
Count Room	SR-90 (FAST)		KPW	06/07/06

****

L28786-9	**WG**	**WG-LS-SW-LS-102-052306-NK-003**		
Process step	Prod		Analyst	Date
Login			PMARSHALL	05/30/06
Aliquot	GELI		DW	06/02/06
Aliquot	H-3		SO	06/06/06
Aliquot	SR-90 (FAST)		LCB	06/06/06
Count Room	GELI		KPW	06/03/06
Count Room	H-3		KPW	06/08/06
Count Room	SR-90 (FAST)		KPW	06/07/06

****

L28786-10	**WG**	**WG-LS-SW-LS-103-052306-NK-004**		
Process step	Prod		Analyst	Date
Login			PMARSHALL	05/30/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28786

L28786-10	**WG**	**WG-LS-SW-LS-103-052306-NK-004**		
Aliquot	GELI		DW	06/02/06
Aliquot	H-3		SO	06/06/06
Aliquot	SR-90	(FAST)	LCB	06/06/06
Count Room	GELI		KOJ	06/05/06
Count Room	H-3		KPW	06/08/06
Count Room	SR-90	(FAST)	KPW	06/07/06

****

L28786-11	**WG**	**RB-LS-052306-NK-005**		
Process step	Prod		Analyst	Date
Login			PMARSHALL	05/30/06
Aliquot	GELI		DW	06/02/06
Aliquot	H-3		SO	06/06/06
Aliquot	SR-90	(FAST)	LCB	06/06/06
Count Room	GELI		KOJ	06/05/06
Count Room	H-3		KPW	06/08/06
Count Room	SR-90	(FAST)	KPW	06/07/06

Analytical Results Summary

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-1015-052406-NK-006**
Station:
Description:
LIMS Number: L28786-1

Collect Start: 05/24/2006 10:50
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.85E+02**	1.11E+02	1.62E+02	pCi/L		10	ml		06/07/06	60	M	+		
TOTAL SR	2018	2.76E-01	5.78E-01	**1.11E+00**	pCi/L		450	ml	05/24/06 10:50	06/07/06	150	M	U		
MN-54	2007	5.35E-01	2.17E+00	**3.58E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
CO-58	2007	-1.40E+00	2.51E+00	**4.00E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
FE-59	2007	-2.85E+00	4.89E+00	**7.76E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
CO-60	2007	4.19E-01	2.23E+00	**3.72E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
ZN-65	2007	3.97E+00	4.76E+00	**8.10E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
NB-95	2007	7.35E-01	2.33E+00	**3.87E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
ZR-95	2007	-2.84E+00	4.34E+00	**6.94E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
CS-134	2007	4.97E+00	4.42E+00	**4.09E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
CS-137	2007	1.24E+00	2.33E+00	**3.94E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
BA-140	2007	-2.91E+00	1.45E+01	**2.36E+01**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No
LA-140	2007	-2.60E+00	4.44E+00	**7.06E+00**	pCi/L		3246.33	ml	05/24/06 10:50	06/05/06	27484	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-HP-2-052406-NK-012**
Station:
Description:
LIMS Number: L28786-2

Collect Start: 05/24/2006 11:00
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-7.68E+01	9.39E+01	**1.64E+02**	pCi/L		10	ml		06/07/06	60	M	U		
TOTAL SR	2018	**1.84E+00**	7.97E-01	1.34E+00	pCi/L		450	ml	05/24/06 11:00	06/08/06	150	M	+		
MN-54	2007	1.02E-01	1.74E+00	**2.85E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
CO-58	2007	-8.48E-02	1.92E+00	**3.14E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
FE-59	2007	4.67E+00	3.90E+00	**6.78E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
CO-60	2007	-9.23E-01	1.80E+00	**2.90E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
ZN-65	2007	5.68E+00	3.87E+00	**6.79E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
NB-95	2007	9.44E-01	1.97E+00	**3.30E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
ZR-95	2007	1.57E-01	3.49E+00	**5.75E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
CS-134	2007	3.31E+00	3.25E+00	**3.32E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
CS-137	2007	2.48E+00	1.99E+00	**2.99E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		Yes
BA-140	2007	-8.40E-01	1.17E+01	**1.91E+01**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No
LA-140	2007	1.26E+00	3.88E+00	**6.48E+00**	pCi/L		3529.37	ml	05/24/06 11:00	06/05/06	26560	Sec	U		No

Comment: 1 Sr-90 analysis added 6/9/06

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-HP-5-052406-NK-013**
Station:
Description:
LIMS Number: L28786-3

Collect Start: 05/24/2006 12:00
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
H-3	2010	-1.27E+01	9.81E+01	**1.63E+02**	pCi/L		10	ml		06/08/06	60	M	U			
TOTAL SR	2018	1.05E+00	6.95E-01	**1.22E+00**	pCi/L		450	ml	05/24/06 12:00	06/07/06	150	M	U			
MN-54	2007	-8.00E-01	1.90E+00	**3.04E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
CO-58	2007	-1.44E+00	2.10E+00	**3.33E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
FE-59	2007	1.91E+00	4.21E+00	**7.10E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
CO-60	2007	1.60E+00	2.03E+00	**3.47E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
ZN-65	2007	9.32E-01	4.20E+00	**7.00E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
NB-95	2007	1.42E+00	2.07E+00	**3.50E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
ZR-95	2007	-9.02E-01	3.62E+00	**5.88E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
CS-134	2007	4.37E+00	2.93E+00	**3.38E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
CS-137	2007	5.61E-01	2.18E+00	**3.38E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
BA-140	2007	1.05E+00	1.30E+01	**2.12E+01**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	
LA-140	2007	2.25E-01	3.67E+00	**6.09E+00**	pCi/L		3787.91	ml	05/24/06 12:00	06/05/06	25733	Sec	U		No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-HP-10-052406-NK-014**
Station:
Description:
LIMS Number: L28786-4

Collect Start: 05/24/2006 12:45
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	2.80E+01	1.02E+02	**1.65E+02**	pCi/L		10	ml		06/08/06	60	M	U		
TOTAL SR	2018	-6.28E-01	6.12E-01	**1.32E+00**	pCi/L		450	ml	05/24/06 12:45	06/07/06	150	M	U		
MN-54	2007	-1.99E+00	2.31E+00	**3.66E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
CO-58	2007	1.61E+00	2.45E+00	**4.20E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
FE-59	2007	3.30E+00	5.06E+00	**8.59E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
CO-60	2007	-1.06E+00	2.31E+00	**3.69E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
ZN-65	2007	1.44E+00	4.86E+00	**8.07E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
NB-95	2007	2.35E+00	2.51E+00	**4.27E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
ZR-95	2007	-4.13E+00	4.60E+00	**7.14E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
CS-134	2007	3.48E+00	3.77E+00	**4.27E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
CS-137	2007	-9.55E-01	2.41E+00	**3.87E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
BA-140	2007	9.76E+00	1.52E+01	**2.59E+01**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No
LA-140	2007	2.24E+00	4.50E+00	**7.66E+00**	pCi/L		3573.9	ml	05/24/06 12:45	06/05/06	24096	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-HP-7-052406-NK-015**
Station:
Description:
LIMS Number: L28786-5

Collect Start: 05/24/2006 13:40
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
H-3	2010	2.58E+01	1.02E+02	**1.65E+02**	pCi/L		10	ml		06/08/06	60	M	U			
TOTAL SR	2018	9.98E-02	5.91E-01	**1.16E+00**	pCi/L		450	ml	05/24/06 13:40	06/07/06	150	M	U			
MN-54	2007	-1.11E+00	3.13E+00	**4.96E+00**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
CO-58	2007	1.09E+00	3.40E+00	**5.70E+00**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
FE-59	2007	6.44E+00	6.24E+00	**1.12E+01**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
CO-60	2007	1.45E-01	3.36E+00	**5.87E+00**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
ZN-65	2007	3.76E+00	6.82E+00	**1.17E+01**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
NB-95	2007	2.74E+00	3.24E+00	**5.66E+00**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
ZR-95	2007	-2.94E+00	5.80E+00	**9.16E+00**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
CS-134	2007	-1.15E-01	3.63E+00	**5.25E+00**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
CS-137	2007	3.09E+00	3.10E+00	**5.50E+00**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
BA-140	2007	-1.01E+01	2.14E+01	**3.40E+01**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	
LA-140	2007	5.80E+00	7.28E+00	**1.30E+01**	pCi/L		3778.53	ml	05/24/06 13:40	06/05/06	10800	Sec	U		No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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L = Low recovery
H = High recovery

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No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WS-LS-SW-LS-106-052406-NK-007**
Station:
Description:
LIMS Number: L28786-6

Collect Start: 05/24/2006 13:30
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
							10	ml		06/08/06	60	M	+			
H-3	2010	**2.19E+02**	1.13E+02	1.62E+02	pCi/L		450	ml	05/24/06 13:30	06/07/06	150	M	U			
TOTAL SR	2018	5.63E-01	5.08E-01	**9.22E-01**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
MN-54	2007	2.70E-01	2.20E+00	**3.61E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
CO-58	2007	2.62E-01	2.34E+00	**3.85E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
FE-59	2007	4.76E+00	4.78E+00	**8.31E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
CO-60	2007	6.43E-01	3.01E+00	**4.48E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
ZN-65	2007	7.34E+00	5.54E+00	**8.54E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
NB-95	2007	1.39E+00	2.20E+00	**3.73E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
ZR-95	2007	-5.55E-01	3.92E+00	**6.39E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
CS-134	2007	4.39E+00	3.43E+00	**4.10E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
CS-137	2007	-5.14E-01	2.26E+00	**3.71E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
BA-140	2007	5.57E+00	1.50E+01	**2.49E+01**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	
LA-140	2007	-5.63E-01	4.84E+00	**7.93E+00**	pCi/L		3615.22	ml	05/24/06 13:30	06/05/06	21600	Sec	U		No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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High = Activity concentration exceeds customer reporting value
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MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-103S-052306-NK-001**
Station:
Description:
LIMS Number: L28786-7

Collect Start: 05/23/2006 11:00
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.25E+01	9.83E+01	**1.60E+02**	pCi/L		10	ml		06/08/06	60	M	U		
TOTAL SR	2018	9.64E-01	5.86E-01	**1.02E+00**	pCi/L		450	ml	05/23/06 11:00	06/07/06	150	M	U		
MN-54	2007	-9.67E-02	1.84E+00	**3.00E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
CO-58	2007	-4.59E-01	2.13E+00	**3.45E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
FE-59	2007	3.00E+00	4.52E+00	**7.69E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
CO-60	2007	9.97E-01	1.96E+00	**3.35E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
ZN-65	2007	6.14E+00	4.93E+00	**7.48E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
NB-95	2007	2.08E+00	2.17E+00	**3.72E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
ZR-95	2007	-2.81E+00	3.82E+00	**6.08E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
CS-134	2007	9.42E+00	3.98E+00	**3.78E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U*		No
CS-137	2007	-1.25E-01	2.00E+00	**3.31E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
BA-140	2007	5.81E+00	1.32E+01	**2.21E+01**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No
LA-140	2007	5.59E+00	4.74E+00	**8.36E+00**	pCi/L		3608.93	ml	05/23/06 11:00	06/05/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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L = Low recovery
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Bolded text indicates reportable value.

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**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-SW-LS-101-052306-NK-002**
Station:
Description:
LIMS Number: L28786-8

Collect Start: 05/23/2006 12:30
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
H-3	2010	**2.32E+02**	1.16E+02	1.66E+02	pCi/L		10	ml		06/08/06	60	M	+			
TOTAL SR	2018	-2.88E-03	5.80E-01	**1.15E+00**	pCi/L		450	ml	05/23/06 12:30	06/07/06	150	M	U			
MN-54	2007	-1.25E-01	2.25E+00	**3.72E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
CO-58	2007	1.36E+00	2.70E+00	**3.91E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
FE-59	2007	2.69E+00	4.87E+00	**8.21E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
CO-60	2007	-8.43E-01	2.11E+00	**3.39E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
ZN-65	2007	1.01E+01	5.60E+00	**8.77E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U*		No	
NB-95	2007	7.41E-01	2.40E+00	**3.95E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
ZR-95	2007	-8.05E-01	4.31E+00	**6.96E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
CS-134	2007	9.63E+00	4.41E+00	**4.15E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U*		No	
CS-137	2007	-2.40E-01	2.44E+00	**3.88E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
BA-140	2007	1.60E+01	1.56E+01	**2.68E+01**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	
LA-140	2007	1.88E+00	4.90E+00	**8.24E+00**	pCi/L		3777.1	ml	05/23/06 12:30	06/05/06	28800	Sec	U		No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-SW-LS-102-052306-NK-003**
Station:
Description:
LIMS Number: L28786-9

Collect Start: 05/23/2006 13:00
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.77E+02**	1.11E+02	1.64E+02	pCi/L		10	ml		06/08/06	60	M	+		
TOTAL SR	2018	1.14E-01	6.48E-01	**1.27E+00**	pCi/L		450	ml	05/23/06 13:00	06/07/06	150	M	U		
MN-54	2007	-2.13E-02	2.92E+00	**4.93E+00**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
CO-58	2007	-4.04E+00	3.24E+00	**5.23E+00**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
FE-59	2007	2.97E+00	6.30E+00	**1.10E+01**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
CO-60	2007	3.13E-01	2.88E+00	**4.95E+00**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
ZN-65	2007	8.82E+00	7.14E+00	**1.11E+01**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
NB-95	2007	5.01E+00	3.18E+00	**5.65E+00**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
ZR-95	2007	-7.39E+00	5.78E+00	**9.36E+00**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
CS-134	2007	9.25E+00	3.49E+00	**5.72E+00**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U*		No
CS-137	2007	1.63E-01	3.16E+00	**5.37E+00**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
BA-140	2007	-1.41E+01	1.94E+01	**3.16E+01**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No
LA-140	2007	-4.23E-01	5.79E+00	**1.00E+01**	pCi/L		993.22	ml	05/23/06 13:00	06/03/06	50696	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-SW-LS-103-052306-NK-004**
Station:
Description:
LIMS Number: L28786-10

Collect Start: 05/23/2006 13:30
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.63E+02	1.12E+02	**1.67E+02**	pCi/L		10	ml		06/08/06	60	M	U		
TOTAL SR	2018	-1.73E-01	5.19E-01	**1.06E+00**	pCi/L		450	ml	05/23/06 13:30	06/07/06	150	M	U		
MN-54	2007	2.20E+00	1.99E+00	**3.45E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
CO-58	2007	1.42E+00	2.26E+00	**3.84E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
FE-59	2007	5.13E+00	4.70E+00	**8.07E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
CO-60	2007	-6.75E-02	2.12E+00	**3.47E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
ZN-65	2007	5.96E+00	4.53E+00	**7.99E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
NB-95	2007	2.11E+00	2.19E+00	**3.79E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
ZR-95	2007	-2.39E+00	3.72E+00	**6.01E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
CS-134	2007	7.58E+00	3.60E+00	**4.07E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U*		No
CS-137	2007	1.06E-01	2.18E+00	**3.58E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
BA-140	2007	-2.20E+00	1.40E+01	**2.29E+01**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No
LA-140	2007	3.91E+00	4.93E+00	**8.57E+00**	pCi/L		3834.68	ml	05/23/06 13:30	06/05/06	28800	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/09/06 12:01

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28786

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **RB-LS-052306-NK-005**
Station:
Description:
LIMS Number: L28786-11

Collect Start: 05/23/2006 14:00
Collect Stop:
Receive Date: 05/30/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-6.11E+01	9.72E+01	**1.68E+02**	pCi/L		10	ml		06/08/06	60	M	U		
TOTAL SR	2018	-1.84E-01	4.26E-01	**8.77E-01**	pCi/L		450	ml	05/23/06 14:00	06/07/06	150	M	U		
MN-54	2007	-2.32E-01	1.93E+00	**3.13E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
CO-58	2007	-7.62E-01	2.18E+00	**3.50E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
FE-59	2007	7.01E+00	4.61E+00	**8.22E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
CO-60	2007	1.41E+00	1.80E+00	**3.11E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
ZN-65	2007	2.86E+00	4.81E+00	**7.04E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
NB-95	2007	2.29E+00	2.27E+00	**3.89E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
ZR-95	2007	-1.97E+00	3.88E+00	**6.21E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
CS-134	2007	5.04E+00	3.95E+00	**3.56E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
CS-137	2007	-4.47E-01	2.26E+00	**3.48E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
BA-140	2007	7.25E+00	1.44E+01	**2.39E+01**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No
LA-140	2007	-5.48E-01	4.42E+00	**7.22E+00**	pCi/L		3659.77	ml	05/23/06 14:00	06/05/06	21600	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28786

6/9/2006 11:57:51AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4090-1	H-3	WO	06/07/2006 18:55	< 1.600E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4090-2	H-3	WO	06/07/2006 19:59	5.05E+002	5.010E+02	pCi/Total	99.3	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4090-3 L28786-1	H-3	WG	06/07/2006 21:03	1.850E+02	< 1.600E+02	pCi/L		<30	*	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28786

6/9/2006 11:57:51AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28786 **H-3**

Associated Samples for **WG4090**

SAMPLENUM	CLIENTID
L28786-1	WG-LS-MW-LS-1015-052406-NK-006
L28786-2	WG-LS-HP-2-052406-NK-012
L28786-3	WG-LS-HP-5-052406-NK-013
L28786-4	WG-LS-HP-10-052406-NK-014
L28786-5	WG-LS-HP-7-052406-NK-015
L28786-6	WS-LS-SW-LS-106-052406-NK-007
L28786-7	WG-LS-MW-LS-103S-052306-NK-001
L28786-8	WG-LS-SW-LS-101-052306-NK-002
L28786-9	WG-LS-SW-LS-102-052306-NK-003
L28786-10	WG-LS-SW-LS-103-052306-NK-004
L28786-11	RB-LS-052306-NK-005

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28786

6/9/2006 11:57:51AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4101-1	TOTAL SR	WO	06/07/2006 19:24	< 6.950E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4101-2	TOTAL SR	WO	06/07/2006 19:24	5.84E+001	6.060E+01	pCi/Total	103.8	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4101-3 L28786-1	TOTAL SR	WG	06/07/2006 21:56	< 1.110E+00	< 1.130E+00	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28786

6/9/2006 11:57:51AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28786 **SR-90 (FAST)**

Associated Samples for **WG4101**

SAMPLENUM	CLIENTID
L28786-1	WG-LS-MW-LS-1015-052406-NK-006
L28786-2	WG-LS-HP-2-052406-NK-012
L28786-3	WG-LS-HP-5-052406-NK-013
L28786-4	WG-LS-HP-10-052406-NK-014
L28786-5	WG-LS-HP-7-052406-NK-015
L28786-6	WS-LS-SW-LS-106-052406-NK-007
L28786-7	WG-LS-MW-LS-103S-052306-NK-001
L28786-8	WG-LS-SW-LS-101-052306-NK-002
L28786-9	WG-LS-SW-LS-102-052306-NK-003
L28786-10	WG-LS-SW-LS-103-052306-NK-004
L28786-11	RB-LS-052306-NK-005

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Jun 09 2006, 12:15 pm

Work Order: *L28786* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPSALLE-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28786-1		H-3					0		07-jun-06 22:06	LS7	151	60	1.63	60	.214		SO
WG-LS-MW-LS-1015-05240				10 ml													
Activity: 1.85E+02 * Error: 1.11E+02				MDC: 1.62E+02													
L28786-2		H-3					0		07-jun-06 23:10	LS7	76	60	1.63	60	.212		SO
WG-LS-HP-2-052406-NK-0				10 ml													
Activity: -7.68E+01 Error: 9.39E+01				MDC: 1.64E+02 *													
L28786-3		H-3					0		08-jun-06 00:14	LS7	94	60	1.63	60	.213		SO
WG-LS-HP-5-052406-NK-0				10 ml													
Activity: -1.27E+01 Error: 9.81E+01				MDC: 1.63E+02 *													
L28786-4		H-3					0		08-jun-06 01:18	LS7	106	60	1.63	60	.21		SO
WG-LS-HP-10-052406-NK-				10 ml													
Activity: 2.8E+01 Error: 1.02E+02				MDC: 1.65E+02 *													
L28786-5		H-3					0		08-jun-06 02:22	LS7	105	60	1.63	60	.21		SO
WG-LS-HP-7-052406-NK-0				10 ml													
Activity: 2.58E+01 Error: 1.02E+02				MDC: 1.65E+02 *													
L28786-6		H-3					0		08-jun-06 03:25	LS7	160	60	1.63	60	.215		SO
WS-LS-SW-LS-106-052406				10 ml													
Activity: 2.19E+02 * Error: 1.13E+02				MDC: 1.62E+02													
L28786-7		H-3					0		08-jun-06 04:29	LS7	101	60	1.63	60	.216		SO
WG-LS-MW-LS-103S-05230				10 ml													
Activity: 1.25E+01 Error: 9.83E+01				MDC: 1.6E+02 *													
L28786-8		H-3					0		08-jun-06 05:33	LS7	162	60	1.63	60	.209		SO
WG-LS-SW-LS-101-052306				10 ml													
Activity: 2.32E+02 * Error: 1.16E+02				MDC: 1.66E+02													
L28786-9		H-3					0		08-jun-06 06:37	LS7	148	60	1.63	60	.212		SO
WG-LS-SW-LS-102-052306				10 ml													
Activity: 1.77E+02 * Error: 1.11E+02				MDC: 1.64E+02													
L28786-10		H-3					0		08-jun-06 07:41	LS7	143	60	1.63	60	.208		SO
WG-LS-SW-LS-103-052306				10 ml													
Activity: 1.63E+02 Error: 1.12E+02				MDC: 1.67E+02 *													
L28786-11		H-3					0		08-jun-06 08:45	LS7	81	60	1.63	60	.207		SO
RB-LS-052306-NK-005				10 ml													
Activity: -6.11E+01 Error: 9.72E+01				MDC: 1.68E+02 *													

Raw Data Sheet (rawdata)
Jun 09 2006, 12:15 pm

Work Order: *L28786* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPSALLE-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28786-1		TOTAL SR	24-may-06		07-jun-06		0		07-jun-06	X1A	128	150	308	400	.346	.999	LCB
WG-LS-MW-LS-1015-05240			10:50	450 ml	13:15			87.37	19:13								
Activity: 2.76E-01 Error: 5.78E-01 MDC: 1.11E+00 *																	
L28786-2		TOTAL SR	24-may-06		07-jun-06		0		08-jun-06	X3A	211	150	363	400	.335	.999	LCB
WG-LS-HP-2-052406-NK-0			11:00	450 ml	13:15			80.91	23:01								
Activity: 1.84E+00 * Error: 7.97E-01 MDC: 1.34E+00																	
L28786-3		TOTAL SR	24-may-06		07-jun-06		0		07-jun-06	X1C	150	150	289	400	.354	.999	LCB
WG-LS-HP-5-052406-NK-0			12:00	450 ml	13:15			75.00	19:13								
Activity: 1.05E+00 Error: 6.95E-01 MDC: 1.22E+00 *																	
L28786-4		TOTAL SR	24-may-06		07-jun-06		0		07-jun-06	X1D	93	150	312	400	.344	.999	LCB
WG-LS-HP-10-052406-NK-			12:45	450 ml	13:15			74.19	19:13								
Activity: -6.28E-01 Error: 6.12E-01 MDC: 1.32E+00 *																	
L28786-5		TOTAL SR	24-may-06		07-jun-06		0		07-jun-06	X2A	103	150	264	400	.354	.999	LCB
WG-LS-HP-7-052406-NK-0			13:40	450 ml	13:15			75.54	19:13								
Activity: 9.98E-02 Error: 5.91E-01 MDC: 1.16E+00 *																	
L28786-6		TOTAL SR	24-may-06		07-jun-06		0		07-jun-06	X2B	138	150	289	400	.345	.999	LCB
WS-LS-SW-LS-106-052406			13:30	450 ml	13:15			101.88	19:13								
Activity: 5.63E-01 Error: 5.08E-01 MDC: 9.22E-01 *																	
L28786-7		TOTAL SR	23-may-06		07-jun-06		0		07-jun-06	X2C	149	150	277	400	.344	.999	LCB
WG-LS-MW-LS-103S-05230			11:00	450 ml	13:15			90.86	19:13								
Activity: 9.64E-01 Error: 5.86E-01 MDC: 1.02E+00 *																	
L28786-8		TOTAL SR	23-may-06		07-jun-06		0		07-jun-06	X2D	115	150	307	400	.343	.999	LCB
WG-LS-SW-LS-101-052306			12:30	450 ml	13:15			84.41	19:13								
Activity: -2.88E-03 Error: 5.8E-01 MDC: 1.15E+00 *																	
L28786-9		TOTAL SR	23-may-06		07-jun-06		0		07-jun-06	X3A	141	150	363	400	.335	.999	LCB
WG-LS-SW-LS-102-052306			13:00	450 ml	13:15			85.22	19:13								
Activity: 1.14E-01 Error: 6.48E-01 MDC: 1.27E+00 *																	
L28786-10		TOTAL SR	23-may-06		07-jun-06		0		07-jun-06	X3B	112	150	321	400	.343	.999	LCB
WG-LS-SW-LS-103-052306			13:30	450 ml	13:15			94.09	19:13								
Activity: -1.73E-01 Error: 5.19E-01 MDC: 1.06E+00 *																	
L28786-11		TOTAL SR	23-may-06		07-jun-06		0		07-jun-06	X3C	100	150	294	400	.345	.999	LCB
RB-LS-052306-NK-005			14:00	450 ml	13:15			108.06	19:13								
Activity: -1.84E-01 Error: 4.26E-01 MDC: 8.77E-01 *																	

Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 5-JUN-2006 22:43:34.66
TBE14 P-10933A HpGe ********** Aquisition Date/Time: 5-JUN-2006 14:54:03.47

LIMS No., Customer Name, Client ID: L28786-1 WG LASALLE

Sample ID : 14L28786-1
Sample Type : WG
Quantity : 3.24630E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 10:50:00.
Geometry : 143L082304
BKGFILE : 14BG060306MT
Real Time : 0 07:38:08.73
Live time : 0 07:38:04.29

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.06	367	1132	2.21	133.11	5.04E-01	1.33E-02	18.4	3.24E+00
2	1	92.73*	12	946	1.69	186.59	1.28E+00	4.34E-04	532.1	1.41E+00
3	1	139.77	284	874	1.61	280.91	1.89E+00	1.03E-02	20.2	2.29E+00
4	1	198.51*	198	587	1.49	398.62	1.83E+00	7.20E-03	24.8	1.89E+00
5	1	352.75*	77	464	4.97	707.48	1.28E+00	2.79E-03	70.0	2.04E+00
6	1	596.25	99	195	1.52	1194.28	8.47E-01	3.60E-03	27.4	4.13E-01
7	1	609.37*	65	221	2.47	1220.49	8.33E-01	2.38E-03	61.8	2.64E+00
8	1	911.32*	1	80	1.97	1822.75	6.16E-01	2.71E-05	*****	2.96E+00
9	1	969.07*	31	49	1.71	1937.77	5.89E-01	1.12E-03	58.9	1.06E+00
10	1	1461.48*	68	90	2.30	2916.39	4.36E-01	2.47E-03	46.4	6.96E-01
11	1	1771.59	2534	101	19.62	3530.75	3.78E-01	9.22E-02	1.5	8.64E+02

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	68	10.67*	4.361E-01	4.423E+01	4.423E+01	92.88
AC-228	835.50	------	1.75	6.571E-01	------	Line Not Found	------
	911.07	1	27.70*	6.164E-01	1.322E-01	1.328E-01	5401.55
TH-232	583.14	------	30.25	8.620E-01	------	Line Not Found	------
	911.07	1	27.70*	6.164E-01	1.322E-01	1.322E-01	5401.55
	969.11	31	16.60	5.892E-01	9.528E+00	9.528E+00	117.86

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 14L28786-1

Acquisition date : 5-JUN-2006 14:54:03

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.423E+01	4.423E+01	4.108E+01	92.88	
AC-228	5.75Y	1.00	1.322E-01	1.328E-01	71.73E-01	5401.55	
TH-232	1.41E+10Y	1.00	1.322E-01	1.322E-01	71.44E-01	5401.55	
			---	---			
	Total Activity :		4.450E+01	4.450E+01			

Grand Total Activity : 4.450E+01 4.450E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 14L28786-1

Acquisition date : 5-JUN-2006 14:54:03

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.06	367	1132	2.21	133.11	127	11	1.33E-02	36.9	5.04E-01	
1	92.73	12	946	1.69	186.59	182	10	4.34E-04	****	1.28E+00	
1	139.77	284	874	1.61	280.91	276	10	1.03E-02	40.5	1.89E+00	
1	198.51	198	587	1.49	398.62	395	8	7.20E-03	49.6	1.83E+00	
1	352.75	77	464	4.97	707.48	701	15	2.79E-03	****	1.28E+00	
1	596.25	99	195	1.52	1194.28	1190	9	3.60E-03	54.8	8.47E-01	
1	609.37	65	221	2.47	1220.49	1213	16	2.38E-03	****	8.33E-01	
1	1771.59	2534	101	19.62	3530.75	3512	46	9.22E-02	3.0	3.78E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.423E+01	4.423E+01	4.108E+01	92.88	
TH-232	1.41E+10Y	1.00	2.839E+00	2.839E+00	6.027E+00	212.31	
		Total Activity :	4.707E+01	4.707E+01			

Grand Total Activity : 4.707E+01 4.707E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.423E+01	4.108E+01	3.206E+01	0.000E+00	1.380
TH-232	2.839E+00	6.027E+00	1.255E+01	0.000E+00	0.226

---- Non-Identified Nuclides ----

Key-Line Activity	K.L.	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)	Ided	(pCi/L)		
BE-7	1.153E+01	2.112E+01	3.540E+01	0.000E+00	0.326
NA-24	-1.205E+00	9.052E-01	Half-Life too short		
CR-51	-1.883E+01	2.428E+01	3.902E+01	0.000E+00	-0.483
MN-54	5.349E-01	2.171E+00	3.580E+00	0.000E+00	0.149
CO-57	-8.908E-01	2.189E+00	3.607E+00	0.000E+00	-0.247
CO-58	-1.396E+00	2.505E+00	3.997E+00	0.000E+00	-0.349
FE-59	-2.845E+00	4.886E+00	7.755E+00	0.000E+00	-0.367
CO-60	4.187E-01	2.234E+00	3.719E+00	0.000E+00	0.113
ZN-65	3.967E+00	4.762E+00	8.101E+00	0.000E+00	0.490
SE-75	1.116E+00	3.017E+00	5.033E+00	0.000E+00	0.222
SR-85	2.164E+01	2.815E+00	5.471E+00	0.000E+00	3.955
Y-88	-1.434E+00	2.543E+00	3.993E+00	0.000E+00	-0.359
NB-94	1.238E+00	2.120E+00	3.572E+00	0.000E+00	0.347
NB-95	7.346E-01	2.326E+00	3.866E+00	0.000E+00	0.190
ZR-95	-2.837E+00	4.344E+00	6.936E+00	0.000E+00	-0.409
MO-99	-1.600E+02	3.644E+02	5.882E+02	0.000E+00	-0.272
RU-103	1.673E+00	2.701E+00	4.527E+00	0.000E+00	0.369
RU-106	-2.647E+01	2.258E+01	3.328E+01	0.000E+00	-0.795
AG-110m	-4.266E-01	2.167E+00	3.561E+00	0.000E+00	-0.120
SN-113	-2.543E-01	3.004E+00	4.860E+00	0.000E+00	-0.052
SB-124	5.057E+00	5.423E+00	4.254E+00	0.000E+00	1.189
SB-125	-2.044E+00	6.154E+00	1.010E+01	0.000E+00	-0.202
TE-129M	-7.928E+00	3.036E+01	4.970E+01	0.000E+00	-0.160
I-131	1.979E+00	6.598E+00	1.033E+01	0.000E+00	0.192
BA-133	4.799E+00	3.566E+00	5.169E+00	0.000E+00	0.928
CS-134	4.970E+00	4.417E+00	4.090E+00	0.000E+00	1.215
CS-136	2.095E+00	3.990E+00	6.668E+00	0.000E+00	0.314
CS-137	1.242E+00	2.334E+00	3.940E+00	0.000E+00	0.315
CE-139	1.285E+00	2.201E+00	3.650E+00	0.000E+00	0.352
BA-140	-2.911E+00	1.453E+01	2.360E+01	0.000E+00	-0.123
LA-140	-2.602E+00	4.444E+00	7.063E+00	0.000E+00	-0.368
CE-141	-3.812E+00	5.468E+00	7.508E+00	0.000E+00	-0.508
CE-144	-7.136E+00	1.945E+01	2.707E+01	0.000E+00	-0.264
EU-152	-4.956E+00	8.064E+00	1.083E+01	0.000E+00	-0.458
EU-154	-7.400E-01	4.493E+00	7.433E+00	0.000E+00	-0.100
RA-226	-3.988E+01	5.682E+01	8.500E+01	0.000E+00	-0.469
AC-228	1.328E-01	7.173E+00	1.368E+01	0.000E+00	0.010
TH-228	7.085E+00	4.250E+00	6.824E+00	0.000E+00	1.038
U-235	1.729E+01	1.943E+01	2.787E+01	0.000E+00	0.620
U-238	1.499E+02	2.352E+02	3.990E+02	0.000E+00	0.376
AM-241	-3.730E+01	3.357E+01	4.558E+01	0.000E+00	-0.818

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A,14L28786-1       ,06/05/2006 22:43,05/24/2006 10:50,   3.246E+00,L28786-1 WG LA
B,14L28786-1       ,LIBD                ,06/02/2006 08:23,143L082304
C,K-40     ,YES,   4.423E+01,   4.108E+01,   3.206E+01,,    1.380
C,TH-232   ,YES,   2.839E+00,   6.027E+00,   1.255E+01,,    0.226
C,BE-7     ,NO ,   1.153E+01,   2.112E+01,   3.540E+01,,    0.326
C,CR-51    ,NO ,  -1.883E+01,   2.428E+01,   3.902E+01,,   -0.483
C,MN-54    ,NO ,   5.349E-01,   2.171E+00,   3.580E+00,,    0.149
C,CO-57    ,NO ,  -8.908E-01,   2.189E+00,   3.607E+00,,   -0.247
C,CO-58    ,NO ,  -1.396E+00,   2.505E+00,   3.997E+00,,   -0.349
C,FE-59    ,NO ,  -2.845E+00,   4.886E+00,   7.755E+00,,   -0.367
C,CO-60    ,NO ,   4.187E-01,   2.234E+00,   3.719E+00,,    0.113
C,ZN-65    ,NO ,   3.967E+00,   4.762E+00,   8.101E+00,,    0.490
C,SE-75    ,NO ,   1.116E+00,   3.017E+00,   5.033E+00,,    0.222
C,SR-85    ,NO ,   2.164E+01,   2.815E+00,   5.471E+00,,    3.955
C,Y-88     ,NO ,  -1.434E+00,   2.543E+00,   3.993E+00,,   -0.359
C,NB-94    ,NO ,   1.238E+00,   2.120E+00,   3.572E+00,,    0.347
C,NB-95    ,NO ,   7.346E-01,   2.326E+00,   3.866E+00,,    0.190
C,ZR-95    ,NO ,  -2.837E+00,   4.344E+00,   6.936E+00,,   -0.409
C,MO-99    ,NO ,  -1.600E+02,   3.644E+02,   5.882E+02,,   -0.272
C,RU-103   ,NO ,   1.673E+00,   2.701E+00,   4.527E+00,,    0.369
C,RU-106   ,NO ,  -2.647E+01,   2.258E+01,   3.328E+01,,   -0.795
C,AG-110m  ,NO ,  -4.266E-01,   2.167E+00,   3.561E+00,,   -0.120
C,SN-113   ,NO ,  -2.543E-01,   3.004E+00,   4.860E+00,,   -0.052
C,SB-124   ,NO ,   5.057E+00,   5.423E+00,   4.254E+00,,    1.189
C,SB-125   ,NO ,  -2.044E+00,   6.154E+00,   1.010E+01,,   -0.202
C,TE-129M  ,NO ,  -7.928E+00,   3.036E+01,   4.970E+01,,   -0.160
C,I-131    ,NO ,   1.979E+00,   6.598E+00,   1.033E+01,,    0.192
C,BA-133   ,NO ,   4.799E+00,   3.566E+00,   5.169E+00,,    0.928
C,CS-134   ,NO ,   4.970E+00,   4.417E+00,   4.090E+00,,    1.215
C,CS-136   ,NO ,   2.095E+00,   3.990E+00,   6.668E+00,,    0.314
C,CS-137   ,NO ,   1.242E+00,   2.334E+00,   3.940E+00,,    0.315
C,CE-139   ,NO ,   1.285E+00,   2.201E+00,   3.650E+00,,    0.352
C,BA-140   ,NO ,  -2.911E+00,   1.453E+01,   2.360E+01,,   -0.123
C,LA-140   ,NO ,  -2.602E+00,   4.444E+00,   7.063E+00,,   -0.368
C,CE-141   ,NO ,  -3.812E+00,   5.468E+00,   7.508E+00,,   -0.508
C,CE-144   ,NO ,  -7.136E+00,   1.945E+01,   2.707E+01,,   -0.264
C,EU-152   ,NO ,  -4.956E+00,   8.064E+00,   1.083E+01,,   -0.458
C,EU-154   ,NO ,  -7.400E-01,   4.493E+00,   7.433E+00,,   -0.100
C,RA-226   ,NO ,  -3.988E+01,   5.682E+01,   8.500E+01,,   -0.469
C,AC-228   ,NO ,   1.328E-01,   7.173E+00,   1.368E+01,,    0.010
C,TH-228   ,NO ,   7.085E+00,   4.250E+00,   6.824E+00,,    1.038
C,U-235    ,NO ,   1.729E+01,   1.943E+01,   2.787E+01,,    0.620
C,U-238    ,NO ,   1.499E+02,   2.352E+02,   3.990E+02,,    0.376
C,AM-241   ,NO ,  -3.730E+01,   3.357E+01,   4.558E+01,,   -0.818
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 5-JUN-2006 22:27:20.81
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 5-JUN-2006 15:04:32.33

LIMS No., Customer Name, Client ID: L28786-2 WG LASALLE

Sample ID : 07L28786-2
Sample Type : WG
Quantity : 3.52940E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 11:00:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 07:22:45.17
Live time : 0 07:22:39.91

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	4	66.27*	282	698	1.35	133.31	7.22E-01	1.06E-02	18.6	2.01E+00
2	1	139.85*	205	755	1.06	280.59	2.09E+00	7.72E-03	27.6	2.16E+00
3	1	174.78	141	589	1.87	350.50	2.06E+00	5.30E-03	32.0	1.13E+00
4	1	198.47*	225	744	1.30	397.92	1.98E+00	8.48E-03	27.5	1.05E+00
5	1	294.67*	101	467	0.79	590.44	1.61E+00	3.80E-03	45.7	1.79E+01
6	1	500.18	74	246	1.42	1001.69	1.13E+00	2.77E-03	43.1	1.98E+00
7	1	595.65	118	203	1.55	1192.73	9.97E-01	4.44E-03	24.2	4.88E+00
8	1	609.39*	119	228	2.78	1220.21	9.80E-01	4.50E-03	34.3	1.19E+00
9	1	661.63	68	180	1.37	1324.74	9.24E-01	2.54E-03	40.2	1.09E+00
10	1	1203.57	36	78	2.20	2408.80	5.93E-01	1.36E-03	53.7	1.18E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: fission

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
CS-137	661.65	68	85.12*	9.242E-01	2.475E+00	2.477E+00	80.50

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28786-2

Acquisition date : 5-JUN-2006 15:04:32

Total number of lines in spectrum	10	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	1	10.00%

Nuclide Type : fission

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.17Y	1.00	2.475E+00	2.477E+00	1.994E+00	80.50	
		Total Activity :	2.475E+00	2.477E+00			
		Grand Total Activity :	2.475E+00	2.477E+00			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28786-2

Acquisition date : 5-JUN-2006 15:04:32

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	66.27	282	698	1.35	133.31	123	15	1.06E-02	37.2	7.22E-01	
1	139.85	205	755	1.06	280.59	276	9	7.72E-03	55.2	2.09E+00	
1	174.78	141	589	1.87	350.50	347	9	5.30E-03	64.0	2.06E+00	
1	198.47	225	744	1.30	397.92	393	12	8.48E-03	54.9	1.98E+00	
1	294.67	101	467	0.79	590.44	586	11	3.80E-03	91.4	1.61E+00	
1	500.18	74	246	1.42	1001.69	995	11	2.77E-03	86.3	1.13E+00	
1	595.65	118	203	1.55	1192.73	1187	10	4.44E-03	48.4	9.97E-01	
1	609.39	119	228	2.78	1220.21	1214	16	4.50E-03	68.6	9.80E-01	
1	1203.57	36	78	2.20	2408.80	2405	13	1.36E-03	****	5.93E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	10	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	1	10.00%

Nuclide Type : fission

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CS-137	30.17Y	1.00	2.475E+00	2.477E+00	1.994E+00	80.50	
			---	---			
	Total Activity :		2.475E+00	2.477E+00			

Grand Total Activity : 2.475E+00 2.477E+00

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
CS-137	2.477E+00	1.994E+00	2.994E+00	0.000E+00	0.827

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.286E+01		1.659E+01	2.665E+01	0.000E+00	-0.483
NA-24	-4.616E-01		7.629E-01	Half-Life too short		

K-40	2.600E+01	2.747E+01	4.620E+01	0.000E+00	0.563
CR-51	-1.105E+01	2.040E+01	3.293E+01	0.000E+00	-0.336
MN-54	1.022E-01	1.736E+00	2.849E+00	0.000E+00	0.036
CO-57	-4.438E-01	1.790E+00	2.941E+00	0.000E+00	-0.151
CO-58	-8.484E-02	1.919E+00	3.141E+00	0.000E+00	-0.027
FE-59	4.670E+00	3.897E+00	6.783E+00	0.000E+00	0.688
CO-60	-9.225E-01	1.802E+00	2.899E+00	0.000E+00	-0.318
ZN-65	5.683E+00	3.865E+00	6.791E+00	0.000E+00	0.837
SE-75	-2.362E+00	2.491E+00	4.020E+00	0.000E+00	-0.588
SR-85	2.084E+01	2.422E+00	4.753E+00	0.000E+00	4.384
Y-88	-2.922E+00	2.076E+00	3.086E+00	0.000E+00	-0.947
NB-94	6.997E-02	1.720E+00	2.849E+00	0.000E+00	0.025
NB-95	9.440E-01	1.966E+00	3.297E+00	0.000E+00	0.286
ZR-95	1.570E-01	3.487E+00	5.754E+00	0.000E+00	0.027
MO-99	2.957E+01	2.806E+02	4.648E+02	0.000E+00	0.064
RU-103	1.588E+00	2.258E+00	3.798E+00	0.000E+00	0.418
RU-106	-4.012E+00	1.869E+01	2.782E+01	0.000E+00	-0.144
AG-110m	2.998E+00	2.024E+00	3.069E+00	0.000E+00	0.977
SN-113	2.901E-01	2.442E+00	3.975E+00	0.000E+00	0.073
SB-124	7.973E-01	4.789E+00	3.383E+00	0.000E+00	0.236
SB-125	8.941E-01	5.040E+00	8.403E+00	0.000E+00	0.106
TE-129M	1.566E+01	2.538E+01	4.274E+01	0.000E+00	0.366
I-131	3.394E+00	5.178E+00	8.591E+00	0.000E+00	0.395
BA-133	4.707E+00	2.588E+00	4.421E+00	0.000E+00	1.065
CS-134	3.305E+00	3.247E+00	3.321E+00	0.000E+00	0.995
CS-136	7.312E-01	3.225E+00	5.339E+00	0.000E+00	0.137
CE-139	-6.508E-01	1.933E+00	2.963E+00	0.000E+00	-0.220
BA-140	-8.404E-01	1.167E+01	1.907E+01	0.000E+00	-0.044
LA-140	1.257E+00	3.879E+00	6.479E+00	0.000E+00	0.194
CE-141	3.832E+00	4.383E+00	6.261E+00	0.000E+00	0.612
CE-144	-5.794E+00	1.649E+01	2.281E+01	0.000E+00	-0.254
EU-152	-1.929E+01	5.964E+00	8.885E+00	0.000E+00	-2.171
EU-154	-1.630E+00	3.684E+00	6.030E+00	0.000E+00	-0.270
RA-226	-3.773E-01	4.817E+01	7.557E+01	0.000E+00	-0.005
AC-228	-2.100E+00	7.527E+00	1.117E+01	0.000E+00	-0.188
TH-228	3.359E+00	3.675E+00	5.924E+00	0.000E+00	0.567
TH-232	-2.092E+00	7.497E+00	1.112E+01	0.000E+00	-0.188
U-235	2.215E+01	1.607E+01	2.327E+01	0.000E+00	0.952
U-238	1.471E+02	1.835E+02	3.153E+02	0.000E+00	0.466
AM-241	2.476E+01	1.889E+01	2.727E+01	0.000E+00	0.908

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A,07L28786-2       ,06/05/2006 22:27,05/24/2006 11:00,   3.529E+00,L28786-2 WG LA
B,07L28786-2       ,LIBD                ,06/02/2006 08:24,0735L090904
C,CS-137   ,YES,   2.477E+00,   1.994E+00,   2.994E+00,,    0.827
C,BE-7     ,NO ,  -1.286E+01,   1.659E+01,   2.665E+01,,   -0.483
C,K-40     ,NO ,   2.600E+01,   2.747E+01,   4.620E+01,,    0.563
C,CR-51    ,NO ,  -1.105E+01,   2.040E+01,   3.293E+01,,   -0.336
C,MN-54    ,NO ,   1.022E-01,   1.736E+00,   2.849E+00,,    0.036
C,CO-57    ,NO ,  -4.438E-01,   1.790E+00,   2.941E+00,,   -0.151
C,CO-58    ,NO ,  -8.484E-02,   1.919E+00,   3.141E+00,,   -0.027
C,FE-59    ,NO ,   4.670E+00,   3.897E+00,   6.783E+00,,    0.688
C,CO-60    ,NO ,  -9.225E-01,   1.802E+00,   2.899E+00,,   -0.318
C,ZN-65    ,NO ,   5.683E+00,   3.865E+00,   6.791E+00,,    0.837
C,SE-75    ,NO ,  -2.362E+00,   2.491E+00,   4.020E+00,,   -0.588
C,SR-85    ,NO ,   2.084E+01,   2.422E+00,   4.753E+00,,    4.384
C,Y-88     ,NO ,  -2.922E+00,   2.076E+00,   3.086E+00,,   -0.947
C,NB-94    ,NO ,   6.997E-02,   1.720E+00,   2.849E+00,,    0.025
C,NB-95    ,NO ,   9.440E-01,   1.966E+00,   3.297E+00,,    0.286
C,ZR-95    ,NO ,   1.570E-01,   3.487E+00,   5.754E+00,,    0.027
C,MO-99    ,NO ,   2.957E+01,   2.806E+02,   4.648E+02,,    0.064
C,RU-103   ,NO ,   1.588E+00,   2.258E+00,   3.798E+00,,    0.418
C,RU-106   ,NO ,  -4.012E+00,   1.869E+01,   2.782E+01,,   -0.144
C,AG-110m  ,NO ,   2.998E+00,   2.024E+00,   3.069E+00,,    0.977
C,SN-113   ,NO ,   2.901E-01,   2.442E+00,   3.975E+00,,    0.073
C,SB-124   ,NO ,   7.973E-01,   4.789E+00,   3.383E+00,,    0.236
C,SB-125   ,NO ,   8.941E-01,   5.040E+00,   8.403E+00,,    0.106
C,TE-129M  ,NO ,   1.566E+01,   2.538E+01,   4.274E+01,,    0.366
C,I-131    ,NO ,   3.394E+00,   5.178E+00,   8.591E+00,,    0.395
C,BA-133   ,NO ,   4.707E+00,   2.588E+00,   4.421E+00,,    1.065
C,CS-134   ,NO ,   3.305E+00,   3.247E+00,   3.321E+00,,    0.995
C,CS-136   ,NO ,   7.312E-01,   3.225E+00,   5.339E+00,,    0.137
C,CE-139   ,NO ,  -6.508E-01,   1.933E+00,   2.963E+00,,   -0.220
C,BA-140   ,NO ,  -8.404E-01,   1.167E+01,   1.907E+01,,   -0.044
C,LA-140   ,NO ,   1.257E+00,   3.879E+00,   6.479E+00,,    0.194
C,CE-141   ,NO ,   3.832E+00,   4.383E+00,   6.261E+00,,    0.612
C,CE-144   ,NO ,  -5.794E+00,   1.649E+01,   2.281E+01,,   -0.254
C,EU-152   ,NO ,  -1.929E+01,   5.964E+00,   8.885E+00,,   -2.171
C,EU-154   ,NO ,  -1.630E+00,   3.684E+00,   6.030E+00,,   -0.270
C,RA-226   ,NO ,  -3.773E-01,   4.817E+01,   7.557E+01,,   -0.005
C,AC-228   ,NO ,  -2.100E+00,   7.527E+00,   1.117E+01,,   -0.188
C,TH-228   ,NO ,   3.359E+00,   3.675E+00,   5.924E+00,,    0.567
C,TH-232   ,NO ,  -2.092E+00,   7.497E+00,   1.112E+01,,   -0.188
C,U-235    ,NO ,   2.215E+01,   1.607E+01,   2.327E+01,,    0.952
C,U-238    ,NO ,   1.471E+02,   1.835E+02,   3.153E+02,,    0.466
C,AM-241   ,NO ,   2.476E+01,   1.889E+01,   2.727E+01,,    0.908
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 5-JUN-2006 22:27:43.81
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 5-JUN-2006 15:18:29.35

LIMS No., Customer Name, Client ID: L28786-3 WG LASALLE

Sample ID : 13L28786-3
Sample Type : WG
Quantity : 3.78790E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 12:00:00.
Geometry : 134L092804
BKGFILE : 13BG060306MT
Real Time : 0 07:09:00.64
Live time : 0 07:08:53.35

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	46.19*	79	761	2.40	92.44	8.80E-02	3.08E-03	71.8	9.86E-01
2	1	63.43*	70	558	1.08	126.88	5.54E-01	2.72E-03	70.0	2.37E+00
3	1	65.01	94	665	1.14	130.06	6.09E-01	3.66E-03	50.4	
4	1	66.46	198	676	1.14	132.94	6.60E-01	7.70E-03	23.0	
5	2	77.18*	25	611	1.05	154.38	1.02E+00	9.88E-04	177.7	1.16E+00
6	1	84.09*	83	838	2.18	168.19	1.23E+00	3.22E-03	70.1	5.50E+00
7	1	139.72*	100	938	0.92	279.38	1.74E+00	3.88E-03	60.5	1.11E+00
8	1	185.80*	54	746	1.00	371.51	1.61E+00	2.11E-03	110.1	6.71E-01
9	1	198.38*	243	697	1.55	396.66	1.56E+00	9.44E-03	23.0	3.50E+00
10	1	238.54*	155	579	1.45	476.95	1.42E+00	6.02E-03	34.2	4.44E+00
11	1	295.18*	12	455	1.40	590.20	1.26E+00	4.51E-04	376.9	9.10E-01
12	1	596.09	129	180	1.96	1192.09	8.32E-01	5.00E-03	22.2	4.51E+00
13	1	609.48*	89	231	1.81	1218.87	8.20E-01	3.45E-03	42.4	1.42E+00
14	1	911.68*	23	117	2.27	1823.71	6.15E-01	9.09E-04	118.1	3.70E+00
15	1	970.46*	2	153	0.89	1941.40	5.86E-01	5.89E-05	*****	6.88E+00
16	1	1001.48*	53	84	3.51	2003.50	5.71E-01	2.05E-03	43.2	1.77E+00
17	1	1764.80*	34	23	2.67	3533.12	3.69E-01	1.31E-03	47.8	1.92E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	54	3.28*	1.606E+00	2.862E+01	2.862E+01	220.27
AC-228	835.50	------	1.75	6.580E-01	------	Line Not Found	------
	911.07	23	27.70*	6.153E-01	3.807E+00	3.823E+00	236.30
TH-228	238.63	155	44.60*	1.416E+00	6.808E+00	6.891E+00	68.38
	240.98	------	3.95	1.408E+00	------	Line Not Found	------
TH-232	583.14	------	30.25	8.435E-01	------	Line Not Found	------
	911.07	23	27.70*	6.153E-01	3.807E+00	3.807E+00	236.30
	969.11	2	16.60	5.856E-01	4.324E-01	4.324E-01	3810.09
U-235	143.76	------	10.50*	1.738E+00	------	Line Not Found	------
	163.35	------	4.70	1.688E+00	------	Line Not Found	------
	185.71	54	54.00	1.606E+00	1.738E+00	1.738E+00	220.27
	205.31	------	4.70	1.532E+00	------	Line Not Found	------
U-238	766.41	------	0.21	7.013E-01	------	Line Not Found	------

1001.03	53	0.92*	5.709E-01	2.788E+02	2.788E+02	86.36

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28786-3 Acquisition date : 5-JUN-2006 15:18:29

Total number of lines in spectrum	17	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	5	29.41%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	2.862E+01	2.862E+01	6.304E+01	220.27	
AC-228	5.75Y	1.00	3.807E+00	3.823E+00	9.033E+00	236.30	
TH-228	1.91Y	1.01	6.808E+00	6.891E+00	4.712E+00	68.38	
TH-232	1.41E+10Y	1.00	3.807E+00	3.807E+00	8.996E+00	236.30	
U-235	7.04E+08Y	1.00	1.738E+00	1.738E+00	3.829E+00	220.27	K
U-238	4.47E+09Y	1.00	2.788E+02	2.788E+02	2.408E+02	86.36	
			---	---			
	Total Activity :		3.235E+02	3.236E+02			

Grand Total Activity : 3.235E+02 3.236E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28786-3 Acquisition date : 5-JUN-2006 15:18:29

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	46.19	79	761	2.40	92.44	88	10	3.08E-03	****	8.80E-02	
1	63.43	70	558	1.08	126.88	120	17	2.72E-03	****	5.54E-01	
1	65.01	94	665	1.14	130.06	120	17	3.66E-03	****	6.09E-01	
1	66.46	198	676	1.14	132.94	120	17	7.70E-03	45.9	6.60E-01	
2	77.18	25	611	1.05	154.38	142	16	9.88E-04	****	1.02E+00	
1	84.09	83	838	2.18	168.19	164	9	3.22E-03	****	1.23E+00	
1	139.72	100	938	0.92	279.38	275	9	3.88E-03	****	1.74E+00	
1	198.38	243	697	1.55	396.66	391	10	9.44E-03	45.9	1.56E+00	
1	295.18	12	455	1.40	590.20	586	9	4.51E-04	****	1.26E+00	
1	596.09	129	180	1.96	1192.09	1187	11	5.00E-03	44.3	8.32E-01	
1	609.48	89	231	1.81	1218.87	1214	12	3.45E-03	84.7	8.20E-01	
1	1764.80	34	23	2.67	3533.12	3526	13	1.31E-03	95.7	3.69E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	17	
Number of unidentified lines	12	
Number of lines tentatively identified by NID	5	29.41%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	2.862E+01	2.862E+01	6.304E+01	220.27	
AC-228	5.75Y	1.00	3.375E+00	3.389E+00	18.85E+00	556.24	
TH-228	1.91Y	1.01	6.808E+00	6.891E+00	4.712E+00	68.38	
TH-232	1.41E+10Y	1.00	4.324E-01	4.324E-01	164.8E-01	3810.09	
U-238	4.47E+09Y	1.00	2.788E+02	2.788E+02	2.408E+02	86.36	
			---	---			
	Total Activity :		3.180E+02	3.181E+02			

Grand Total Activity : 3.180E+02 3.181E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA

RA-226	2.862E+01	6.304E+01	8.237E+01	0.000E+00	0.347
AC-228	3.389E+00	1.885E+01	1.050E+01	0.000E+00	0.323
TH-228	6.891E+00	4.712E+00	6.370E+00	0.000E+00	1.082
TH-232	4.324E-01	1.648E+01	1.250E+01	0.000E+00	0.035
U-238	2.788E+02	2.408E+02	3.229E+02	0.000E+00	0.863

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	5.237E+00		1.921E+01	3.168E+01	0.000E+00	0.165
NA-24	-2.386E+00		8.077E-01	Half-Life too short		
K-40	-3.860E+00		3.128E+01	5.476E+01	0.000E+00	-0.070
CR-51	-1.133E+01		2.324E+01	3.816E+01	0.000E+00	-0.297
MN-54	-8.002E-01		1.900E+00	3.043E+00	0.000E+00	-0.263
CO-57	-2.243E-01		1.957E+00	3.252E+00	0.000E+00	-0.069
CO-58	-1.440E+00		2.098E+00	3.325E+00	0.000E+00	-0.433
FE-59	1.907E+00		4.205E+00	7.104E+00	0.000E+00	0.268
CO-60	1.600E+00		2.032E+00	3.473E+00	0.000E+00	0.461
ZN-65	9.315E-01		4.195E+00	6.996E+00	0.000E+00	0.133
SE-75	7.245E-01		3.094E+00	5.045E+00	0.000E+00	0.144
SR-85	2.053E+01		2.687E+00	5.200E+00	0.000E+00	3.949
Y-88	-4.644E-01		2.129E+00	3.419E+00	0.000E+00	-0.136
NB-94	-5.434E-01		1.787E+00	2.910E+00	0.000E+00	-0.187
NB-95	1.417E+00		2.073E+00	3.504E+00	0.000E+00	0.404
ZR-95	-9.017E-01		3.622E+00	5.884E+00	0.000E+00	-0.153
MO-99	1.551E+02		3.091E+02	5.194E+02	0.000E+00	0.299
RU-103	3.875E+00		2.524E+00	4.325E+00	0.000E+00	0.896
RU-106	-4.359E+00		1.807E+01	2.973E+01	0.000E+00	-0.147
AG-110m	1.288E+00		1.863E+00	3.170E+00	0.000E+00	0.406
SN-113	1.259E+00		2.776E+00	4.640E+00	0.000E+00	0.271
SB-124	2.346E+00		4.408E+00	3.569E+00	0.000E+00	0.657
SB-125	-4.871E+00		5.813E+00	9.283E+00	0.000E+00	-0.525
TE-129M	6.436E+00		2.820E+01	4.651E+01	0.000E+00	0.138
I-131	6.726E-01		5.889E+00	9.773E+00	0.000E+00	0.069
BA-133	-1.498E-01		2.861E+00	4.730E+00	0.000E+00	-0.032
CS-134	4.369E+00		2.930E+00	3.381E+00	0.000E+00	1.292
CS-136	-4.435E+00		3.408E+00	5.219E+00	0.000E+00	-0.850
CS-137	5.612E-01		2.181E+00	3.376E+00	0.000E+00	0.166
CE-139	-6.730E-02		2.142E+00	3.531E+00	0.000E+00	-0.019
BA-140	1.046E+00		1.300E+01	2.118E+01	0.000E+00	0.049
LA-140	2.249E-01		3.673E+00	6.091E+00	0.000E+00	0.037
CE-141	4.649E+00		5.044E+00	7.328E+00	0.000E+00	0.634
CE-144	-8.709E+00		1.832E+01	2.568E+01	0.000E+00	-0.339
EU-152	-1.539E+01		6.692E+00	1.040E+01	0.000E+00	-1.479
EU-154	-3.952E-01		4.000E+00	6.647E+00	0.000E+00	-0.059
U-235	1.357E+01		1.905E+01	2.646E+01	0.000E+00	0.513
AM-241	4.151E+00		2.105E+01	2.964E+01	0.000E+00	0.140

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A,13L28786-3        ,06/05/2006 22:27,05/24/2006 12:00,   3.788E+00,L28786-3 WG LA
B,13L28786-3        ,LIBD                ,06/01/2006 10:13,134L092804
C,RA-226   ,YES,   2.862E+01,   6.304E+01,   8.237E+01,,    0.347
C,AC-228   ,YES,   3.389E+00,   1.885E+01,   1.050E+01,,    0.323
C,TH-228   ,YES,   6.891E+00,   4.712E+00,   6.370E+00,,    1.082
C,TH-232   ,YES,   4.324E-01,   1.648E+01,   1.250E+01,,    0.035
C,U-238    ,YES,   2.788E+02,   2.408E+02,   3.229E+02,,    0.863
C,BE-7     ,NO ,   5.237E+00,   1.921E+01,   3.168E+01,,    0.165
C,K-40     ,NO ,  -3.860E+00,   3.128E+01,   5.476E+01,,   -0.070
C,CR-51    ,NO ,  -1.133E+01,   2.324E+01,   3.816E+01,,   -0.297
C,MN-54    ,NO ,  -8.002E-01,   1.900E+00,   3.043E+00,,   -0.263
C,CO-57    ,NO ,  -2.243E-01,   1.957E+00,   3.252E+00,,   -0.069
C,CO-58    ,NO ,  -1.440E+00,   2.098E+00,   3.325E+00,,   -0.433
C,FE-59    ,NO ,   1.907E+00,   4.205E+00,   7.104E+00,,    0.268
C,CO-60    ,NO ,   1.600E+00,   2.032E+00,   3.473E+00,,    0.461
C,ZN-65    ,NO ,   9.315E-01,   4.195E+00,   6.996E+00,,    0.133
C,SE-75    ,NO ,   7.245E-01,   3.094E+00,   5.045E+00,,    0.144
C,SR-85    ,NO ,   2.053E+01,   2.687E+00,   5.200E+00,,    3.949
C,Y-88     ,NO ,  -4.644E-01,   2.129E+00,   3.419E+00,,   -0.136
C,NB-94    ,NO ,  -5.434E-01,   1.787E+00,   2.910E+00,,   -0.187
C,NB-95    ,NO ,   1.417E+00,   2.073E+00,   3.504E+00,,    0.404
C,ZR-95    ,NO ,  -9.017E-01,   3.622E+00,   5.884E+00,,   -0.153
C,MO-99    ,NO ,   1.551E+02,   3.091E+02,   5.194E+02,,    0.299
C,RU-103   ,NO ,   3.875E+00,   2.524E+00,   4.325E+00,,    0.896
C,RU-106   ,NO ,  -4.359E+00,   1.807E+01,   2.973E+01,,   -0.147
C,AG-110m  ,NO ,   1.288E+00,   1.863E+00,   3.170E+00,,    0.406
C,SN-113   ,NO ,   1.259E+00,   2.776E+00,   4.640E+00,,    0.271
C,SB-124   ,NO ,   2.346E+00,   4.408E+00,   3.569E+00,,    0.657
C,SB-125   ,NO ,  -4.871E+00,   5.813E+00,   9.283E+00,,   -0.525
C,TE-129M  ,NO ,   6.436E+00,   2.820E+01,   4.651E+01,,    0.138
C,I-131    ,NO ,   6.726E-01,   5.889E+00,   9.773E+00,,    0.069
C,BA-133   ,NO ,  -1.498E-01,   2.861E+00,   4.730E+00,,   -0.032
C,CS-134   ,NO ,   4.369E+00,   2.930E+00,   3.381E+00,,    1.292
C,CS-136   ,NO ,  -4.435E+00,   3.408E+00,   5.219E+00,,   -0.850
C,CS-137   ,NO ,   5.612E-01,   2.181E+00,   3.376E+00,,    0.166
C,CE-139   ,NO ,  -6.730E-02,   2.142E+00,   3.531E+00,,   -0.019
C,BA-140   ,NO ,   1.046E+00,   1.300E+01,   2.118E+01,,    0.049
C,LA-140   ,NO ,   2.249E-01,   3.673E+00,   6.091E+00,,    0.037
C,CE-141   ,NO ,   4.649E+00,   5.044E+00,   7.328E+00,,    0.634
C,CE-144   ,NO ,  -8.709E+00,   1.832E+01,   2.568E+01,,   -0.339
C,EU-152   ,NO ,  -1.539E+01,   6.692E+00,   1.040E+01,,   -1.479
C,EU-154   ,NO ,  -3.952E-01,   4.000E+00,   6.647E+00,,   -0.059
C,U-235    ,NO ,   1.357E+01,   1.905E+01,   2.646E+01,,    0.513
C,AM-241   ,NO ,   4.151E+00,   2.105E+01,   2.964E+01,,    0.140
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 5-JUN-2006 22:30:13.55
TBE10 12892256 HpGe ********** Aquisition Date/Time: 5-JUN-2006 15:48:23.36

LIMS No., Customer Name, Client ID: WG L28786-4 LASALLE

Sample ID : 10L28786-4
Sample Type : WG
Quantity : 3.57390E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 12:45:00.
Geometry : 1035L091004
BKGFILE : 10BG060306MT
Real Time : 0 06:41:39.56
Live time : 0 06:41:35.71

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.14*	207	708	1.61	131.58	6.29E-01	8.60E-03	24.7	2.10E+00
2	1	92.72*	7	747	1.39	184.78	1.30E+00	2.84E-04	822.9	1.89E+00
3	1	139.90	207	783	0.96	279.24	1.68E+00	8.58E-03	26.4	1.82E+00
4	1	186.13*	71	726	1.77	371.78	1.59E+00	2.96E-03	83.5	1.16E+00
5	1	198.12*	137	579	1.33	395.78	1.55E+00	5.67E-03	37.7	1.12E+00
6	1	238.54*	83	501	1.41	476.70	1.40E+00	3.46E-03	59.5	1.35E+00
7	1	351.72*	1	256	0.98	703.27	1.07E+00	5.52E-05	*****	2.18E+00
8	1	582.11*	100	172	1.01	1164.52	7.19E-01	4.17E-03	28.9	4.47E+01
9	1	595.75	68	124	1.32	1191.84	7.06E-01	2.82E-03	31.8	5.84E-01
10	1	608.70*	44	145	2.21	1217.76	6.95E-01	1.82E-03	65.3	1.44E+00
11	1	911.16*	6	93	1.77	1823.37	5.07E-01	2.39E-04	379.1	8.76E-01
12	1	1460.40*	7	43	2.00	2923.21	3.56E-01	2.91E-04	317.6	8.54E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	7	10.67*	3.560E-01	5.793E+00	5.793E+00	635.16
RA-226	186.21	71	3.28*	1.593E+00	4.286E+01	4.286E+01	166.94
AC-228	835.50	------	1.75	5.422E-01	------	Line Not Found	------
	911.07	6	27.70*	5.069E-01	1.285E+00	1.291E+00	758.21
TH-228	238.63	83	44.60*	1.401E+00	4.182E+00	4.233E+00	119.02
	240.98	------	3.95	1.392E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	1.683E+00	------	Line Not Found	------
	163.35	------	4.70	1.659E+00	------	Line Not Found	------
	185.71	71	54.00	1.593E+00	2.603E+00	2.603E+00	166.94
	205.31	------	4.70	1.524E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28786-4

Acquisition date : 5-JUN-2006 15:48:23

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.793E+00	5.793E+00	36.79E+00	635.16	
RA-226	1600.00Y	1.00	4.286E+01	4.286E+01	7.154E+01	166.94	
AC-228	5.75Y	1.00	1.285E+00	1.291E+00	9.785E+00	758.21	
TH-228	1.91Y	1.01	4.182E+00	4.233E+00	5.038E+00	119.02	
U-235	7.04E+08Y	1.00	2.603E+00	2.603E+00	4.346E+00	166.94	K
			---	---			
	Total Activity :		5.672E+01	5.678E+01			

Grand Total Activity : 5.672E+01 5.678E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28786-4

Acquisition date : 5-JUN-2006 15:48:23

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.14	207	708	1.61	131.58	128	8	8.60E-03	49.4	6.29E-01	
1	92.72	7	747	1.39	184.78	180	9	2.84E-04	****	1.30E+00	
1	139.90	207	783	0.96	279.24	274	10	8.58E-03	52.8	1.68E+00	
1	198.12	137	579	1.33	395.78	391	10	5.67E-03	75.3	1.55E+00	
1	351.72	1	256	0.98	703.27	699	9	5.52E-05	****	1.07E+00	
1	582.11	100	172	1.01	1164.52	1160	11	4.17E-03	57.7	7.19E-01	
1	595.75	68	124	1.32	1191.84	1187	9	2.82E-03	63.5	7.06E-01	
1	608.70	44	145	2.21	1217.76	1213	11	1.82E-03	****	6.95E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.793E+00	5.793E+00	36.79E+00	635.16	
RA-226	1600.00Y	1.00	4.286E+01	4.286E+01	7.154E+01	166.94	
AC-228	5.75Y	1.00	1.285E+00	1.291E+00	9.785E+00	758.21	
TH-228	1.91Y	1.01	4.182E+00	4.233E+00	5.038E+00	119.02	
			---	---			
	Total Activity :		5.412E+01	5.417E+01			

Grand Total Activity : 5.412E+01 5.417E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.793E+00	3.679E+01	3.294E+01	0.000E+00	0.176
RA-226	4.286E+01	7.154E+01	8.687E+01	0.000E+00	0.493
AC-228	1.291E+00	9.785E+00	1.301E+01	0.000E+00	0.099
TH-228	4.233E+00	5.038E+00	6.650E+00	0.000E+00	0.637

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-2.705E+00		2.136E+01	3.537E+01	0.000E+00	-0.076
NA-24	-6.590E-02		9.457E-01	Half-Life too short		
CR-51	-1.667E+01		2.554E+01	4.128E+01	0.000E+00	-0.404
MN-54	-1.985E+00		2.308E+00	3.659E+00	0.000E+00	-0.542
CO-57	-2.156E-01		2.410E+00	3.975E+00	0.000E+00	-0.054
CO-58	1.614E+00		2.447E+00	4.196E+00	0.000E+00	0.385
FE-59	3.302E+00		5.060E+00	8.593E+00	0.000E+00	0.384
CO-60	-1.057E+00		2.311E+00	3.689E+00	0.000E+00	-0.287
ZN-65	1.436E+00		4.855E+00	8.070E+00	0.000E+00	0.178
SE-75	1.131E-01		3.227E+00	5.362E+00	0.000E+00	0.021
SR-85	1.646E+01		2.840E+00	5.489E+00	0.000E+00	2.999
Y-88	-4.965E-01		2.516E+00	4.081E+00	0.000E+00	-0.122
NB-94	-2.295E+00		2.272E+00	3.537E+00	0.000E+00	-0.649
NB-95	2.351E+00		2.509E+00	4.274E+00	0.000E+00	0.550
ZR-95	-4.128E+00		4.600E+00	7.143E+00	0.000E+00	-0.578
MO-99	-1.322E+02		3.630E+02	5.804E+02	0.000E+00	-0.228
RU-103	1.136E+00		2.804E+00	4.727E+00	0.000E+00	0.240
RU-106	-1.557E+01		2.107E+01	3.344E+01	0.000E+00	-0.466
AG-110m	-1.636E+00		2.266E+00	3.586E+00	0.000E+00	-0.456
SN-113	-8.468E-03		3.141E+00	5.136E+00	0.000E+00	-0.002
SB-124	5.656E+00		5.043E+00	4.292E+00	0.000E+00	1.318
SB-125	-3.349E+00		6.524E+00	1.042E+01	0.000E+00	-0.321
TE-129M	-1.207E+01		3.290E+01	5.264E+01	0.000E+00	-0.229
I-131	-5.446E+00		6.622E+00	1.056E+01	0.000E+00	-0.516
BA-133	5.599E+00		3.662E+00	5.446E+00	0.000E+00	1.028
CS-134	3.481E+00		3.773E+00	4.273E+00	0.000E+00	0.815
CS-136	-4.076E+00		4.173E+00	6.579E+00	0.000E+00	-0.620
CS-137	-9.546E-01		2.406E+00	3.868E+00	0.000E+00	-0.247
CE-139	3.707E-01		2.452E+00	4.029E+00	0.000E+00	0.092
BA-140	9.764E+00		1.524E+01	2.587E+01	0.000E+00	0.377
LA-140	2.240E+00		4.503E+00	7.663E+00	0.000E+00	0.292
CE-141	-5.443E-01		5.814E+00	8.089E+00	0.000E+00	-0.067
CE-144	-1.965E+01		2.164E+01	2.948E+01	0.000E+00	-0.667
EU-152	-1.001E+01		8.731E+00	1.148E+01	0.000E+00	-0.871
EU-154	-2.335E+00		4.936E+00	8.082E+00	0.000E+00	-0.289
TH-232	1.285E+00	+	9.745E+00	1.510E+01	0.000E+00	0.085
U-235	3.086E+01		2.090E+01	3.044E+01	0.000E+00	1.014
U-238	2.934E+01		2.350E+02	3.889E+02	0.000E+00	0.075
AM-241	-1.678E+01		2.313E+01	3.123E+01	0.000E+00	-0.537

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A,10L28786-4        ,06/05/2006 22:30,05/24/2006 12:45,   3.574E+00,WG L28786-4 LA
B,10L28786-4        ,LIBD                   ,06/02/2006 08:22,1035L091004
C,K-40     ,YES,   5.793E+00,   3.679E+01,   3.294E+01,,    0.176
C,RA-226   ,YES,   4.286E+01,   7.154E+01,   8.687E+01,,    0.493
C,AC-228   ,YES,   1.291E+00,   9.785E+00,   1.301E+01,,    0.099
C,TH-228   ,YES,   4.233E+00,   5.038E+00,   6.650E+00,,    0.637
C,BE-7     ,NO ,  -2.705E+00,   2.136E+01,   3.537E+01,,   -0.076
C,CR-51    ,NO ,  -1.667E+01,   2.554E+01,   4.128E+01,,   -0.404
C,MN-54    ,NO ,  -1.985E+00,   2.308E+00,   3.659E+00,,   -0.542
C,CO-57    ,NO ,  -2.156E-01,   2.410E+00,   3.975E+00,,   -0.054
C,CO-58    ,NO ,   1.614E+00,   2.447E+00,   4.196E+00,,    0.385
C,FE-59    ,NO ,   3.302E+00,   5.060E+00,   8.593E+00,,    0.384
C,CO-60    ,NO ,  -1.057E+00,   2.311E+00,   3.689E+00,,   -0.287
C,ZN-65    ,NO ,   1.436E+00,   4.855E+00,   8.070E+00,,    0.178
C,SE-75    ,NO ,   1.131E-01,   3.227E+00,   5.362E+00,,    0.021
C,SR-85    ,NO ,   1.646E+01,   2.840E+00,   5.489E+00,,    2.999
C,Y-88     ,NO ,  -4.965E-01,   2.516E+00,   4.081E+00,,   -0.122
C,NB-94    ,NO ,  -2.295E+00,   2.272E+00,   3.537E+00,,   -0.649
C,NB-95    ,NO ,   2.351E+00,   2.509E+00,   4.274E+00,,    0.550
C,ZR-95    ,NO ,  -4.128E+00,   4.600E+00,   7.143E+00,,   -0.578
C,MO-99    ,NO ,  -1.322E+02,   3.630E+02,   5.804E+02,,   -0.228
C,RU-103   ,NO ,   1.136E+00,   2.804E+00,   4.727E+00,,    0.240
C,RU-106   ,NO ,  -1.557E+01,   2.107E+01,   3.344E+01,,   -0.466
C,AG-110m  ,NO ,  -1.636E+00,   2.266E+00,   3.586E+00,,   -0.456
C,SN-113   ,NO ,  -8.468E-03,   3.141E+00,   5.136E+00,,   -0.002
C,SB-124   ,NO ,   5.656E+00,   5.043E+00,   4.292E+00,,    1.318
C,SB-125   ,NO ,  -3.349E+00,   6.524E+00,   1.042E+01,,   -0.321
C,TE-129M  ,NO ,  -1.207E+01,   3.290E+01,   5.264E+01,,   -0.229
C,I-131    ,NO ,  -5.446E+00,   6.622E+00,   1.056E+01,,   -0.516
C,BA-133   ,NO ,   5.599E+00,   3.662E+00,   5.446E+00,,    1.028
C,CS-134   ,NO ,   3.481E+00,   3.773E+00,   4.273E+00,,    0.815
C,CS-136   ,NO ,  -4.076E+00,   4.173E+00,   6.579E+00,,   -0.620
C,CS-137   ,NO ,  -9.546E-01,   2.406E+00,   3.868E+00,,   -0.247
C,CE-139   ,NO ,   3.707E-01,   2.452E+00,   4.029E+00,,    0.092
C,BA-140   ,NO ,   9.764E+00,   1.524E+01,   2.587E+01,,    0.377
C,LA-140   ,NO ,   2.240E+00,   4.503E+00,   7.663E+00,,    0.292
C,CE-141   ,NO ,  -5.443E-01,   5.814E+00,   8.089E+00,,   -0.067
C,CE-144   ,NO ,  -1.965E+01,   2.164E+01,   2.948E+01,,   -0.667
C,EU-152   ,NO ,  -1.001E+01,   8.731E+00,   1.148E+01,,   -0.871
C,EU-154   ,NO ,  -2.335E+00,   4.936E+00,   8.082E+00,,   -0.289
C,TH-232   ,NO ,   1.285E+00,   9.745E+00,   1.510E+01,,    0.085
C,U-235    ,NO ,   3.086E+01,   2.090E+01,   3.044E+01,,    1.014
C,U-238    ,NO ,   2.934E+01,   2.350E+02,   3.889E+02,,    0.075
C,AM-241   ,NO ,  -1.678E+01,   2.313E+01,   3.123E+01,,   -0.537
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 7-JUN-2006 09:49:33.38
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 5-JUN-2006 15:54:51.37

LIMS No., Customer Name, Client ID: WG L28786-5 LASALLE

Sample ID : 04L28786-5
Sample Type : WG
Quantity : 3.77850E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 13:40:00.
Geometry : 044L092404
BKGFILE : 04BG060305MT
Real Time : 0 03:00:01.83
Live time : 0 03:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.15*	61	243	1.27	132.75	5.44E-01	5.63E-03	45.8	2.94E+00
2	1	92.64*	5	342	1.75	185.74	1.24E+00	4.46E-04	747.7	1.21E+00
3	1	140.03*	60	243	1.11	280.49	1.57E+00	5.52E-03	48.2	1.03E+00
4	1	198.50*	42	196	1.62	397.42	1.41E+00	3.89E-03	62.7	2.39E+00
5	1	595.88	25	41	1.12	1191.98	7.17E-01	2.29E-03	50.6	1.10E+00
6	1	1461.03*	12	12	3.04	2921.42	3.59E-01	1.15E-03	94.1	7.24E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	12	10.67*	3.593E-01	2.145E+01	2.145E+01	188.19

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28786-5 Acquisition date : 5-JUN-2006 15:54:51

Total number of lines in spectrum	6	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	1	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.145E+01	2.145E+01	4.037E+01	188.19	
			---	---			
	Total Activity :		2.145E+01	2.145E+01			
	Grand Total Activity :		2.145E+01	2.145E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28786-5 Acquisition date : 5-JUN-2006 15:54:51

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.15	61	243	1.27	132.75	130	7	5.63E-03	91.7	5.44E-01	
1	92.64	5	342	1.75	185.74	180	10	4.46E-04	****	1.24E+00	
1	140.03	60	243	1.11	280.49	277	8	5.52E-03	96.4	1.57E+00	
1	198.50	42	196	1.62	397.42	394	8	3.89E-03	****	1.41E+00	
1	595.88	25	41	1.12	1191.98	1188	9	2.29E-03	****	7.17E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	6	
Number of unidentified lines	5	
Number of lines tentatively identified by NID	1	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.145E+01	2.145E+01	4.037E+01	188.19	
			---	---			
	Total Activity :		2.145E+01	2.145E+01			

Grand Total Activity : 2.145E+01 2.145E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.145E+01	4.037E+01	5.514E+01	0.000E+00	0.389

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	4.852E+00		2.972E+01	4.960E+01	0.000E+00	0.098
NA-24	3.743E-01		1.263E+00	Half-Life too short		
CR-51	-2.904E+01		3.730E+01	5.918E+01	0.000E+00	-0.491
MN-54	-1.108E+00		3.127E+00	4.955E+00	0.000E+00	-0.224
CO-57	-1.417E+00		2.953E+00	4.866E+00	0.000E+00	-0.291
CO-58	1.090E+00		3.400E+00	5.698E+00	0.000E+00	0.191

FE-59	6.440E+00	6.240E+00	1.124E+01	0.000E+00	0.573
CO-60	1.451E-01	3.358E+00	5.872E+00	0.000E+00	0.025
ZN-65	3.759E+00	6.818E+00	1.169E+01	0.000E+00	0.322
SE-75	-2.300E+00	4.429E+00	7.207E+00	0.000E+00	-0.319
SR-85	1.961E+01	4.231E+00	8.293E+00	0.000E+00	2.364
Y-88	-1.203E+00	3.750E+00	5.877E+00	0.000E+00	-0.205
NB-94	-6.048E-02	2.809E+00	4.635E+00	0.000E+00	-0.013
NB-95	2.740E+00	3.239E+00	5.659E+00	0.000E+00	0.484
ZR-95	-2.937E+00	5.804E+00	9.155E+00	0.000E+00	-0.321
MO-99	-1.666E+02	4.623E+02	7.396E+02	0.000E+00	-0.225
RU-103	4.581E+00	3.909E+00	6.867E+00	0.000E+00	0.667
RU-106	-2.017E+01	2.881E+01	4.433E+01	0.000E+00	-0.455
AG-110m	-1.486E+00	2.980E+00	4.772E+00	0.000E+00	-0.311
SN-113	-2.017E+00	4.224E+00	6.674E+00	0.000E+00	-0.302
SB-124	-7.408E+00	4.698E+00	5.482E+00	0.000E+00	-1.351
SB-125	9.563E+00	9.147E+00	1.605E+01	0.000E+00	0.596
TE-129M	4.314E+00	4.552E+01	7.583E+01	0.000E+00	0.057
I-131	3.840E+00	8.866E+00	1.482E+01	0.000E+00	0.259
BA-133	4.150E-01	4.456E+00	7.322E+00	0.000E+00	0.057
CS-134	-1.154E-01	3.627E+00	5.251E+00	0.000E+00	-0.022
CS-136	-3.599E+00	5.625E+00	8.705E+00	0.000E+00	-0.413
CS-137	3.093E+00	3.096E+00	5.498E+00	0.000E+00	0.563
CE-139	8.458E-01	3.272E+00	5.448E+00	0.000E+00	0.155
BA-140	-1.013E+01	2.135E+01	3.395E+01	0.000E+00	-0.298
LA-140	5.797E+00	7.277E+00	1.302E+01	0.000E+00	0.445
CE-141	2.376E+00	7.406E+00	1.069E+01	0.000E+00	0.222
CE-144	-2.005E+01	2.726E+01	3.903E+01	0.000E+00	-0.514
EU-152	-1.300E+01	1.016E+01	1.558E+01	0.000E+00	-0.834
EU-154	-4.112E+00	6.145E+00	1.006E+01	0.000E+00	-0.409
RA-226	5.251E+01	8.234E+01	1.394E+02	0.000E+00	0.377
AC-228	7.530E-01	1.073E+01	1.866E+01	0.000E+00	0.040
TH-228	1.065E+00	6.719E+00	1.144E+01	0.000E+00	0.093
TH-232	7.500E-01	1.068E+01	1.858E+01	0.000E+00	0.040
U-235	9.933E+00	2.641E+01	3.836E+01	0.000E+00	0.259
U-238	2.609E+02	3.215E+02	5.677E+02	0.000E+00	0.460
AM-241	-2.777E+01	3.205E+01	4.902E+01	0.000E+00	-0.567

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A,04L28786-5       ,06/07/2006 09:49,05/24/2006 13:40,   3.779E+00,WG L28786-5 LA
B,04L28786-5       ,LIBD                ,06/02/2006 09:04,044L092404
C,K-40     ,YES,   2.145E+01,   4.037E+01,   5.514E+01,,    0.389
C,BE-7     ,NO ,   4.852E+00,   2.972E+01,   4.960E+01,,    0.098
C,CR-51    ,NO ,  -2.904E+01,   3.730E+01,   5.918E+01,,   -0.491
C,MN-54    ,NO ,  -1.108E+00,   3.127E+00,   4.955E+00,,   -0.224
C,CO-57    ,NO ,  -1.417E+00,   2.953E+00,   4.866E+00,,   -0.291
C,CO-58    ,NO ,   1.090E+00,   3.400E+00,   5.698E+00,,    0.191
C,FE-59    ,NO ,   6.440E+00,   6.240E+00,   1.124E+01,,    0.573
C,CO-60    ,NO ,   1.451E-01,   3.358E+00,   5.872E+00,,    0.025
C,ZN-65    ,NO ,   3.759E+00,   6.818E+00,   1.169E+01,,    0.322
C,SE-75    ,NO ,  -2.300E+00,   4.429E+00,   7.207E+00,,   -0.319
C,SR-85    ,NO ,   1.961E+01,   4.231E+00,   8.293E+00,,    2.364
C,Y-88     ,NO ,  -1.203E+00,   3.750E+00,   5.877E+00,,   -0.205
C,NB-94    ,NO ,  -6.048E-02,   2.809E+00,   4.635E+00,,   -0.013
C,NB-95    ,NO ,   2.740E+00,   3.239E+00,   5.659E+00,,    0.484
C,ZR-95    ,NO ,  -2.937E+00,   5.804E+00,   9.155E+00,,   -0.321
C,MO-99    ,NO ,  -1.666E+02,   4.623E+02,   7.396E+02,,   -0.225
C,RU-103   ,NO ,   4.581E+00,   3.909E+00,   6.867E+00,,    0.667
C,RU-106   ,NO ,  -2.017E+01,   2.881E+01,   4.433E+01,,   -0.455
C,AG-110m  ,NO ,  -1.486E+00,   2.980E+00,   4.772E+00,,   -0.311
C,SN-113   ,NO ,  -2.017E+00,   4.224E+00,   6.674E+00,,   -0.302
C,SB-124   ,NO ,  -7.408E+00,   4.698E+00,   5.482E+00,,   -1.351
C,SB-125   ,NO ,   9.563E+00,   9.147E+00,   1.605E+01,,    0.596
C,TE-129M  ,NO ,   4.314E+00,   4.552E+01,   7.583E+01,,    0.057
C,I-131    ,NO ,   3.840E+00,   8.866E+00,   1.482E+01,,    0.259
C,BA-133   ,NO ,   4.150E-01,   4.456E+00,   7.322E+00,,    0.057
C,CS-134   ,NO ,  -1.154E-01,   3.627E+00,   5.251E+00,,   -0.022
C,CS-136   ,NO ,  -3.599E+00,   5.625E+00,   8.705E+00,,   -0.413
C,CS-137   ,NO ,   3.093E+00,   3.096E+00,   5.498E+00,,    0.563
C,CE-139   ,NO ,   8.458E-01,   3.272E+00,   5.448E+00,,    0.155
C,BA-140   ,NO ,  -1.013E+01,   2.135E+01,   3.395E+01,,   -0.298
C,LA-140   ,NO ,   5.797E+00,   7.277E+00,   1.302E+01,,    0.445
C,CE-141   ,NO ,   2.376E+00,   7.406E+00,   1.069E+01,,    0.222
C,CE-144   ,NO ,  -2.005E+01,   2.726E+01,   3.903E+01,,   -0.514
C,EU-152   ,NO ,  -1.300E+01,   1.016E+01,   1.558E+01,,   -0.834
C,EU-154   ,NO ,  -4.112E+00,   6.145E+00,   1.006E+01,,   -0.409
C,RA-226   ,NO ,   5.251E+01,   8.234E+01,   1.394E+02,,    0.377
C,AC-228   ,NO ,   7.530E-01,   1.073E+01,   1.866E+01,,    0.040
C,TH-228   ,NO ,   1.065E+00,   6.719E+00,   1.144E+01,,    0.093
C,TH-232   ,NO ,   7.500E-01,   1.068E+01,   1.858E+01,,    0.040
C,U-235    ,NO ,   9.933E+00,   2.641E+01,   3.836E+01,,    0.259
C,U-238    ,NO ,   2.609E+02,   3.215E+02,   5.677E+02,,    0.460
C,AM-241   ,NO ,  -2.777E+01,   3.205E+01,   4.902E+01,,   -0.567
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 7-JUN-2006 13:37:47.36
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 5-JUN-2006 23:07:59.60

LIMS No., Customer Name, Client ID: WG L28786-6 EX LAS

Sample ID : 04L28786-6
Sample Type : WG
Quantity : 3.61520E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 13:30:00.
Geometry : 0435L090804
BKGFILE : 04BG060305MT
Real Time : 0 06:00:03.70
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.21*	183	687	1.51	132.89	6.44E-01	8.48E-03	27.3	2.79E+00
2	1	139.88*	53	593	1.11	280.20	1.82E+00	2.44E-03	87.4	1.49E+00
3	1	198.13*	140	501	1.55	396.68	1.68E+00	6.49E-03	32.1	2.07E+00
4	1	595.95	84	155	1.38	1192.13	7.86E-01	3.91E-03	29.2	2.53E+00
5	1	609.10*	58	198	1.93	1218.42	7.73E-01	2.67E-03	60.7	3.15E+00
6	1	1123.11	128	68	1.08	2246.00	4.80E-01	5.92E-03	16.1	1.56E+02
7	1	1175.12	88	90	0.75	2349.96	4.63E-01	4.09E-03	25.8	3.59E+01
8	1	1334.48	674	64	5.72	2668.48	4.20E-01	3.12E-02	2.9	3.67E+02
9	1	1461.21*	5	53	2.55	2921.78	3.92E-01	2.33E-04	447.3	1.47E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	5	10.67*	3.920E-01	4.165E+00	4.165E+00	894.67

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28786-6 Acquisition date : 5-JUN-2006 23:07:59

Total number of lines in spectrum	9	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	1	11.11%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.165E+00	4.165E+00	37.27E+00	894.67	
		Total Activity :	4.165E+00	4.165E+00			
		Grand Total Activity :	4.165E+00	4.165E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines

Sample ID : 04L28786-6 Acquisition date : 5-JUN-2006 23:07:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.21	183	687	1.51	132.89	129	9	8.48E-03	54.6	6.44E-01	
1	139.88	53	593	1.11	280.20	276	9	2.44E-03	****	1.82E+00	
1	198.13	140	501	1.55	396.68	391	10	6.49E-03	64.3	1.68E+00	
1	595.95	84	155	1.38	1192.13	1186	10	3.91E-03	58.5	7.86E-01	
1	609.10	58	198	1.93	1218.42	1213	15	2.67E-03	****	7.73E-01	
1	1123.11	128	68	1.08	2246.00	2239	17	5.92E-03	32.2	4.80E-01	
1	1175.12	88	90	0.75	2349.96	2339	18	4.09E-03	51.6	4.63E-01	
1	1334.48	674	64	5.72	2668.48	2662	16	3.12E-02	5.8	4.20E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	9	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	1	11.11%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.165E+00	4.165E+00	37.27E+00	894.67	
		Total Activity :	4.165E+00	4.165E+00			
		Grand Total Activity :	4.165E+00	4.165E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.165E+00	3.727E+01	3.258E+01	0.000E+00	0.128

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-3.752E+00		1.975E+01	3.238E+01	0.000E+00	-0.116
NA-24	-8.949E-01		1.257E+00	Half-Life too short		
CR-51	-2.180E+01		2.375E+01	3.792E+01	0.000E+00	-0.575

MN-54	2.695E-01	2.198E+00	3.611E+00	0.000E+00	0.075
CO-57	-4.661E-01	1.932E+00	3.217E+00	0.000E+00	-0.145
CO-58	2.624E-01	2.338E+00	3.846E+00	0.000E+00	0.068
FE-59	4.760E+00	4.777E+00	8.307E+00	0.000E+00	0.573
CO-60	6.434E-01	3.007E+00	4.479E+00	0.000E+00	0.144
ZN-65	7.343E+00	5.544E+00	8.539E+00	0.000E+00	0.860
SE-75	-2.086E+00	2.896E+00	4.719E+00	0.000E+00	-0.442
SR-85	1.887E+01	2.826E+00	5.553E+00	0.000E+00	3.398
Y-88	7.570E-01	2.391E+00	4.027E+00	0.000E+00	0.188
NB-94	1.174E-01	2.070E+00	3.430E+00	0.000E+00	0.034
NB-95	1.390E+00	2.195E+00	3.731E+00	0.000E+00	0.373
ZR-95	-5.545E-01	3.918E+00	6.388E+00	0.000E+00	-0.087
MO-99	1.302E+02	3.692E+02	6.187E+02	0.000E+00	0.210
RU-103	1.450E+00	2.631E+00	4.433E+00	0.000E+00	0.327
RU-106	-1.064E+01	2.113E+01	3.171E+01	0.000E+00	-0.336
AG-110m	-1.651E+00	2.147E+00	3.434E+00	0.000E+00	-0.481
SN-113	8.111E-01	2.900E+00	4.765E+00	0.000E+00	0.170
SB-124	3.331E+00	4.701E+00	3.863E+00	0.000E+00	0.862
SB-125	2.708E-01	6.031E+00	1.006E+01	0.000E+00	0.027
TE-129M	4.034E+00	2.963E+01	4.936E+01	0.000E+00	0.082
I-131	-8.309E-01	6.134E+00	9.966E+00	0.000E+00	-0.083
BA-133	7.189E+00	3.029E+00	5.336E+00	0.000E+00	1.347
CS-134	4.394E+00	3.430E+00	4.103E+00	0.000E+00	1.071
CS-136	-8.354E-02	3.859E+00	6.297E+00	0.000E+00	-0.013
CS-137	-5.141E-01	2.262E+00	3.713E+00	0.000E+00	-0.138
CE-139	1.612E+00	2.070E+00	3.481E+00	0.000E+00	0.463
BA-140	5.570E+00	1.495E+01	2.492E+01	0.000E+00	0.224
LA-140	-5.633E-01	4.839E+00	7.933E+00	0.000E+00	-0.071
CE-141	-1.879E+00	5.012E+00	7.027E+00	0.000E+00	-0.267
CE-144	-1.430E+01	1.755E+01	2.435E+01	0.000E+00	-0.587
EU-152	-1.756E+01	6.920E+00	1.037E+01	0.000E+00	-1.693
EU-154	-2.487E-01	3.959E+00	6.617E+00	0.000E+00	-0.038
RA-226	9.118E+00	5.011E+01	8.180E+01	0.000E+00	0.111
AC-228	-2.991E-01	8.542E+00	1.435E+01	0.000E+00	-0.021
TH-228	6.160E-01	4.015E+00	6.777E+00	0.000E+00	0.091
TH-232	-2.979E-01	8.507E+00	1.429E+01	0.000E+00	-0.021
U-235	-6.261E+00	1.799E+01	2.509E+01	0.000E+00	-0.250
U-238	5.714E+01	2.257E+02	3.779E+02	0.000E+00	0.151
AM-241	-1.778E+01	1.900E+01	2.838E+01	0.000E+00	-0.626

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A,04L28786-6       ,06/07/2006 13:37,05/24/2006 13:30,   3.615E+00,WG L28786-6 EX
B,04L28786-6       ,LIBD                ,06/02/2006 09:04,0435L090804
C,K-40     ,YES,   4.165E+00,   3.727E+01,   3.258E+01,,    0.128
C,BE-7     ,NO ,  -3.752E+00,   1.975E+01,   3.238E+01,,   -0.116
C,CR-51    ,NO ,  -2.180E+01,   2.375E+01,   3.792E+01,,   -0.575
C,MN-54    ,NO ,   2.695E-01,   2.198E+00,   3.611E+00,,    0.075
C,CO-57    ,NO ,  -4.661E-01,   1.932E+00,   3.217E+00,,   -0.145
C,CO-58    ,NO ,   2.624E-01,   2.338E+00,   3.846E+00,,    0.068
C,FE-59    ,NO ,   4.760E+00,   4.777E+00,   8.307E+00,,    0.573
C,CO-60    ,NO ,   6.434E-01,   3.007E+00,   4.479E+00,,    0.144
C,ZN-65    ,NO ,   7.343E+00,   5.544E+00,   8.539E+00,,    0.860
C,SE-75    ,NO ,  -2.086E+00,   2.896E+00,   4.719E+00,,   -0.442
C,SR-85    ,NO ,   1.887E+01,   2.826E+00,   5.553E+00,,    3.398
C,Y-88     ,NO ,   7.570E-01,   2.391E+00,   4.027E+00,,    0.188
C,NB-94    ,NO ,   1.174E-01,   2.070E+00,   3.430E+00,,    0.034
C,NB-95    ,NO ,   1.390E+00,   2.195E+00,   3.731E+00,,    0.373
C,ZR-95    ,NO ,  -5.545E-01,   3.918E+00,   6.388E+00,,   -0.087
C,MO-99    ,NO ,   1.302E+02,   3.692E+02,   6.187E+02,,    0.210
C,RU-103   ,NO ,   1.450E+00,   2.631E+00,   4.433E+00,,    0.327
C,RU-106   ,NO ,  -1.064E+01,   2.113E+01,   3.171E+01,,   -0.336
C,AG-110m  ,NO ,  -1.651E+00,   2.147E+00,   3.434E+00,,   -0.481
C,SN-113   ,NO ,   8.111E-01,   2.900E+00,   4.765E+00,,    0.170
C,SB-124   ,NO ,   3.331E+00,   4.701E+00,   3.863E+00,,    0.862
C,SB-125   ,NO ,   2.708E-01,   6.031E+00,   1.006E+01,,    0.027
C,TE-129M  ,NO ,   4.034E+00,   2.963E+01,   4.936E+01,,    0.082
C,I-131    ,NO ,  -8.309E-01,   6.134E+00,   9.966E+00,,   -0.083
C,BA-133   ,NO ,   7.189E+00,   3.029E+00,   5.336E+00,,    1.347
C,CS-134   ,NO ,   4.394E+00,   3.430E+00,   4.103E+00,,    1.071
C,CS-136   ,NO ,  -8.354E-02,   3.859E+00,   6.297E+00,,   -0.013
C,CS-137   ,NO ,  -5.141E-01,   2.262E+00,   3.713E+00,,   -0.138
C,CE-139   ,NO ,   1.612E+00,   2.070E+00,   3.481E+00,,    0.463
C,BA-140   ,NO ,   5.570E+00,   1.495E+01,   2.492E+01,,    0.224
C,LA-140   ,NO ,  -5.633E-01,   4.839E+00,   7.933E+00,,   -0.071
C,CE-141   ,NO ,  -1.879E+00,   5.012E+00,   7.027E+00,,   -0.267
C,CE-144   ,NO ,  -1.430E+01,   1.755E+01,   2.435E+01,,   -0.587
C,EU-152   ,NO ,  -1.756E+01,   6.920E+00,   1.037E+01,,   -1.693
C,EU-154   ,NO ,  -2.487E-01,   3.959E+00,   6.617E+00,,   -0.038
C,RA-226   ,NO ,   9.118E+00,   5.011E+01,   8.180E+01,,    0.111
C,AC-228   ,NO ,  -2.991E-01,   8.542E+00,   1.435E+01,,   -0.021
C,TH-228   ,NO ,   6.160E-01,   4.015E+00,   6.777E+00,,    0.091
C,TH-232   ,NO ,  -2.979E-01,   8.507E+00,   1.429E+01,,   -0.021
C,U-235    ,NO ,  -6.261E+00,   1.799E+01,   2.509E+01,,   -0.250
C,U-238    ,NO ,   5.714E+01,   2.257E+02,   3.779E+02,,    0.151
C,AM-241   ,NO ,  -1.778E+01,   1.900E+01,   2.838E+01,,   -0.626
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 6-JUN-2006 05:08:25.89
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 5-JUN-2006 23:08:08.71

LIMS No., Customer Name, Client ID: WG L28786-7 EX LAS

Sample ID : 07L28786-7
Sample Type : WG
Quantity : 3.60890E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 11:00:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 06:00:04.32
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.17*	163	704	1.24	133.12	7.19E-01	7.54E-03	30.8	9.66E-01
2	1	140.04*	174	782	1.20	280.98	2.09E+00	8.07E-03	34.9	8.22E-01
3	1	338.08*	44	155	1.32	677.32	1.47E+00	2.02E-03	56.7	1.42E+00
4	1	352.00*	82	307	1.46	705.17	1.43E+00	3.81E-03	50.0	1.50E+00
5	1	583.59*	64	126	1.96	1168.59	1.01E+00	2.97E-03	43.6	1.87E+00
6	1	596.30	125	162	2.21	1194.02	9.96E-01	5.80E-03	23.1	2.30E+00
7	1	609.46*	145	170	2.01	1220.36	9.80E-01	6.70E-03	23.9	2.44E+00
8	1	1120.63*	45	80	2.01	2242.91	6.26E-01	2.06E-03	52.0	2.33E+00
9	1	1764.71*	42	42	3.32	3530.82	4.54E-01	1.93E-03	46.7	1.26E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28786-7 Acquisition date : 5-JUN-2006 23:08:08

Total number of lines in spectrum	9	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	1	11.11%

**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28786-7

Acquisition date : 5-JUN-2006 23:08:08

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.17	163	704	1.24	133.12	130	8	7.54E-03	61.6	7.19E-01	
1	140.04	174	782	1.20	280.98	275	12	8.07E-03	69.8	2.09E+00	
1	338.08	44	155	1.32	677.32	675	6	2.02E-03	****	1.47E+00	
1	352.00	82	307	1.46	705.17	701	11	3.81E-03	****	1.43E+00	
1	583.59	64	126	1.96	1168.59	1164	10	2.97E-03	87.2	1.01E+00	T
1	596.30	125	162	2.21	1194.02	1189	13	5.80E-03	46.2	9.96E-01	
1	609.46	145	170	2.01	1220.36	1212	14	6.70E-03	47.7	9.80E-01	
1	1120.63	45	80	2.01	2242.91	2235	16	2.06E-03	****	6.26E-01	
1	1764.71	42	42	3.32	3530.82	3524	19	1.93E-03	93.3	4.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum 9
Number of unidentified lines 8
Number of lines tentatively identified by NID 1 11.11%
**** There are no nuclides meeting summary criteria ****

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	5.325E+00		1.900E+01	3.165E+01	0.000E+00	0.168
NA-24	1.698E+00		3.833E+00	Half-Life too short		
K-40	3.162E+01		2.973E+01	5.174E+01	0.000E+00	0.611
CR-51	-1.636E+01		2.290E+01	3.673E+01	0.000E+00	-0.445
MN-54	-9.671E-02		1.837E+00	3.001E+00	0.000E+00	-0.032
CO-57	-1.858E-01		1.956E+00	3.223E+00	0.000E+00	-0.058
CO-58	-4.592E-01		2.125E+00	3.450E+00	0.000E+00	-0.133
FE-59	3.002E+00		4.520E+00	7.692E+00	0.000E+00	0.390
CO-60	9.971E-01		1.957E+00	3.345E+00	0.000E+00	0.298
ZN-65	6.141E+00		4.933E+00	7.479E+00	0.000E+00	0.821
SE-75	-5.648E-01		2.848E+00	4.680E+00	0.000E+00	-0.121
SR-85	2.235E+01		2.636E+00	5.253E+00	0.000E+00	4.255
Y-88	-5.499E-01		2.325E+00	3.772E+00	0.000E+00	-0.146
NB-94	8.122E-01		1.958E+00	3.291E+00	0.000E+00	0.247
NB-95	2.075E+00		2.167E+00	3.715E+00	0.000E+00	0.559
ZR-95	-2.813E+00		3.822E+00	6.083E+00	0.000E+00	-0.462
MO-99	5.364E+01		4.382E+02	7.266E+02	0.000E+00	0.074
RU-103	4.566E-01		2.419E+00	4.008E+00	0.000E+00	0.114
RU-106	1.612E+01		1.901E+01	3.161E+01	0.000E+00	0.510

AG-110m	-1.808E+00	1.923E+00	3.068E+00	0.000E+00	-0.589
SN-113	5.902E-01	2.689E+00	4.394E+00	0.000E+00	0.134
SB-124	4.213E+00	4.448E+00	3.590E+00	0.000E+00	1.173
SB-125	-9.007E-01	5.449E+00	8.986E+00	0.000E+00	-0.100
TE-129M	-1.809E+00	2.863E+01	4.721E+01	0.000E+00	-0.038
I-131	1.554E+00	6.359E+00	1.043E+01	0.000E+00	0.149
BA-133	8.582E+00	3.340E+00	5.097E+00	0.000E+00	1.684
CS-134	9.419E+00	3.979E+00	3.782E+00	0.000E+00	2.491
CS-136	-7.384E-02	3.695E+00	6.052E+00	0.000E+00	-0.012
CS-137	-1.252E-01	2.002E+00	3.313E+00	0.000E+00	-0.038
CE-139	2.378E-01	2.041E+00	3.343E+00	0.000E+00	0.071
BA-140	5.812E+00	1.323E+01	2.209E+01	0.000E+00	0.263
LA-140	5.591E+00	4.744E+00	8.359E+00	0.000E+00	0.669
CE-141	7.014E-01	5.046E+00	7.056E+00	0.000E+00	0.099
CE-144	-6.890E+00	1.828E+01	2.524E+01	0.000E+00	-0.273
EU-152	-4.229E+00	1.399E+01	9.785E+00	0.000E+00	-0.432
EU-154	1.540E+00	4.017E+00	6.683E+00	0.000E+00	0.230
RA-226	-2.909E+01	5.179E+01	8.135E+01	0.000E+00	-0.358
AC-228	-2.150E+00	8.050E+00	1.223E+01	0.000E+00	-0.176
TH-228	-2.248E-01	4.003E+00	6.439E+00	0.000E+00	-0.035
TH-232	-2.141E+00	8.014E+00	1.218E+01	0.000E+00	-0.176
U-235	1.974E+01	1.778E+01	2.562E+01	0.000E+00	0.770
U-238	2.487E+01	2.107E+02	3.507E+02	0.000E+00	0.071
AM-241	1.693E+00	2.092E+01	3.018E+01	0.000E+00	0.056

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A,07L28786-7       ,06/06/2006 05:08,05/23/2006 11:00,   3.609E+00,WG L28786-7 EX
B,07L28786-7       ,LIBD                ,06/02/2006 08:24,0735L090904
C,BE-7     ,NO ,   5.325E+00,   1.900E+01,   3.165E+01,,    0.168
C,K-40     ,NO ,   3.162E+01,   2.973E+01,   5.174E+01,,    0.611
C,CR-51    ,NO ,  -1.636E+01,   2.290E+01,   3.673E+01,,   -0.445
C,MN-54    ,NO ,  -9.671E-02,   1.837E+00,   3.001E+00,,   -0.032
C,CO-57    ,NO ,  -1.858E-01,   1.956E+00,   3.223E+00,,   -0.058
C,CO-58    ,NO ,  -4.592E-01,   2.125E+00,   3.450E+00,,   -0.133
C,FE-59    ,NO ,   3.002E+00,   4.520E+00,   7.692E+00,,    0.390
C,CO-60    ,NO ,   9.971E-01,   1.957E+00,   3.345E+00,,    0.298
C,ZN-65    ,NO ,   6.141E+00,   4.933E+00,   7.479E+00,,    0.821
C,SE-75    ,NO ,  -5.648E-01,   2.848E+00,   4.680E+00,,   -0.121
C,SR-85    ,NO ,   2.235E+01,   2.636E+00,   5.253E+00,,    4.255
C,Y-88     ,NO ,  -5.499E-01,   2.325E+00,   3.772E+00,,   -0.146
C,NB-94    ,NO ,   8.122E-01,   1.958E+00,   3.291E+00,,    0.247
C,NB-95    ,NO ,   2.075E+00,   2.167E+00,   3.715E+00,,    0.559
C,ZR-95    ,NO ,  -2.813E+00,   3.822E+00,   6.083E+00,,   -0.462
C,MO-99    ,NO ,   5.364E+01,   4.382E+02,   7.266E+02,,    0.074
C,RU-103   ,NO ,   4.566E-01,   2.419E+00,   4.008E+00,,    0.114
C,RU-106   ,NO ,   1.612E+01,   1.901E+01,   3.161E+01,,    0.510
C,AG-110m  ,NO ,  -1.808E+00,   1.923E+00,   3.068E+00,,   -0.589
C,SN-113   ,NO ,   5.902E-01,   2.689E+00,   4.394E+00,,    0.134
C,SB-124   ,NO ,   4.213E+00,   4.448E+00,   3.590E+00,,    1.173
C,SB-125   ,NO ,  -9.007E-01,   5.449E+00,   8.986E+00,,   -0.100
C,TE-129M  ,NO ,  -1.809E+00,   2.863E+01,   4.721E+01,,   -0.038
C,I-131    ,NO ,   1.554E+00,   6.359E+00,   1.043E+01,,    0.149
C,BA-133   ,NO ,   8.582E+00,   3.340E+00,   5.097E+00,,    1.684
C,CS-134   ,NO ,   9.419E+00,   3.979E+00,   3.782E+00,,    2.491
C,CS-136   ,NO ,  -7.384E-02,   3.695E+00,   6.052E+00,,   -0.012
C,CS-137   ,NO ,  -1.252E-01,   2.002E+00,   3.313E+00,,   -0.038
C,CE-139   ,NO ,   2.378E-01,   2.041E+00,   3.343E+00,,    0.071
C,BA-140   ,NO ,   5.812E+00,   1.323E+01,   2.209E+01,,    0.263
C,LA-140   ,NO ,   5.591E+00,   4.744E+00,   8.359E+00,,    0.669
C,CE-141   ,NO ,   7.014E-01,   5.046E+00,   7.056E+00,,    0.099
C,CE-144   ,NO ,  -6.890E+00,   1.828E+01,   2.524E+01,,   -0.273
C,EU-152   ,NO ,  -4.229E+00,   1.399E+01,   9.785E+00,,   -0.432
C,EU-154   ,NO ,   1.540E+00,   4.017E+00,   6.683E+00,,    0.230
C,RA-226   ,NO ,  -2.909E+01,   5.179E+01,   8.135E+01,,   -0.358
C,AC-228   ,NO ,  -2.150E+00,   8.050E+00,   1.223E+01,,   -0.176
C,TH-228   ,NO ,  -2.248E-01,   4.003E+00,   6.439E+00,,   -0.035
C,TH-232   ,NO ,  -2.141E+00,   8.014E+00,   1.218E+01,,   -0.176
C,U-235    ,NO ,   1.974E+01,   1.778E+01,   2.562E+01,,    0.770
C,U-238    ,NO ,   2.487E+01,   2.107E+02,   3.507E+02,,    0.071
C,AM-241   ,NO ,   1.693E+00,   2.092E+01,   3.018E+01,,    0.056
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 6-JUN-2006 07:08:31.27
TBE10 12892256 HpGe ********** Aquisition Date/Time: 5-JUN-2006 23:08:14.85

LIMS No., Customer Name, Client ID: WG L28786-8 EX LAS

Sample ID : 10L28786-8
Sample Type : WG
Quantity : 3.77710E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 12:30:00.
Geometry : 104L092304
BKGFILE : 10BG060306MT
Real Time : 0 08:00:04.67
Live time : 0 08:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.42*	198	1004	1.24	132.14	6.10E-01	6.88E-03	31.4	8.00E-01
2	1	92.72*	37	822	1.23	184.79	1.21E+00	1.27E-03	162.5	8.72E-01
3	1	139.80	202	916	1.43	279.02	1.46E+00	7.02E-03	27.9	1.43E+00
4	1	198.21*	36	684	1.66	395.96	1.30E+00	1.26E-03	150.7	2.65E+00
5	1	238.69*	104	461	1.17	477.00	1.18E+00	3.61E-03	44.4	6.45E-01
6	1	295.26	98	425	1.20	590.24	1.03E+00	3.41E-03	39.5	1.48E+00
7	1	351.85*	138	445	2.09	703.53	9.19E-01	4.79E-03	37.7	9.80E-01
8	1	583.24*	20	188	1.41	1166.80	6.53E-01	6.83E-04	161.5	1.53E+00
9	1	595.83	137	142	1.81	1192.00	6.43E-01	4.76E-03	18.8	1.22E-01
10	1	609.06*	173	97	1.82	1218.48	6.33E-01	6.00E-03	16.7	1.45E+00
11	1	673.73	31	80	1.04	1347.97	5.89E-01	1.09E-03	52.0	4.60E+00
12	1	807.32	161	220	5.33	1615.45	5.15E-01	5.58E-03	24.4	1.08E+01
13	1	910.75*	4	105	1.67	1822.54	4.69E-01	1.34E-04	627.6	1.71E+00
14	4	1120.50*	33	113	2.76	2242.54	3.97E-01	1.15E-03	77.2	3.99E+00
15	4	1125.98	57	50	2.77	2253.51	3.96E-01	1.99E-03	29.9	
16	1	1377.62	34	42	2.27	2757.44	3.36E-01	1.18E-03	42.2	7.98E-01
17	1	1460.41*	4	97	1.86	2923.24	3.21E-01	1.39E-04	745.8	1.40E+00
18	1	1764.34*	45	45	3.33	3531.93	2.81E-01	1.58E-03	45.1	8.03E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	4	10.67*	3.214E-01	2.890E+00	2.890E+00	1491.62
AC-228	835.50	------	1.75	5.015E-01	------	Line Not Found	------
	911.07	4	27.70*	4.690E-01	7.407E-01	7.441E-01	1255.19
TH-228	238.63	104	44.60*	1.176E+00	4.919E+00	4.986E+00	88.84
	240.98	------	3.95	1.169E+00	------	Line Not Found	------
TH-232	583.14	20	30.25	6.530E-01	2.474E+00	2.474E+00	323.03
	911.07	4	27.70*	4.690E-01	7.407E-01	7.407E-01	1255.19
	969.11	------	16.60	4.465E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28786-8

Acquisition date : 5-JUN-2006 23:08:14

Total number of lines in spectrum	18	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	4	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.890E+00	2.890E+00	43.11E+00	1491.62	
AC-228	5.75Y	1.00	7.407E-01	7.441E-01	93.40E-01	1255.19	
TH-228	1.91Y	1.01	4.919E+00	4.986E+00	4.430E+00	88.84	
TH-232	1.41E+10Y	1.00	7.407E-01	7.407E-01	92.98E-01	1255.19	
			---	---			
	Total Activity :		9.291E+00	9.361E+00			

Grand Total Activity : 9.291E+00 9.361E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28786-8

Acquisition date : 5-JUN-2006 23:08:14

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.42	198	1004	1.24	132.14	128	9	6.88E-03	62.9	6.10E-01	
1	92.72	37	822	1.23	184.79	181	8	1.27E-03	****	1.21E+00	
1	139.80	202	916	1.43	279.02	275	9	7.02E-03	55.7	1.46E+00	
1	198.21	36	684	1.66	395.96	392	9	1.26E-03	****	1.30E+00	
1	295.26	98	425	1.20	590.24	587	9	3.41E-03	79.1	1.03E+00	
1	351.85	138	445	2.09	703.53	696	15	4.79E-03	75.5	9.19E-01	
1	595.83	137	142	1.81	1192.00	1188	11	4.76E-03	37.7	6.43E-01	
1	609.06	173	97	1.82	1218.48	1214	10	6.00E-03	33.4	6.33E-01	
1	673.73	31	80	1.04	1347.97	1343	8	1.09E-03	****	5.89E-01	
1	807.32	161	220	5.33	1615.45	1603	23	5.58E-03	48.7	5.15E-01	
4	1120.50	33	113	2.76	2242.54	2235	24	1.15E-03	****	3.97E-01	
4	1125.98	57	50	2.77	2253.51	2235	24	1.99E-03	59.7	3.96E-01	
1	1377.62	34	42	2.27	2757.44	2751	12	1.18E-03	84.5	3.36E-01	
1	1764.34	45	45	3.33	3531.93	3523	19	1.58E-03	90.1	2.81E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	18	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	4	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.890E+00	2.890E+00	43.11E+00	1491.62	
TH-228	1.91Y	1.01	4.919E+00	4.986E+00	4.430E+00	88.84	
TH-232	1.41E+10Y	1.00	1.737E+00	1.737E+00	6.060E+00	348.78	
			---	---			
	Total Activity :		9.547E+00	9.614E+00			

Grand Total Activity : 9.547E+00 9.614E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA

K-40	2.890E+00	4.311E+01	3.414E+01	0.000E+00	0.085
TH-228	4.986E+00	4.430E+00	7.147E+00	0.000E+00	0.698
TH-232	1.737E+00	6.060E+00	1.219E+01	0.000E+00	0.142

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-4.984E+00		2.184E+01	3.606E+01	0.000E+00	-0.138
NA-24	2.477E+00		4.458E+00	Half-Life too short		
CR-51	-2.843E+01		2.756E+01	4.419E+01	0.000E+00	-0.643
MN-54	-1.245E-01		2.249E+00	3.720E+00	0.000E+00	-0.033
CO-57	7.949E-01		2.418E+00	4.018E+00	0.000E+00	0.198
CO-58	1.355E+00		2.697E+00	3.910E+00	0.000E+00	0.346
FE-59	2.688E+00		4.874E+00	8.207E+00	0.000E+00	0.328
CO-60	-8.432E-01		2.109E+00	3.387E+00	0.000E+00	-0.249
ZN-65	1.005E+01		5.604E+00	8.771E+00	0.000E+00	1.146
SE-75	3.557E+00		3.440E+00	5.844E+00	0.000E+00	0.609
SR-85	2.038E+01		3.003E+00	5.796E+00	0.000E+00	3.517
Y-88	-9.248E-01		2.484E+00	3.977E+00	0.000E+00	-0.233
NB-94	-3.921E-01		2.030E+00	3.289E+00	0.000E+00	-0.119
NB-95	7.407E-01		2.396E+00	3.953E+00	0.000E+00	0.187
ZR-95	-8.047E-01		4.311E+00	6.955E+00	0.000E+00	-0.116
MO-99	-1.486E+02		4.715E+02	7.567E+02	0.000E+00	-0.196
RU-103	-8.713E-01		2.793E+00	4.591E+00	0.000E+00	-0.190
RU-106	4.168E+00		2.103E+01	3.484E+01	0.000E+00	0.120
AG-110m	3.422E-01		2.194E+00	3.620E+00	0.000E+00	0.095
SN-113	-4.357E-01		3.137E+00	5.105E+00	0.000E+00	-0.085
SB-124	2.772E+00		4.907E+00	3.798E+00	0.000E+00	0.730
SB-125	-5.995E-01		6.698E+00	1.088E+01	0.000E+00	-0.055
TE-129M	-2.364E+01		3.364E+01	5.326E+01	0.000E+00	-0.444
I-131	6.312E+00		7.636E+00	1.282E+01	0.000E+00	0.492
BA-133	6.847E+00		3.837E+00	5.714E+00	0.000E+00	1.198
CS-134	9.630E+00		4.407E+00	4.153E+00	0.000E+00	2.319
CS-136	-3.988E+00		5.037E+00	6.643E+00	0.000E+00	-0.600
CS-137	-2.398E-01		2.440E+00	3.875E+00	0.000E+00	-0.062
CE-139	7.381E-01		2.555E+00	4.206E+00	0.000E+00	0.175
BA-140	1.599E+01		1.562E+01	2.683E+01	0.000E+00	0.596
LA-140	1.880E+00		4.904E+00	8.235E+00	0.000E+00	0.228
CE-141	1.111E+00		6.240E+00	8.749E+00	0.000E+00	0.127
CE-144	2.379E+00		2.197E+01	3.084E+01	0.000E+00	0.077
EU-152	-5.465E+00		8.667E+00	1.172E+01	0.000E+00	-0.466
EU-154	2.137E+00		4.947E+00	8.232E+00	0.000E+00	0.260
RA-226	-1.813E+00		6.674E+01	1.016E+02	0.000E+00	-0.018
AC-228	7.441E-01		9.340E+00	1.409E+01	0.000E+00	0.053
U-235	3.105E+01		2.170E+01	3.143E+01	0.000E+00	0.988
U-238	1.609E+02		2.234E+02	3.814E+02	0.000E+00	0.422
AM-241	1.747E+01		2.154E+01	3.046E+01	0.000E+00	0.573

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A,10L28786-8        ,06/06/2006 07:08,05/23/2006 12:30,   3.777E+00,WG L28786-8 EX
B,10L28786-8        ,LIBD                  ,06/02/2006 08:22,104L092304
C,K-40     ,YES,    2.890E+00,   4.311E+01,   3.414E+01,,    0.085
C,TH-228   ,YES,    4.986E+00,   4.430E+00,   7.147E+00,,    0.698
C,TH-232   ,YES,    1.737E+00,   6.060E+00,   1.219E+01,,    0.142
C,BE-7     ,NO ,   -4.984E+00,   2.184E+01,   3.606E+01,,   -0.138
C,CR-51    ,NO ,   -2.843E+01,   2.756E+01,   4.419E+01,,   -0.643
C,MN-54    ,NO ,   -1.245E-01,   2.249E+00,   3.720E+00,,   -0.033
C,CO-57    ,NO ,    7.949E-01,   2.418E+00,   4.018E+00,,    0.198
C,CO-58    ,NO ,    1.355E+00,   2.697E+00,   3.910E+00,,    0.346
C,FE-59    ,NO ,    2.688E+00,   4.874E+00,   8.207E+00,,    0.328
C,CO-60    ,NO ,   -8.432E-01,   2.109E+00,   3.387E+00,,   -0.249
C,ZN-65    ,NO ,    1.005E+01,   5.604E+00,   8.771E+00,,    1.146
C,SE-75    ,NO ,    3.557E+00,   3.440E+00,   5.844E+00,,    0.609
C,SR-85    ,NO ,    2.038E+01,   3.003E+00,   5.796E+00,,    3.517
C,Y-88     ,NO ,   -9.248E-01,   2.484E+00,   3.977E+00,,   -0.233
C,NB-94    ,NO ,   -3.921E-01,   2.030E+00,   3.289E+00,,   -0.119
C,NB-95    ,NO ,    7.407E-01,   2.396E+00,   3.953E+00,,    0.187
C,ZR-95    ,NO ,   -8.047E-01,   4.311E+00,   6.955E+00,,   -0.116
C,MO-99    ,NO ,   -1.486E+02,   4.715E+02,   7.567E+02,,   -0.196
C,RU-103   ,NO ,   -8.713E-01,   2.793E+00,   4.591E+00,,   -0.190
C,RU-106   ,NO ,    4.168E+00,   2.103E+01,   3.484E+01,,    0.120
C,AG-110m  ,NO ,    3.422E-01,   2.194E+00,   3.620E+00,,    0.095
C,SN-113   ,NO ,   -4.357E-01,   3.137E+00,   5.105E+00,,   -0.085
C,SB-124   ,NO ,    2.772E+00,   4.907E+00,   3.798E+00,,    0.730
C,SB-125   ,NO ,   -5.995E-01,   6.698E+00,   1.088E+01,,   -0.055
C,TE-129M  ,NO ,   -2.364E+01,   3.364E+01,   5.326E+01,,   -0.444
C,I-131    ,NO ,    6.312E+00,   7.636E+00,   1.282E+01,,    0.492
C,BA-133   ,NO ,    6.847E+00,   3.837E+00,   5.714E+00,,    1.198
C,CS-134   ,NO ,    9.630E+00,   4.407E+00,   4.153E+00,,    2.319
C,CS-136   ,NO ,   -3.988E+00,   5.037E+00,   6.643E+00,,   -0.600
C,CS-137   ,NO ,   -2.398E-01,   2.440E+00,   3.875E+00,,   -0.062
C,CE-139   ,NO ,    7.381E-01,   2.555E+00,   4.206E+00,,    0.175
C,BA-140   ,NO ,    1.599E+01,   1.562E+01,   2.683E+01,,    0.596
C,LA-140   ,NO ,    1.880E+00,   4.904E+00,   8.235E+00,,    0.228
C,CE-141   ,NO ,    1.111E+00,   6.240E+00,   8.749E+00,,    0.127
C,CE-144   ,NO ,    2.379E+00,   2.197E+01,   3.084E+01,,    0.077
C,EU-152   ,NO ,   -5.465E+00,   8.667E+00,   1.172E+01,,   -0.466
C,EU-154   ,NO ,    2.137E+00,   4.947E+00,   8.232E+00,,    0.260
C,RA-226   ,NO ,   -1.813E+00,   6.674E+01,   1.016E+02,,   -0.018
C,AC-228   ,NO ,    7.441E-01,   9.340E+00,   1.409E+01,,    0.053
C,U-235    ,NO ,    3.105E+01,   2.170E+01,   3.143E+01,,    0.988
C,U-238    ,NO ,    1.609E+02,   2.234E+02,   3.814E+02,,    0.422
C,AM-241   ,NO ,    1.747E+01,   2.154E+01,   3.046E+01,,    0.573
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 4-JUN-2006 06:52:32.41
TBE23 03017322 HpGe ********** Aquisition Date/Time: 3-JUN-2006 16:46:50.54

LIMS No., Customer Name, Client ID: WG L28786-9 LASALLE

Sample ID : 23L28786-9
Sample Type : WG
Quantity : 9.93220E-01 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 13:00:00.
Geometry : 231L082404
BKGFILE : 23BG060306MT
Real Time : 0 14:05:30.49
Live time : 0 14:04:55.91

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	7	33.73*	124	51	1.06	67.79	1.48E-01	2.44E-03	34.4	2.73E+00
2	7	35.49*	156	293	2.35	71.31	1.97E-01	3.08E-03	51.7	
3	7	38.05*	199	566	2.36	76.41	2.81E-01	3.92E-03	41.4	
4	7	40.37*	34	682	1.76	81.05	3.73E-01	6.77E-04	219.4	
5	0	66.33	195	1119	1.24	132.94	1.86E+00	3.84E-03	29.5	
6	0	84.57	161	1299	1.53	169.40	2.76E+00	3.18E-03	39.6	
7	0	92.54*	62	1625	1.29	185.31	3.04E+00	1.22E-03	155.7	
8	0	139.69*	156	1529	1.46	279.56	3.59E+00	3.07E-03	54.4	
9	0	185.33*	191	1510	1.35	370.77	3.34E+00	3.76E-03	51.8	
10	0	582.79*	14	271	1.51	1165.27	1.40E+00	2.69E-04	309.0	
11	0	595.56	91	293	1.06	1190.81	1.38E+00	1.79E-03	35.5	
12	0	910.53*	51	189	1.72	1820.60	9.93E-01	1.00E-03	77.5	
13	0	1120.28*	7	123	1.78	2240.07	8.54E-01	1.46E-04	420.9	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	191	3.28*	3.337E+00	9.343E+01	9.343E+01	103.54
AC-228	835.50	------	1.75	1.059E+00	------	Line Not Found	------
	911.07	51	27.70*	9.929E-01	9.916E+00	9.953E+00	155.04
TH-232	583.14	14	30.25	1.404E+00	1.721E+00	1.721E+00	617.97
	911.07	51	27.70*	9.929E-01	9.916E+00	9.916E+00	155.04
	969.11	------	16.60	9.484E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28786-9

Acquisition date : 3-JUN-2006 16:46:50

Total number of lines in spectrum	13	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	3	23.08%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	9.343E+01	9.343E+01	9.674E+01	103.54	
AC-228	5.75Y	1.00	9.916E+00	9.953E+00	15.43E+00	155.04	
TH-232	1.41E+10Y	1.00	9.916E+00	9.916E+00	15.37E+00	155.04	
			---	---			
	Total Activity :		1.133E+02	1.133E+02			
	Grand Total Activity :		1.133E+02	1.133E+02			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28786-9 Acquisition date : 3-JUN-2006 16:46:50

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
7	33.73	124	51	1.06	67.79	64	33	2.44E-03	68.8	1.48E-01	
7	35.49	156	293	2.35	71.31	64	33	3.08E-03	****	1.97E-01	
7	38.05	199	566	2.36	76.41	64	33	3.92E-03	82.8	2.81E-01	
7	40.37	34	682	1.76	81.05	64	33	6.77E-04	****	3.73E-01	
0	66.33	195	1119	1.24	132.94	130	7	3.84E-03	59.1	1.86E+00	
0	84.57	161	1299	1.53	169.40	166	8	3.18E-03	79.3	2.76E+00	
0	92.54	62	1625	1.29	185.31	181	9	1.22E-03	****	3.04E+00	
0	139.69	156	1529	1.46	279.56	275	9	3.07E-03	****	3.59E+00	
0	595.56	91	293	1.06	1190.81	1187	9	1.79E-03	71.0	1.38E+00	
0	1120.28	7	123	1.78	2240.07	2234	11	1.46E-04	****	8.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	3	23.08%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	9.343E+01	9.343E+01	9.674E+01	103.54	
AC-228	5.75Y	1.00	8.195E+00	8.226E+00	18.76E+00	228.10	
TH-232	1.41E+10Y	1.00	1.721E+00	1.721E+00	10.63E+00	617.97	
			---	---			
	Total Activity :		1.033E+02	1.034E+02			

Grand Total Activity : 1.033E+02 1.034E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	9.343E+01	9.674E+01	1.135E+02	0.000E+00	0.823
AC-228	8.226E+00	1.876E+01	1.706E+01	0.000E+00	0.482
TH-232	1.721E+00	1.063E+01	1.906E+01	0.000E+00	0.090

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.031E+01		2.763E+01	4.699E+01	0.000E+00	0.432
NA-24	-4.381E-01		4.424E-01	Half-Life too short		
K-40	-3.371E+01		5.526E+01	9.119E+01	0.000E+00	-0.370
CR-51	-3.207E+01		3.220E+01	5.316E+01	0.000E+00	-0.603
MN-54	-2.130E-02		2.922E+00	4.929E+00	0.000E+00	-0.004
CO-57	-2.280E+00		2.767E+00	4.568E+00	0.000E+00	-0.499
CO-58	-4.038E+00		3.240E+00	5.232E+00	0.000E+00	-0.772
FE-59	2.969E+00		6.296E+00	1.098E+01	0.000E+00	0.270
CO-60	3.126E-01		2.883E+00	4.950E+00	0.000E+00	0.063
ZN-65	8.817E+00		7.142E+00	1.105E+01	0.000E+00	0.798
SE-75	1.389E+00		4.125E+00	7.007E+00	0.000E+00	0.198
SR-85	3.562E+01		3.916E+00	7.594E+00	0.000E+00	4.690
Y-88	-3.058E-01		3.147E+00	5.423E+00	0.000E+00	-0.056
NB-94	1.123E+00		2.932E+00	5.017E+00	0.000E+00	0.224
NB-95	5.007E+00		3.182E+00	5.651E+00	0.000E+00	0.886
ZR-95	-7.385E+00		5.775E+00	9.355E+00	0.000E+00	-0.789
MO-99	5.052E+01		3.887E+02	6.608E+02	0.000E+00	0.076
RU-103	1.475E+00		3.615E+00	6.083E+00	0.000E+00	0.242
RU-106	-1.493E+00		2.757E+01	4.683E+01	0.000E+00	-0.032
AG-110m	-2.472E+00		2.930E+00	4.850E+00	0.000E+00	-0.510
SN-113	-3.707E+00		4.083E+00	6.704E+00	0.000E+00	-0.553
SB-124	-1.252E+01		4.509E+00	5.801E+00	0.000E+00	-2.158
SB-125	-3.630E+00		8.488E+00	1.405E+01	0.000E+00	-0.258
TE-129M	-3.100E+01		4.176E+01	6.841E+01	0.000E+00	-0.453
I-131	1.170E+01		8.033E+00	1.388E+01	0.000E+00	0.843
BA-133	-1.610E+00		4.127E+00	6.873E+00	0.000E+00	-0.234
CS-134	9.247E+00		3.488E+00	5.718E+00	0.000E+00	1.617
CS-136	4.397E+00		5.044E+00	8.782E+00	0.000E+00	0.501
CS-137	1.625E-01		3.155E+00	5.367E+00	0.000E+00	0.030
CE-139	1.661E+00		2.943E+00	4.917E+00	0.000E+00	0.338
BA-140	-1.406E+01		1.942E+01	3.163E+01	0.000E+00	-0.444
LA-140	-4.227E-01		5.791E+00	1.001E+01	0.000E+00	-0.042
CE-141	5.430E+00		7.056E+00	1.010E+01	0.000E+00	0.538
CE-144	6.311E+00		2.574E+01	3.657E+01	0.000E+00	0.173
EU-152	-1.575E+01		9.428E+00	1.532E+01	0.000E+00	-1.028
EU-154	-5.255E+00		5.692E+00	9.383E+00	0.000E+00	-0.560
TH-228	1.918E-01		6.773E+00	9.304E+00	0.000E+00	0.021
U-235	-4.377E+00		2.923E+01	3.678E+01	0.000E+00	-0.119
U-238	3.307E+01		3.757E+02	5.534E+02	0.000E+00	0.060
AM-241	1.590E+01		1.658E+01	2.440E+01	0.000E+00	0.652

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A,23L28786-9        ,06/04/2006 06:52,05/23/2006 13:00,   9.932E-01,WG L28786-9 LA
B,23L28786-9        ,LIBD                ,06/01/2006 10:14,231L082404
C,RA-226   ,YES,    9.343E+01,   9.674E+01,   1.135E+02,,    0.823
C,AC-228   ,YES,    8.226E+00,   1.876E+01,   1.706E+01,,    0.482
C,TH-232   ,YES,    1.721E+00,   1.063E+01,   1.906E+01,,    0.090
C,BE-7     ,NO ,    2.031E+01,   2.763E+01,   4.699E+01,,    0.432
C,K-40     ,NO ,   -3.371E+01,   5.526E+01,   9.119E+01,,   -0.370
C,CR-51    ,NO ,   -3.207E+01,   3.220E+01,   5.316E+01,,   -0.603
C,MN-54    ,NO ,   -2.130E-02,   2.922E+00,   4.929E+00,,   -0.004
C,CO-57    ,NO ,   -2.280E+00,   2.767E+00,   4.568E+00,,   -0.499
C,CO-58    ,NO ,   -4.038E+00,   3.240E+00,   5.232E+00,,   -0.772
C,FE-59    ,NO ,    2.969E+00,   6.296E+00,   1.098E+01,,    0.270
C,CO-60    ,NO ,    3.126E-01,   2.883E+00,   4.950E+00,,    0.063
C,ZN-65    ,NO ,    8.817E+00,   7.142E+00,   1.105E+01,,    0.798
C,SE-75    ,NO ,    1.389E+00,   4.125E+00,   7.007E+00,,    0.198
C,SR-85    ,NO ,    3.562E+01,   3.916E+00,   7.594E+00,,    4.690
C,Y-88     ,NO ,   -3.058E-01,   3.147E+00,   5.423E+00,,   -0.056
C,NB-94    ,NO ,    1.123E+00,   2.932E+00,   5.017E+00,,    0.224
C,NB-95    ,NO ,    5.007E+00,   3.182E+00,   5.651E+00,,    0.886
C,ZR-95    ,NO ,   -7.385E+00,   5.775E+00,   9.355E+00,,   -0.789
C,MO-99    ,NO ,    5.052E+01,   3.887E+02,   6.608E+02,,    0.076
C,RU-103   ,NO ,    1.475E+00,   3.615E+00,   6.083E+00,,    0.242
C,RU-106   ,NO ,   -1.493E+00,   2.757E+01,   4.683E+01,,   -0.032
C,AG-110m  ,NO ,   -2.472E+00,   2.930E+00,   4.850E+00,,   -0.510
C,SN-113   ,NO ,   -3.707E+00,   4.083E+00,   6.704E+00,,   -0.553
C,SB-124   ,NO ,   -1.252E+01,   4.509E+00,   5.801E+00,,   -2.158
C,SB-125   ,NO ,   -3.630E+00,   8.488E+00,   1.405E+01,,   -0.258
C,TE-129M  ,NO ,   -3.100E+01,   4.176E+01,   6.841E+01,,   -0.453
C,I-131    ,NO ,    1.170E+01,   8.033E+00,   1.388E+01,,    0.843
C,BA-133   ,NO ,   -1.610E+00,   4.127E+00,   6.873E+00,,   -0.234
C,CS-134   ,NO ,    9.247E+00,   3.488E+00,   5.718E+00,,    1.617
C,CS-136   ,NO ,    4.397E+00,   5.044E+00,   8.782E+00,,    0.501
C,CS-137   ,NO ,    1.625E-01,   3.155E+00,   5.367E+00,,    0.030
C,CE-139   ,NO ,    1.661E+00,   2.943E+00,   4.917E+00,,    0.338
C,BA-140   ,NO ,   -1.406E+01,   1.942E+01,   3.163E+01,,   -0.444
C,LA-140   ,NO ,   -4.227E-01,   5.791E+00,   1.001E+01,,   -0.042
C,CE-141   ,NO ,    5.430E+00,   7.056E+00,   1.010E+01,,    0.538
C,CE-144   ,NO ,    6.311E+00,   2.574E+01,   3.657E+01,,    0.173
C,EU-152   ,NO ,   -1.575E+01,   9.428E+00,   1.532E+01,,   -1.028
C,EU-154   ,NO ,   -5.255E+00,   5.692E+00,   9.383E+00,,   -0.560
C,TH-228   ,NO ,    1.918E-01,   6.773E+00,   9.304E+00,,    0.021
C,U-235    ,NO ,   -4.377E+00,   2.923E+01,   3.678E+01,,   -0.119
C,U-238    ,NO ,    3.307E+01,   3.757E+02,   5.534E+02,,    0.060
C,AM-241   ,NO ,    1.590E+01,   1.658E+01,   2.440E+01,,    0.652
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Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 6-JUN-2006 07:08:41.35
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 5-JUN-2006 23:08:19.99

LIMS No., Customer Name, Client ID: WG L28786-10 EX LAS

Sample ID : 11L28786-10
Sample Type : WG
Quantity : 3.83470E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 13:30:00.
Geometry : 114L092404
BKGFILE : 11BG060306MT
Real Time : 0 08:00:10.18
Live time : 0 08:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	66.34	199	1661	1.31	132.01	5.44E-01	6.90E-03	36.4	
2	0	139.79*	172	660	1.19	279.55	1.46E+00	5.97E-03	30.4	
3	0	185.69*	23	669	1.22	371.69	1.35E+00	7.87E-04	240.3	
4	0	197.96	184	740	1.08	396.33	1.31E+00	6.38E-03	28.7	
5	0	238.76*	7	638	1.44	478.25	1.18E+00	2.60E-04	750.7	
6	0	295.29*	171	590	1.62	591.70	1.04E+00	5.93E-03	33.2	
7	0	351.75*	176	457	1.38	705.01	9.26E-01	6.11E-03	29.9	
8	0	583.20*	45	155	1.35	1169.19	6.63E-01	1.58E-03	72.3	
9	0	595.66	114	158	1.50	1194.15	6.54E-01	3.97E-03	22.6	
10	0	609.29*	235	192	1.26	1221.48	6.44E-01	8.15E-03	15.7	
11	0	912.46	86	149	2.27	1828.78	4.76E-01	2.97E-03	35.7	
12	0	1377.39	40	57	1.55	2758.71	3.39E-01	1.40E-03	43.6	
13	0	1460.87*	50	115	1.69	2925.51	3.23E-01	1.74E-03	63.5	
14	0	1762.05*	49	33	1.84	3526.81	2.80E-01	1.69E-03	38.6	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	50	10.67*	3.227E-01	3.564E+01	3.564E+01	126.91
RA-226	186.21	23	3.28*	1.351E+00	1.251E+01	1.251E+01	480.59
TH-228	238.63	7	44.60*	1.181E+00	3.481E-01	3.528E-01	1501.38
	240.98	------	3.95	1.175E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	1.459E+00	------	Line Not Found	------
	163.35	------	4.70	1.419E+00	------	Line Not Found	------
	185.71	23	54.00	1.351E+00	7.601E-01	7.601E-01	480.59
	205.31	------	4.70	1.286E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28786-10

Acquisition date : 5-JUN-2006 23:08:19

Total number of lines in spectrum	14	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	4	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.564E+01	3.564E+01	4.523E+01	126.91	
RA-226	1600.00Y	1.00	1.251E+01	1.251E+01	6.014E+01	480.59	
TH-228	1.91Y	1.01	3.481E-01	3.528E-01	52.97E-01	1501.38	
U-235	7.04E+08Y	1.00	7.601E-01	7.601E-01	36.53E-01	480.59	K
			---	---			
	Total Activity :		4.926E+01	4.926E+01			

Grand Total Activity : 4.926E+01 4.926E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28786-10

Acquisition date : 5-JUN-2006 23:08:19

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	66.34	199	1661	1.31	132.01	128	8	6.90E-03	72.7	5.44E-01	
0	139.79	172	660	1.19	279.55	276	8	5.97E-03	60.7	1.46E+00	
0	197.96	184	740	1.08	396.33	391	10	6.38E-03	57.4	1.31E+00	
0	295.29	171	590	1.62	591.70	586	14	5.93E-03	66.4	1.04E+00	
0	351.75	176	457	1.38	705.01	699	14	6.11E-03	59.9	9.26E-01	
0	583.20	45	155	1.35	1169.19	1164	11	1.58E-03	****	6.63E-01	T
0	595.66	114	158	1.50	1194.15	1189	10	3.97E-03	45.1	6.54E-01	
0	609.29	235	192	1.26	1221.48	1215	13	8.15E-03	31.4	6.44E-01	
0	912.46	86	149	2.27	1828.78	1822	19	2.97E-03	71.5	4.76E-01	
0	1377.39	40	57	1.55	2758.71	2751	15	1.40E-03	87.2	3.39E-01	
0	1762.05	49	33	1.84	3526.81	3520	14	1.69E-03	77.2	2.80E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	14	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	4	28.57%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.564E+01	3.564E+01	4.523E+01	126.91	
RA-226	1600.00Y	1.00	1.251E+01	1.251E+01	6.014E+01	480.59	
TH-228	1.91Y	1.01	3.481E-01	3.528E-01	52.97E-01	1501.38	
			---	---			
	Total Activity :		4.850E+01	4.850E+01			

Grand Total Activity : 4.850E+01 4.850E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	3.564E+01	4.523E+01	3.366E+01	0.000E+00	1.059
RA-226	1.251E+01	6.014E+01	9.031E+01	0.000E+00	0.139
TH-228	3.528E-01	5.297E+00	6.909E+00	0.000E+00	0.051

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.155E+01		2.155E+01	3.644E+01	0.000E+00	0.317
NA-24	-5.607E+00		4.730E+00	Half-Life too short		
CR-51	-3.341E+01		2.700E+01	4.307E+01	0.000E+00	-0.776
MN-54	2.370E+00		2.139E+00	3.709E+00	0.000E+00	0.639
CO-57	1.317E+00		2.244E+00	3.759E+00	0.000E+00	0.350
CO-58	1.531E+00		2.432E+00	4.135E+00	0.000E+00	0.370
FE-59	5.558E+00		5.091E+00	8.751E+00	0.000E+00	0.635
CO-60	-7.388E-02		2.314E+00	3.794E+00	0.000E+00	-0.019
ZN-65	6.471E+00		4.914E+00	8.666E+00	0.000E+00	0.747
SE-75	-9.086E-02		3.254E+00	5.404E+00	0.000E+00	-0.017
SR-85	2.041E+01		2.845E+00	5.547E+00	0.000E+00	3.679
Y-88	1.146E+00		2.633E+00	4.460E+00	0.000E+00	0.257
NB-94	-6.728E-01		2.081E+00	3.345E+00	0.000E+00	-0.201
NB-95	2.267E+00		2.362E+00	4.079E+00	0.000E+00	0.556
ZR-95	-2.569E+00		4.011E+00	6.476E+00	0.000E+00	-0.397
MO-99	1.128E+02		4.676E+02	7.684E+02	0.000E+00	0.147
RU-103	1.876E+00		2.773E+00	4.702E+00	0.000E+00	0.399
RU-106	1.752E+00		2.099E+01	3.411E+01	0.000E+00	0.051
AG-110m	-1.824E+00		2.230E+00	3.525E+00	0.000E+00	-0.517
SN-113	8.686E-01		3.200E+00	5.273E+00	0.000E+00	0.165
SB-124	-1.945E-01		5.834E+00	4.066E+00	0.000E+00	-0.048
SB-125	-3.087E+00		6.646E+00	1.065E+01	0.000E+00	-0.290
TE-129M	9.860E+00		3.296E+01	5.401E+01	0.000E+00	0.183
I-131	-3.702E+00		7.557E+00	1.203E+01	0.000E+00	-0.308
BA-133	9.408E+00		3.781E+00	5.773E+00	0.000E+00	1.630
CS-134	8.278E+00		3.924E+00	4.439E+00	0.000E+00	1.865
CS-136	-1.123E+00		4.115E+00	6.727E+00	0.000E+00	-0.167
CS-137	1.148E-01		2.367E+00	3.878E+00	0.000E+00	0.030
CE-139	-2.018E+00		2.397E+00	3.872E+00	0.000E+00	-0.521
BA-140	-2.432E+00		1.541E+01	2.532E+01	0.000E+00	-0.096
LA-140	4.277E+00		5.399E+00	9.383E+00	0.000E+00	0.456
CE-141	4.128E+00		5.742E+00	8.204E+00	0.000E+00	0.503
CE-144	6.313E+00		2.035E+01	2.884E+01	0.000E+00	0.219
EU-152	-1.374E+01		8.766E+00	1.138E+01	0.000E+00	-1.208
EU-154	1.562E+00		4.600E+00	7.672E+00	0.000E+00	0.204
AC-228	-3.397E+00		1.133E+01	1.402E+01	0.000E+00	-0.242
TH-232	-3.381E+00		1.128E+01	1.396E+01	0.000E+00	-0.242
U-235	4.151E+01		1.999E+01	2.960E+01	0.000E+00	1.402
U-238	1.352E+02		2.436E+02	4.095E+02	0.000E+00	0.330
AM-241	-1.446E+01		3.385E+01	4.670E+01	0.000E+00	-0.310

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A,11L28786-10      ,06/06/2006 07:08,05/23/2006 13:30,   3.835E+00,WG L28786-10 E
B,11L28786-10      ,LIBD                   ,06/02/2006 08:22,114L092404
C,K-40     ,YES,   3.564E+01,   4.523E+01,   3.366E+01,,    1.059
C,RA-226   ,YES,   1.251E+01,   6.014E+01,   9.031E+01,,    0.139
C,TH-228   ,YES,   3.528E-01,   5.297E+00,   6.909E+00,,    0.051
C,BE-7     ,NO ,   1.155E+01,   2.155E+01,   3.644E+01,,    0.317
C,CR-51    ,NO ,  -3.341E+01,   2.700E+01,   4.307E+01,,   -0.776
C,MN-54    ,NO ,   2.370E+00,   2.139E+00,   3.709E+00,,    0.639
C,CO-57    ,NO ,   1.317E+00,   2.244E+00,   3.759E+00,,    0.350
C,CO-58    ,NO ,   1.531E+00,   2.432E+00,   4.135E+00,,    0.370
C,FE-59    ,NO ,   5.558E+00,   5.091E+00,   8.751E+00,,    0.635
C,CO-60    ,NO ,  -7.388E-02,   2.314E+00,   3.794E+00,,   -0.019
C,ZN-65    ,NO ,   6.471E+00,   4.914E+00,   8.666E+00,,    0.747
C,SE-75    ,NO ,  -9.086E-02,   3.254E+00,   5.404E+00,,   -0.017
C,SR-85    ,NO ,   2.041E+01,   2.845E+00,   5.547E+00,,    3.679
C,Y-88     ,NO ,   1.146E+00,   2.633E+00,   4.460E+00,,    0.257
C,NB-94    ,NO ,  -6.728E-01,   2.081E+00,   3.345E+00,,   -0.201
C,NB-95    ,NO ,   2.267E+00,   2.362E+00,   4.079E+00,,    0.556
C,ZR-95    ,NO ,  -2.569E+00,   4.011E+00,   6.476E+00,,   -0.397
C,MO-99    ,NO ,   1.128E+02,   4.676E+02,   7.684E+02,,    0.147
C,RU-103   ,NO ,   1.876E+00,   2.773E+00,   4.702E+00,,    0.399
C,RU-106   ,NO ,   1.752E+00,   2.099E+01,   3.411E+01,,    0.051
C,AG-110m  ,NO ,  -1.824E+00,   2.230E+00,   3.525E+00,,   -0.517
C,SN-113   ,NO ,   8.686E-01,   3.200E+00,   5.273E+00,,    0.165
C,SB-124   ,NO ,  -1.945E-01,   5.834E+00,   4.066E+00,,   -0.048
C,SB-125   ,NO ,  -3.087E+00,   6.646E+00,   1.065E+01,,   -0.290
C,TE-129M  ,NO ,   9.860E+00,   3.296E+01,   5.401E+01,,    0.183
C,I-131    ,NO ,  -3.702E+00,   7.557E+00,   1.203E+01,,   -0.308
C,BA-133   ,NO ,   9.408E+00,   3.781E+00,   5.773E+00,,    1.630
C,CS-134   ,NO ,   8.278E+00,   3.924E+00,   4.439E+00,,    1.865
C,CS-136   ,NO ,  -1.123E+00,   4.115E+00,   6.727E+00,,   -0.167
C,CS-137   ,NO ,   1.148E-01,   2.367E+00,   3.878E+00,,    0.030
C,CE-139   ,NO ,  -2.018E+00,   2.397E+00,   3.872E+00,,   -0.521
C,BA-140   ,NO ,  -2.432E+00,   1.541E+01,   2.532E+01,,   -0.096
C,LA-140   ,NO ,   4.277E+00,   5.399E+00,   9.383E+00,,    0.456
C,CE-141   ,NO ,   4.128E+00,   5.742E+00,   8.204E+00,,    0.503
C,CE-144   ,NO ,   6.313E+00,   2.035E+01,   2.884E+01,,    0.219
C,EU-152   ,NO ,  -1.374E+01,   8.766E+00,   1.138E+01,,   -1.208
C,EU-154   ,NO ,   1.562E+00,   4.600E+00,   7.672E+00,,    0.204
C,AC-228   ,NO ,  -3.397E+00,   1.133E+01,   1.402E+01,,   -0.242
C,TH-232   ,NO ,  -3.381E+00,   1.128E+01,   1.396E+01,,   -0.242
C,U-235    ,NO ,   4.151E+01,   1.999E+01,   2.960E+01,,    1.402
C,U-238    ,NO ,   1.352E+02,   2.436E+02,   4.095E+02,,    0.330
C,AM-241   ,NO ,  -1.446E+01,   3.385E+01,   4.670E+01,,   -0.310
```

Sec. Review: Analyst: LIMS: ✓

==========
VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 6-JUN-2006 05:08:48.81
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 5-JUN-2006 23:08:28.69

LIMS No., Customer Name, Client ID: WG L28786-11 EX LAS

Sample ID : 13L28786-11
Sample Type : WG
Quantity : 3.65980E+00 L
Start Channel : 25 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 23-MAY-2006 14:00:00.
Geometry : 1335L090904
BKGFILE : 13BG060306MT
Real Time : 0 06:00:06.15
Live time : 0 06:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	63.24*	36	576	0.88	126.50	6.18E-01	1.65E-03	129.5	3.02E+00
2	1	66.21	171	550	1.44	132.44	7.20E-01	7.92E-03	23.0	3.89E+00
3	1	84.46*	17	638	1.58	168.93	1.31E+00	7.76E-04	290.6	2.39E+00
4	1	87.32*	14	507	1.01	174.63	1.39E+00	6.35E-04	284.5	1.39E+00
5	1	92.75*	68	846	1.60	185.50	1.52E+00	3.15E-03	93.5	5.38E+00
6	1	139.82*	74	468	1.02	279.58	2.02E+00	3.43E-03	54.2	1.09E+00
7	1	185.66*	40	657	0.90	371.23	1.95E+00	1.83E-03	135.2	4.66E-01
8	1	198.33*	97	507	1.29	396.55	1.90E+00	4.48E-03	45.8	3.11E+00
9	1	295.12*	68	497	2.64	590.07	1.52E+00	3.13E-03	74.2	2.22E+00
10	1	351.88*	69	313	1.68	703.57	1.34E+00	3.21E-03	57.4	3.31E+00
11	1	583.52*	6	143	2.25	1166.94	9.26E-01	2.74E-04	493.2	2.18E+00
12	1	596.99	148	228	2.89	1193.88	9.10E-01	6.83E-03	23.8	2.00E+00
13	1	609.54*	126	163	1.43	1219.00	8.96E-01	5.82E-03	25.3	5.72E+00
14	1	911.45*	62	60	2.97	1823.25	6.64E-01	2.89E-03	36.4	3.39E+00
15	1	1120.90*	16	98	2.20	2242.67	5.69E-01	7.27E-04	158.1	1.24E+00
16	1	1461.05*	40	69	2.07	2924.15	4.69E-01	1.84E-03	67.8	1.25E+00
17	1	1764.61*	35	30	2.06	3532.74	4.11E-01	1.61E-03	47.4	1.60E+00
18	1	1970.49	55	45	9.46	3945.68	3.83E-01	2.54E-03	32.0	1.25E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	40	10.67*	4.688E-01	2.712E+01	2.712E+01	135.56
RA-226	186.21	40	3.28*	1.946E+00	2.116E+01	2.116E+01	270.40
AC-228	835.50	------	1.75	7.084E-01	------	Line Not Found	------
	911.07	62	27.70*	6.639E-01	1.160E+01	1.165E+01	72.89
TH-232	583.14	6	30.25	9.257E-01	7.239E-01	7.239E-01	986.47
	911.07	62	27.70*	6.639E-01	1.160E+01	1.160E+01	72.89
	969.11	------	16.60	6.342E-01	------	Line Not Found	------
U-235	143.76	------	10.50*	2.023E+00	------	Line Not Found	------
	163.35	------	4.70	2.011E+00	------	Line Not Found	------
	185.71	40	54.00	1.946E+00	1.285E+00	1.285E+00	270.40
	205.31	------	4.70	1.871E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28786-11

Acquisition date : 5-JUN-2006 23:08:28

Total number of lines in spectrum	18	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	4	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.712E+01	2.712E+01	3.676E+01	135.56	
RA-226	1600.00Y	1.00	2.116E+01	2.116E+01	5.721E+01	270.40	
AC-228	5.75Y	1.00	1.160E+01	1.165E+01	0.849E+01	72.89	
TH-232	1.41E+10Y	1.00	1.160E+01	1.160E+01	0.846E+01	72.89	
U-235	7.04E+08Y	1.00	1.285E+00	1.285E+00	3.475E+00	270.40	K
			---	---			
	Total Activity :		7.276E+01	7.281E+01			

Grand Total Activity : 7.276E+01 7.281E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28786-11

Acquisition date : 5-JUN-2006 23:08:28

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	63.24	36	576	0.88	126.50	123	6	1.65E-03	****	6.18E-01	
1	66.21	171	550	1.44	132.44	130	6	7.92E-03	46.0	7.20E-01	
1	84.46	17	638	1.58	168.93	165	8	7.76E-04	****	1.31E+00	
1	87.32	14	507	1.01	174.63	173	6	6.35E-04	****	1.39E+00	
1	92.75	68	846	1.60	185.50	181	10	3.15E-03	****	1.52E+00	
1	139.82	74	468	1.02	279.58	277	6	3.43E-03	****	2.02E+00	
1	198.33	97	507	1.29	396.55	393	8	4.48E-03	91.5	1.90E+00	
1	295.12	68	497	2.64	590.07	584	13	3.13E-03	****	1.52E+00	
1	351.88	69	313	1.68	703.57	698	10	3.21E-03	****	1.34E+00	
1	596.99	148	228	2.89	1193.88	1186	15	6.83E-03	47.7	9.10E-01	
1	609.54	126	163	1.43	1219.00	1214	10	5.82E-03	50.6	8.96E-01	
1	1120.90	16	98	2.20	2242.67	2235	14	7.27E-04	****	5.69E-01	
1	1764.61	35	30	2.06	3532.74	3527	14	1.61E-03	94.8	4.11E-01	
1	1970.49	55	45	9.46	3945.68	3938	18	2.54E-03	63.9	3.83E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	18	
Number of unidentified lines	14	
Number of lines tentatively identified by NID	4	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.712E+01	2.712E+01	3.676E+01	135.56	
RA-226	1600.00Y	1.00	2.116E+01	2.116E+01	5.721E+01	270.40	
AC-228	5.75Y	1.00	1.088E+01	1.092E+01	1.112E+01	101.76	
TH-232	1.41E+10Y	1.00	7.239E-01	7.239E-01	71.41E-01	986.47	
			---	---			
	Total Activity :		5.988E+01	5.993E+01			

Grand Total Activity : 5.988E+01 5.993E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA

K-40	2.712E+01	3.676E+01	3.162E+01	0.000E+00	0.858
RA-226	2.116E+01	5.721E+01	7.817E+01	0.000E+00	0.271
AC-228	1.092E+01	1.112E+01	1.211E+01	0.000E+00	0.902
TH-232	7.239E-01	7.141E+00	1.313E+01	0.000E+00	0.055

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.828E+01		1.963E+01	3.318E+01	0.000E+00	0.551
NA-24	-4.436E+00		3.125E+00	Half-Life too short		
CR-51	-1.269E+01		2.288E+01	3.745E+01	0.000E+00	-0.339
MN-54	-2.319E-01		1.926E+00	3.126E+00	0.000E+00	-0.074
CO-57	-4.481E-01		1.987E+00	3.294E+00	0.000E+00	-0.136
CO-58	-7.618E-01		2.176E+00	3.497E+00	0.000E+00	-0.218
FE-59	7.014E+00		4.608E+00	8.221E+00	0.000E+00	0.853
CO-60	1.410E+00		1.797E+00	3.106E+00	0.000E+00	0.454
ZN-65	2.863E+00		4.808E+00	7.041E+00	0.000E+00	0.407
SE-75	-5.442E-01		2.897E+00	4.672E+00	0.000E+00	-0.116
SR-85	1.820E+01		2.728E+00	5.250E+00	0.000E+00	3.466
Y-88	-1.252E+00		2.098E+00	3.238E+00	0.000E+00	-0.387
NB-94	-8.762E-01		1.946E+00	3.147E+00	0.000E+00	-0.278
NB-95	2.292E+00		2.267E+00	3.893E+00	0.000E+00	0.589
ZR-95	-1.968E+00		3.876E+00	6.210E+00	0.000E+00	-0.317
MO-99	-8.034E+00		4.189E+02	6.884E+02	0.000E+00	-0.012
RU-103	1.277E+00		2.527E+00	4.199E+00	0.000E+00	0.304
RU-106	-6.975E+00		1.902E+01	3.109E+01	0.000E+00	-0.224
AG-110m	2.105E-01		1.931E+00	3.213E+00	0.000E+00	0.066
SN-113	-9.362E-01		2.714E+00	4.422E+00	0.000E+00	-0.212
SB-124	1.538E+00		4.881E+00	3.843E+00	0.000E+00	0.400
SB-125	5.048E-01		5.668E+00	9.338E+00	0.000E+00	0.054
TE-129M	2.237E+01		2.924E+01	4.919E+01	0.000E+00	0.455
I-131	3.436E+00		6.148E+00	1.035E+01	0.000E+00	0.332
BA-133	3.512E+00		3.182E+00	4.705E+00	0.000E+00	0.746
CS-134	5.039E+00		3.952E+00	3.555E+00	0.000E+00	1.418
CS-136	1.824E+00		3.824E+00	6.408E+00	0.000E+00	0.285
CS-137	-4.467E-01		2.259E+00	3.478E+00	0.000E+00	-0.128
CE-139	1.141E+00		2.088E+00	3.484E+00	0.000E+00	0.327
BA-140	7.249E+00		1.440E+01	2.387E+01	0.000E+00	0.304
LA-140	-5.477E-01		4.415E+00	7.220E+00	0.000E+00	-0.076
CE-141	1.984E+00		4.987E+00	7.148E+00	0.000E+00	0.277
CE-144	-2.969E+00		1.740E+01	2.551E+01	0.000E+00	-0.116
EU-152	-7.181E+00		7.397E+00	9.978E+00	0.000E+00	-0.720
EU-154	-7.455E-01		4.058E+00	6.731E+00	0.000E+00	-0.111
TH-228	3.034E+00		4.306E+00	6.855E+00	0.000E+00	0.443
U-235	-4.674E+00		1.824E+01	2.485E+01	0.000E+00	-0.188
U-238	7.892E+01		2.427E+02	3.815E+02	0.000E+00	0.207
AM-241	8.474E+00		2.011E+01	2.855E+01	0.000E+00	0.297

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A,13L28786-11      ,06/06/2006 05:08,05/23/2006 14:00,   3.660E+00,WG L28786-11 E
B,13L28786-11      ,LIBD                ,06/01/2006 10:13,1335L090904
C,K-40     ,YES,   2.712E+01,   3.676E+01,   3.162E+01,,    0.858
C,RA-226   ,YES,   2.116E+01,   5.721E+01,   7.817E+01,,    0.271
C,AC-228   ,YES,   1.092E+01,   1.112E+01,   1.211E+01,,    0.902
C,TH-232   ,YES,   7.239E-01,   7.141E+00,   1.313E+01,,    0.055
C,BE-7     ,NO ,   1.828E+01,   1.963E+01,   3.318E+01,,    0.551
C,CR-51    ,NO ,  -1.269E+01,   2.288E+01,   3.745E+01,,   -0.339
C,MN-54    ,NO ,  -2.319E-01,   1.926E+00,   3.126E+00,,   -0.074
C,CO-57    ,NO ,  -4.481E-01,   1.987E+00,   3.294E+00,,   -0.136
C,CO-58    ,NO ,  -7.618E-01,   2.176E+00,   3.497E+00,,   -0.218
C,FE-59    ,NO ,   7.014E+00,   4.608E+00,   8.221E+00,,    0.853
C,CO-60    ,NO ,   1.410E+00,   1.797E+00,   3.106E+00,,    0.454
C,ZN-65    ,NO ,   2.863E+00,   4.808E+00,   7.041E+00,,    0.407
C,SE-75    ,NO ,  -5.442E-01,   2.897E+00,   4.672E+00,,   -0.116
C,SR-85    ,NO ,   1.820E+01,   2.728E+00,   5.250E+00,,    3.466
C,Y-88     ,NO ,  -1.252E+00,   2.098E+00,   3.238E+00,,   -0.387
C,NB-94    ,NO ,  -8.762E-01,   1.946E+00,   3.147E+00,,   -0.278
C,NB-95    ,NO ,   2.292E+00,   2.267E+00,   3.893E+00,,    0.589
C,ZR-95    ,NO ,  -1.968E+00,   3.876E+00,   6.210E+00,,   -0.317
C,MO-99    ,NO ,  -8.034E+00,   4.189E+02,   6.884E+02,,   -0.012
C,RU-103   ,NO ,   1.277E+00,   2.527E+00,   4.199E+00,,    0.304
C,RU-106   ,NO ,  -6.975E+00,   1.902E+01,   3.109E+01,,   -0.224
C,AG-110m  ,NO ,   2.105E-01,   1.931E+00,   3.213E+00,,    0.066
C,SN-113   ,NO ,  -9.362E-01,   2.714E+00,   4.422E+00,,   -0.212
C,SB-124   ,NO ,   1.538E+00,   4.881E+00,   3.843E+00,,    0.400
C,SB-125   ,NO ,   5.048E-01,   5.668E+00,   9.338E+00,,    0.054
C,TE-129M  ,NO ,   2.237E+01,   2.924E+01,   4.919E+01,,    0.455
C,I-131    ,NO ,   3.436E+00,   6.148E+00,   1.035E+01,,    0.332
C,BA-133   ,NO ,   3.512E+00,   3.182E+00,   4.705E+00,,    0.746
C,CS-134   ,NO ,   5.039E+00,   3.952E+00,   3.555E+00,,    1.418
C,CS-136   ,NO ,   1.824E+00,   3.824E+00,   6.408E+00,,    0.285
C,CS-137   ,NO ,  -4.467E-01,   2.259E+00,   3.478E+00,,   -0.128
C,CE-139   ,NO ,   1.141E+00,   2.088E+00,   3.484E+00,,    0.327
C,BA-140   ,NO ,   7.249E+00,   1.440E+01,   2.387E+01,,    0.304
C,LA-140   ,NO ,  -5.477E-01,   4.415E+00,   7.220E+00,,   -0.076
C,CE-141   ,NO ,   1.984E+00,   4.987E+00,   7.148E+00,,    0.277
C,CE-144   ,NO ,  -2.969E+00,   1.740E+01,   2.551E+01,,   -0.116
C,EU-152   ,NO ,  -7.181E+00,   7.397E+00,   9.978E+00,,   -0.720
C,EU-154   ,NO ,  -7.455E-01,   4.058E+00,   6.731E+00,,   -0.111
C,TH-228   ,NO ,   3.034E+00,   4.306E+00,   6.855E+00,,    0.443
C,U-235    ,NO ,  -4.674E+00,   1.824E+01,   2.485E+01,,   -0.188
C,U-238    ,NO ,   7.892E+01,   2.427E+02,   3.815E+02,,    0.207
C,AM-241   ,NO ,   8.474E+00,   2.011E+01,   2.855E+01,,    0.297
```

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L28801

Exelon

June 12, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L28801
EX001-3ESPSALLE-06

06/12/2006 08:29

Sample Receipt

The following samples were received on June 1, 2006 in good condition, unless otherwise noted.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WS-LS-SW-LS-104-052506-NK-008	L28801-1	
WS-LS-SW-LS-105-052506-NK-009	L28801-2	
RB-LS-052506-NK-010	L28801-3	
WG-LS-MW-LS-110S-052506-NK-011	L28801-4	
WG-LS-MW-LS-108S-052506-NK-016	L28801-5	
WG-LS-MW-LS-106S-052506-NK-017	L28801-6	
WS-LS-SW-LS-105-052506-NK-018	L28801-7	
WG-LS-MW-LS-107S-052606-NK-018	L28801-8	
WG-LS-MW-LS-105S-052606-NK-019	L28801-9	
WG-LS-MW-LS-104S-052606-NK-020	L28801-10	
WG-LS-MW-LS-109S-052606-NK-021	L28801-11	
WG-LS-MW-LS-111S-053006-BW-022	L28801-12	
WG-LS-MW-LS-111S-053006-BW-023	L28801-13	
WG-LS-MW-LS-112S-053006-BW-024	L28801-14	
WG-LS-MW-LS-112S-053006-BW-025	L28801-15	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
Gamma Spectrometry	TBE-2007	EPA 901.1
H-3	TBE-2010	EPA 906.0
TOTAL SR	TBE-2018	EPA 905.0

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28801
EX001-3ESPSALLE-06

06/12/2006 08:29

Gamma Spectroscopy

Quality Control

Quality control samples were analyzed as WG4094.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WS-LS-SW-LS-104-052506-NK-008	L28801-1	WG4094-8

H-3

Quality Control

Quality control samples were analyzed as WG4098,WG4106.

Method Blank

All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample

All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample

Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
RB-PB-RB2-052406-JAS-029	L28795-10	WG4098-3
WG-LS-MW-LS-109S-052606-NK-021	L28801-11	WG4106-3

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L28801
EX001-3ESPSALLE-06

06/12/2006 08:29

TOTAL SR

Quality Control

Quality control samples were analyzed as WG4116.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WS-LS-SW-LS-104-052506-NK-008	L28801-1	WG4116-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

06/02/06 08:52

SR #: SR08667

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPSALLE-06 LIMS #: L28801

Initiated By: BWILKERSON
Init Date: 06/01/06 Receive Date: 06/01/06

Notification of Variance

Person Notified: Contacted By:
Notify Date:
Notify Method:
Notify Comment:

Client Response

Person Responding:
Response Date:
Response Method:
Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	NA	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody RB-LS-052506-NK-010 WS-LS-SW-LS-105-052506-NK-018	N	Both of these samples have an extra bottle of tritium. COC indicate only 2 containers for each sample.
8	Sample(s) properly preserved and in appropriate container(s)	Y	Ph at or below 2
9	Other (Describe)	NA	

L28801

CRA
CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

SHIPPED TO (Laboratory Name): Teledyne Brown (CRA Samples)

REFERENCE NUMBER: 45136-24-003

PROJECT NAME: Exelon Fleetwide Tritium Assessment

CHAIN OF CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Nathan Kuhl

SEQ: No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	Tritium	Gamma Spec LS-84/1D	REMARKS
	5/25/06		~~[illegible]~~ WS-LS-SW-LS-104-052506-NK-008		2	X	X X	
			WS-LS-SW-LS-105-052506-NK-009		2	X	X X	
			RB-LS-052506-NK-010		2	X	X X	
			WG-LS-MW-LS-110S-052506-NK-011		2	X	X X	
			108S 016		2	X	X X	
			106S 017		2	X	X X	
			WS-LS-SW-LS-105-052506-NK-018		2	X	X X	Max HNO3 used; 20mL (06/06)
	5/26/06		WG-LS-MW-LS-107S-052606-NK-018		2	X	X X	
			105S 019		2	X	X X	
			104S 020		2	X	X X	
			109S 021		2	X	X X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: 1. [signature]	DATE: 5/30/06 TIME: 1510	RECEIVED BY: 1. [signature]	DATE: 5/30/06 TIME: 1515
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: AIR BILL No.

White -Fully Executed Copy Pink -Shipper Copy
Yellow -Receiving Laboratory Copy Goldenrod -Sampler Copy

SAMPLE TEAM: N. Kuhl

RECEIVED FOR LABORATORY BY: Pat Marshall
DATE: 6/1/06 TIME: 1100

27015

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

L 28801

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # № D 1703

SSOW Ref. Code:

Required Client Information:

Company: CRA, Inc.	Report To: Denis Hoyt
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: Exelon - Lasalle
Fax: 734-453-5201	Project Number: 45136.24-003
Email:	

Laboratory:	Teledyne Brown
Laboratory Location:	
Laboratory Contact:	
Requested Due Date:	TAT:
QA/QC Requirements:	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	Analysis and Method: Tritium	Gamma-Spec	SR-89/90								Remarks/Lab ID
1.	WG-LS-MW-LS-1115-053006-BW-022	WG	5/30/06	1106	2	Y			Y			X	X	X								
2.	1115-023			1126	2	X			X			X	X	X								
3.	1125-024			1311	2	X			X			X	X	X								
4.	1125-025			1321	2	Y			Y			X	X	X								Max HNO3 used 18 mLs
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						

TOTAL NUMBER OF CONTAINERS

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
			5/30/06	1600	Frank A. Spangl	5/30/06	1600
AIRBILL NO.					Pat Marshall	6/1/06	1100

Sample Condition

Temp in C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6.04)

L28801 8 of 130

Charles, Rebecca

From: Shaw, Kathy [kshaw@craworld.com]
Sent: Thursday, June 01, 2006 4:10 PM
To: Charles, Rebecca; zigmund.karpa@exeloncorp.com; joyce.tomlinson@exeloncorp.com; Czech, Julie; Larry.Walton@exeloncorp.com; Rick.maldonado@exeloncorp.com; Scott.sklenar@exeloncorp.com
Subject: RE: Acknowledgement and variance report.

This is the revised COC, please let me know if you have any questions - Kathy

---

From: Charles, Rebecca [mailto:Rebecca.Charles@tbe.com]
Sent: Thursday, June 01, 2006 1:15 PM
To: zigmund.karpa@exeloncorp.com; joyce.tomlinson@exeloncorp.com; Czech, Julie; Larry.Walton@exeloncorp.com; Rick.maldonado@exeloncorp.com; Scott.sklenar@exeloncorp.com; Shaw, Kathy
Subject: Acknowledgement and variance report.

LaSalle sample WS-LS-SW-LS-102-052306-NK-003 was damaged in shipment and some of the sample leaked out. We still have 2 liters and should be able to extend the count times and perform the analyses with that volume.

No sample collection times were provided for samples 1 through 6 (see acknowledgement)

Also
ID on COC was RB-LS-052306-NK-005 ID on container RB-LS-052306-NK-105
ID on COC was WG-LS-MW-LS-1015-052406 ID on container WG-LS-MW-LS-1015-052306

Samples were logged using ID on COC.

Rebecca Charles
Teledyne Brown Engineering
Project Manager
(865) 934-0379
(865) 934-0396 (fax)

REVISED

L28801

CRA

CONESTOGA-ROVERS & ASSOCIATES, INC.
14496 Sheldon Road, Suite 200
Plymouth, MI 48170 • (734) 453-5123

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name): Teledyne Brown (CRA Samples)

REFERENCE NUMBER: 45136-24-003

PROJECT NAME: Exelon Fleetwide Tritium Assessment

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Nathan Kuhl

SEQ. No.	DATE	TIME		SAMPLE TYPE	No. OF CONTAINERS	Tritium	Gamma GE LS-89/90	REMARKS
	5/25/06	0835	WS-LS-SW-LS-104-052506-NK-008	water	2	X	X X	
		0900	WS-LS-SW-LS-105-052506-NK-009		2	X	X X	
		0910	RB-LS-052506-NK-010		2	X	X X	
		1040	WL-LS-MW-LS-110S-052506-NK-011		2	X	X X	
		840	108S 016		2	X	X X	
		1005	106S 017		2	X	X X	
		900	WS-LS-SW-LS-105-052506-NK-018		2	X	X X	
	5/26/06	920	WL-LS-MW-LS-107S-052606-NK-018		2	X	X X	Max HNO3 used, 20mL (bb)
		1110	108S 019		2	X	X X	
		1100	109S 020		2	X	X X	
		1255	109S 021		2	X	X X	

TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY: 1. [signature]	DATE: 5/30/06 TIME: 1510	RECEIVED BY: 1. [signature]	DATE: 5/30/06 TIME: 1515
RELINQUISHED BY: 2.	DATE: TIME:	RECEIVED BY: 2.	DATE: TIME:
RELINQUISHED BY: 3.	DATE: TIME:	RECEIVED BY: 1.	DATE: TIME:

METHOD OF SHIPMENT: AIR BILL No.

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: N. Kuhl

RECEIVED FOR LABORATORY BY:

DATE: TIME:

27015

1001 (FORMS)-APRIL 29, 93-REV.0-(C)(F-01)

L28801

CONESTOGA-ROVERS & ASSOCIATES

REVISED

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # № D 1703

SSOW Ref. Code:

Required Client Information:

Company: CRA, Inc.	Report To: Dennis Hoyt
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: Exelon Lasalle
Fax: 734-453-5201	Project Number: 45136-24-003
Email:	

Laboratory:	Teledyne Brown
Laboratory Location:	
Laboratory Contact:	
Requested Due Date:	TAT:
QA/QC Requirements:	

Valid Matrix Codes: WG Groundwater; WP Borehole Water; WS Surface Water; SO Soil; SE Sediment; See Back for Additional Codes

Analysis and Method

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Unpreserved	HCl	H2SO4	HNO3	NaOH	Other	Tritium	Gamma Spec	SR-89/90	Remarks/Lab ID
1. WG-LS-MW-LS-1115-053006-BU-022	WG	5/30/06	1106	2	Y			Y			X	X	X	
2. 1115 023			1126	2	Y			Y			X	X	X	
3. 1125 024			1311	2	Y			Y			X	X	X	
4. 1125 025			1321	2	Y			Y			X	X	X	Max Hung used 18 mLs
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
13.														
14.														
15.														
TOTAL NUMBER OF CONTAINERS														

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
	1		5/30/06		Frank A. Sampf	5/30/06	1600

AIRBILL NO.

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

TELEDYNE BROWN ENGINEERING
2508 Quality Lane
Knoxville, TN 37931-3133

6-2-06

ACKNOWLEDGEMENT
This is not an invoice

June 02, 2006

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville, CT 06062

The following sample(s) were received at Teledyne Brown Engineering Knoxville laboratory on June 01, 2006. The sample(s) have been scheduled for the analyses listed below and the report is scheduled for completion by June 08, 2006. Please review the following login information and pricing. Contact me if anything is incorrect or you have questions about the status of your sample(s).

Thank you for choosing Teledyne Brown Engineering for your analytical needs.

Sincerely,
Rebecca Charles
Project Manager
(865)934-0379

Project ID: EX001-3ESPSALLE-06
P.O. #: 00411203
Release #:
Contract#: 00411203
Kathy Shaw, FAX#:860-747-1900, larry.walton@exeloncorp.com

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WS-LS-SW-LS-104-052506-NK-00	**L28801-1**		**05/25/06:0835**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WS-LS-SW-LS-105-052506-NK-00	**L28801-2**		**05/25/06:0900**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
RB-LS-052506-NK-010	**L28801-3**		**05/25/06:0910**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-110S-052506-NK-0	**L28801-4**		**05/25/06:1040**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-108S-052506-NK-0	**L28801-5**		**05/25/06:0840**	

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-106S-052506-NK-0	**L28801-6**		**05/25/06:1005**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WS-LS-SW-LS-105-052506-NK-01	**L28801-7**		**05/25/06:0900**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-107S-052606-NK-0	**L28801-8**		**05/26/06:0920**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-105S-052606-NK-0	**L28801-9**		**05/26/06:1110**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-104S-052606-NK-0	**L28801-10**		**05/26/06:1100**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-109S-052606-NK-0	**L28801-11**		**05/26/06:1255**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-111S-053006-BW-0	**L28801-12**		**05/30/06:1106**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-111S-053006-BW-0	**L28801-13**		**05/30/06:1126**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		
WG-LS-MW-LS-112S-053006-BW-0	**L28801-14**		**05/30/06:1311**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		

Client ID/ Station	Laboratory ID Analysis	Vol/Units Price	Start Collect Date/Time	End Collect Date/Time
WG-LS-MW-LS-112S-053006-BW-0	**L28801-15**		**05/30/06:1321**	
WG	GELI	108.00		
WG	H-3	108.00		
WG	SR-90 (FAST)	140.00		

End of document

Internal Chain of Custody

06/12/06 08:28

Teledyne Brown Engineering
Internal Chain of Custody

****

Sample # L28801-1 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-1 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-2 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-2 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-3 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-3 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Internal Chain of Custody

****

Sample # L28801-3 Containernum 3

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-4 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-4 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-5 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-5 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-6 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Internal Chain of Custody

****

Sample # L28801-6 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-7 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-7 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-7 Containernum 3

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-8 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-8 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

06/12/06 08:28

Teledyne Brown Engineering
Internal Chain of Custody

****

Sample # L28801-9 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-9 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-10 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-10 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-11 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Sample # L28801-11 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By
06/01/2006 00:00

Received By
099999 Sample Custodian

****

Internal Chain of Custody

****

Sample # L28801-12 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-12 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-13 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-13 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-14 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

Sample # L28801-14 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By Received By
06/01/2006 00:00 099999 Sample Custodian

****

06/12/06 08:28

Teledyne Brown Engineering

Internal Chain of Custody

****

Sample # L28801-15 Containernum 1

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By

06/01/2006 00:00

Received By

099999 Sample Custodian

****

Sample # L28801-15 Containernum 2

Prod	Analyst
GELI	EJ
H-3	EJ
SR-90 (FAST)	LCB

Relinquish Date Relinquish By

06/01/2006 00:00

Received By

099999 Sample Custodian

06/12/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28801

****

L28801-1 WG WS-LS-SW-LS-104-052506-NK-008

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-2 WG WS-LS-SW-LS-105-052506-NK-009

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-3 WG RB-LS-052506-NK-010

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-4 WG WG-LS-MW-LS-110S-052506-NK-011

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-5 WG WG-LS-MW-LS-108S-052506-NK-016

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06

06/12/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28801

L28801-5 **WG** **WG-LS-MW-LS-108S-052506-NK-016**

Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-6 **WG** **WG-LS-MW-LS-106S-052506-NK-017**

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-7 **WG** **WS-LS-SW-LS-105-052506-NK-018**

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-8 **WG** **WG-LS-MW-LS-107S-052606-NK-018**

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-9 **WG** **WG-LS-MW-LS-105S-052606-NK-019**

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-10 **WG** **WG-LS-MW-LS-104S-052606-NK-020**

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06

06/12/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28801

L28801-10	**WG**	**WG-LS-MW-LS-104S-052606-NK-020**	
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	ILL	06/07/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-11	**WG**	**WG-LS-MW-LS-109S-052606-NK-021**	
Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/08/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/10/06

****

L28801-12	**WG**	**WG-LS-MW-LS-111S-053006-BW-022**	
Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/08/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-13	**WG**	**WG-LS-MW-LS-111S-053006-BW-023**	
Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/08/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

****

L28801-14	**WG**	**WG-LS-MW-LS-112S-053006-BW-024**	
Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/08/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/09/06

06/12/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L28801

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L28801-15 WG WG-LS-MW-LS-112S-053006-BW-025

Process step	Prod	Analyst	Date
Login		RCHARLES	06/01/06
Aliquot	GELI	EJ	06/06/06
Aliquot	H-3	EJ	06/07/06
Aliquot	SR-90 (FAST)	LCB	06/08/06
Count Room	GELI	KPW	06/08/06
Count Room	H-3	KPW	06/10/06
Count Room	SR-90 (FAST)	KPW	06/10/06

Analytical Results Summary

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WS-LS-SW-LS-104-052506-NK-008**
Station:
Description:
LIMS Number: L28801-1

Collect Start: 05/25/2006 08:35
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	2.55E+01	1.02E+02	**1.65E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	**1.13E+00**	6.37E-01	1.10E+00	pCi/L		450	ml	05/25/06 08:35	06/09/06	150	M	+		
MN-54	2007	9.99E-01	3.32E+00	**5.54E+00**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
CO-58	2007	-5.94E-01	3.33E+00	**5.40E+00**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
FE-59	2007	8.42E+00	6.86E+00	**1.24E+01**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
CO-60	2007	-4.33E-01	3.26E+00	**5.27E+00**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
ZN-65	2007	3.49E+00	6.76E+00	**1.16E+01**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
NB-95	2007	-3.48E-01	3.42E+00	**5.58E+00**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
ZR-95	2007	1.43E+00	5.94E+00	**9.92E+00**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
CS-134	2007	6.26E+00	6.61E+00	**5.72E+00**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
CS-137	2007	-1.55E-01	3.36E+00	**5.55E+00**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
BA-140	2007	2.99E+00	2.16E+01	**3.54E+01**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No
LA-140	2007	4.51E+00	7.27E+00	**1.28E+01**	pCi/L		3523.99	ml	05/25/06 08:35	06/07/06	13204	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WS-LS-SW-LS-105-052506-NK-009**
Station:
Description:
LIMS Number: L28801-2

Collect Start: 05/25/2006 09:00
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.73E+02	1.16E+02	**1.72E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	5.69E-01	7.70E-01	**1.45E+00**	pCi/L		450	ml	05/25/06 09:00	06/09/06	150	M	U		
MN-54	2007	9.75E-01	2.05E+00	**3.39E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
CO-58	2007	-1.04E+00	2.19E+00	**3.51E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
FE-59	2007	-1.36E+00	4.43E+00	**7.14E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
CO-60	2007	-1.02E-01	1.99E+00	**3.26E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
ZN-65	2007	6.45E+00	4.39E+00	**7.60E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
NB-95	2007	-6.66E-01	2.19E+00	**3.55E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
ZR-95	2007	-6.66E-01	3.98E+00	**6.49E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
CS-134	2007	7.21E+00	3.67E+00	**3.61E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U*		No
CS-137	2007	2.20E+00	2.10E+00	**3.59E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
BA-140	2007	1.19E+01	1.48E+01	**2.48E+01**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No
LA-140	2007	6.52E-01	4.87E+00	**8.12E+00**	pCi/L		3555.4	ml	05/24/06 09:00	06/07/06	36000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **RB-LS-052506-NK-010**
Station:
Description:
LIMS Number: L28801-3

Collect Start: 05/25/2006 09:10
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
H-3	2010	2.80E+01	1.03E+02	**1.67E+02**	pCi/L		10	ml		06/10/06	60	M	U			
TOTAL SR	2018	3.42E-01	7.45E-01	**1.43E+00**	pCi/L		450	ml	05/25/06 09:10	06/09/06	150	M	U			
MN-54	2007	-1.14E+00	2.83E+00	**4.56E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
CO-58	2007	-2.00E-01	2.96E+00	**4.88E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
FE-59	2007	1.51E+00	6.45E+00	**1.09E+01**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
CO-60	2007	-3.32E-02	2.65E+00	**4.32E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
ZN-65	2007	2.51E+00	6.33E+00	**1.08E+01**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
NB-95	2007	8.94E-01	3.11E+00	**5.25E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
ZR-95	2007	-1.25E+00	5.63E+00	**9.00E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
CS-134	2007	4.66E+00	3.61E+00	**5.48E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
CS-137	2007	5.03E-03	3.00E+00	**4.91E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
BA-140	2007	1.21E+01	1.88E+01	**3.23E+01**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	
LA-140	2007	-4.56E+00	6.40E+00	**9.75E+00**	pCi/L		3369.32	ml	05/25/06 09:10	06/07/06	11266	Sec	U		No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-110S-052506-NK-011**
Station:
Description:
LIMS Number: L28801-4

Collect Start: 05/25/2006 10:40
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.88E+02**	1.14E+02	1.67E+02	pCi/L		10	ml		06/10/06	60	M	+		
TOTAL SR	2018	1.09E+00	6.54E-01	**1.14E+00**	pCi/L		450	ml	05/25/06 10:40	06/09/06	150	M	U		
MN-54	2007	1.22E+00	2.68E+00	**4.49E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
CO-58	2007	-2.38E+00	2.88E+00	**4.47E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
FE-59	2007	-5.78E-01	6.11E+00	**9.93E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
CO-60	2007	1.21E+00	3.16E+00	**5.12E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
ZN-65	2007	1.90E+00	6.84E+00	**9.64E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
NB-95	2007	9.69E-01	2.79E+00	**4.68E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
ZR-95	2007	-1.14E+00	5.07E+00	**8.22E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
CS-134	2007	7.02E+00	4.63E+00	**4.41E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U*		No
CS-137	2007	-1.76E+00	2.56E+00	**4.08E+00**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
BA-140	2007	1.53E+01	1.73E+01	**2.97E+01**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No
LA-140	2007	4.60E-01	6.30E+00	**1.05E+01**	pCi/L		3332.45	ml	05/24/06 10:40	06/07/06	18000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPSALLE-06

Sample ID: **WG-LS-MW-LS-108S-052506-NK-016**
Station:
Description:
LIMS Number: L28801-5

Collect Start: 05/25/2006 08:40
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-3.56E+01	1.02E+02	**1.72E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	7.30E-01	5.32E-01	**9.40E-01**	pCi/L		450	ml	05/25/06 08:40	06/09/06	150	M	U		
K-40	2007	**6.87E+01**	4.39E+01	3.85E+01	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	+	Yes	
MN-54	2007	1.70E+00	2.92E+00	**4.96E+00**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
CO-58	2007	-1.70E+00	3.12E+00	**4.94E+00**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
FE-59	2007	6.77E+00	6.07E+00	**1.07E+01**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
CO-60	2007	1.39E+00	2.73E+00	**4.62E+00**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
ZN-65	2007	1.02E+01	7.25E+00	**1.12E+01**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
NB-95	2007	2.17E+00	3.05E+00	**5.15E+00**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
ZR-95	2007	-3.81E-01	5.40E+00	**8.80E+00**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
CS-134	2007	8.86E+00	5.87E+00	**5.05E+00**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U*	No	
CS-137	2007	8.52E-01	3.15E+00	**5.07E+00**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
BA-140	2007	1.83E+01	1.98E+01	**3.36E+01**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	
LA-140	2007	3.26E+00	6.01E+00	**1.03E+01**	pCi/L		3206.6	ml	05/25/06 08:40	06/07/06	18000	Sec	U	No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-106S-052506-NK-017**
Station:
Description:
LIMS Number: L28801-6

Collect Start: 05/25/2006 10:05
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.07E+02	1.08E+02	**1.67E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	9.22E-01	5.99E-01	**1.05E+00**	pCi/L		450	ml	05/25/06 10:05	06/09/06	150	M	U		
K-40	2007	**7.15E+01**	3.83E+01	3.43E+01	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	+		Yes
MN-54	2007	2.66E+00	2.33E+00	**4.02E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
CO-58	2007	-2.25E-01	2.47E+00	**4.06E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
FE-59	2007	-2.38E+00	5.24E+00	**8.47E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
CO-60	2007	-1.34E-02	2.20E+00	**3.57E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
ZN-65	2007	8.62E+00	5.17E+00	**9.19E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
NB-95	2007	1.77E+00	2.49E+00	**4.24E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
ZR-95	2007	3.59E-01	4.39E+00	**7.30E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
CS-134	2007	4.90E+00	3.94E+00	**3.93E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
CS-137	2007	-7.46E-01	2.44E+00	**3.93E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
BA-140	2007	5.37E+00	1.59E+01	**2.65E+01**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No
LA-140	2007	-6.75E-01	5.75E+00	**9.38E+00**	pCi/L		3370.86	ml	05/25/06 10:05	06/07/06	36000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WS-LS-SW-LS-105-052506-NK-018**
Station:
Description:
LIMS Number: L28801-7

Collect Start: 05/25/2006 09:00
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	5.35E+01	1.04E+02	**1.66E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	7.16E-01	6.44E-01	**1.17E+00**	pCi/L		450	ml	05/25/06 09:00	06/09/06	150	M	U		
MN-54	2007	2.12E+00	2.44E+00	**4.38E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
CO-58	2007	-1.76E-01	2.59E+00	**4.44E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
FE-59	2007	3.60E+00	5.17E+00	**9.42E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
CO-60	2007	3.14E-01	2.44E+00	**4.29E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
ZN-65	2007	6.41E+00	6.12E+00	**9.80E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
NB-95	2007	3.15E+00	2.74E+00	**4.97E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
ZR-95	2007	-1.76E+00	4.73E+00	**7.98E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
CS-134	2007	8.68E+00	5.63E+00	**5.19E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U*		No
CS-137	2007	2.86E-01	2.68E+00	**4.64E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
BA-140	2007	6.82E+00	1.79E+01	**3.07E+01**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No
LA-140	2007	-9.83E-01	5.23E+00	**9.16E+00**	pCi/L		3325.61	ml	05/25/06 09:00	06/07/06	18000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-107S-052606-NK-018**
Station:
Description:
LIMS Number: L28801-8

Collect Start: 05/26/2006 09:20
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
H-3	2010	4.63E+01	1.07E+02	**1.71E+02**	pCi/L		10	ml		06/10/06	60	M	U			
TOTAL SR	2018	**8.74E-01**	4.80E-01	8.26E-01	pCi/L		450	ml	05/26/06 09:20	06/09/06	150	M	+			
K-40	2007	**9.18E+01**	3.71E+01	3.07E+01	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	+		Yes	
MN-54	2007	1.31E-01	1.95E+00	**3.20E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
CO-58	2007	-3.45E+00	2.22E+00	**3.39E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
FE-59	2007	3.09E+00	4.44E+00	**7.58E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
CO-60	2007	-5.62E-01	2.10E+00	**3.39E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
ZN-65	2007	4.22E+00	5.10E+00	**7.51E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
NB-95	2007	1.96E+00	2.21E+00	**3.75E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
ZR-95	2007	-2.57E+00	3.93E+00	**6.29E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
CS-134	2007	9.75E+00	4.20E+00	**3.90E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U*		No	
CS-137	2007	1.04E+00	2.09E+00	**3.51E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
BA-140	2007	2.21E+01	1.44E+01	**2.46E+01**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	
LA-140	2007	-2.27E+00	4.68E+00	**7.53E+00**	pCi/L		3394.32	ml	05/25/06 09:20	06/07/06	36000	Sec	U		No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

Bolded text indicates reportable value.

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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-105S-052606-NK-019**
Station:
Description:
LIMS Number: L28801-9

Collect Start: 05/26/2006 11:10
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	**1.28E+03**	1.84E+02	1.85E+02	pCi/L		10	ml		06/10/06	49.48	M	+		
TOTAL SR	2018	5.35E-01	7.07E-01	**1.33E+00**	pCi/L		450	ml	05/26/06 11:10	06/09/06	150	M	U		
MN-54	2007	-2.02E-01	2.05E+00	**3.36E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
CO-58	2007	-1.14E-01	2.41E+00	**3.97E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
FE-59	2007	-3.04E+00	4.87E+00	**7.77E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
CO-60	2007	3.75E-01	2.28E+00	**3.77E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
ZN-65	2007	5.17E+00	4.66E+00	**8.19E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
NB-95	2007	-5.06E-01	2.34E+00	**3.84E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
ZR-95	2007	-4.01E+00	4.36E+00	**6.73E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
CS-134	2007	1.14E+00	5.41E+00	**3.94E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
CS-137	2007	-1.20E+00	2.31E+00	**3.69E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
BA-140	2007	1.82E+01	1.52E+01	**2.64E+01**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No
LA-140	2007	-2.23E+00	5.10E+00	**8.11E+00**	pCi/L		3503.33	ml	05/25/06 11:10	06/07/06	18000	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-104S-052606-NK-020**
Station:
Description:
LIMS Number: L28801-10

Collect Start: 05/26/2006 11:00
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values			
H-3	2010	7.68E+01	1.09E+02	**1.70E+02**	pCi/L		10	ml		06/10/06	60	M	U			
TOTAL SR	2018	2.70E-01	5.72E-01	**1.10E+00**	pCi/L		450	ml	05/26/06 11:00	06/09/06	150	M	U			
MN-54	2007	9.57E-01	2.05E+00	**3.45E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
CO-58	2007	1.38E+00	2.18E+00	**3.70E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
FE-59	2007	1.40E+00	4.59E+00	**7.73E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
CO-60	2007	-1.42E+00	2.02E+00	**3.16E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
ZN-65	2007	9.91E+00	5.08E+00	**8.03E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U*		No	
NB-95	2007	7.25E-01	2.20E+00	**3.70E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
ZR-95	2007	-1.32E+00	3.96E+00	**6.49E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
CS-134	2007	4.94E+00	4.19E+00	**3.92E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
CS-137	2007	1.94E-01	2.17E+00	**3.55E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
BA-140	2007	3.15E+00	1.47E+01	**2.44E+01**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	
LA-140	2007	3.18E+00	4.60E+00	**7.93E+00**	pCi/L		3392.08	ml	05/25/06 11:00	06/07/06	36000	Sec	U		No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
Spec = MDC exceeds customer technical specification
L = Low recovery
H = High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-109S-052606-NK-021**
Station:
Description:
LIMS Number: L28801-11

Collect Start: 05/26/2006 12:55
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.01E+02	1.10E+02	**1.70E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	5.76E-01	6.23E-01	**1.15E+00**	pCi/L		450	ml	05/26/06 12:55	06/10/06	150	M	U		
MN-54	2007	-3.36E-02	2.50E+00	**4.07E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
CO-58	2007	-2.08E+00	2.90E+00	**4.54E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
FE-59	2007	1.72E+00	6.04E+00	**1.01E+01**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
CO-60	2007	3.98E-01	2.61E+00	**5.16E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		Yes
ZN-65	2007	4.10E+00	5.93E+00	**1.01E+01**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
NB-95	2007	1.32E+00	2.83E+00	**4.78E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
ZR-95	2007	-2.65E+00	4.95E+00	**7.87E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
CS-134	2007	4.54E+00	4.70E+00	**5.10E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
CS-137	2007	6.42E-01	2.72E+00	**4.56E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
BA-140	2007	-1.66E+01	1.71E+01	**2.66E+01**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No
LA-140	2007	-3.33E+00	5.79E+00	**9.06E+00**	pCi/L		3392.49	ml	05/26/06 12:55	06/08/06	16968	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

Bolded text indicates reportable value.

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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-111S-053006-BW-022**
Station:
Description:
LIMS Number: L28801-12

Collect Start: 05/30/2006 11:06
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	4.80E+01	1.06E+02	**1.69E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	**1.85E+00**	9.60E-01	1.63E+00	pCi/L		450	ml	05/30/06 11:06	06/09/06	150	M	+		
MN-54	2007	4.52E+00	3.44E+00	**6.16E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
CO-58	2007	1.10E-01	3.34E+00	**5.54E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
FE-59	2007	6.94E+00	7.00E+00	**1.25E+01**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
CO-60	2007	4.43E-03	3.28E+00	**5.35E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
ZN-65	2007	4.40E+00	7.56E+00	**1.31E+01**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
NB-95	2007	2.04E+00	3.22E+00	**5.59E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
ZR-95	2007	4.96E-01	5.98E+00	**9.77E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
CS-134	2007	5.89E+00	7.81E+00	**6.42E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
CS-137	2007	4.50E+00	3.32E+00	**5.94E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
BA-140	2007	-1.29E+01	1.71E+01	**2.71E+01**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No
LA-140	2007	1.26E+00	5.43E+00	**9.16E+00**	pCi/L		3539.96	ml	05/30/06 11:06	06/08/06	8406	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

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Yes = Peak identified in gamma spectrum
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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-111S-053006-BW-023**
Station:
Description:
LIMS Number: L28801-13

Collect Start: 05/30/2006 11:26
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	1.71E+01	1.02E+02	**1.66E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	5.44E-01	4.65E-01	**8.41E-01**	pCi/L		450	ml	05/30/06 11:26	06/09/06	150	M	U		
MN-54	2007	1.12E-01	2.90E+00	**4.69E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
CO-58	2007	-2.61E-01	2.82E+00	**4.63E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
FE-59	2007	1.83E-01	5.53E+00	**9.20E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
CO-60	2007	1.57E+00	2.92E+00	**4.99E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
ZN-65	2007	-6.22E-01	6.13E+00	**1.01E+01**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
NB-95	2007	2.31E+00	2.90E+00	**5.02E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
ZR-95	2007	-8.73E-01	5.18E+00	**8.52E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
CS-134	2007	5.38E+00	5.89E+00	**4.88E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
CS-137	2007	1.25E+00	2.92E+00	**4.89E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
BA-140	2007	1.94E+00	1.59E+01	**2.63E+01**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No
LA-140	2007	9.36E-01	4.62E+00	**7.78E+00**	pCi/L		3570.39	ml	05/30/06 11:26	06/08/06	16975	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-112S-053006-BW-024**
Station:
Description:
LIMS Number: L28801-14

Collect Start: 05/30/2006 13:11
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	4.54E+01	1.05E+02	**1.68E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	3.73E-02	6.61E-01	**1.31E+00**	pCi/L		450	ml	05/30/06 13:11	06/09/06	150	M	U		
K-40	2007	**9.12E+01**	4.63E+01	4.81E+01	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	+	Yes	
MN-54	2007	6.10E-01	2.80E+00	**4.65E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
CO-58	2007	-3.82E-01	3.06E+00	**4.98E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
FE-59	2007	-3.52E+00	5.99E+00	**9.52E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
CO-60	2007	2.33E+00	2.98E+00	**5.19E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
ZN-65	2007	-6.12E-01	6.46E+00	**1.06E+01**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
NB-95	2007	4.66E-01	2.95E+00	**4.90E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
ZR-95	2007	2.76E+00	5.20E+00	**8.82E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
CS-134	2007	3.13E+00	4.70E+00	**5.32E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
CS-137	2007	2.05E+00	2.96E+00	**5.07E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
BA-140	2007	-5.84E+00	1.61E+01	**2.56E+01**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	
LA-140	2007	-3.79E+00	5.04E+00	**7.77E+00**	pCi/L		3410.47	ml	05/30/06 13:11	06/08/06	17229	Sec	U	No	

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U* = Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High = Activity concentration exceeds customer reporting value
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H = High recovery

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MDC - Minimum Detectable Concentration

Report of Analysis

06/12/06 08:08

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L28801

Conestoga-Rovers & Associates

EX001-3ESPSALLE-06

Kathy Shaw

Sample ID: **WG-LS-MW-LS-112S-053006-BW-025**
Station:
Description:
LIMS Number: L28801-15

Collect Start: 05/30/2006 13:21
Collect Stop:
Receive Date: 06/01/2006

Matrix: Ground Water (WG)
Volume:
% Moisture:

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3	2010	-6.60E+00	1.03E+02	**1.70E+02**	pCi/L		10	ml		06/10/06	60	M	U		
TOTAL SR	2018	1.63E-01	4.30E-01	**8.28E-01**	pCi/L		450	ml	05/30/06 13:21	06/10/06	150	M	U		
MN-54	2007	-2.22E-01	2.78E+00	**4.51E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
CO-58	2007	-1.75E+00	2.90E+00	**4.57E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
FE-59	2007	2.66E+00	5.89E+00	**9.91E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
CO-60	2007	1.27E+00	2.79E+00	**4.74E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
ZN-65	2007	1.27E+01	6.22E+00	**1.14E+01**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U*		No
NB-95	2007	-1.38E-01	2.96E+00	**4.84E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
ZR-95	2007	-1.17E+00	5.34E+00	**8.66E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
CS-134	2007	3.06E+00	6.86E+00	**5.07E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
CS-137	2007	3.28E-01	3.04E+00	**5.05E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
BA-140	2007	8.39E+00	1.55E+01	**2.60E+01**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No
LA-140	2007	-8.91E-01	4.97E+00	**8.10E+00**	pCi/L		3546.11	ml	05/30/06 13:21	06/08/06	17436	Sec	U		No

Flag Values
U = Compound/Analyte not detected or less than 3 sigma
\+ = Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
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MDC - Minimum Detectable Concentration

QC Results Summary

QC Summary Report for L28801

6/12/2006 8:10:06AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4098-1	H-3	WO	06/10/2006 1:51	< 1.350E+00	pCi/Total	U	P
WG4106-1		WO	06/10/2006 3:12	< 1.680E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4098-2	H-3	WO	06/10/2006 2:55	5.05E+002	5.790E+02	pCi/Total	114.7	70-130	+	P
Spike ID: 3H-041706-1 Spike conc: 5.05E+002 Spike Vol: 1.00E+000										
WG4106-2		WO	06/10/2006 4:15	5.05E+002	4.990E+02	pCi/Total	98.9	70-130	+	P
Spike ID: 3H-041706-1 Spike conc: 5.05E+002 Spike Vol: 1.00E+000										

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4098-3 L28795-10	H-3	WG	06/10/2006 0:47	< 1.650E+02	< 1.410E+02	pCi/L		<30	**	NE
WG4106-3 L28801-11		WG	06/10/2006 4:34	< 1.700E+02	< 1.710E+02	pCi/L		<30	**	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28801

6/12/2006 8:10:06AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28801 **H-3**

Associated Samples for **WG4106**

SAMPLENUM	CLIENTID
L28801-11	WG-LS-MW-LS-109S-052606-NK-021
L28801-12	WG-LS-MW-LS-111S-053006-BW-022
L28801-13	WG-LS-MW-LS-111S-053006-BW-023
L28801-14	WG-LS-MW-LS-112S-053006-BW-024
L28801-15	WG-LS-MW-LS-112S-053006-BW-025

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28801

6/12/2006 8:10:06AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

TOTAL SR

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4116-1	TOTAL SR	WO	06/11/2006 14:39	< 6.420E-01	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4116-2	TOTAL SR	WO	06/10/2006 0:29	5.84E+001	6.600E+01	pCi/Total	113.1	70-130	+	P

Spike ID: 90SR-011905
Spike conc: 2.34E+002
Spike Vol: 2.50E-001

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4116-3 L28801-1	TOTAL SR	WG	06/10/2006 0:29	1.130E+00	< 1.210E+00	pCi/L		<30	*	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

QC Summary Report for L28801

6/12/2006 8:10:06AM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

L28801 **SR-90 (FAST)**

Associated Samples for **WG4116**

SAMPLENUM	CLIENTID
L28801-1	WS-LS-SW-LS-104-052506-NK-008
L28801-2	WS-LS-SW-LS-105-052506-NK-009
L28801-3	RB-LS-052506-NK-010
L28801-4	WG-LS-MW-LS-110S-052506-NK-011
L28801-5	WG-LS-MW-LS-108S-052506-NK-016
L28801-6	WG-LS-MW-LS-106S-052506-NK-017
L28801-7	WS-LS-SW-LS-105-052506-NK-018
L28801-8	WG-LS-MW-LS-107S-052606-NK-018
L28801-9	WG-LS-MW-LS-105S-052606-NK-019
L28801-10	WG-LS-MW-LS-104S-052606-NK-020
L28801-11	WG-LS-MW-LS-109S-052606-NK-021
L28801-12	WG-LS-MW-LS-111S-053006-BW-022
L28801-13	WG-LS-MW-LS-111S-053006-BW-023
L28801-14	WG-LS-MW-LS-112S-053006-BW-024
L28801-15	WG-LS-MW-LS-112S-053006-BW-025

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

Raw Data

Raw Data Sheet (rawdata)
Jun 12 2006, 08:22 am

Work Order: *L28801* Customer: *Exelon*

Nuclide: *H-3* Project : *EX001-3ESPSALLE-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28801-1		H-3					0		10-jun-06 05:38	LS7	107	60	1.66	60	.212		EJ
WS-LS-SW-LS-104-052506				10 ml													
Activity: 2.55E+01	Error: 1.02E+02			MDC: 1.65E+02 *													
L28801-2		H-3					0		10-jun-06 06:41	LS7	146	60	1.66	60	.203		EJ
WS-LS-SW-LS-105-052506				10 ml													
Activity: 1.73E+02	Error: 1.16E+02			MDC: 1.72E+02 *													
L28801-3		H-3					0		10-jun-06 07:45	LS7	107	60	1.66	60	.21		EJ
RB-LS-052506-NK-010				10 ml													
Activity: 2.8E+01	Error: 1.03E+02			MDC: 1.67E+02 *													
L28801-4		H-3					0		10-jun-06 08:48	LS7	152	60	1.66	60	.21		EJ
WG-LS-MW-LS-110S-05250				10 ml													
Activity: 1.88E+02 *	Error: 1.14E+02			MDC: 1.67E+02													
L28801-5		H-3					0		10-jun-06 09:52	LS7	90	60	1.66	60	.203		EJ
WG-LS-MW-LS-108S-05250				10 ml													
Activity: -3.56E+01	Error: 1.02E+02			MDC: 1.72E+02 *													
L28801-6		H-3					0		10-jun-06 10:55	LS7	130	60	1.66	60	.21		EJ
WG-LS-MW-LS-106S-05250				10 ml													
Activity: 1.07E+02	Error: 1.08E+02			MDC: 1.67E+02 *													
L28801-7		H-3					0		10-jun-06 11:58	LS7	115	60	1.66	60	.211		EJ
WS-LS-SW-LS-105-052506				10 ml													
Activity: 5.35E+01	Error: 1.04E+02			MDC: 1.66E+02 *													
L28801-8		H-3					0		10-jun-06 13:02	LS7	112	60	1.66	60	.205		EJ
WG-LS-MW-LS-107S-05260				10 ml													
Activity: 4.63E+01	Error: 1.07E+02			MDC: 1.71E+02 *													
L28801-9		H-3					0		10-jun-06 14:05	LS7	373	49.48	1.66	60	.208		EJ
WG-LS-MW-LS-105S-05260				10 ml													
Activity: 1.28E+03 *	Error: 1.84E+02			MDC: 1.85E+02													
L28801-10		H-3					0		10-jun-06 14:58	LS7	121	60	1.66	60	.206		EJ
WG-LS-MW-LS-104S-05260				10 ml													
Activity: 7.68E+01	Error: 1.09E+02			MDC: 1.7E+02 *													
L28801-11		H-3					0		10-jun-06 16:02	LS7	127	60	1.66	60	.206		EJ
WG-LS-MW-LS-109S-05260				10 ml													
Activity: 1.01E+02	Error: 1.1E+02			MDC: 1.7E+02 *													
L28801-12		H-3					0		10-jun-06 17:06	LS7	113	60	1.66	60	.207		EJ
WG-LS-MW-LS-111S-05300				10 ml													
Activity: 4.8E+01	Error: 1.06E+02			MDC: 1.69E+02 *													
L28801-13		H-3					0		10-jun-06 18:09	LS7	104	60	1.66	60	.211		EJ
WG-LS-MW-LS-111S-05300				10 ml													
Activity: 1.71E+01	Error: 1.02E+02			MDC: 1.66E+02 *													
L28801-14		H-3					0		10-jun-06 19:13	LS7	112	60	1.66	60	.209		EJ
WG-LS-MW-LS-112S-05300				10 ml													
Activity: 4.54E+01	Error: 1.05E+02			MDC: 1.68E+02 *													
L28801-15		H-3					0		10-jun-06 20:16	LS7	98	60	1.66	60	.205		EJ
WG-LS-MW-LS-112S-05300				10 ml													
Activity: -6.6E+00	Error: 1.03E+02			MDC: 1.7E+02 *													

Raw Data Sheet (rawdata)
Jun 12 2006, 08:22 am

Work Order: *L28801* Customer: *Exelon*

Nuclide: *SR-90 (FAST)* Project : *EX001-3ESPSALLE-06*

Sample ID / Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L28801-1		TOTAL SR	25-may-06		09-jun-06		0		09-jun-06	X1A	167	150	308	400	.346	.999	LCB
WS-LS-SW-LS-104-052506			08:35	450 ml	14:30			87.90	20:00								
Activity: 1.13E+00 * Error: 6.37E-01 MDC: 1.1E+00																	
L28801-2		TOTAL SR	25-may-06		09-jun-06		0		09-jun-06	X1B	149	150	342	400	.343	.999	LCB
WS-LS-SW-LS-105-052506			09:00	450 ml	14:30			70.97	20:00								
Activity: 5.69E-01 Error: 7.7E-01 MDC: 1.45E+00 *																	
L28801-3		TOTAL SR	25-may-06		09-jun-06		0		09-jun-06	X1C	120	150	289	400	.354	.999	LCB
RB-LS-052506-NK-010			09:10	450 ml	14:30			64.25	20:00								
Activity: 3.42E-01 Error: 7.45E-01 MDC: 1.43E+00 *																	
L28801-4		TOTAL SR	25-may-06		09-jun-06		0		09-jun-06	X1D	165	150	312	400	.344	.999	LCB
WG-LS-MW-LS-110S-05250			10:40	450 ml	14:30			85.75	20:00								
Activity: 1.09E+00 Error: 6.54E-01 MDC: 1.14E+00 *																	
L28801-5		TOTAL SR	25-may-06		09-jun-06		0		09-jun-06	X2A	135	150	264	400	.354	.999	LCB
WG-LS-MW-LS-108S-05250			08:40	450 ml	14:30			93.01	20:00								
Activity: 7.3E-01 Error: 5.32E-01 MDC: 9.4E-01 *																	
L28801-6		TOTAL SR	25-may-06		09-jun-06		0		09-jun-06	X2B	151	150	289	400	.345	.999	LCB
WG-LS-MW-LS-106S-05250			10:05	450 ml	14:30			89.52	20:00								
Activity: 9.22E-01 Error: 5.99E-01 MDC: 1.05E+00 *																	
L28801-7		TOTAL SR	25-may-06		09-jun-06		0		09-jun-06	X2C	133	150	277	400	.344	.999	LCB
WS-LS-SW-LS-105-052506			09:00	450 ml	14:30			79.03	20:00								
Activity: 7.16E-01 Error: 6.44E-01 MDC: 1.17E+00 *																	
L28801-8		TOTAL SR	26-may-06		09-jun-06		0		09-jun-06	X2D	168	150	307	400	.343	.999	LCB
WG-LS-MW-LS-107S-05260			09:20	450 ml	14:30			117.74	20:00								
Activity: 8.74E-01 * Error: 4.8E-01 MDC: 8.26E-01																	
L28801-9		TOTAL SR	26-may-06		09-jun-06		0		09-jun-06	X3A	158	150	363	400	.335	.999	LCB
WG-LS-MW-LS-105S-05260			11:10	450 ml	14:30			81.45	20:00								
Activity: 5.35E-01 Error: 7.07E-01 MDC: 1.33E+00 *																	
L28801-10		TOTAL SR	26-may-06		09-jun-06		0		09-jun-06	X3B	133	150	321	400	.343	.999	LCB
WG-LS-MW-LS-104S-05260			11:00	450 ml	14:30			90.86	20:00								
Activity: 2.7E-01 Error: 5.72E-01 MDC: 1.1E+00 *																	
L28801-11		TOTAL SR	26-may-06		09-jun-06		0		10-jun-06	Y2A	129	150	280	400	.349	.999	LCB
WG-LS-MW-LS-109S-05260			12:55	450 ml	14:30			79.84	00:30								
Activity: 5.76E-01 Error: 6.23E-01 MDC: 1.15E+00 *																	
L28801-12		TOTAL SR	30-may-06		09-jun-06		0		09-jun-06	X4A	161	150	284	400	.358	.999	LCB
WG-LS-MW-LS-111S-05300			11:06	450 ml	14:30			55.11	20:01								
Activity: 1.85E+00 * Error: 9.6E-01 MDC: 1.63E+00																	
L28801-13		TOTAL SR	30-may-06		09-jun-06		0		09-jun-06	X4C	144	150	299	400	.35	.999	LCB
WG-LS-MW-LS-111S-05300			11:26	450 ml	14:30			111.83	20:01								
Activity: 5.44E-01 Error: 4.65E-01 MDC: 8.41E-01 *																	
L28801-14		TOTAL SR	30-may-06		09-jun-06		0		09-jun-06	X4D	129	150	340	400	.353	.999	LCB
WG-LS-MW-LS-112S-05300			13:11	450 ml	14:30			76.08	20:01								
Activity: 3.73E-02 Error: 6.61E-01 MDC: 1.31E+00 *																	
L28801-15		TOTAL SR	30-may-06		09-jun-06		0		10-jun-06	Y1A	114	150	279	400	.341	.999	LCB
WG-LS-MW-LS-112S-05300			13:21	450 ml	14:30			112.90	00:29								
Activity: 1.63E-01 Error: 4.3E-01 MDC: 8.28E-01 *																	

L28801

In Process

Sample#	Analysis	Matrix	Clientid

****

In Process QC

Sample #	Analysis	Matrix	Clientid

****

Missing gamma nuclides

Sample #	Nuclide

****

Spec/High Flags

Sample#	Analysis	Flag

****

QC Failures

Qc Sample	Analysis	QC type	Passfail

****

Recoveries

Sample#	Analysis	Flag

****

Comments

Sample#	Analysis	Seq	Comments

Sec. Review: Analyst: LIMS: ✓

==========

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 7-JUN-2006 18:59:17.05
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 7-JUN-2006 15:18:59.27

LIMS No., Customer Name, Client ID: WG L28801-1 LASALLE

Sample ID : 11L28801-1
Sample Type : WG
Quantity : 3.52400E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 08:35:00.
Geometry : 1135L090204
BKGFILE : 11BG060306MT
Real Time : 0 03:40:08.35
Live time : 0 03:40:03.72

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	198.46	127	292	1.59	396.68	1.57E+00	9.61E-03	26.7	
2	0	238.25*	5	297	1.27	476.45	1.42E+00	3.45E-04	785.4	
3	0	583.07*	10	53	1.31	1167.34	7.27E-01	7.64E-04	172.4	
4	0	595.81	57	72	1.28	1192.85	7.15E-01	4.35E-03	31.0	
5	0	608.90*	71	52	1.85	1219.06	7.02E-01	5.40E-03	27.2	
6	0	1460.56*	22	36	1.69	2921.61	3.54E-01	1.66E-03	79.1	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	22	10.67*	3.540E-01	3.368E+01	3.368E+01	158.24
TH-228	238.63	5	44.60*	1.423E+00	4.167E-01	4.222E-01	1570.71
	240.98	------	3.95	1.413E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28801-1

Acquisition date : 7-JUN-2006 15:18:59

Total number of lines in spectrum	6	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	3	50.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.368E+01	3.368E+01	5.329E+01	158.24	
TH-228	1.91Y	1.01	4.167E-01	4.222E-01	66.32E-01	1570.71	
			---	---			
Total Activity :			3.409E+01	3.410E+01			

Grand Total Activity : 3.409E+01 3.410E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28801-1

Acquisition date : 7-JUN-2006 15:18:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	198.46	127	292	1.59	396.68	393	10	9.61E-03	53.5	1.57E+00	
0	583.07	10	53	1.31	1167.34	1162	9	7.64E-04	****	7.27E-01	T
0	595.81	57	72	1.28	1192.85	1189	11	4.35E-03	62.1	7.15E-01	
0	608.90	71	52	1.85	1219.06	1212	13	5.40E-03	54.4	7.02E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	6	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	3	50.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.368E+01	3.368E+01	5.329E+01	158.24	
TH-228	1.91Y	1.01	4.167E-01	4.222E-01	66.32E-01	1570.71	
			---	---			
Total Activity :			3.409E+01	3.410E+01			

Grand Total Activity : 3.409E+01 3.410E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	3.368E+01	5.329E+01	4.355E+01	0.000E+00	0.773
TH-228	4.222E-01	6.632E+00	9.005E+00	0.000E+00	0.047

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.237E+00		3.189E+01	5.213E+01	0.000E+00	0.024
NA-24	4.313E+00		4.227E+00	Half-Life too short		
CR-51	1.739E+01		3.604E+01	6.073E+01	0.000E+00	0.286
MN-54	9.987E-01		3.319E+00	5.543E+00	0.000E+00	0.180
CO-57	-1.640E+00		3.114E+00	5.059E+00	0.000E+00	-0.324

CO-58	-5.939E-01	3.334E+00	5.397E+00	0.000E+00	-0.110
FE-59	8.415E+00	6.858E+00	1.243E+01	0.000E+00	0.677
CO-60	-4.333E-01	3.257E+00	5.273E+00	0.000E+00	-0.082
ZN-65	3.487E+00	6.758E+00	1.162E+01	0.000E+00	0.300
SE-75	1.129E+00	4.284E+00	7.194E+00	0.000E+00	0.157
SR-85	2.361E+01	4.271E+00	8.380E+00	0.000E+00	2.818
Y-88	-4.545E+00	3.725E+00	5.199E+00	0.000E+00	-0.874
NB-94	-2.256E-01	2.935E+00	4.819E+00	0.000E+00	-0.047
NB-95	-3.482E-01	3.418E+00	5.580E+00	0.000E+00	-0.062
ZR-95	1.426E+00	5.937E+00	9.924E+00	0.000E+00	0.144
MO-99	6.707E+02	6.558E+02	1.150E+03	0.000E+00	0.583
RU-103	3.579E+00	3.951E+00	6.737E+00	0.000E+00	0.531
RU-106	-4.535E-01	2.824E+01	4.678E+01	0.000E+00	-0.010
AG-110m	1.990E+00	3.137E+00	5.384E+00	0.000E+00	0.370
SN-113	1.453E+00	4.316E+00	7.200E+00	0.000E+00	0.202
SB-124	2.799E+00	7.460E+00	5.806E+00	0.000E+00	0.482
SB-125	-2.772E-01	9.336E+00	1.528E+01	0.000E+00	-0.018
TE-129M	3.090E-01	4.517E+01	7.384E+01	0.000E+00	0.004
I-131	3.967E+00	9.884E+00	1.656E+01	0.000E+00	0.239
BA-133	4.600E-01	4.338E+00	7.184E+00	0.000E+00	0.064
CS-134	6.261E+00	6.613E+00	5.721E+00	0.000E+00	1.094
CS-136	-5.822E+00	5.913E+00	8.976E+00	0.000E+00	-0.649
CS-137	-1.547E-01	3.362E+00	5.546E+00	0.000E+00	-0.028
CE-139	-9.994E-01	3.206E+00	5.200E+00	0.000E+00	-0.192
BA-140	2.988E+00	2.163E+01	3.542E+01	0.000E+00	0.084
LA-140	4.510E+00	7.270E+00	1.280E+01	0.000E+00	0.352
CE-141	-5.998E+00	7.055E+00	1.132E+01	0.000E+00	-0.530
CE-144	-2.201E+01	2.546E+01	4.094E+01	0.000E+00	-0.538
EU-152	-2.200E+01	9.862E+00	1.476E+01	0.000E+00	-1.491
EU-154	-3.606E+00	6.348E+00	1.030E+01	0.000E+00	-0.350
RA-226	4.625E+01	7.946E+01	1.283E+02	0.000E+00	0.361
AC-228	-8.460E+00	1.342E+01	1.988E+01	0.000E+00	-0.425
TH-232	-8.423E+00	1.336E+01	1.980E+01	0.000E+00	-0.425
U-235	-1.562E-01	2.461E+01	4.042E+01	0.000E+00	-0.004
U-238	3.393E+00	3.175E+02	5.284E+02	0.000E+00	0.006
AM-241	-8.043E+01	4.162E+01	6.455E+01	0.000E+00	-1.246

```
A,11L28801-1        ,06/07/2006 18:59,05/25/2006 08:35,   3.524E+00,WG L28801-1 LA
B,11L28801-1        ,LIBD                ,06/07/2006 09:40,1135L090204
C,K-40     ,YES,    3.368E+01,   5.329E+01,   4.355E+01,,    0.773
C,TH-228   ,YES,    4.222E-01,   6.632E+00,   9.005E+00,,    0.047
C,BE-7     ,NO ,    1.237E+00,   3.189E+01,   5.213E+01,,    0.024
C,CR-51    ,NO ,    1.739E+01,   3.604E+01,   6.073E+01,,    0.286
C,MN-54    ,NO ,    9.987E-01,   3.319E+00,   5.543E+00,,    0.180
C,CO-57    ,NO ,   -1.640E+00,   3.114E+00,   5.059E+00,,   -0.324
C,CO-58    ,NO ,   -5.939E-01,   3.334E+00,   5.397E+00,,   -0.110
C,FE-59    ,NO ,    8.415E+00,   6.858E+00,   1.243E+01,,    0.677
C,CO-60    ,NO ,   -4.333E-01,   3.257E+00,   5.273E+00,,   -0.082
C,ZN-65    ,NO ,    3.487E+00,   6.758E+00,   1.162E+01,,    0.300
C,SE-75    ,NO ,    1.129E+00,   4.284E+00,   7.194E+00,,    0.157
C,SR-85    ,NO ,    2.361E+01,   4.271E+00,   8.380E+00,,    2.818
C,Y-88     ,NO ,   -4.545E+00,   3.725E+00,   5.199E+00,,   -0.874
C,NB-94    ,NO ,   -2.256E-01,   2.935E+00,   4.819E+00,,   -0.047
C,NB-95    ,NO ,   -3.482E-01,   3.418E+00,   5.580E+00,,   -0.062
C,ZR-95    ,NO ,    1.426E+00,   5.937E+00,   9.924E+00,,    0.144
C,MO-99    ,NO ,    6.707E+02,   6.558E+02,   1.150E+03,,    0.583
C,RU-103   ,NO ,    3.579E+00,   3.951E+00,   6.737E+00,,    0.531
C,RU-106   ,NO ,   -4.535E-01,   2.824E+01,   4.678E+01,,   -0.010
C,AG-110m  ,NO ,    1.990E+00,   3.137E+00,   5.384E+00,,    0.370
C,SN-113   ,NO ,    1.453E+00,   4.316E+00,   7.200E+00,,    0.202
C,SB-124   ,NO ,    2.799E+00,   7.460E+00,   5.806E+00,,    0.482
C,SB-125   ,NO ,   -2.772E-01,   9.336E+00,   1.528E+01,,   -0.018
C,TE-129M  ,NO ,    3.090E-01,   4.517E+01,   7.384E+01,,    0.004
C,I-131    ,NO ,    3.967E+00,   9.884E+00,   1.656E+01,,    0.239
C,BA-133   ,NO ,    4.600E-01,   4.338E+00,   7.184E+00,,    0.064
C,CS-134   ,NO ,    6.261E+00,   6.613E+00,   5.721E+00,,    1.094
C,CS-136   ,NO ,   -5.822E+00,   5.913E+00,   8.976E+00,,   -0.649
C,CS-137   ,NO ,   -1.547E-01,   3.362E+00,   5.546E+00,,   -0.028
C,CE-139   ,NO ,   -9.994E-01,   3.206E+00,   5.200E+00,,   -0.192
C,BA-140   ,NO ,    2.988E+00,   2.163E+01,   3.542E+01,,    0.084
C,LA-140   ,NO ,    4.510E+00,   7.270E+00,   1.280E+01,,    0.352
C,CE-141   ,NO ,   -5.998E+00,   7.055E+00,   1.132E+01,,   -0.530
C,CE-144   ,NO ,   -2.201E+01,   2.546E+01,   4.094E+01,,   -0.538
C,EU-152   ,NO ,   -2.200E+01,   9.862E+00,   1.476E+01,,   -1.491
C,EU-154   ,NO ,   -3.606E+00,   6.348E+00,   1.030E+01,,   -0.350
C,RA-226   ,NO ,    4.625E+01,   7.946E+01,   1.283E+02,,    0.361
C,AC-228   ,NO ,   -8.460E+00,   1.342E+01,   1.988E+01,,   -0.425
C,TH-232   ,NO ,   -8.423E+00,   1.336E+01,   1.980E+01,,   -0.425
C,U-235    ,NO ,   -1.562E-01,   2.461E+01,   4.042E+01,,   -0.004
C,U-238    ,NO ,    3.393E+00,   3.175E+02,   5.284E+02,,    0.006
C,AM-241   ,NO ,   -8.043E+01,   4.162E+01,   6.455E+01,,   -1.246
```

Sec. Review: Analyst: LIMS: ____

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 01:19:11.95
TBE14 P-10933A HpGe ********** Aquisition Date/Time: 7-JUN-2006 15:19:01.15

LIMS No., Customer Name, Client ID: WG L28801-2 LASALLE

Sample ID : 14L28801-2
Sample Type : WG
Quantity : 3.55540E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 09:00:00.
Geometry : 1435L091304
BKGFILE : 14BG060306MT
Real Time : 0 10:00:05.89
Live time : 0 10:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.52	332	1767	1.71	134.04	4.58E-01	9.23E-03	26.0	1.10E+00
2	1	92.67*	136	1210	1.97	186.47	1.15E+00	3.79E-03	54.9	5.81E-01
3	1	139.82	294	1164	1.26	281.00	1.67E+00	8.16E-03	22.5	1.43E+00
4	1	185.84*	54	876	1.46	373.25	1.64E+00	1.51E-03	119.4	3.58E-01
5	1	198.83*	305	1133	1.99	399.27	1.60E+00	8.47E-03	24.5	3.95E+00
6	1	238.73*	70	882	1.21	479.20	1.47E+00	1.96E-03	90.8	1.39E+00
7	1	351.80*	117	564	2.52	705.58	1.14E+00	3.25E-03	51.9	2.31E+00
8	1	583.03*	53	318	2.65	1167.87	7.91E-01	1.47E-03	88.8	9.58E-01
9	1	594.87	148	325	2.69	1191.51	7.80E-01	4.10E-03	27.2	2.70E+00
10	1	609.24*	99	204	1.47	1220.22	7.66E-01	2.74E-03	37.4	4.44E+00
11	1	910.39*	34	188	3.18	1820.90	5.65E-01	9.58E-04	94.7	3.64E+00
12	1	1460.94*	81	73	2.38	2915.31	3.93E-01	2.26E-03	39.5	1.87E+00
13	1	1765.54*	6	96	2.13	3518.77	3.44E-01	1.62E-04	500.0	1.71E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	81	10.67*	3.927E-01	4.102E+01	4.102E+01	78.98
RA-226	186.21	54	3.28*	1.641E+00	2.131E+01	2.131E+01	238.82
AC-228	835.50	------	1.75	6.034E-01	------	Line Not Found	------
	911.07	34	27.70*	5.649E-01	4.654E+00	4.676E+00	189.43
TH-228	238.63	70	44.60*	1.468E+00	2.272E+00	2.305E+00	181.55
	240.98	------	3.95	1.461E+00	------	Line Not Found	------
TH-232	583.14	53	30.25	7.914E-01	4.660E+00	4.660E+00	177.58
	911.07	34	27.70*	5.649E-01	4.654E+00	4.654E+00	189.43
	969.11	------	16.60	5.383E-01	------	Line Not Found	------
U-235	143.76	------	10.50*	1.680E+00	------	Line Not Found	------
	163.35	------	4.70	1.685E+00	------	Line Not Found	------
	185.71	54	54.00	1.641E+00	1.295E+00	1.295E+00	238.82
	205.31	------	4.70	1.582E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 14L28801-2

Acquisition date : 7-JUN-2006 15:19:01

Total number of lines in spectrum	13	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	5	38.46%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.102E+01	4.102E+01	3.240E+01	78.98	
RA-226	1600.00Y	1.00	2.131E+01	2.131E+01	5.090E+01	238.82	
AC-228	5.75Y	1.00	4.654E+00	4.676E+00	8.858E+00	189.43	
TH-228	1.91Y	1.01	2.272E+00	2.305E+00	4.185E+00	181.55	
TH-232	1.41E+10Y	1.00	4.654E+00	4.654E+00	8.816E+00	189.43	
U-235	7.04E+08Y	1.00	1.295E+00	1.295E+00	3.092E+00	238.82	K
			---	---			
	Total Activity :		7.521E+01	7.527E+01			

Grand Total Activity : 7.521E+01 7.527E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 14L28801-2

Acquisition date : 7-JUN-2006 15:19:01

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.52	332	1767	1.71	134.04	129	12	9.23E-03	52.0	4.58E-01	
1	92.67	136	1210	1.97	186.47	182	10	3.79E-03	****	1.15E+00	
1	139.82	294	1164	1.26	281.00	276	10	8.16E-03	44.9	1.67E+00	
1	198.83	305	1133	1.99	399.27	394	12	8.47E-03	49.0	1.60E+00	
1	351.80	117	564	2.52	705.58	699	14	3.25E-03	****	1.14E+00	
1	594.87	148	325	2.69	1191.51	1185	14	4.10E-03	54.5	7.80E-01	
1	609.24	99	204	1.47	1220.22	1217	9	2.74E-03	74.8	7.66E-01	
1	1765.54	6	96	2.13	3518.77	3516	17	1.62E-04	****	3.44E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	5	38.46%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.102E+01	4.102E+01	3.240E+01	78.98	
RA-226	1600.00Y	1.00	2.131E+01	2.131E+01	5.090E+01	238.82	
TH-228	1.91Y	1.01	2.272E+00	2.305E+00	4.185E+00	181.55	
TH-232	1.41E+10Y	1.00	4.657E+00	4.657E+00	6.034E+00	129.55	
			---	---			
	Total Activity :		6.927E+01	6.930E+01			

Grand Total Activity : 6.927E+01 6.930E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.102E+01	3.240E+01	3.211E+01	0.000E+00	1.278
RA-226	2.131E+01	5.090E+01	7.437E+01	0.000E+00	0.287
TH-228	2.305E+00	4.185E+00	5.599E+00	0.000E+00	0.412
[illegible]	[illegible]	[illegible]	1.104E+01	0.000E+00	0.422

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	8.158E+00		1.933E+01	3.221E+01	0.000E+00	0.253
NA-24	-6.526E-01		9.302E+00	Half-Life too short		
CR-51	-3.907E+01		2.326E+01	3.670E+01	0.000E+00	-1.065
MN-54	9.752E-01		2.045E+00	3.393E+00	0.000E+00	0.287
CO-57	-1.591E-01		1.995E+00	3.306E+00	0.000E+00	-0.048
CO-58	-1.036E+00		2.186E+00	3.509E+00	0.000E+00	-0.295
FE-59	-1.359E+00		4.427E+00	7.144E+00	0.000E+00	-0.190
CO-60	-1.022E-01		1.988E+00	3.264E+00	0.000E+00	-0.031
ZN-65	6.447E+00		4.385E+00	7.595E+00	0.000E+00	0.849
SE-75	1.833E+00		2.769E+00	4.641E+00	0.000E+00	0.395
SR-85	1.999E+01		2.489E+00	4.783E+00	0.000E+00	4.179
Y-88	-5.393E-01		2.345E+00	3.786E+00	0.000E+00	-0.142
NB-94	3.458E-01		1.864E+00	3.092E+00	0.000E+00	0.112
NB-95	-6.659E-01		2.191E+00	3.554E+00	0.000E+00	-0.187
ZR-95	-6.663E-01		3.976E+00	6.487E+00	0.000E+00	-0.103
MO-99	-2.373E+02		5.516E+02	8.930E+02	0.000E+00	-0.266
RU-103	2.152E+00		2.448E+00	4.122E+00	0.000E+00	0.522
RU-106	3.529E+00		1.871E+01	3.053E+01	0.000E+00	0.116
AG-110m	3.874E-01		1.966E+00	3.275E+00	0.000E+00	0.118
SN-113	-1.038E+00		2.750E+00	4.417E+00	0.000E+00	-0.235
SB-124	1.847E+00		5.036E+00	3.627E+00	0.000E+00	0.509
SB-125	-1.829E+00		5.357E+00	8.800E+00	0.000E+00	-0.208
TE-129M	7.250E+00		2.865E+01	4.763E+01	0.000E+00	0.152
I-131	4.338E+00		6.912E+00	1.143E+01	0.000E+00	0.380
BA-133	3.777E+00		3.239E+00	4.635E+00	0.000E+00	0.815
CS-134	7.210E+00		3.671E+00	3.606E+00	0.000E+00	1.999
CS-136	-8.952E-02		3.966E+00	6.471E+00	0.000E+00	-0.014
CS-137	2.196E+00		2.097E+00	3.585E+00	0.000E+00	0.613
CE-139	1.043E+00		2.055E+00	3.399E+00	0.000E+00	0.307
BA-140	1.189E+01		1.482E+01	2.483E+01	0.000E+00	0.479
LA-140	6.524E-01		4.873E+00	8.123E+00	0.000E+00	0.080
CE-141	-3.275E+00		5.228E+00	7.211E+00	0.000E+00	-0.454
CE-144	-4.981E+00		1.774E+01	2.478E+01	0.000E+00	-0.201
EU-152	-3.858E+00		7.233E+00	9.777E+00	0.000E+00	-0.395
EU-154	2.007E+00		4.062E+00	6.791E+00	0.000E+00	0.295
AC-228	4.676E+00		8.858E+00	1.298E+01	0.000E+00	0.360
U-235	8.549E+00		1.788E+01	2.533E+01	0.000E+00	0.337
U-238	1.364E+02		2.106E+02	3.559E+02	0.000E+00	0.383
AM-241	-2.040E+01		3.095E+01	4.266E+01	0.000E+00	-0.478

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A,14L28801-2        ,06/08/2006 01:19,05/24/2006 09:00,   3.555E+00,WG L28801-2 LA
B,14L28801-2        ,LIBD                ,06/02/2006 08:23,1435L091304
C,K-40     ,YES,    4.102E+01,   3.240E+01,   3.211E+01,,    1.278
C,RA-226   ,YES,    2.131E+01,   5.090E+01,   7.437E+01,,    0.287
C,TH-228   ,YES,    2.305E+00,   4.185E+00,   5.599E+00,,    0.412
C,TH-232   ,YES,    4.657E+00,   6.034E+00,   1.104E+01,,    0.422
C,BE-7     ,NO ,    8.158E+00,   1.933E+01,   3.221E+01,,    0.253
C,CR-51    ,NO ,   -3.907E+01,   2.326E+01,   3.670E+01,,   -1.065
C,MN-54    ,NO ,    9.752E-01,   2.045E+00,   3.393E+00,,    0.287
C,CO-57    ,NO ,   -1.591E-01,   1.995E+00,   3.306E+00,,   -0.048
C,CO-58    ,NO ,   -1.036E+00,   2.186E+00,   3.509E+00,,   -0.295
C,FE-59    ,NO ,   -1.359E+00,   4.427E+00,   7.144E+00,,   -0.190
C,CO-60    ,NO ,   -1.022E-01,   1.988E+00,   3.264E+00,,   -0.031
C,ZN-65    ,NO ,    6.447E+00,   4.385E+00,   7.595E+00,,    0.849
C,SE-75    ,NO ,    1.833E+00,   2.769E+00,   4.641E+00,,    0.395
C,SR-85    ,NO ,    1.999E+01,   2.489E+00,   4.783E+00,,    4.179
C,Y-88     ,NO ,   -5.393E-01,   2.345E+00,   3.786E+00,,   -0.142
C,NB-94    ,NO ,    3.458E-01,   1.864E+00,   3.092E+00,,    0.112
C,NB-95    ,NO ,   -6.659E-01,   2.191E+00,   3.554E+00,,   -0.187
C,ZR-95    ,NO ,   -6.663E-01,   3.976E+00,   6.487E+00,,   -0.103
C,MO-99    ,NO ,   -2.373E+02,   5.516E+02,   8.930E+02,,   -0.266
C,RU-103   ,NO ,    2.152E+00,   2.448E+00,   4.122E+00,,    0.522
C,RU-106   ,NO ,    3.529E+00,   1.871E+01,   3.053E+01,,    0.116
C,AG-110m  ,NO ,    3.874E-01,   1.966E+00,   3.275E+00,,    0.118
C,SN-113   ,NO ,   -1.038E+00,   2.750E+00,   4.417E+00,,   -0.235
C,SB-124   ,NO ,    1.847E+00,   5.036E+00,   3.627E+00,,    0.509
C,SB-125   ,NO ,   -1.829E+00,   5.357E+00,   8.800E+00,,   -0.208
C,TE-129M  ,NO ,    7.250E+00,   2.865E+01,   4.763E+01,,    0.152
C,I-131    ,NO ,    4.338E+00,   6.912E+00,   1.143E+01,,    0.380
C,BA-133   ,NO ,    3.777E+00,   3.239E+00,   4.635E+00,,    0.815
C,CS-134   ,NO ,    7.210E+00,   3.671E+00,   3.606E+00,,    1.999
C,CS-136   ,NO ,   -8.952E-02,   3.966E+00,   6.471E+00,,   -0.014
C,CS-137   ,NO ,    2.196E+00,   2.097E+00,   3.585E+00,,    0.613
C,CE-139   ,NO ,    1.043E+00,   2.055E+00,   3.399E+00,,    0.307
C,BA-140   ,NO ,    1.189E+01,   1.482E+01,   2.483E+01,,    0.479
C,LA-140   ,NO ,    6.524E-01,   4.873E+00,   8.123E+00,,    0.080
C,CE-141   ,NO ,   -3.275E+00,   5.228E+00,   7.211E+00,,   -0.454
C,CE-144   ,NO ,   -4.981E+00,   1.774E+01,   2.478E+01,,   -0.201
C,EU-152   ,NO ,   -3.858E+00,   7.233E+00,   9.777E+00,,   -0.395
C,EU-154   ,NO ,    2.007E+00,   4.062E+00,   6.791E+00,,    0.295
C,AC-228   ,NO ,    4.676E+00,   8.858E+00,   1.298E+01,,    0.360
C,U-235    ,NO ,    8.549E+00,   1.788E+01,   2.533E+01,,    0.337
C,U-238    ,NO ,    1.364E+02,   2.106E+02,   3.559E+02,,    0.383
C,AM-241   ,NO ,   -2.040E+01,   3.095E+01,   4.266E+01,,   -0.478
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 7-JUN-2006 18:57:05.27
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 7-JUN-2006 15:49:11.03

LIMS No., Customer Name, Client ID: WG L28801-3 LASALLE

Sample ID : 07L28801-3
Sample Type : WG
Quantity : 3.36930E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 09:10:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 03:07:48.20
Live time : 0 03:07:45.98

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.26*	120	275	1.63	133.10	7.22E-01	1.07E-02	25.8	4.19E+00
2	1	198.44*	94	305	1.49	397.65	1.98E+00	8.37E-03	40.8	1.81E+00
3	1	595.81	50	104	1.73	1192.79	9.96E-01	4.47E-03	43.9	1.09E+00
4	1	1461.00*	36	28	2.33	2922.98	5.15E-01	3.16E-03	49.1	1.19E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	36	10.67*	5.151E-01	4.618E+01	4.618E+01	98.30

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28801-3

Acquisition date : 7-JUN-2006 15:49:11

Total number of lines in spectrum	4	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	1	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.618E+01	4.618E+01	4.539E+01	98.30	
		Total Activity :	4.618E+01	4.618E+01			
		Grand Total Activity :	4.618E+01	4.618E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28801-3 Acquisition date : 7-JUN-2006 15:49:11

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.26	120	275	1.63	133.10	130	7	1.07E-02	51.6	7.22E-01	
1	198.44	94	305	1.49	397.65	392	12	8.37E-03	81.6	1.98E+00	
1	595.81	50	104	1.73	1192.79	1190	12	4.47E-03	87.8	9.96E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	4	
Number of unidentified lines	3	
Number of lines tentatively identified by NID	1	25.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.618E+01	4.618E+01	4.539E+01	98.30	
		Total Activity :	4.618E+01	4.618E+01			
		Grand Total Activity :	4.618E+01	4.618E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.618E+01	4.539E+01	4.329E+01	0.000E+00	1.067

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.758E+00		2.631E+01	4.268E+01	0.000E+00	-0.041
NA-24	-8.603E+00		3.588E+00	Half-Life too short		
CR-51	1.469E+01		3.279E+01	5.552E+01	0.000E+00	0.265
MN-54	-1.139E+00		2.833E+00	4.557E+00	0.000E+00	-0.250
CO-57	6.710E-01		2.786E+00	4.588E+00	0.000E+00	0.146
CO-58	-2.001E-01		2.963E+00	4.882E+00	0.000E+00	-0.041
FE-59	1.505E+00		6.451E+00	1.087E+01	0.000E+00	0.139
CO-60	-3.324E-02		2.649E+00	4.321E+00	0.000E+00	-0.008

ZN-65	2.508E+00	6.329E+00	1.076E+01	0.000E+00	0.233
SE-75	-1.098E+00	3.971E+00	6.414E+00	0.000E+00	-0.171
SR-85	2.141E+01	3.836E+00	7.591E+00	0.000E+00	2.820
Y-88	-1.946E+00	3.627E+00	5.693E+00	0.000E+00	-0.342
NB-94	1.374E+00	2.898E+00	4.857E+00	0.000E+00	0.283
NB-95	8.943E-01	3.107E+00	5.253E+00	0.000E+00	0.170
ZR-95	-1.246E+00	5.627E+00	9.003E+00	0.000E+00	-0.138
MO-99	3.556E+02	5.763E+02	9.760E+02	0.000E+00	0.364
RU-103	3.613E+00	3.572E+00	6.101E+00	0.000E+00	0.592
RU-106	-7.813E-01	2.749E+01	4.515E+01	0.000E+00	-0.017
AG-110m	-7.454E-01	2.787E+00	4.493E+00	0.000E+00	-0.166
SN-113	9.906E-01	3.788E+00	6.315E+00	0.000E+00	0.157
SB-124	-8.637E+00	4.658E+00	5.619E+00	0.000E+00	-1.537
SB-125	-4.779E-01	7.889E+00	1.289E+01	0.000E+00	-0.037
TE-129M	-1.902E+01	3.917E+01	6.224E+01	0.000E+00	-0.306
I-131	-5.690E+00	8.744E+00	1.404E+01	0.000E+00	-0.405
BA-133	4.636E+00	3.934E+00	6.824E+00	0.000E+00	0.679
CS-134	4.662E+00	3.614E+00	5.483E+00	0.000E+00	0.850
CS-136	-1.662E+00	4.963E+00	8.013E+00	0.000E+00	-0.207
CS-137	5.025E-03	2.997E+00	4.911E+00	0.000E+00	0.001
CE-139	-9.182E-01	2.891E+00	4.778E+00	0.000E+00	-0.192
BA-140	1.209E+01	1.877E+01	3.226E+01	0.000E+00	0.375
LA-140	-4.561E+00	6.403E+00	9.750E+00	0.000E+00	-0.468
CE-141	-6.744E+00	6.496E+00	1.020E+01	0.000E+00	-0.661
CE-144	-4.033E+01	2.256E+01	3.469E+01	0.000E+00	-1.162
EU-152	-1.747E+01	9.146E+00	1.399E+01	0.000E+00	-1.249
EU-154	6.691E-01	5.706E+00	9.357E+00	0.000E+00	0.072
RA-226	1.175E+00	6.914E+01	1.153E+02	0.000E+00	0.010
AC-228	3.290E+00	1.131E+01	1.880E+01	0.000E+00	0.175
TH-228	2.758E+00	5.617E+00	9.436E+00	0.000E+00	0.292
TH-232	3.275E+00	1.126E+01	1.871E+01	0.000E+00	0.175
U-235	4.988E+00	2.252E+01	3.681E+01	0.000E+00	0.135
U-238	4.190E+02	2.916E+02	5.279E+02	0.000E+00	0.794
AM-241	-2.438E+01	2.907E+01	4.176E+01	0.000E+00	-0.584

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A,07L28801-3        ,06/07/2006 18:57,05/25/2006 09:10,   3.369E+00,WG L28801-3 LA
B,07L28801-3        ,LIBD                ,06/07/2006 09:32,0735L090904
C,K-40     ,YES,   4.618E+01,   4.539E+01,   4.329E+01,,    1.067
C,BE-7     ,NO ,  -1.758E+00,   2.631E+01,   4.268E+01,,   -0.041
C,CR-51    ,NO ,   1.469E+01,   3.279E+01,   5.552E+01,,    0.265
C,MN-54    ,NO ,  -1.139E+00,   2.833E+00,   4.557E+00,,   -0.250
C,CO-57    ,NO ,   6.710E-01,   2.786E+00,   4.588E+00,,    0.146
C,CO-58    ,NO ,  -2.001E-01,   2.963E+00,   4.882E+00,,   -0.041
C,FE-59    ,NO ,   1.505E+00,   6.451E+00,   1.087E+01,,    0.139
C,CO-60    ,NO ,  -3.324E-02,   2.649E+00,   4.321E+00,,   -0.008
C,ZN-65    ,NO ,   2.508E+00,   6.329E+00,   1.076E+01,,    0.233
C,SE-75    ,NO ,  -1.098E+00,   3.971E+00,   6.414E+00,,   -0.171
C,SR-85    ,NO ,   2.141E+01,   3.836E+00,   7.591E+00,,    2.820
C,Y-88     ,NO ,  -1.946E+00,   3.627E+00,   5.693E+00,,   -0.342
C,NB-94    ,NO ,   1.374E+00,   2.898E+00,   4.857E+00,,    0.283
C,NB-95    ,NO ,   8.943E-01,   3.107E+00,   5.253E+00,,    0.170
C,ZR-95    ,NO ,  -1.246E+00,   5.627E+00,   9.003E+00,,   -0.138
C,MO-99    ,NO ,   3.556E+02,   5.763E+02,   9.760E+02,,    0.364
C,RU-103   ,NO ,   3.613E+00,   3.572E+00,   6.101E+00,,    0.592
C,RU-106   ,NO ,  -7.813E-01,   2.749E+01,   4.515E+01,,   -0.017
C,AG-110m  ,NO ,  -7.454E-01,   2.787E+00,   4.493E+00,,   -0.166
C,SN-113   ,NO ,   9.906E-01,   3.788E+00,   6.315E+00,,    0.157
C,SB-124   ,NO ,  -8.637E+00,   4.658E+00,   5.619E+00,,   -1.537
C,SB-125   ,NO ,  -4.779E-01,   7.889E+00,   1.289E+01,,   -0.037
C,TE-129M  ,NO ,  -1.902E+01,   3.917E+01,   6.224E+01,,   -0.306
C,I-131    ,NO ,  -5.690E+00,   8.744E+00,   1.404E+01,,   -0.405
C,BA-133   ,NO ,   4.636E+00,   3.934E+00,   6.824E+00,,    0.679
C,CS-134   ,NO ,   4.662E+00,   3.614E+00,   5.483E+00,,    0.850
C,CS-136   ,NO ,  -1.662E+00,   4.963E+00,   8.013E+00,,   -0.207
C,CS-137   ,NO ,   5.025E-03,   2.997E+00,   4.911E+00,,    0.001
C,CE-139   ,NO ,  -9.182E-01,   2.891E+00,   4.778E+00,,   -0.192
C,BA-140   ,NO ,   1.209E+01,   1.877E+01,   3.226E+01,,    0.375
C,LA-140   ,NO ,  -4.561E+00,   6.403E+00,   9.750E+00,,   -0.468
C,CE-141   ,NO ,  -6.744E+00,   6.496E+00,   1.020E+01,,   -0.661
C,CE-144   ,NO ,  -4.033E+01,   2.256E+01,   3.469E+01,,   -1.162
C,EU-152   ,NO ,  -1.747E+01,   9.146E+00,   1.399E+01,,   -1.249
C,EU-154   ,NO ,   6.691E-01,   5.706E+00,   9.357E+00,,    0.072
C,RA-226   ,NO ,   1.175E+00,   6.914E+01,   1.153E+02,,    0.010
C,AC-228   ,NO ,   3.290E+00,   1.131E+01,   1.880E+01,,    0.175
C,TH-228   ,NO ,   2.758E+00,   5.617E+00,   9.436E+00,,    0.292
C,TH-232   ,NO ,   3.275E+00,   1.126E+01,   1.871E+01,,    0.175
C,U-235    ,NO ,   4.988E+00,   2.252E+01,   3.681E+01,,    0.135
C,U-238    ,NO ,   4.190E+02,   2.916E+02,   5.279E+02,,    0.794
C,AM-241   ,NO ,  -2.438E+01,   2.907E+01,   4.176E+01,,   -0.584
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 7-JUN-2006 22:16:45.43
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 7-JUN-2006 17:16:31.41

LIMS No., Customer Name, Client ID: WG L28801-4 LASALLE

Sample ID : 04L28801-4
Sample Type : WG
Quantity : 3.33250E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 24-MAY-2006 10:40:00.
Geometry : 0435L090804
BKGFILE : 04BG060306MT
Real Time : 0 05:00:03.05
Live time : 0 05:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	2	63.57*	49	404	1.17	127.60	5.58E-01	2.74E-03	72.8	1.79E+00
2	2	66.57*	180	394	1.16	133.59	6.55E-01	9.97E-03	21.0	
3	1	139.89	127	361	0.96	280.22	1.82E+00	7.04E-03	26.3	3.65E+00
4	1	185.65*	97	315	1.91	371.72	1.73E+00	5.41E-03	38.9	3.47E+00
5	1	198.05*	41	398	1.16	396.53	1.68E+00	2.30E-03	102.1	2.39E+00
6	1	238.54*	22	275	1.05	477.49	1.52E+00	1.25E-03	149.5	9.21E-01
7	1	596.12	87	109	2.16	1192.47	7.86E-01	4.85E-03	27.0	1.50E+00
8	1	609.25*	57	81	1.62	1218.71	7.73E-01	3.14E-03	44.0	1.49E+00
9	1	1120.53*	18	23	1.58	2240.84	4.81E-01	1.02E-03	58.4	5.06E+00
10	1	1460.87*	1	54	2.67	2921.10	3.92E-01	5.70E-05	*****	2.09E+00
11	1	1763.95*	39	7	4.47	3526.82	3.43E-01	2.16E-03	26.4	2.34E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	1	10.67*	3.920E-01	1.106E+00	1.106E+00	4168.63
RA-226	186.21	97	3.28*	1.727E+00	7.747E+01	7.747E+01	77.81
TH-228	238.63	22	44.60*	1.521E+00	1.491E+00	1.512E+00	298.93
	240.98	------	3.95	1.511E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	1.822E+00	------	Line Not Found	------
	163.35	------	4.70	1.796E+00	------	Line Not Found	------
	185.71	97	54.00	1.727E+00	4.706E+00	4.706E+00	77.81
	205.31	------	4.70	1.652E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28801-4

Acquisition date : 7-JUN-2006 17:16:31

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.106E+00	1.106E+00	46.10E+00	4168.63	
RA-226	1600.00Y	1.00	7.747E+01	7.747E+01	6.028E+01	77.81	
TH-228	1.91Y	1.01	1.491E+00	1.512E+00	4.520E+00	298.93	
U-235	7.04E+08Y	1.00	4.706E+00	4.706E+00	3.661E+00	77.81	K
			---	---			
	Total Activity :		8.477E+01	8.480E+01			

Grand Total Activity : 8.477E+01 8.480E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28801-4

Acquisition date : 7-JUN-2006 17:16:31

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	63.57	49	404	1.17	127.60	124	16	2.74E-03	****	5.58E-01	
2	66.57	180	394	1.16	133.59	124	16	9.97E-03	42.0	6.55E-01	
1	139.89	127	361	0.96	280.22	277	7	7.04E-03	52.7	1.82E+00	
1	198.05	41	398	1.16	396.53	392	10	2.30E-03	****	1.68E+00	
1	596.12	87	109	2.16	1192.47	1187	13	4.85E-03	53.9	7.86E-01	
1	609.25	57	81	1.62	1218.71	1212	13	3.14E-03	88.1	7.73E-01	
1	1120.53	18	23	1.58	2240.84	2238	7	1.02E-03	****	4.81E-01	
1	1763.95	39	7	4.47	3526.82	3519	14	2.16E-03	52.8	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	3	27.27%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	1.106E+00	1.106E+00	46.10E+00	4168.63	
RA-226	1600.00Y	1.00	7.747E+01	7.747E+01	6.028E+01	77.81	
TH-228	1.91Y	1.01	1.491E+00	1.512E+00	4.520E+00	298.93	
			---	---			
	Total Activity :		8.007E+01	8.009E+01			

Grand Total Activity : 8.007E+01 8.009E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	1.106E+00	4.610E+01	3.894E+01	0.000E+00	0.028
RA-226	7.747E+01	6.028E+01	9.397E+01	0.000E+00	0.824
TH-228	1.512E+00	4.520E+00	7.057E+00	0.000E+00	0.214

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	3.876E+00	2.283E+01	3.805E+01	0.000E+00	0.102
NA-24	-2.014E+01	1.204E+01	Half-Life too short		
CR-51	-1.861E+01	2.853E+01	4.582E+01	0.000E+00	-0.406
MN-54	1.218E+00	2.681E+00	4.490E+00	0.000E+00	0.271
CO-57	-7.070E-01	2.294E+00	3.810E+00	0.000E+00	-0.186
CO-58	-2.381E+00	2.877E+00	4.465E+00	0.000E+00	-0.533
FE-59	-5.777E-01	6.111E+00	9.933E+00	0.000E+00	-0.058
CO-60	1.212E+00	3.156E+00	5.120E+00	0.000E+00	0.237
ZN-65	1.897E+00	6.836E+00	9.639E+00	0.000E+00	0.197
SE-75	-7.826E-01	3.485E+00	5.759E+00	0.000E+00	-0.136
SR-85	2.115E+01	3.437E+00	6.761E+00	0.000E+00	3.129
Y-88	-2.357E+00	3.350E+00	5.115E+00	0.000E+00	-0.461
NB-94	2.058E+00	2.453E+00	4.227E+00	0.000E+00	0.487
NB-95	9.693E-01	2.791E+00	4.675E+00	0.000E+00	0.207
ZR-95	-1.142E+00	5.065E+00	8.216E+00	0.000E+00	-0.139
MO-99	-6.513E+02	6.887E+02	1.071E+03	0.000E+00	-0.608
RU-103	9.106E-01	3.050E+00	5.098E+00	0.000E+00	0.179
RU-106	1.138E+01	2.266E+01	3.784E+01	0.000E+00	0.301
AG-110m	-1.868E-02	2.347E+00	3.894E+00	0.000E+00	-0.005
SN-113	-1.002E+00	3.454E+00	5.546E+00	0.000E+00	-0.181
SB-124	3.505E+00	5.419E+00	4.479E+00	0.000E+00	0.783
SB-125	-2.515E+00	6.938E+00	1.137E+01	0.000E+00	-0.221
TE-129M	3.600E+01	3.561E+01	6.162E+01	0.000E+00	0.584
I-131	1.148E+00	8.325E+00	1.367E+01	0.000E+00	0.084
BA-133	1.058E+00	3.480E+00	5.757E+00	0.000E+00	0.184
CS-134	7.021E+00	4.633E+00	4.407E+00	0.000E+00	1.593
CS-136	2.721E-01	5.082E+00	8.332E+00	0.000E+00	0.033
CS-137	-1.755E+00	2.558E+00	4.082E+00	0.000E+00	-0.430
CE-139	1.298E+00	2.445E+00	4.093E+00	0.000E+00	0.317
BA-140	1.526E+01	1.732E+01	2.973E+01	0.000E+00	0.513
LA-140	4.603E-01	6.299E+00	1.049E+01	0.000E+00	0.044
CE-141	5.015E+00	5.810E+00	8.535E+00	0.000E+00	0.588
CE-144	-5.507E+00	2.004E+01	2.937E+01	0.000E+00	-0.188
EU-152	-1.460E+01	8.068E+00	1.233E+01	0.000E+00	-1.184
EU-154	1.551E+00	4.673E+00	7.886E+00	0.000E+00	0.197
AC-228	2.586E+00	1.031E+01	1.675E+01	0.000E+00	0.154
TH-232	2.574E+00	1.026E+01	1.667E+01	0.000E+00	0.154
U-235	2.904E+01	1.969E+01	2.959E+01	0.000E+00	0.982
U-238	1.114E+02	2.644E+02	4.484E+02	0.000E+00	0.248
AM-241	-1.764E+01	2.379E+01	3.292E+01	0.000E+00	-0.536

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A,04L28801-4        ,06/07/2006 22:16,05/24/2006 10:40,   3.332E+00,WG L28801-4 LA
B,04L28801-4        ,LIBD                ,06/02/2006 09:04,0435L090804
C,K-40     ,YES,   1.106E+00,   4.610E+01,   3.894E+01,,    0.028
C,RA-226   ,YES,   7.747E+01,   6.028E+01,   9.397E+01,,    0.824
C,TH-228   ,YES,   1.512E+00,   4.520E+00,   7.057E+00,,    0.214
C,BE-7     ,NO ,   3.876E+00,   2.283E+01,   3.805E+01,,    0.102
C,CR-51    ,NO ,  -1.861E+01,   2.853E+01,   4.582E+01,,   -0.406
C,MN-54    ,NO ,   1.218E+00,   2.681E+00,   4.490E+00,,    0.271
C,CO-57    ,NO ,  -7.070E-01,   2.294E+00,   3.810E+00,,   -0.186
C,CO-58    ,NO ,  -2.381E+00,   2.877E+00,   4.465E+00,,   -0.533
C,FE-59    ,NO ,  -5.777E-01,   6.111E+00,   9.933E+00,,   -0.058
C,CO-60    ,NO ,   1.212E+00,   3.156E+00,   5.120E+00,,    0.237
C,ZN-65    ,NO ,   1.897E+00,   6.836E+00,   9.639E+00,,    0.197
C,SE-75    ,NO ,  -7.826E-01,   3.485E+00,   5.759E+00,,   -0.136
C,SR-85    ,NO ,   2.115E+01,   3.437E+00,   6.761E+00,,    3.129
C,Y-88     ,NO ,  -2.357E+00,   3.350E+00,   5.115E+00,,   -0.461
C,NB-94    ,NO ,   2.058E+00,   2.453E+00,   4.227E+00,,    0.487
C,NB-95    ,NO ,   9.693E-01,   2.791E+00,   4.675E+00,,    0.207
C,ZR-95    ,NO ,  -1.142E+00,   5.065E+00,   8.216E+00,,   -0.139
C,MO-99    ,NO ,  -6.513E+02,   6.887E+02,   1.071E+03,,   -0.608
C,RU-103   ,NO ,   9.106E-01,   3.050E+00,   5.098E+00,,    0.179
C,RU-106   ,NO ,   1.138E+01,   2.266E+01,   3.784E+01,,    0.301
C,AG-110m  ,NO ,  -1.868E-02,   2.347E+00,   3.894E+00,,   -0.005
C,SN-113   ,NO ,  -1.002E+00,   3.454E+00,   5.546E+00,,   -0.181
C,SB-124   ,NO ,   3.505E+00,   5.419E+00,   4.479E+00,,    0.783
C,SB-125   ,NO ,  -2.515E+00,   6.938E+00,   1.137E+01,,   -0.221
C,TE-129M  ,NO ,   3.600E+01,   3.561E+01,   6.162E+01,,    0.584
C,I-131    ,NO ,   1.148E+00,   8.325E+00,   1.367E+01,,    0.084
C,BA-133   ,NO ,   1.058E+00,   3.480E+00,   5.757E+00,,    0.184
C,CS-134   ,NO ,   7.021E+00,   4.633E+00,   4.407E+00,,    1.593
C,CS-136   ,NO ,   2.721E-01,   5.082E+00,   8.332E+00,,    0.033
C,CS-137   ,NO ,  -1.755E+00,   2.558E+00,   4.082E+00,,   -0.430
C,CE-139   ,NO ,   1.298E+00,   2.445E+00,   4.093E+00,,    0.317
C,BA-140   ,NO ,   1.526E+01,   1.732E+01,   2.973E+01,,    0.513
C,LA-140   ,NO ,   4.603E-01,   6.299E+00,   1.049E+01,,    0.044
C,CE-141   ,NO ,   5.015E+00,   5.810E+00,   8.535E+00,,    0.588
C,CE-144   ,NO ,  -5.507E+00,   2.004E+01,   2.937E+01,,   -0.188
C,EU-152   ,NO ,  -1.460E+01,   8.068E+00,   1.233E+01,,   -1.184
C,EU-154   ,NO ,   1.551E+00,   4.673E+00,   7.886E+00,,    0.197
C,AC-228   ,NO ,   2.586E+00,   1.031E+01,   1.675E+01,,    0.154
C,TH-232   ,NO ,   2.574E+00,   1.026E+01,   1.667E+01,,    0.154
C,U-235    ,NO ,   2.904E+01,   1.969E+01,   2.959E+01,,    0.982
C,U-238    ,NO ,   1.114E+02,   2.644E+02,   4.484E+02,,    0.248
C,AM-241   ,NO ,  -1.764E+01,   2.379E+01,   3.292E+01,,   -0.536
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Sec. Review: Analyst: LIMS: ___

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 7-JUN-2006 22:16:53.40
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 7-JUN-2006 17:16:36.76

LIMS No., Customer Name, Client ID: WG L28801-5 LASALLE

Sample ID : 13L28801-5
Sample Type : WG
Quantity : 3.20660E+00 L
Start Channel : 25 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 08:40:00.
Geometry : 1335L090904
BKGFILE : 13BG060306MT
Real Time : 0 05:00:05.09
Live time : 0 05:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	3	63.35*	73	598	1.29	126.81	6.22E-01	4.03E-03	67.3	7.25E-01
2	3	66.08	122	629	1.41	132.25	7.16E-01	6.77E-03	36.7	
3	1	92.60*	3	716	1.03	185.27	1.52E+00	1.70E-04	*****	8.82E-01
4	1	140.03*	62	553	1.45	280.07	2.02E+00	3.42E-03	72.7	2.11E+00
5	1	185.89*	38	560	1.09	371.74	1.95E+00	2.09E-03	133.3	4.34E+00
6	1	198.14*	196	573	2.13	396.23	1.90E+00	1.09E-02	26.8	1.69E+00
7	1	352.21*	24	280	1.71	704.27	1.34E+00	1.31E-03	157.9	3.73E+00
8	1	582.85*	4	141	1.71	1165.56	9.27E-01	2.08E-04	752.9	5.32E-01
9	1	596.06	76	217	1.61	1191.99	9.11E-01	4.20E-03	42.6	1.49E+00
10	1	609.12*	15	207	1.90	1218.12	8.97E-01	8.23E-04	237.4	2.22E+00
11	1	1120.55*	10	83	1.52	2241.70	5.69E-01	5.78E-04	245.6	1.39E+00
12	1	1461.07*	73	42	2.14	2923.73	4.69E-01	4.08E-03	32.0	9.27E-01
13	1	1764.43*	34	30	2.79	3531.67	4.11E-01	1.87E-03	48.5	1.41E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	73	10.67*	4.688E-01	6.874E+01	6.874E+01	63.92
RA-226	186.21	38	3.28*	1.946E+00	2.765E+01	2.765E+01	266.62
U-235	143.76	------	10.50*	2.023E+00	------	Line Not Found	------
	163.35	------	4.70	2.011E+00	------	Line Not Found	------
	185.71	38	54.00	1.946E+00	1.679E+00	1.679E+00	266.62
	205.31	------	4.70	1.871E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13L28801-5 Acquisition date : 7-JUN-2006 17:16:36

Total number of lines in spectrum	13	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	3	23.08%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.874E+01	6.874E+01	4.394E+01	63.92	
RA-226	1600.00Y	1.00	2.765E+01	2.765E+01	7.372E+01	266.62	
U-235	7.04E+08Y	1.00	1.679E+00	1.679E+00	4.478E+00	266.62	K
			---	---			
	Total Activity :		9.807E+01	9.807E+01			

Grand Total Activity : 9.807E+01 9.807E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13L28801-5

Acquisition date : 7-JUN-2006 17:16:36

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
3	63.35	73	598	1.29	126.81	121	15	4.03E-03	****	6.22E-01	
3	66.08	122	629	1.41	132.25	121	15	6.77E-03	73.4	7.16E-01	
1	92.60	3	716	1.03	185.27	181	9	1.70E-04	****	1.52E+00	
1	140.03	62	553	1.45	280.07	276	8	3.42E-03	****	2.02E+00	
1	198.14	196	573	2.13	396.23	390	12	1.09E-02	53.6	1.90E+00	
1	352.21	24	280	1.71	704.27	699	11	1.31E-03	****	1.34E+00	
1	582.85	4	141	1.71	1165.56	1159	12	2.08E-04	****	9.27E-01	T
1	596.06	76	217	1.61	1191.99	1185	14	4.20E-03	85.3	9.11E-01	
1	609.12	15	207	1.90	1218.12	1210	15	8.23E-04	****	8.97E-01	
1	1120.55	10	83	1.52	2241.70	2232	19	5.78E-04	****	5.69E-01	
1	1764.43	34	30	2.79	3531.67	3526	18	1.87E-03	97.0	4.11E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	3	23.08%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.874E+01	6.874E+01	4.394E+01	63.92	
RA-226	1600.00Y	1.00	2.765E+01	2.765E+01	7.372E+01	266.62	
		Total Activity :	9.639E+01	9.639E+01			

Grand Total Activity : 9.639E+01 9.639E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	6.874E+01	4.394E+01	3.845E+01	0.000E+00	1.788
RA-226	2.765E+01	7.372E+01	1.060E+02	0.000E+00	0.261

---- Non-Identified Nuclides ----

	Key-Line Activity	K.L.	Act error	MDA	MDA error	Act/MDA

Nuclide	(pCi/L)	Ided	(pCi/L)		
BE-7	1.270E+00	2.643E+01	4.362E+01	0.000E+00	0.029
NA-24	-7.792E+00	4.297E+00	Half-Life too short		
CR-51	-2.408E+01	3.106E+01	4.984E+01	0.000E+00	-0.483
MN-54	1.699E+00	2.915E+00	4.964E+00	0.000E+00	0.342
CO-57	-9.930E-02	2.803E+00	4.531E+00	0.000E+00	-0.022
CO-58	-1.702E+00	3.117E+00	4.935E+00	0.000E+00	-0.345
FE-59	6.768E+00	6.074E+00	1.069E+01	0.000E+00	0.633
CO-60	1.391E+00	2.726E+00	4.616E+00	0.000E+00	0.301
ZN-65	1.015E+01	7.249E+00	1.120E+01	0.000E+00	0.907
SE-75	3.081E+00	3.759E+00	6.376E+00	0.000E+00	0.483
SR-85	2.594E+01	3.662E+00	7.151E+00	0.000E+00	3.628
Y-88	-3.212E-02	3.139E+00	5.181E+00	0.000E+00	-0.006
NB-94	-1.020E+00	2.767E+00	4.480E+00	0.000E+00	-0.228
NB-95	2.172E+00	3.047E+00	5.149E+00	0.000E+00	0.422
ZR-95	-3.811E-01	5.398E+00	8.802E+00	0.000E+00	-0.043
MO-99	-2.591E+01	6.006E+02	9.823E+02	0.000E+00	-0.026
RU-103	-1.101E+00	3.468E+00	5.630E+00	0.000E+00	-0.195
RU-106	-3.398E+01	2.824E+01	4.266E+01	0.000E+00	-0.796
AG-110m	-1.777E+00	2.789E+00	4.481E+00	0.000E+00	-0.397
SN-113	-3.688E-01	3.772E+00	6.104E+00	0.000E+00	-0.060
SB-124	-1.358E+00	7.690E+00	5.104E+00	0.000E+00	-0.266
SB-125	1.541E+00	7.768E+00	1.297E+01	0.000E+00	0.119
TE-129M	2.375E+01	3.898E+01	6.579E+01	0.000E+00	0.361
I-131	6.582E-01	8.799E+00	1.438E+01	0.000E+00	0.046
BA-133	5.243E+00	4.674E+00	6.766E+00	0.000E+00	0.775
CS-134	8.857E+00	5.868E+00	5.054E+00	0.000E+00	1.752
CS-136	-2.325E-01	5.395E+00	8.757E+00	0.000E+00	-0.027
CS-137	8.518E-01	3.154E+00	5.065E+00	0.000E+00	0.168
CE-139	-1.148E-01	2.798E+00	4.614E+00	0.000E+00	-0.025
BA-140	1.828E+01	1.984E+01	3.362E+01	0.000E+00	0.544
LA-140	3.264E+00	6.006E+00	1.027E+01	0.000E+00	0.318
CE-141	6.386E+00	6.791E+00	9.879E+00	0.000E+00	0.646
CE-144	-7.855E+00	2.418E+01	3.397E+01	0.000E+00	-0.231
EU-152	-1.053E+01	1.027E+01	1.349E+01	0.000E+00	-0.781
EU-154	-1.383E+00	5.747E+00	9.245E+00	0.000E+00	-0.150
AC-228	7.782E+00	1.173E+01	1.889E+01	0.000E+00	0.412
TH-228	6.190E+00	5.501E+00	8.950E+00	0.000E+00	0.692
TH-232	7.748E+00	1.168E+01	1.881E+01	0.000E+00	0.412
U-235	1.294E+01	2.469E+01	3.481E+01	0.000E+00	0.372
U-238	-1.133E+02	3.362E+02	5.177E+02	0.000E+00	-0.219
AM-241	1.078E+01	2.638E+01	3.801E+01	0.000E+00	0.284

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A,13L28801-5       ,06/07/2006 22:16,05/25/2006 08:40,   3.207E+00,WG L28801-5 LA
B,13L28801-5       ,LIBD                ,06/07/2006 09:34,1335L090904
C,K-40     ,YES,   6.874E+01,   4.394E+01,   3.845E+01,,    1.788
C,RA-226   ,YES,   2.765E+01,   7.372E+01,   1.060E+02,,    0.261
C,BE-7     ,NO ,   1.270E+00,   2.643E+01,   4.362E+01,,    0.029
C,CR-51    ,NO ,  -2.408E+01,   3.106E+01,   4.984E+01,,   -0.483
C,MN-54    ,NO ,   1.699E+00,   2.915E+00,   4.964E+00,,    0.342
C,CO-57    ,NO ,  -9.930E-02,   2.803E+00,   4.531E+00,,   -0.022
C,CO-58    ,NO ,  -1.702E+00,   3.117E+00,   4.935E+00,,   -0.345
C,FE-59    ,NO ,   6.768E+00,   6.074E+00,   1.069E+01,,    0.633
C,CO-60    ,NO ,   1.391E+00,   2.726E+00,   4.616E+00,,    0.301
C,ZN-65    ,NO ,   1.015E+01,   7.249E+00,   1.120E+01,,    0.907
C,SE-75    ,NO ,   3.081E+00,   3.759E+00,   6.376E+00,,    0.483
C,SR-85    ,NO ,   2.594E+01,   3.662E+00,   7.151E+00,,    3.628
C,Y-88     ,NO ,  -3.212E-02,   3.139E+00,   5.181E+00,,   -0.006
C,NB-94    ,NO ,  -1.020E+00,   2.767E+00,   4.480E+00,,   -0.228
C,NB-95    ,NO ,   2.172E+00,   3.047E+00,   5.149E+00,,    0.422
C,ZR-95    ,NO ,  -3.811E-01,   5.398E+00,   8.802E+00,,   -0.043
C,MO-99    ,NO ,  -2.591E+01,   6.006E+02,   9.823E+02,,   -0.026
C,RU-103   ,NO ,  -1.101E+00,   3.468E+00,   5.630E+00,,   -0.195
C,RU-106   ,NO ,  -3.398E+01,   2.824E+01,   4.266E+01,,   -0.796
C,AG-110m  ,NO ,  -1.777E+00,   2.789E+00,   4.481E+00,,   -0.397
C,SN-113   ,NO ,  -3.688E-01,   3.772E+00,   6.104E+00,,   -0.060
C,SB-124   ,NO ,  -1.358E+00,   7.690E+00,   5.104E+00,,   -0.266
C,SB-125   ,NO ,   1.541E+00,   7.768E+00,   1.297E+01,,    0.119
C,TE-129M  ,NO ,   2.375E+01,   3.898E+01,   6.579E+01,,    0.361
C,I-131    ,NO ,   6.582E-01,   8.799E+00,   1.438E+01,,    0.046
C,BA-133   ,NO ,   5.243E+00,   4.674E+00,   6.766E+00,,    0.775
C,CS-134   ,NO ,   8.857E+00,   5.868E+00,   5.054E+00,,    1.752
C,CS-136   ,NO ,  -2.325E-01,   5.395E+00,   8.757E+00,,   -0.027
C,CS-137   ,NO ,   8.518E-01,   3.154E+00,   5.065E+00,,    0.168
C,CE-139   ,NO ,  -1.148E-01,   2.798E+00,   4.614E+00,,   -0.025
C,BA-140   ,NO ,   1.828E+01,   1.984E+01,   3.362E+01,,    0.544
C,LA-140   ,NO ,   3.264E+00,   6.006E+00,   1.027E+01,,    0.318
C,CE-141   ,NO ,   6.386E+00,   6.791E+00,   9.879E+00,,    0.646
C,CE-144   ,NO ,  -7.855E+00,   2.418E+01,   3.397E+01,,   -0.231
C,EU-152   ,NO ,  -1.053E+01,   1.027E+01,   1.349E+01,,   -0.781
C,EU-154   ,NO ,  -1.383E+00,   5.747E+00,   9.245E+00,,   -0.150
C,AC-228   ,NO ,   7.782E+00,   1.173E+01,   1.889E+01,,    0.412
C,TH-228   ,NO ,   6.190E+00,   5.501E+00,   8.950E+00,,    0.692
C,TH-232   ,NO ,   7.748E+00,   1.168E+01,   1.881E+01,,    0.412
C,U-235    ,NO ,   1.294E+01,   2.469E+01,   3.481E+01,,    0.372
C,U-238    ,NO ,  -1.133E+02,   3.362E+02,   5.177E+02,,   -0.219
C,AM-241   ,NO ,   1.078E+01,   2.638E+01,   3.801E+01,,    0.284
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 03:22:54.62
TBE15 P-10635B HpGe ********** Aquisition Date/Time: 7-JUN-2006 17:22:41.44

LIMS No., Customer Name, Client ID: WG L28801-6 LASALLE

Sample ID : 15L28801-6
Sample Type : WG
Quantity : 3.37090E+00 L
Start Channel : 40 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 10:05:00.
Geometry : 1535L090104
BKGFILE : 15BG060306MT
Real Time : 0 10:00:03.68
Live time : 0 10:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	53.09	149	991	1.48	93.49	1.46E-01	4.14E-03	37.2	1.98E+00
2	1	66.33	290	1161	1.63	120.13	4.35E-01	8.06E-03	21.9	2.15E+00
3	1	139.92	142	793	1.20	268.13	1.48E+00	3.96E-03	33.8	8.05E-01
4	1	198.14	335	852	1.62	385.21	1.37E+00	9.29E-03	17.0	4.72E+00
5	1	238.28*	112	586	1.38	465.92	1.23E+00	3.10E-03	48.1	3.11E+00
6	1	595.87	121	216	2.90	1184.80	5.97E-01	3.37E-03	26.0	1.67E+00
7	1	608.79	142	210	1.87	1210.78	5.87E-01	3.94E-03	22.1	1.67E+00
8	1	1460.05*	100	64	2.32	2920.70	2.91E-01	2.77E-03	26.8	2.18E+00
9	1	1763.64	62	46	2.76	3530.05	2.54E-01	1.72E-03	26.3	8.66E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	100	10.67*	2.909E-01	7.149E+01	7.149E+01	53.50
TH-228	238.63	112	44.60*	1.226E+00	4.544E+00	4.605E+00	96.21
	240.98	------	3.95	1.217E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 15L28801-6

Acquisition date : 7-JUN-2006 17:22:41

Total number of lines in spectrum	9	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	2	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.149E+01	7.149E+01	3.825E+01	53.50	
TH-228	1.91Y	1.01	4.544E+00	4.605E+00	4.431E+00	96.21	
			---	---			
Total Activity :			7.603E+01	7.609E+01			

Grand Total Activity : 7.603E+01 7.609E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 15L28801-6

Acquisition date : 7-JUN-2006 17:22:41

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	53.09	149	991	1.48	93.49	90	8	4.14E-03	74.4	1.46E-01	
1	66.33	290	1161	1.63	120.13	116	9	8.06E-03	43.8	4.35E-01	
1	139.92	142	793	1.20	268.13	265	7	3.96E-03	67.5	1.48E+00	
1	198.14	335	852	1.62	385.21	380	10	9.29E-03	34.0	1.37E+00	
1	595.87	121	216	2.90	1184.80	1179	12	3.37E-03	51.9	5.97E-01	
1	608.79	142	210	1.87	1210.78	1204	12	3.94E-03	44.2	5.87E-01	
1	1763.64	62	46	2.76	3530.05	3524	14	1.72E-03	52.5	2.54E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	9	
Number of unidentified lines	7	
Number of lines tentatively identified by NID	2	22.22%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.149E+01	7.149E+01	3.825E+01	53.50	
TH-228	1.91Y	1.01	4.544E+00	4.605E+00	4.431E+00	96.21	
			---	---			
	Total Activity :		7.603E+01	7.609E+01			

Grand Total Activity : 7.603E+01 7.609E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	7.149E+01	3.825E+01	3.431E+01	0.000E+00	2.084
TH-228	4.605E+00	4.431E+00	6.287E+00	0.000E+00	0.733

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.321E+01		2.147E+01	3.693E+01	0.000E+00	0.629
NA-24	-9.785E+00		3.899E+00	Half-Life too short		

CR-51	-1.866E+01	2.492E+01	4.043E+01	0.000E+00	-0.462
MN-54	2.664E+00	2.331E+00	4.023E+00	0.000E+00	0.662
CO-57	5.588E-01	2.261E+00	3.453E+00	0.000E+00	0.162
CO-58	-2.252E-01	2.470E+00	4.060E+00	0.000E+00	-0.055
FE-59	-2.381E+00	5.244E+00	8.471E+00	0.000E+00	-0.281
CO-60	-1.336E-02	2.195E+00	3.574E+00	0.000E+00	-0.004
ZN-65	8.616E+00	5.167E+00	9.193E+00	0.000E+00	0.937
SE-75	-1.035E+00	3.111E+00	4.985E+00	0.000E+00	-0.208
SR-85	1.522E+01	2.876E+00	5.379E+00	0.000E+00	2.829
Y-88	-8.734E-01	2.649E+00	4.280E+00	0.000E+00	-0.204
NB-94	-3.656E+00	2.183E+00	3.290E+00	0.000E+00	-1.111
NB-95	1.772E+00	2.486E+00	4.237E+00	0.000E+00	0.418
ZR-95	3.589E-01	4.389E+00	7.302E+00	0.000E+00	0.049
MO-99	-1.127E+01	4.743E+02	7.868E+02	0.000E+00	-0.014
RU-103	2.688E+00	2.870E+00	4.900E+00	0.000E+00	0.549
RU-106	-1.277E+01	2.083E+01	3.325E+01	0.000E+00	-0.384
AG-110m	5.521E-01	2.232E+00	3.676E+00	0.000E+00	0.150
SN-113	9.289E-02	3.093E+00	5.061E+00	0.000E+00	0.018
SB-124	2.073E+00	5.060E+00	3.940E+00	0.000E+00	0.526
SB-125	-5.437E+00	6.442E+00	1.019E+01	0.000E+00	-0.533
TE-129M	3.968E+00	3.376E+01	5.487E+01	0.000E+00	0.072
I-131	-1.562E-01	6.990E+00	1.147E+01	0.000E+00	-0.014
BA-133	5.163E-01	3.050E+00	5.037E+00	0.000E+00	0.102
CS-134	4.898E+00	3.938E+00	3.927E+00	0.000E+00	1.247
CS-136	-1.753E+00	4.379E+00	7.091E+00	0.000E+00	-0.247
CS-137	-7.460E-01	2.444E+00	3.933E+00	0.000E+00	-0.190
CE-139	-5.834E-01	2.166E+00	3.564E+00	0.000E+00	-0.164
BA-140	5.371E+00	1.587E+01	2.652E+01	0.000E+00	0.203
LA-140	-6.751E-01	5.753E+00	9.375E+00	0.000E+00	-0.072
CE-141	3.602E+00	5.291E+00	7.659E+00	0.000E+00	0.470
CE-144	1.438E+01	1.767E+01	2.668E+01	0.000E+00	0.539
EU-152	-1.010E+01	7.011E+00	1.112E+01	0.000E+00	-0.909
EU-154	2.252E+00	4.619E+00	7.085E+00	0.000E+00	0.318
RA-226	-5.814E+01	5.983E+01	8.673E+01	0.000E+00	-0.670
AC-228	1.152E+01	8.537E+00	1.481E+01	0.000E+00	0.778
TH-232	1.147E+01	8.499E+00	1.474E+01	0.000E+00	0.778
U-235	-2.100E+00	1.857E+01	2.635E+01	0.000E+00	-0.080
U-238	1.786E+02	2.578E+02	4.333E+02	0.000E+00	0.412
AM-241	-4.732E+01	3.101E+01	4.011E+01	0.000E+00	-1.180

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A,15L28801-6        ,06/08/2006 03:22,05/25/2006 10:05,   3.371E+00,WG L28801-6 LA
B,15L28801-6        ,LIBD                ,06/06/2006 10:43,1535L090104
C,K-40     ,YES,   7.149E+01,   3.825E+01,   3.431E+01,,    2.084
C,TH-228   ,YES,   4.605E+00,   4.431E+00,   6.287E+00,,    0.733
C,BE-7     ,NO ,   2.321E+01,   2.147E+01,   3.693E+01,,    0.629
C,CR-51    ,NO ,  -1.866E+01,   2.492E+01,   4.043E+01,,   -0.462
C,MN-54    ,NO ,   2.664E+00,   2.331E+00,   4.023E+00,,    0.662
C,CO-57    ,NO ,   5.588E-01,   2.261E+00,   3.453E+00,,    0.162
C,CO-58    ,NO ,  -2.252E-01,   2.470E+00,   4.060E+00,,   -0.055
C,FE-59    ,NO ,  -2.381E+00,   5.244E+00,   8.471E+00,,   -0.281
C,CO-60    ,NO ,  -1.336E-02,   2.195E+00,   3.574E+00,,   -0.004
C,ZN-65    ,NO ,   8.616E+00,   5.167E+00,   9.193E+00,,    0.937
C,SE-75    ,NO ,  -1.035E+00,   3.111E+00,   4.985E+00,,   -0.208
C,SR-85    ,NO ,   1.522E+01,   2.876E+00,   5.379E+00,,    2.829
C,Y-88     ,NO ,  -8.734E-01,   2.649E+00,   4.280E+00,,   -0.204
C,NB-94    ,NO ,  -3.656E+00,   2.183E+00,   3.290E+00,,   -1.111
C,NB-95    ,NO ,   1.772E+00,   2.486E+00,   4.237E+00,,    0.418
C,ZR-95    ,NO ,   3.589E-01,   4.389E+00,   7.302E+00,,    0.049
C,MO-99    ,NO ,  -1.127E+01,   4.743E+02,   7.868E+02,,   -0.014
C,RU-103   ,NO ,   2.688E+00,   2.870E+00,   4.900E+00,,    0.549
C,RU-106   ,NO ,  -1.277E+01,   2.083E+01,   3.325E+01,,   -0.384
C,AG-110m  ,NO ,   5.521E-01,   2.232E+00,   3.676E+00,,    0.150
C,SN-113   ,NO ,   9.289E-02,   3.093E+00,   5.061E+00,,    0.018
C,SB-124   ,NO ,   2.073E+00,   5.060E+00,   3.940E+00,,    0.526
C,SB-125   ,NO ,  -5.437E+00,   6.442E+00,   1.019E+01,,   -0.533
C,TE-129M  ,NO ,   3.968E+00,   3.376E+01,   5.487E+01,,    0.072
C,I-131    ,NO ,  -1.562E-01,   6.990E+00,   1.147E+01,,   -0.014
C,BA-133   ,NO ,   5.163E-01,   3.050E+00,   5.037E+00,,    0.102
C,CS-134   ,NO ,   4.898E+00,   3.938E+00,   3.927E+00,,    1.247
C,CS-136   ,NO ,  -1.753E+00,   4.379E+00,   7.091E+00,,   -0.247
C,CS-137   ,NO ,  -7.460E-01,   2.444E+00,   3.933E+00,,   -0.190
C,CE-139   ,NO ,  -5.834E-01,   2.166E+00,   3.564E+00,,   -0.164
C,BA-140   ,NO ,   5.371E+00,   1.587E+01,   2.652E+01,,    0.203
C,LA-140   ,NO ,  -6.751E-01,   5.753E+00,   9.375E+00,,   -0.072
C,CE-141   ,NO ,   3.602E+00,   5.291E+00,   7.659E+00,,    0.470
C,CE-144   ,NO ,   1.438E+01,   1.767E+01,   2.668E+01,,    0.539
C,EU-152   ,NO ,  -1.010E+01,   7.011E+00,   1.112E+01,,   -0.909
C,EU-154   ,NO ,   2.252E+00,   4.619E+00,   7.085E+00,,    0.318
C,RA-226   ,NO ,  -5.814E+01,   5.983E+01,   8.673E+01,,   -0.670
C,AC-228   ,NO ,   1.152E+01,   8.537E+00,   1.481E+01,,    0.778
C,TH-232   ,NO ,   1.147E+01,   8.499E+00,   1.474E+01,,    0.778
C,U-235    ,NO ,  -2.100E+00,   1.857E+01,   2.635E+01,,   -0.080
C,U-238    ,NO ,   1.786E+02,   2.578E+02,   4.333E+02,,    0.412
C,AM-241   ,NO ,  -4.732E+01,   3.101E+01,   4.011E+01,,   -1.180
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 00:10:38.95
TBE23 03017322 HpGe ********** Aquisition Date/Time: 7-JUN-2006 19:10:07.36

LIMS No., Customer Name, Client ID: WG L28801-7 LASALLE

Sample ID : 23L28801-7
Sample Type : WG
Quantity : 3.32560E+00 L
Start Channel : 50 Energy Tol : 1.50000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 09:00:00.
Geometry : 2335L090704
BKGFILE : 23BG060306MT
Real Time : 0 05:00:12.50
Live time : 0 05:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	33.56*	29	239	1.29	67.44	9.04E-02	1.61E-03	106.6	
2	0	64.06*	227	859	1.17	128.41	9.66E-01	1.26E-02	28.1	
3	0	139.88*	71	792	1.04	279.92	2.05E+00	3.95E-03	78.8	
4	0	185.28*	107	578	1.35	370.67	1.95E+00	5.94E-03	48.9	
5	0	198.31*	47	491	1.43	396.71	1.90E+00	2.59E-03	90.3	
6	0	238.63*	39	430	1.13	477.29	1.72E+00	2.16E-03	109.7	
7	0	351.82*	40	269	1.03	703.55	1.32E+00	2.21E-03	90.7	
8	0	596.11	84	178	1.37	1191.91	8.73E-01	4.66E-03	35.5	
9	0	608.83*	133	177	1.57	1217.33	8.59E-01	7.37E-03	26.3	
10	0	873.42	65	208	10.89	1746.38	6.58E-01	3.63E-03	68.5	
11	0	911.77*	10	71	0.91	1823.07	6.38E-01	5.80E-04	190.6	
12	0	1120.40*	38	47	1.59	2240.33	5.52E-01	2.12E-03	46.4	
13	0	1460.82*	8	41	1.95	2921.28	4.59E-01	4.51E-04	286.5	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	8	10.67*	4.594E-01	7.471E+00	7.471E+00	572.91
RA-226	186.21	107	3.28*	1.949E+00	7.554E+01	7.554E+01	97.83
AC-228	835.50	------	1.75	6.790E-01	------	Line Not Found	------
	911.07	10	27.70*	6.379E-01	2.668E+00	2.680E+00	381.21
TH-228	238.63	39	44.60*	1.724E+00	2.286E+00	2.317E+00	219.38
	240.98	------	3.95	1.714E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 23L28801-7

Acquisition date : 7-JUN-2006 19:10:07

Total number of lines in spectrum	13	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	5	38.46%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.471E+00	7.471E+00	42.80E+00	572.91	
RA-226	1600.00Y	1.00	7.554E+01	7.554E+01	7.390E+01	97.83	
AC-228	5.75Y	1.00	2.668E+00	2.680E+00	10.22E+00	381.21	
TH-228	1.91Y	1.01	2.286E+00	2.317E+00	5.084E+00	219.38	
			---	---			
	Total Activity :		8.796E+01	8.801E+01			

Grand Total Activity : 8.796E+01 8.801E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 23L28801-7

Acquisition date : 7-JUN-2006 19:10:07

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	33.56	29	239	1.29	67.44	65	8	1.61E-03	****	9.04E-02	
0	64.06	227	859	1.17	128.41	123	12	1.26E-02	56.3	9.66E-01	
0	139.88	71	792	1.04	279.92	274	10	3.95E-03	****	2.05E+00	
0	198.31	47	491	1.43	396.71	393	8	2.59E-03	****	1.90E+00	
0	351.82	40	269	1.03	703.55	699	11	2.21E-03	****	1.32E+00	
0	596.11	84	178	1.37	1191.91	1186	14	4.66E-03	71.0	8.73E-01	
0	608.83	133	177	1.57	1217.33	1210	16	7.37E-03	52.7	8.59E-01	
0	873.42	65	208	10.89	1746.38	1728	34	3.63E-03	****	6.58E-01	T
0	1120.40	38	47	1.59	2240.33	2235	13	2.12E-03	92.9	5.52E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	5	38.46%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	7.471E+00	7.471E+00	42.80E+00	572.91	
RA-226	1600.00Y	1.00	7.554E+01	7.554E+01	7.390E+01	97.83	
AC-228	5.75Y	1.00	2.668E+00	2.680E+00	10.22E+00	381.21	
TH-228	1.91Y	1.01	2.286E+00	2.317E+00	5.084E+00	219.38	
		Total Activity :	8.796E+01	8.801E+01			

Grand Total Activity : 8.796E+01 8.801E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	7.471E+00	4.280E+01	4.344E+01	0.000E+00	0.172
RA-226	7.554E+01	7.390E+01	1.120E+02	0.000E+00	0.675
AC-228	2.680E+00	1.022E+01	1.438E+01	0.000E+00	0.186
TH-228	2.317E+00	5.084E+00	7.698E+00	0.000E+00	0.301

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.164E+01		2.383E+01	4.108E+01	0.000E+00	0.283
NA-24	-3.055E+00		4.071E+00	Half-Life too short		
CR-51	-8.941E+00		2.875E+01	4.840E+01	0.000E+00	-0.185
MN-54	2.115E+00		2.443E+00	4.382E+00	0.000E+00	0.483
CO-57	9.254E-01		2.844E+00	4.799E+00	0.000E+00	0.193
CO-58	-1.758E-01		2.592E+00	4.439E+00	0.000E+00	-0.040
FE-59	3.604E+00		5.167E+00	9.423E+00	0.000E+00	0.383
CO-60	3.143E-01		2.438E+00	4.290E+00	0.000E+00	0.073
ZN-65	6.405E+00		6.115E+00	9.803E+00	0.000E+00	0.653
SE-75	-3.388E+00		3.688E+00	6.133E+00	0.000E+00	-0.552
SR-85	1.465E+01		3.223E+00	6.162E+00	0.000E+00	2.377
Y-88	1.932E+00		2.994E+00	5.540E+00	0.000E+00	0.349
NB-94	4.358E-01		2.281E+00	3.961E+00	0.000E+00	0.110
NB-95	3.153E+00		2.740E+00	4.969E+00	0.000E+00	0.634
ZR-95	-1.759E+00		4.732E+00	7.980E+00	0.000E+00	-0.220
MO-99	-2.800E+02		5.475E+02	9.166E+02	0.000E+00	-0.305
RU-103	5.005E+00		3.179E+00	5.687E+00	0.000E+00	0.880
RU-106	9.935E+00		2.427E+01	4.152E+01	0.000E+00	0.239
AG-110m	5.817E-01		2.423E+00	4.225E+00	0.000E+00	0.138
SN-113	4.050E-03		3.597E+00	6.086E+00	0.000E+00	0.001
SB-124	1.352E+00		6.289E+00	4.845E+00	0.000E+00	0.279
SB-125	2.111E+00		7.360E+00	1.257E+01	0.000E+00	0.168
TE-129M	1.630E+01		3.558E+01	6.126E+01	0.000E+00	0.266
I-131	-9.454E-01		7.932E+00	1.341E+01	0.000E+00	-0.071
BA-133	5.693E+00		3.914E+00	6.024E+00	0.000E+00	0.945
CS-134	8.676E+00		5.628E+00	5.186E+00	0.000E+00	1.673
CS-136	1.730E+00		4.583E+00	8.046E+00	0.000E+00	0.215
CS-137	2.855E-01		2.680E+00	4.638E+00	0.000E+00	0.062
CE-139	1.046E+00		2.935E+00	4.927E+00	0.000E+00	0.212
BA-140	6.822E+00		1.791E+01	3.070E+01	0.000E+00	0.222
LA-140	-9.827E-01		5.229E+00	9.163E+00	0.000E+00	-0.107
CE-141	-2.509E+00		7.165E+00	1.006E+01	0.000E+00	-0.250
CE-144	6.894E+00		2.584E+01	3.700E+01	0.000E+00	0.186
EU-152	7.510E-01		9.578E+00	1.379E+01	0.000E+00	0.054
EU-154	1.215E-01		5.858E+00	9.824E+00	0.000E+00	0.012
TH-232	2.668E+00	+	1.017E+01	1.522E+01	0.000E+00	0.175
U-235	-2.400E+00		2.601E+01	3.585E+01	0.000E+00	-0.067
U-238	6.584E+01		2.916E+02	4.888E+02	0.000E+00	0.135
AM-241	2.374E+01		1.693E+01	2.476E+01	0.000E+00	0.959

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A,23L28801-7       ,06/08/2006 00:10,05/25/2006 09:00,   3.326E+00,WG L28801-7 LA
B,23L28801-7       ,LIBD                  ,06/01/2006 10:14,2335L090704
C,K-40     ,YES,   7.471E+00,   4.280E+01,   4.344E+01,,    0.172
C,RA-226   ,YES,   7.554E+01,   7.390E+01,   1.120E+02,,    0.675
C,AC-228   ,YES,   2.680E+00,   1.022E+01,   1.438E+01,,    0.186
C,TH-228   ,YES,   2.317E+00,   5.084E+00,   7.698E+00,,    0.301
C,BE-7     ,NO ,   1.164E+01,   2.383E+01,   4.108E+01,,    0.283
C,CR-51    ,NO ,  -8.941E+00,   2.875E+01,   4.840E+01,,   -0.185
C,MN-54    ,NO ,   2.115E+00,   2.443E+00,   4.382E+00,,    0.483
C,CO-57    ,NO ,   9.254E-01,   2.844E+00,   4.799E+00,,    0.193
C,CO-58    ,NO ,  -1.758E-01,   2.592E+00,   4.439E+00,,   -0.040
C,FE-59    ,NO ,   3.604E+00,   5.167E+00,   9.423E+00,,    0.383
C,CO-60    ,NO ,   3.143E-01,   2.438E+00,   4.290E+00,,    0.073
C,ZN-65    ,NO ,   6.405E+00,   6.115E+00,   9.803E+00,,    0.653
C,SE-75    ,NO ,  -3.388E+00,   3.688E+00,   6.133E+00,,   -0.552
C,SR-85    ,NO ,   1.465E+01,   3.223E+00,   6.162E+00,,    2.377
C,Y-88     ,NO ,   1.932E+00,   2.994E+00,   5.540E+00,,    0.349
C,NB-94    ,NO ,   4.358E-01,   2.281E+00,   3.961E+00,,    0.110
C,NB-95    ,NO ,   3.153E+00,   2.740E+00,   4.969E+00,,    0.634
C,ZR-95    ,NO ,  -1.759E+00,   4.732E+00,   7.980E+00,,   -0.220
C,MO-99    ,NO ,  -2.800E+02,   5.475E+02,   9.166E+02,,   -0.305
C,RU-103   ,NO ,   5.005E+00,   3.179E+00,   5.687E+00,,    0.880
C,RU-106   ,NO ,   9.935E+00,   2.427E+01,   4.152E+01,,    0.239
C,AG-110m  ,NO ,   5.817E-01,   2.423E+00,   4.225E+00,,    0.138
C,SN-113   ,NO ,   4.050E-03,   3.597E+00,   6.086E+00,,    0.001
C,SB-124   ,NO ,   1.352E+00,   6.289E+00,   4.845E+00,,    0.279
C,SB-125   ,NO ,   2.111E+00,   7.360E+00,   1.257E+01,,    0.168
C,TE-129M  ,NO ,   1.630E+01,   3.558E+01,   6.126E+01,,    0.266
C,I-131    ,NO ,  -9.454E-01,   7.932E+00,   1.341E+01,,   -0.071
C,BA-133   ,NO ,   5.693E+00,   3.914E+00,   6.024E+00,,    0.945
C,CS-134   ,NO ,   8.676E+00,   5.628E+00,   5.186E+00,,    1.673
C,CS-136   ,NO ,   1.730E+00,   4.583E+00,   8.046E+00,,    0.215
C,CS-137   ,NO ,   2.855E-01,   2.680E+00,   4.638E+00,,    0.062
C,CE-139   ,NO ,   1.046E+00,   2.935E+00,   4.927E+00,,    0.212
C,BA-140   ,NO ,   6.822E+00,   1.791E+01,   3.070E+01,,    0.222
C,LA-140   ,NO ,  -9.827E-01,   5.229E+00,   9.163E+00,,   -0.107
C,CE-141   ,NO ,  -2.509E+00,   7.165E+00,   1.006E+01,,   -0.250
C,CE-144   ,NO ,   6.894E+00,   2.584E+01,   3.700E+01,,    0.186
C,EU-152   ,NO ,   7.510E-01,   9.578E+00,   1.379E+01,,    0.054
C,EU-154   ,NO ,   1.215E-01,   5.858E+00,   9.824E+00,,    0.012
C,TH-232   ,NO ,   2.668E+00,   1.017E+01,   1.522E+01,,    0.175
C,U-235    ,NO ,  -2.400E+00,   2.601E+01,   3.585E+01,,   -0.067
C,U-238    ,NO ,   6.584E+01,   2.916E+02,   4.888E+02,,    0.135
C,AM-241   ,NO ,   2.374E+01,   1.693E+01,   2.476E+01,,    0.959
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 05:12:05.19
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 7-JUN-2006 19:11:44.33

LIMS No., Customer Name, Client ID: WG L28801-8 LASALLE

Sample ID : 11L28801-8
Sample Type : WG
Quantity : 3.39430E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 09:20:00.
Geometry : 1135L090204
BKGFILE : 11BG060306MT
Real Time : 0 10:00:13.19
Live time : 0 10:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	66.37	241	1965	1.49	131.74	6.04E-01	6.70E-03	31.2	
2	0	139.82*	242	1176	1.95	279.08	1.69E+00	6.73E-03	29.8	
3	0	198.44	217	1011	1.23	396.63	1.57E+00	6.02E-03	28.3	
4	0	238.62*	46	602	1.00	477.18	1.42E+00	1.28E-03	123.8	
5	0	242.01	102	577	1.44	483.99	1.41E+00	2.83E-03	42.0	
6	0	295.06*	60	557	1.11	590.34	1.23E+00	1.67E-03	82.6	
7	0	351.75*	142	572	1.17	703.96	1.08E+00	3.96E-03	40.8	
8	0	595.91	160	288	1.60	1193.05	7.14E-01	4.45E-03	23.9	
9	0	609.36*	218	388	1.51	1219.99	7.02E-01	6.05E-03	24.3	
10	0	868.11	39	134	1.35	1737.80	5.33E-01	1.10E-03	59.1	
11	0	969.38*	18	171	1.65	1940.35	4.89E-01	4.96E-04	192.8	
12	0	1121.64	101	125	5.12	2244.72	4.37E-01	2.81E-03	27.7	
13	0	1460.52*	157	80	1.84	2921.54	3.54E-01	4.35E-03	20.2	
14	0	1761.55	88	56	3.77	3522.09	3.04E-01	2.45E-03	20.4	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	157	10.67*	3.540E-01	9.177E+01	9.177E+01	40.45
TH-228	238.63	46	44.60*	1.421E+00	1.608E+00	1.629E+00	247.51
	240.98	------	3.95	1.413E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Page : 2
Sample ID : 11L28801-8
Acquisition date : 7-JUN-2006 19:11:44

Total number of lines in spectrum	14	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	3	21.43%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.177E+01	9.177E+01	3.712E+01	40.45	
TH-228	1.91Y	1.01	1.608E+00	1.629E+00	4.033E+00	247.51	
			---	---			
Total Activity :			9.338E+01	9.340E+01			

Grand Total Activity : 9.338E+01 9.340E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28801-8 Acquisition date : 7-JUN-2006 19:11:44

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	66.37	241	1965	1.49	131.74	129	7	6.70E-03	62.3	6.04E-01	
0	139.82	242	1176	1.95	279.08	275	10	6.73E-03	59.6	1.69E+00	
0	198.44	217	1011	1.23	396.63	392	10	6.02E-03	56.6	1.57E+00	
0	242.01	102	577	1.44	483.99	481	8	2.83E-03	84.0	1.41E+00	
0	295.06	60	557	1.11	590.34	587	9	1.67E-03	****	1.23E+00	
0	351.75	142	572	1.17	703.96	698	13	3.96E-03	81.7	1.08E+00	
0	595.91	160	288	1.60	1193.05	1187	14	4.45E-03	47.8	7.14E-01	
0	609.36	218	388	1.51	1219.99	1211	18	6.05E-03	48.6	7.02E-01	
0	868.11	39	134	1.35	1737.80	1732	11	1.10E-03	****	5.33E-01	
0	969.38	18	171	1.65	1940.35	1932	14	4.96E-04	****	4.89E-01	T
0	1121.64	101	125	5.12	2244.72	2237	17	2.81E-03	55.4	4.37E-01	
0	1761.55	88	56	3.77	3522.09	3516	13	2.45E-03	40.7	3.04E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	14	
Number of unidentified lines	11	
Number of lines tentatively identified by NID	3	21.43%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.177E+01	9.177E+01	3.712E+01	40.45	
TH-228	1.91Y	1.01	1.608E+00	1.629E+00	4.033E+00	247.51	
			---	---			
	Total Activity :		9.338E+01	9.340E+01			

Grand Total Activity : 9.338E+01 9.340E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	9.177E+01	3.712E+01	3.066E+01	0.000E+00	2.994
TH-228	1.629E+00	4.033E+00	6.024E+00	0.000E+00	0.271

---- Non-Identified Nuclides ----

Nuclide	Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-1.109E+01		2.022E+01	3.244E+01	0.000E+00	-0.342
NA-24	-7.534E+00		3.871E+00	Half-Life too short		
CR-51	-2.113E+01		2.337E+01	3.785E+01	0.000E+00	-0.558
MN-54	1.307E-01		1.945E+00	3.195E+00	0.000E+00	0.041
CO-57	1.507E-01		2.130E+00	3.515E+00	0.000E+00	0.043
CO-58	-3.449E+00		2.216E+00	3.392E+00	0.000E+00	-1.017
FE-59	3.085E+00		4.436E+00	7.584E+00	0.000E+00	0.407
CO-60	-5.622E-01		2.099E+00	3.390E+00	0.000E+00	-0.166
ZN-65	4.222E+00		5.099E+00	7.514E+00	0.000E+00	0.562
SE-75	-1.848E+00		2.926E+00	4.808E+00	0.000E+00	-0.384
SR-85	2.131E+01		2.778E+00	5.290E+00	0.000E+00	4.028
Y-88	-1.699E+00		2.530E+00	3.982E+00	0.000E+00	-0.427
NB-94	-2.873E-01		1.935E+00	3.175E+00	0.000E+00	-0.090
NB-95	1.960E+00		2.206E+00	3.752E+00	0.000E+00	0.522
ZR-95	-2.566E+00		3.927E+00	6.289E+00	0.000E+00	-0.408
MO-99	-4.224E+02		4.387E+02	6.937E+02	0.000E+00	-0.609
RU-103	2.445E+00		2.624E+00	4.394E+00	0.000E+00	0.557
RU-106	3.750E+00		2.012E+01	3.172E+01	0.000E+00	0.118
AG-110m	1.772E-01		1.982E+00	3.289E+00	0.000E+00	0.054
SN-113	1.832E-01		2.849E+00	4.690E+00	0.000E+00	0.039
SB-124	2.361E+00		4.806E+00	3.673E+00	0.000E+00	0.643
SB-125	2.736E+00		5.936E+00	9.851E+00	0.000E+00	0.278
TE-129M	1.457E+01		2.992E+01	4.960E+01	0.000E+00	0.294
I-131	4.408E-01		6.455E+00	1.065E+01	0.000E+00	0.041
BA-133	8.493E+00		3.234E+00	4.941E+00	0.000E+00	1.719
CS-134	9.752E+00		4.201E+00	3.898E+00	0.000E+00	2.502
CS-136	5.207E+00		3.808E+00	6.601E+00	0.000E+00	0.789
CS-137	1.041E+00		2.086E+00	3.513E+00	0.000E+00	0.296
CE-139	1.018E-01		2.132E+00	3.492E+00	0.000E+00	0.029
BA-140	2.208E+01		1.440E+01	2.461E+01	0.000E+00	0.897
LA-140	-2.271E+00		4.675E+00	7.528E+00	0.000E+00	-0.302
CE-141	3.908E+00		5.415E+00	7.670E+00	0.000E+00	0.510
CE-144	-4.243E+00		1.926E+01	2.675E+01	0.000E+00	-0.159
EU-152	-9.133E+00		7.744E+00	1.036E+01	0.000E+00	-0.881
EU-154	-2.494E-02		4.343E+00	7.157E+00	0.000E+00	-0.003
RA-226	-2.280E+00		5.761E+01	8.540E+01	0.000E+00	-0.027
AC-228	1.756E+00		9.960E+00	1.331E+01	0.000E+00	0.132
TH-232	1.748E+00		9.916E+00	1.325E+01	0.000E+00	0.132
U-235	2.984E+01		1.888E+01	2.727E+01	0.000E+00	1.094
U-238	5.228E+01		2.139E+02	3.596E+02	0.000E+00	0.145
AM-241	-3.469E+01		3.006E+01	4.198E+01	0.000E+00	-0.826

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A,11L28801-8       ,06/08/2006 05:12,05/25/2006 09:20,   3.394E+00,WG L28801-8 LA
B,11L28801-8       ,LIBD                ,06/07/2006 09:40,1135L090204
C,K-40     ,YES,   9.177E+01,   3.712E+01,   3.066E+01,,    2.994
C,TH-228   ,YES,   1.629E+00,   4.033E+00,   6.024E+00,,    0.271
C,BE-7     ,NO ,  -1.109E+01,   2.022E+01,   3.244E+01,,   -0.342
C,CR-51    ,NO ,  -2.113E+01,   2.337E+01,   3.785E+01,,   -0.558
C,MN-54    ,NO ,   1.307E-01,   1.945E+00,   3.195E+00,,    0.041
C,CO-57    ,NO ,   1.507E-01,   2.130E+00,   3.515E+00,,    0.043
C,CO-58    ,NO ,  -3.449E+00,   2.216E+00,   3.392E+00,,   -1.017
C,FE-59    ,NO ,   3.085E+00,   4.436E+00,   7.584E+00,,    0.407
C,CO-60    ,NO ,  -5.622E-01,   2.099E+00,   3.390E+00,,   -0.166
C,ZN-65    ,NO ,   4.222E+00,   5.099E+00,   7.514E+00,,    0.562
C,SE-75    ,NO ,  -1.848E+00,   2.926E+00,   4.808E+00,,   -0.384
C,SR-85    ,NO ,   2.131E+01,   2.778E+00,   5.290E+00,,    4.028
C,Y-88     ,NO ,  -1.699E+00,   2.530E+00,   3.982E+00,,   -0.427
C,NB-94    ,NO ,  -2.873E-01,   1.935E+00,   3.175E+00,,   -0.090
C,NB-95    ,NO ,   1.960E+00,   2.206E+00,   3.752E+00,,    0.522
C,ZR-95    ,NO ,  -2.566E+00,   3.927E+00,   6.289E+00,,   -0.408
C,MO-99    ,NO ,  -4.224E+02,   4.387E+02,   6.937E+02,,   -0.609
C,RU-103   ,NO ,   2.445E+00,   2.624E+00,   4.394E+00,,    0.557
C,RU-106   ,NO ,   3.750E+00,   2.012E+01,   3.172E+01,,    0.118
C,AG-110m  ,NO ,   1.772E-01,   1.982E+00,   3.289E+00,,    0.054
C,SN-113   ,NO ,   1.832E-01,   2.849E+00,   4.690E+00,,    0.039
C,SB-124   ,NO ,   2.361E+00,   4.806E+00,   3.673E+00,,    0.643
C,SB-125   ,NO ,   2.736E+00,   5.936E+00,   9.851E+00,,    0.278
C,TE-129M  ,NO ,   1.457E+01,   2.992E+01,   4.960E+01,,    0.294
C,I-131    ,NO ,   4.408E-01,   6.455E+00,   1.065E+01,,    0.041
C,BA-133   ,NO ,   8.493E+00,   3.234E+00,   4.941E+00,,    1.719
C,CS-134   ,NO ,   9.752E+00,   4.201E+00,   3.898E+00,,    2.502
C,CS-136   ,NO ,   5.207E+00,   3.808E+00,   6.601E+00,,    0.789
C,CS-137   ,NO ,   1.041E+00,   2.086E+00,   3.513E+00,,    0.296
C,CE-139   ,NO ,   1.018E-01,   2.132E+00,   3.492E+00,,    0.029
C,BA-140   ,NO ,   2.208E+01,   1.440E+01,   2.461E+01,,    0.897
C,LA-140   ,NO ,  -2.271E+00,   4.675E+00,   7.528E+00,,   -0.302
C,CE-141   ,NO ,   3.908E+00,   5.415E+00,   7.670E+00,,    0.510
C,CE-144   ,NO ,  -4.243E+00,   1.926E+01,   2.675E+01,,   -0.159
C,EU-152   ,NO ,  -9.133E+00,   7.744E+00,   1.036E+01,,   -0.881
C,EU-154   ,NO ,  -2.494E-02,   4.343E+00,   7.157E+00,,   -0.003
C,RA-226   ,NO ,  -2.280E+00,   5.761E+01,   8.540E+01,,   -0.027
C,AC-228   ,NO ,   1.756E+00,   9.960E+00,   1.331E+01,,    0.132
C,TH-232   ,NO ,   1.748E+00,   9.916E+00,   1.325E+01,,    0.132
C,U-235    ,NO ,   2.984E+01,   1.888E+01,   2.727E+01,,    1.094
C,U-238    ,NO ,   5.228E+01,   2.139E+02,   3.596E+02,,    0.145
C,AM-241   ,NO ,  -3.469E+01,   3.006E+01,   4.198E+01,,   -0.826
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 00:13:06.71
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 7-JUN-2006 19:12:56.82

LIMS No., Customer Name, Client ID: WG L28801-9 LASALLE

Sample ID : 07L28801-9
Sample Type : WG
Quantity : 3.50330E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 11:10:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 05:00:03.56
Live time : 0 05:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.33*	127	556	1.40	133.23	7.25E-01	7.04E-03	35.2	4.79E-01
2	1	139.62*	175	499	1.34	279.93	2.09E+00	9.70E-03	26.1	4.66E+00
3	1	198.44*	76	393	1.08	397.65	1.98E+00	4.20E-03	52.3	1.30E+00
4	1	296.28	57	330	2.90	593.46	1.60E+00	3.17E-03	63.7	2.46E+00
5	1	595.99	90	135	1.83	1193.14	9.96E-01	5.02E-03	26.8	3.59E-01
6	1	609.38*	96	114	1.65	1219.95	9.80E-01	5.32E-03	28.4	2.20E+00
7	1	1460.80*	32	29	2.23	2922.60	5.15E-01	1.78E-03	60.4	1.29E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	32	10.67*	5.151E-01	2.498E+01	2.498E+01	120.75

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28801-9 Acquisition date : 7-JUN-2006 19:12:56

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.498E+01	2.498E+01	3.016E+01	120.75	
			---	---			
	Total Activity :		2.498E+01	2.498E+01			
	Grand Total Activity :		2.498E+01	2.498E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28801-9 Acquisition date : 7-JUN-2006 19:12:56

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.33	127	556	1.40	133.23	130	8	7.04E-03	70.5	7.25E-01	
1	139.62	175	499	1.34	279.93	275	9	9.70E-03	52.3	2.09E+00	
1	198.44	76	393	1.08	397.65	394	8	4.20E-03	****	1.98E+00	
1	296.28	57	330	2.90	593.46	588	11	3.17E-03	****	1.60E+00	
1	595.99	90	135	1.83	1193.14	1189	11	5.02E-03	53.7	9.96E-01	
1	609.38	96	114	1.65	1219.95	1216	11	5.32E-03	56.8	9.80E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.498E+01	2.498E+01	3.016E+01	120.75	
			---	---			
	Total Activity :		2.498E+01	2.498E+01			
	Grand Total Activity :		2.498E+01	2.498E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	2.498E+01	3.016E+01	3.471E+01	0.000E+00	0.720

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	7.420E+00		2.038E+01	3.370E+01	0.000E+00	0.220
NA-24	-4.322E+00		3.372E+00	Half-Life too short		
CR-51	-3.077E+01		2.468E+01	3.948E+01	0.000E+00	-0.779
MN-54	-2.022E-01		2.047E+00	3.364E+00	0.000E+00	-0.060
CO-57	7.247E-01		2.198E+00	3.620E+00	0.000E+00	0.200

CO-58	-1.141E-01	2.406E+00	3.974E+00	0.000E+00	-0.029
FE-59	-3.041E+00	4.873E+00	7.770E+00	0.000E+00	-0.391
CO-60	3.750E-01	2.284E+00	3.773E+00	0.000E+00	0.099
ZN-65	5.167E+00	4.656E+00	8.189E+00	0.000E+00	0.631
SE-75	-4.907E-01	3.087E+00	5.017E+00	0.000E+00	-0.098
SR-85	1.950E+01	2.901E+00	5.708E+00	0.000E+00	3.417
Y-88	1.725E+00	2.571E+00	4.479E+00	0.000E+00	0.385
NB-94	1.049E+00	2.140E+00	3.571E+00	0.000E+00	0.294
NB-95	-5.063E-01	2.335E+00	3.839E+00	0.000E+00	-0.132
ZR-95	-4.014E+00	4.355E+00	6.728E+00	0.000E+00	-0.597
MO-99	-3.671E+01	4.755E+02	7.703E+02	0.000E+00	-0.048
RU-103	-1.380E-01	2.736E+00	4.434E+00	0.000E+00	-0.031
RU-106	-9.187E+00	1.980E+01	3.092E+01	0.000E+00	-0.297
AG-110m	8.541E-01	2.112E+00	3.529E+00	0.000E+00	0.242
SN-113	3.967E-01	2.878E+00	4.764E+00	0.000E+00	0.083
SB-124	-3.497E+00	6.115E+00	3.872E+00	0.000E+00	-0.903
SB-125	1.531E+00	6.156E+00	1.018E+01	0.000E+00	0.150
TE-129M	3.271E+01	3.257E+01	5.518E+01	0.000E+00	0.593
I-131	-9.706E-03	6.755E+00	1.117E+01	0.000E+00	-0.001
BA-133	4.334E+00	3.075E+00	5.314E+00	0.000E+00	0.816
CS-134	1.140E+00	5.405E+00	3.936E+00	0.000E+00	0.290
CS-136	-5.542E-02	4.171E+00	6.897E+00	0.000E+00	-0.008
CS-137	-1.200E+00	2.312E+00	3.693E+00	0.000E+00	-0.325
CE-139	-1.442E+00	2.167E+00	3.557E+00	0.000E+00	-0.406
BA-140	1.822E+01	1.515E+01	2.639E+01	0.000E+00	0.690
LA-140	-2.227E+00	5.104E+00	8.108E+00	0.000E+00	-0.275
CE-141	4.058E+00	5.308E+00	7.535E+00	0.000E+00	0.539
CE-144	-9.728E+00	1.950E+01	2.652E+01	0.000E+00	-0.367
EU-152	-1.722E+01	6.977E+00	1.066E+01	0.000E+00	-1.616
EU-154	7.612E-01	4.496E+00	7.376E+00	0.000E+00	0.103
RA-226	-8.090E+00	5.466E+01	8.886E+01	0.000E+00	-0.091
AC-228	4.967E+00	8.677E+00	1.407E+01	0.000E+00	0.353
TH-228	7.557E+00	4.392E+00	7.397E+00	0.000E+00	1.022
TH-232	4.945E+00	8.639E+00	1.401E+01	0.000E+00	0.353
U-235	1.800E+01	1.905E+01	2.721E+01	0.000E+00	0.662
U-238	2.499E+02	2.508E+02	4.315E+02	0.000E+00	0.579
AM-241	-3.808E+01	2.151E+01	3.008E+01	0.000E+00	-1.266

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A,07L28801-9       ,06/08/2006 00:13,05/25/2006 11:10,   3.503E+00,WG L28801-9 LA
B,07L28801-9       ,LIBD                ,06/07/2006 09:32,0735L090904
C,K-40     ,YES,   2.498E+01,   3.016E+01,   3.471E+01,,    0.720
C,BE-7     ,NO ,   7.420E+00,   2.038E+01,   3.370E+01,,    0.220
C,CR-51    ,NO ,  -3.077E+01,   2.468E+01,   3.948E+01,,   -0.779
C,MN-54    ,NO ,  -2.022E-01,   2.047E+00,   3.364E+00,,   -0.060
C,CO-57    ,NO ,   7.247E-01,   2.198E+00,   3.620E+00,,    0.200
C,CO-58    ,NO ,  -1.141E-01,   2.406E+00,   3.974E+00,,   -0.029
C,FE-59    ,NO ,  -3.041E+00,   4.873E+00,   7.770E+00,,   -0.391
C,CO-60    ,NO ,   3.750E-01,   2.284E+00,   3.773E+00,,    0.099
C,ZN-65    ,NO ,   5.167E+00,   4.656E+00,   8.189E+00,,    0.631
C,SE-75    ,NO ,  -4.907E-01,   3.087E+00,   5.017E+00,,   -0.098
C,SR-85    ,NO ,   1.950E+01,   2.901E+00,   5.708E+00,,    3.417
C,Y-88     ,NO ,   1.725E+00,   2.571E+00,   4.479E+00,,    0.385
C,NB-94    ,NO ,   1.049E+00,   2.140E+00,   3.571E+00,,    0.294
C,NB-95    ,NO ,  -5.063E-01,   2.335E+00,   3.839E+00,,   -0.132
C,ZR-95    ,NO ,  -4.014E+00,   4.355E+00,   6.728E+00,,   -0.597
C,MO-99    ,NO ,  -3.671E+01,   4.755E+02,   7.703E+02,,   -0.048
C,RU-103   ,NO ,  -1.380E-01,   2.736E+00,   4.434E+00,,   -0.031
C,RU-106   ,NO ,  -9.187E+00,   1.980E+01,   3.092E+01,,   -0.297
C,AG-110m  ,NO ,   8.541E-01,   2.112E+00,   3.529E+00,,    0.242
C,SN-113   ,NO ,   3.967E-01,   2.878E+00,   4.764E+00,,    0.083
C,SB-124   ,NO ,  -3.497E+00,   6.115E+00,   3.872E+00,,   -0.903
C,SB-125   ,NO ,   1.531E+00,   6.156E+00,   1.018E+01,,    0.150
C,TE-129M  ,NO ,   3.271E+01,   3.257E+01,   5.518E+01,,    0.593
C,I-131    ,NO ,  -9.706E-03,   6.755E+00,   1.117E+01,,   -0.001
C,BA-133   ,NO ,   4.334E+00,   3.075E+00,   5.314E+00,,    0.816
C,CS-134   ,NO ,   1.140E+00,   5.405E+00,   3.936E+00,,    0.290
C,CS-136   ,NO ,  -5.542E-02,   4.171E+00,   6.897E+00,,   -0.008
C,CS-137   ,NO ,  -1.200E+00,   2.312E+00,   3.693E+00,,   -0.325
C,CE-139   ,NO ,  -1.442E+00,   2.167E+00,   3.557E+00,,   -0.406
C,BA-140   ,NO ,   1.822E+01,   1.515E+01,   2.639E+01,,    0.690
C,LA-140   ,NO ,  -2.227E+00,   5.104E+00,   8.108E+00,,   -0.275
C,CE-141   ,NO ,   4.058E+00,   5.308E+00,   7.535E+00,,    0.539
C,CE-144   ,NO ,  -9.728E+00,   1.950E+01,   2.652E+01,,   -0.367
C,EU-152   ,NO ,  -1.722E+01,   6.977E+00,   1.066E+01,,   -1.616
C,EU-154   ,NO ,   7.612E-01,   4.496E+00,   7.376E+00,,    0.103
C,RA-226   ,NO ,  -8.090E+00,   5.466E+01,   8.886E+01,,   -0.091
C,AC-228   ,NO ,   4.967E+00,   8.677E+00,   1.407E+01,,    0.353
C,TH-228   ,NO ,   7.557E+00,   4.392E+00,   7.397E+00,,    1.022
C,TH-232   ,NO ,   4.945E+00,   8.639E+00,   1.401E+01,,    0.353
C,U-235    ,NO ,   1.800E+01,   1.905E+01,   2.721E+01,,    0.662
C,U-238    ,NO ,   2.499E+02,   2.508E+02,   4.315E+02,,    0.579
C,AM-241   ,NO ,  -3.808E+01,   2.151E+01,   3.008E+01,,   -1.266
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 05:15:57.11
TBE10 12892256 HpGe ********** Aquisition Date/Time: 7-JUN-2006 19:15:42.68

LIMS No., Customer Name, Client ID: WG L28801-10 LASALLE\

Sample ID : 10L28801-10
Sample Type : WG
Quantity : 3.39210E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 11:00:00.
Geometry : 1035L091004
BKGFILE : 10BG060306MT
Real Time : 0 10:00:05.93
Live time : 0 10:00:00.00

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.34*	341	1130	1.54	131.80	6.35E-01	9.46E-03	19.3	5.34E+00
2	1	139.90	239	1241	1.11	278.99	1.68E+00	6.65E-03	27.2	6.77E-01
3	1	185.87*	15	849	1.28	370.95	1.59E+00	4.18E-04	402.7	1.57E+00
4	1	198.37*	143	1163	1.22	395.97	1.55E+00	3.98E-03	53.2	1.78E+00
5	1	294.51	226	561	4.30	588.35	1.22E+00	6.29E-03	21.0	9.37E+00
6	1	352.36*	83	547	1.43	704.11	1.06E+00	2.32E-03	66.8	3.77E+00
7	1	583.19*	2	246	1.33	1166.04	7.18E-01	4.32E-05	*****	1.26E+00
8	1	595.87	139	198	1.16	1191.43	7.06E-01	3.86E-03	20.0	1.98E+00
9	1	609.34*	130	244	1.51	1218.38	6.94E-01	3.60E-03	30.7	1.84E+00
10	1	1120.27*	52	99	2.23	2241.03	4.33E-01	1.45E-03	50.1	1.73E+00
11	1	1765.11*	25	93	3.37	3532.06	3.13E-01	7.07E-04	110.5	8.46E-01

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
RA-226	186.21	15	3.28*	1.594E+00	6.374E+00	6.374E+00	805.45
U-235	143.76	------	10.50*	1.683E+00	------	Line Not Found	------
	163.35	------	4.70	1.659E+00	------	Line Not Found	------
	185.71	15	54.00	1.594E+00	3.871E-01	3.871E-01	805.45
	205.31	------	4.70	1.524E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Page : 2
Sample ID : 10L28801-10
Acquisition date : 7-JUN-2006 19:15:42

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	6.374E+00	6.374E+00	51.34E+00	805.45	
U-235	7.04E+08Y	1.00	3.871E-01	3.871E-01	31.18E-01	805.45	K
			---	---			
	Total Activity :		6.761E+00	6.761E+00			
	Grand Total Activity :		6.761E+00	6.761E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Page : 3
Sample ID : 10L28801-10
Acquisition date : 7-JUN-2006 19:15:42

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.34	341	1130	1.54	131.80	128	8	9.46E-03	38.6	6.35E-01	
1	139.90	239	1241	1.11	278.99	275	9	6.65E-03	54.4	1.68E+00	
1	198.37	143	1163	1.22	395.97	391	12	3.98E-03	****	1.55E+00	
1	294.51	226	561	4.30	588.35	586	11	6.29E-03	42.0	1.22E+00	
1	352.36	83	547	1.43	704.11	697	13	2.32E-03	****	1.06E+00	
1	583.19	2	246	1.33	1166.04	1161	12	4.32E-05	****	7.18E-01	T
1	595.87	139	198	1.16	1191.43	1188	9	3.86E-03	40.0	7.06E-01	
1	609.34	130	244	1.51	1218.38	1213	12	3.60E-03	61.4	6.94E-01	
1	1120.27	52	99	2.23	2241.03	2237	14	1.45E-03	****	4.33E-01	
1	1765.11	25	93	3.37	3532.06	3522	23	7.07E-04	****	3.13E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	11	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	2	18.18%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	6.374E+00	6.374E+00	51.34E+00	805.45	
	Total Activity :		6.374E+00	6.374E+00			
Grand Total Activity :			6.374E+00	6.374E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
RA-226	6.374E+00	5.134E+01	8.093E+01	0.000E+00	0.079

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

NA-24	-9.552E+00	3.564E+00	Half-Life too short		
K-40	2.430E+01	3.175E+01	5.411E+01	0.000E+00	0.449
CR-51	-9.577E+00	2.337E+01	3.809E+01	0.000E+00	-0.251
MN-54	9.570E-01	2.049E+00	3.445E+00	0.000E+00	0.278
CO-57	1.496E-01	2.107E+00	3.489E+00	0.000E+00	0.043
CO-58	1.378E+00	2.184E+00	3.703E+00	0.000E+00	0.372
FE-59	1.400E+00	4.591E+00	7.725E+00	0.000E+00	0.181
CO-60	-1.423E+00	2.015E+00	3.164E+00	0.000E+00	-0.450
ZN-65	9.910E+00	5.080E+00	8.027E+00	0.000E+00	1.235
SE-75	-9.199E-01	2.894E+00	4.767E+00	0.000E+00	-0.193
SR-85	2.184E+01	2.625E+00	5.139E+00	0.000E+00	4.250
Y-88	-1.481E+00	2.182E+00	3.390E+00	0.000E+00	-0.437
NB-94	1.442E+00	1.920E+00	3.212E+00	0.000E+00	0.449
NB-95	7.251E-01	2.202E+00	3.697E+00	0.000E+00	0.196
ZR-95	-1.317E+00	3.962E+00	6.490E+00	0.000E+00	-0.203
MO-99	9.176E+01	4.340E+02	7.269E+02	0.000E+00	0.126
RU-103	4.290E+00	2.532E+00	4.399E+00	0.000E+00	0.975
RU-106	-6.835E+00	1.945E+01	3.055E+01	0.000E+00	-0.224
AG-110m	-7.669E-01	2.029E+00	3.265E+00	0.000E+00	-0.235
SN-113	3.256E-01	2.876E+00	4.705E+00	0.000E+00	0.069
SB-124	1.451E+00	5.384E+00	3.899E+00	0.000E+00	0.372
SB-125	5.854E+00	5.779E+00	9.669E+00	0.000E+00	0.605
TE-129M	1.256E+01	2.916E+01	4.906E+01	0.000E+00	0.256
I-131	-6.078E+00	6.615E+00	1.056E+01	0.000E+00	-0.576
BA-133	1.033E+01	3.312E+00	5.102E+00	0.000E+00	2.025
CS-134	4.942E+00	4.191E+00	3.916E+00	0.000E+00	1.262
CS-136	-3.689E+00	3.857E+00	6.112E+00	0.000E+00	-0.604
CS-137	1.936E-01	2.165E+00	3.545E+00	0.000E+00	0.055
CE-139	9.033E-01	2.192E+00	3.615E+00	0.000E+00	0.250
BA-140	3.146E+00	1.466E+01	2.436E+01	0.000E+00	0.129
LA-140	3.182E+00	4.602E+00	7.925E+00	0.000E+00	0.402
CE-141	-3.217E+00	5.492E+00	7.562E+00	0.000E+00	-0.425
CE-144	7.191E+00	1.922E+01	2.715E+01	0.000E+00	0.265
EU-152	-9.440E+00	7.688E+00	1.016E+01	0.000E+00	-0.929
EU-154	-4.771E-01	4.322E+00	7.135E+00	0.000E+00	-0.067
AC-228	-1.047E+00	8.666E+00	1.265E+01	0.000E+00	-0.083
TH-228	6.333E+00	4.325E+00	6.771E+00	0.000E+00	0.935
TH-232	-1.042E+00	8.628E+00	1.260E+01	0.000E+00	-0.083
U-235	1.780E+01	1.928E+01	2.750E+01	0.000E+00	0.647
U-238	4.148E+02	2.248E+02	3.974E+02	0.000E+00	1.044
AM-241	-2.161E+01	2.024E+01	2.842E+01	0.000E+00	-0.760

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A,10L28801-10      ,06/08/2006 05:15,05/25/2006 11:00,   3.392E+00,WG L28801-10 L
B,10L28801-10      ,LIBD                ,06/07/2006 09:32,1035L091004
C,RA-226   ,YES,   6.374E+00,   5.134E+01,   8.093E+01,,    0.079
C,BE-7     ,NO ,  -1.198E+01,   2.035E+01,   3.318E+01,,   -0.361
C,K-40     ,NO ,   2.430E+01,   3.175E+01,   5.411E+01,,    0.449
C,CR-51    ,NO ,  -9.577E+00,   2.337E+01,   3.809E+01,,   -0.251
C,MN-54    ,NO ,   9.570E-01,   2.049E+00,   3.445E+00,,    0.278
C,CO-57    ,NO ,   1.496E-01,   2.107E+00,   3.489E+00,,    0.043
C,CO-58    ,NO ,   1.378E+00,   2.184E+00,   3.703E+00,,    0.372
C,FE-59    ,NO ,   1.400E+00,   4.591E+00,   7.725E+00,,    0.181
C,CO-60    ,NO ,  -1.423E+00,   2.015E+00,   3.164E+00,,   -0.450
C,ZN-65    ,NO ,   9.910E+00,   5.080E+00,   8.027E+00,,    1.235
C,SE-75    ,NO ,  -9.199E-01,   2.894E+00,   4.767E+00,,   -0.193
C,SR-85    ,NO ,   2.184E+01,   2.625E+00,   5.139E+00,,    4.250
C,Y-88     ,NO ,  -1.481E+00,   2.182E+00,   3.390E+00,,   -0.437
C,NB-94    ,NO ,   1.442E+00,   1.920E+00,   3.212E+00,,    0.449
C,NB-95    ,NO ,   7.251E-01,   2.202E+00,   3.697E+00,,    0.196
C,ZR-95    ,NO ,  -1.317E+00,   3.962E+00,   6.490E+00,,   -0.203
C,MO-99    ,NO ,   9.176E+01,   4.340E+02,   7.269E+02,,    0.126
C,RU-103   ,NO ,   4.290E+00,   2.532E+00,   4.399E+00,,    0.975
C,RU-106   ,NO ,  -6.835E+00,   1.945E+01,   3.055E+01,,   -0.224
C,AG-110m  ,NO ,  -7.669E-01,   2.029E+00,   3.265E+00,,   -0.235
C,SN-113   ,NO ,   3.256E-01,   2.876E+00,   4.705E+00,,    0.069
C,SB-124   ,NO ,   1.451E+00,   5.384E+00,   3.899E+00,,    0.372
C,SB-125   ,NO ,   5.854E+00,   5.779E+00,   9.669E+00,,    0.605
C,TE-129M  ,NO ,   1.256E+01,   2.916E+01,   4.906E+01,,    0.256
C,I-131    ,NO ,  -6.078E+00,   6.615E+00,   1.056E+01,,   -0.576
C,BA-133   ,NO ,   1.033E+01,   3.312E+00,   5.102E+00,,    2.025
C,CS-134   ,NO ,   4.942E+00,   4.191E+00,   3.916E+00,,    1.262
C,CS-136   ,NO ,  -3.689E+00,   3.857E+00,   6.112E+00,,   -0.604
C,CS-137   ,NO ,   1.936E-01,   2.165E+00,   3.545E+00,,    0.055
C,CE-139   ,NO ,   9.033E-01,   2.192E+00,   3.615E+00,,    0.250
C,BA-140   ,NO ,   3.146E+00,   1.466E+01,   2.436E+01,,    0.129
C,LA-140   ,NO ,   3.182E+00,   4.602E+00,   7.925E+00,,    0.402
C,CE-141   ,NO ,  -3.217E+00,   5.492E+00,   7.562E+00,,   -0.425
C,CE-144   ,NO ,   7.191E+00,   1.922E+01,   2.715E+01,,    0.265
C,EU-152   ,NO ,  -9.440E+00,   7.688E+00,   1.016E+01,,   -0.929
C,EU-154   ,NO ,  -4.771E-01,   4.322E+00,   7.135E+00,,   -0.067
C,AC-228   ,NO ,  -1.047E+00,   8.666E+00,   1.265E+01,,   -0.083
C,TH-228   ,NO ,   6.333E+00,   4.325E+00,   6.771E+00,,    0.935
C,TH-232   ,NO ,  -1.042E+00,   8.628E+00,   1.260E+01,,   -0.083
C,U-235    ,NO ,   1.780E+01,   1.928E+01,   2.750E+01,,    0.647
C,U-238    ,NO ,   4.148E+02,   2.248E+02,   3.974E+02,,    1.044
C,AM-241   ,NO ,  -2.161E+01,   2.024E+01,   2.842E+01,,   -0.760
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 14:31:49.96
TBE04 P-40312B HpGe ********** Aquisition Date/Time: 8-JUN-2006 09:48:47.69

LIMS No., Customer Name, Client ID: WG L28801-11 LASALLE

Sample ID : 04L28801-11
Sample Type : WG
Quantity : 3.39250E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 26-MAY-2006 12:55:00.
Geometry : 0435L090804
BKGFILE : 04BG060306MT
Real Time : 0 04:42:50.72
Live time : 0 04:42:47.73

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.25*	64	558	1.23	132.96	6.45E-01	3.79E-03	71.4	2.71E+00
2	1	139.57	122	371	1.15	279.57	1.82E+00	7.22E-03	29.1	3.10E+00
3	1	198.42*	46	429	1.24	397.26	1.68E+00	2.69E-03	94.3	1.76E+00
4	1	238.75*	68	288	1.04	477.90	1.52E+00	4.03E-03	50.3	1.30E+00
5	1	295.35	94	253	1.29	591.09	1.32E+00	5.54E-03	35.9	2.19E+00
6	1	352.21*	32	211	1.41	704.78	1.17E+00	1.86E-03	103.2	2.09E+00
7	1	583.05*	49	81	1.14	1166.34	7.99E-01	2.91E-03	40.8	4.21E+00
8	1	596.17	49	151	1.49	1192.56	7.86E-01	2.90E-03	49.7	2.82E+00
9	1	609.15*	97	136	1.30	1218.53	7.73E-01	5.71E-03	30.3	7.80E-01
10	1	911.08*	8	54	2.53	1822.14	5.66E-01	4.51E-04	226.5	4.01E+00
11	1	1173.16*	4	28	1.98	2346.04	4.64E-01	2.31E-04	328.4	1.98E+00
12	1	1765.00*	25	24	0.81	3528.92	3.43E-01	1.48E-03	56.2	8.30E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: activation

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
CO-60	1173.22	4	100.00	4.638E-01	3.961E-01	3.979E-01	656.84
	1332.49	------	100.00*	4.202E-01	------	Line Not Found	------

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
AC-228	835.50	------	1.75	6.054E-01	------	Line Not Found	------
	911.07	8	27.70*	5.657E-01	2.293E+00	2.303E+00	453.05
TH-228	238.63	68	44.60*	1.520E+00	4.737E+00	4.799E+00	100.67
	240.98	------	3.95	1.511E+00	------	Line Not Found	------
TH-232	583.14	49	30.25	7.994E-01	9.582E+00	9.582E+00	81.66
	911.07	8	27.70*	5.657E-01	2.293E+00	2.293E+00	453.05
	969.11	------	16.60	5.389E-01	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 04L28801-11 Acquisition date : 8-JUN-2006 09:48:47

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : activation

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	3.961E-01	3.979E-01	26.14E-01	656.84	K
			---	---			
Total Activity :			3.961E-01	3.979E-01			

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
AC-228	5.75Y	1.00	2.293E+00	2.303E+00	10.43E+00	453.05	
TH-228	1.91Y	1.01	4.737E+00	4.799E+00	4.831E+00	100.67	
TH-232	1.41E+10Y	1.00	2.293E+00	2.293E+00	10.39E+00	453.05	
			---	---			
Total Activity :			9.324E+00	9.395E+00			

Grand Total Activity : 9.720E+00 9.793E+00

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 04L28801-11 Acquisition date : 8-JUN-2006 09:48:47

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.25	64	558	1.23	132.96	130	9	3.79E-03	****	6.45E-01	
1	139.57	122	371	1.15	279.57	276	8	7.22E-03	58.3	1.82E+00	
1	198.42	46	429	1.24	397.26	392	10	2.69E-03	****	1.68E+00	
1	295.35	94	253	1.29	591.09	586	12	5.54E-03	71.9	1.32E+00	
1	352.21	32	211	1.41	704.78	701	12	1.86E-03	****	1.17E+00	
1	596.17	49	151	1.49	1192.56	1186	11	2.90E-03	99.4	7.86E-01	
1	609.15	97	136	1.30	1218.53	1212	13	5.71E-03	60.7	7.73E-01	
1	1765.00	25	24	0.81	3528.92	3519	19	1.48E-03	****	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	8	
Number of lines tentatively identified by NID	4	33.33%

Nuclide Type : activation

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-60	5.27Y	1.00	3.961E-01	3.979E-01	26.14E-01	656.84	
		Total Activity :	3.961E-01	3.979E-01			

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TH-228	1.91Y	1.01	4.737E+00	4.799E+00	4.831E+00	100.67	
TH-232	1.41E+10Y	1.00	6.944E+00	6.944E+00	6.251E+00	90.02	
		Total Activity :	1.168E+01	1.174E+01			

Grand Total Activity : 1.208E+01 1.214E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering Nuclide	Interfering Line	Interfered Nuclide	Interfered Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA

CO-60	3.979E-01	2.614E+00	5.159E+00	0.000E+00	0.077
TH-228	4.799E+00	4.831E+00	7.219E+00	0.000E+00	0.665
TH-232	6.944E+00	6.251E+00	1.304E+01	0.000E+00	0.533

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	1.549E+01		2.434E+01	4.140E+01	0.000E+00	0.374
NA-24	-1.379E+00		2.473E+00	Half-Life too short		
K-40	2.943E+01		3.862E+01	7.014E+01	0.000E+00	0.420
CR-51	-1.403E+01		2.936E+01	4.750E+01	0.000E+00	-0.295
MN-54	-3.362E-02		2.495E+00	4.067E+00	0.000E+00	-0.008
CO-57	9.801E-01		2.365E+00	4.001E+00	0.000E+00	0.245
CO-58	-2.084E+00		2.904E+00	4.536E+00	0.000E+00	-0.459
FE-59	1.715E+00		6.037E+00	1.007E+01	0.000E+00	0.170
ZN-65	4.101E+00		5.925E+00	1.013E+01	0.000E+00	0.405
SE-75	-1.075E+00		3.561E+00	5.868E+00	0.000E+00	-0.183
SR-85	1.822E+01		3.381E+00	6.564E+00	0.000E+00	2.776
Y-88	-3.235E-01		3.059E+00	4.948E+00	0.000E+00	-0.065
NB-94	8.457E-02		2.386E+00	3.950E+00	0.000E+00	0.021
NB-95	1.322E+00		2.834E+00	4.781E+00	0.000E+00	0.277
ZR-95	-2.649E+00		4.953E+00	7.873E+00	0.000E+00	-0.336
MO-99	-3.846E+00		4.954E+02	8.152E+02	0.000E+00	-0.005
RU-103	-2.650E-01		3.071E+00	5.042E+00	0.000E+00	-0.053
RU-106	5.296E-01		2.481E+01	4.032E+01	0.000E+00	0.013
AG-110m	5.836E-01		2.493E+00	4.192E+00	0.000E+00	0.139
SN-113	1.564E+00		3.637E+00	6.017E+00	0.000E+00	0.260
SB-124	-5.061E+00		7.760E+00	4.929E+00	0.000E+00	-1.027
SB-125	3.401E-01		7.064E+00	1.178E+01	0.000E+00	0.029
TE-129M	2.352E+01		3.676E+01	6.260E+01	0.000E+00	0.376
I-131	-1.042E+00		7.688E+00	1.248E+01	0.000E+00	-0.083
BA-133	3.892E+00		4.135E+00	6.043E+00	0.000E+00	0.644
CS-134	4.540E+00		4.701E+00	5.104E+00	0.000E+00	0.889
CS-136	5.119E-01		4.550E+00	7.492E+00	0.000E+00	0.068
CS-137	6.419E-01		2.716E+00	4.564E+00	0.000E+00	0.141
CE-139	1.071E+00		2.549E+00	4.254E+00	0.000E+00	0.252
BA-140	-1.664E+01		1.712E+01	2.660E+01	0.000E+00	-0.626
LA-140	-3.328E+00		5.785E+00	9.058E+00	0.000E+00	-0.367
CE-141	1.057E+00		6.012E+00	8.599E+00	0.000E+00	0.123
CE-144	-1.812E+01		2.144E+01	2.960E+01	0.000E+00	-0.612
EU-152	-6.183E+00		8.970E+00	1.281E+01	0.000E+00	-0.483
EU-154	2.922E+00		4.823E+00	8.195E+00	0.000E+00	0.356
RA-226	-2.093E+01		6.302E+01	9.851E+01	0.000E+00	-0.212
AC-228	2.303E+00		1.043E+01	1.653E+01	0.000E+00	0.139
U-235	1.308E+01		2.055E+01	2.995E+01	0.000E+00	0.437
U-238	3.380E+01		2.884E+02	4.789E+02	0.000E+00	0.071
AM-241	-3.717E+01		2.301E+01	3.459E+01	0.000E+00	-1.075

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A,04L28801-11      ,06/08/2006 14:31,05/26/2006 12:55,   3.392E+00,WG L28801-11 L
B,04L28801-11      ,LIBD                ,06/02/2006 09:04,0435L090804
C,CO-60    ,YES,   3.979E-01,   2.614E+00,   5.159E+00,,    0.077
C,TH-228   ,YES,   4.799E+00,   4.831E+00,   7.219E+00,,    0.665
C,TH-232   ,YES,   6.944E+00,   6.251E+00,   1.304E+01,,    0.533
C,BE-7     ,NO ,   1.549E+01,   2.434E+01,   4.140E+01,,    0.374
C,K-40     ,NO ,   2.943E+01,   3.862E+01,   7.014E+01,,    0.420
C,CR-51    ,NO ,  -1.403E+01,   2.936E+01,   4.750E+01,,   -0.295
C,MN-54    ,NO ,  -3.362E-02,   2.495E+00,   4.067E+00,,   -0.008
C,CO-57    ,NO ,   9.801E-01,   2.365E+00,   4.001E+00,,    0.245
C,CO-58    ,NO ,  -2.084E+00,   2.904E+00,   4.536E+00,,   -0.459
C,FE-59    ,NO ,   1.715E+00,   6.037E+00,   1.007E+01,,    0.170
C,ZN-65    ,NO ,   4.101E+00,   5.925E+00,   1.013E+01,,    0.405
C,SE-75    ,NO ,  -1.075E+00,   3.561E+00,   5.868E+00,,   -0.183
C,SR-85    ,NO ,   1.822E+01,   3.381E+00,   6.564E+00,,    2.776
C,Y-88     ,NO ,  -3.235E-01,   3.059E+00,   4.948E+00,,   -0.065
C,NB-94    ,NO ,   8.457E-02,   2.386E+00,   3.950E+00,,    0.021
C,NB-95    ,NO ,   1.322E+00,   2.834E+00,   4.781E+00,,    0.277
C,ZR-95    ,NO ,  -2.649E+00,   4.953E+00,   7.873E+00,,   -0.336
C,MO-99    ,NO ,  -3.846E+00,   4.954E+02,   8.152E+02,,   -0.005
C,RU-103   ,NO ,  -2.650E-01,   3.071E+00,   5.042E+00,,   -0.053
C,RU-106   ,NO ,   5.296E-01,   2.481E+01,   4.032E+01,,    0.013
C,AG-110m  ,NO ,   5.836E-01,   2.493E+00,   4.192E+00,,    0.139
C,SN-113   ,NO ,   1.564E+00,   3.637E+00,   6.017E+00,,    0.260
C,SB-124   ,NO ,  -5.061E+00,   7.760E+00,   4.929E+00,,   -1.027
C,SB-125   ,NO ,   3.401E-01,   7.064E+00,   1.178E+01,,    0.029
C,TE-129M  ,NO ,   2.352E+01,   3.676E+01,   6.260E+01,,    0.376
C,I-131    ,NO ,  -1.042E+00,   7.688E+00,   1.248E+01,,   -0.083
C,BA-133   ,NO ,   3.892E+00,   4.135E+00,   6.043E+00,,    0.644
C,CS-134   ,NO ,   4.540E+00,   4.701E+00,   5.104E+00,,    0.889
C,CS-136   ,NO ,   5.119E-01,   4.550E+00,   7.492E+00,,    0.068
C,CS-137   ,NO ,   6.419E-01,   2.716E+00,   4.564E+00,,    0.141
C,CE-139   ,NO ,   1.071E+00,   2.549E+00,   4.254E+00,,    0.252
C,BA-140   ,NO ,  -1.664E+01,   1.712E+01,   2.660E+01,,   -0.626
C,LA-140   ,NO ,  -3.328E+00,   5.785E+00,   9.058E+00,,   -0.367
C,CE-141   ,NO ,   1.057E+00,   6.012E+00,   8.599E+00,,    0.123
C,CE-144   ,NO ,  -1.812E+01,   2.144E+01,   2.960E+01,,   -0.612
C,EU-152   ,NO ,  -6.183E+00,   8.970E+00,   1.281E+01,,   -0.483
C,EU-154   ,NO ,   2.922E+00,   4.823E+00,   8.195E+00,,    0.356
C,RA-226   ,NO ,  -2.093E+01,   6.302E+01,   9.851E+01,,   -0.212
C,AC-228   ,NO ,   2.303E+00,   1.043E+01,   1.653E+01,,    0.139
C,U-235    ,NO ,   1.308E+01,   2.055E+01,   2.995E+01,,    0.437
C,U-238    ,NO ,   3.380E+01,   2.884E+02,   4.789E+02,,    0.071
C,AM-241   ,NO ,  -3.717E+01,   2.301E+01,   3.459E+01,,   -1.075
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 9-JUN-2006 10:30:35.31
TBE07 P-10768B HpGe ********** Aquisition Date/Time: 8-JUN-2006 09:48:58.36

LIMS No., Customer Name, Client ID: WG L28801-12 LASALLE

Sample ID : 07L28801-12
Sample Type : WG
Quantity : 3.54000E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 11:06:00.
Geometry : 0735L090904
BKGFILE : 07BG060306MT
Real Time : 0 02:20:07.90
Live time : 0 02:20:06.19

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	352.09*	33	88	1.33	705.15	1.43E+00	3.90E-03	60.4	3.83E-01
2	1	584.28*	49	61	1.14	1169.73	1.01E+00	5.79E-03	37.5	1.91E+01
3	1	595.62	63	67	3.36	1192.40	9.97E-01	7.54E-03	31.2	3.90E+00
4	1	609.39*	82	93	2.29	1219.96	9.80E-01	9.72E-03	31.4	9.16E-01
5	1	1460.97*	37	13	2.40	2922.93	5.15E-01	4.42E-03	38.8	1.36E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	37	10.67*	5.151E-01	6.136E+01	6.136E+01	77.67

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 07L28801-12

Acquisition date : 8-JUN-2006 09:48:58

Total number of lines in spectrum	5	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	1	20.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.136E+01	6.136E+01	4.766E+01	77.67	
			---	---			
	Total Activity :		6.136E+01	6.136E+01			
	Grand Total Activity :		6.136E+01	6.136E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 07L28801-12 Acquisition date : 8-JUN-2006 09:48:58

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	352.09	33	88	1.33	705.15	701	8	3.90E-03	****	1.43E+00	
1	584.28	49	61	1.14	1169.73	1164	12	5.79E-03	75.0	1.01E+00	
1	595.62	63	67	3.36	1192.40	1185	15	7.54E-03	62.4	9.97E-01	
1	609.39	82	93	2.29	1219.96	1214	17	9.72E-03	62.7	9.80E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	5	
Number of unidentified lines	4	
Number of lines tentatively identified by NID	1	20.00%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.136E+01	6.136E+01	4.766E+01	77.67	
		Total Activity :	6.136E+01	6.136E+01			
		Grand Total Activity :	6.136E+01	6.136E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	6.136E+01	4.766E+01	4.357E+01	0.000E+00	1.408

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	2.739E+01		3.081E+01	5.264E+01	0.000E+00	0.520
NA-24	1.957E-02		3.733E-02	Half-Life too short		
CR-51	-1.636E+01		3.293E+01	5.363E+01	0.000E+00	-0.305
MN-54	4.522E+00		3.436E+00	6.163E+00	0.000E+00	0.734
CO-57	3.100E+00		3.251E+00	5.484E+00	0.000E+00	0.565
CO-58	1.101E-01		3.336E+00	5.536E+00	0.000E+00	0.020
FE-59	6.938E+00		6.996E+00	1.248E+01	0.000E+00	0.556

CO-60	4.433E-03	3.276E+00	5.350E+00	0.000E+00	0.001
ZN-65	4.403E+00	7.559E+00	1.305E+01	0.000E+00	0.337
SE-75	-3.358E-01	4.568E+00	7.435E+00	0.000E+00	-0.045
SR-85	1.867E+01	4.028E+00	7.928E+00	0.000E+00	2.355
Y-88	1.303E-01	3.545E+00	5.895E+00	0.000E+00	0.022
NB-94	-1.912E+00	3.170E+00	4.961E+00	0.000E+00	-0.385
NB-95	2.037E+00	3.222E+00	5.592E+00	0.000E+00	0.364
ZR-95	4.962E-01	5.982E+00	9.774E+00	0.000E+00	0.051
MO-99	-3.027E+01	2.277E+02	3.667E+02	0.000E+00	-0.083
RU-103	-1.811E+00	3.611E+00	5.681E+00	0.000E+00	-0.319
RU-106	-9.525E-01	3.135E+01	4.668E+01	0.000E+00	-0.020
AG-110m	1.168E+00	3.093E+00	5.201E+00	0.000E+00	0.225
SN-113	5.405E-01	4.252E+00	7.048E+00	0.000E+00	0.077
SB-124	-1.029E+00	8.355E+00	5.702E+00	0.000E+00	-0.181
SB-125	4.341E+00	9.435E+00	1.584E+01	0.000E+00	0.274
TE-129M	-8.822E+00	4.068E+01	6.552E+01	0.000E+00	-0.135
I-131	-1.159E+00	6.705E+00	1.099E+01	0.000E+00	-0.106
BA-133	5.917E+00	5.195E+00	7.857E+00	0.000E+00	0.753
CS-134	5.891E+00	7.809E+00	6.421E+00	0.000E+00	0.917
CS-136	-4.386E+00	4.860E+00	7.484E+00	0.000E+00	-0.586
CS-137	4.504E+00	3.319E+00	5.936E+00	0.000E+00	0.759
CE-139	3.794E-01	3.105E+00	5.202E+00	0.000E+00	0.073
BA-140	-1.288E+01	1.713E+01	2.707E+01	0.000E+00	-0.476
LA-140	1.258E+00	5.428E+00	9.161E+00	0.000E+00	0.137
CE-141	3.324E-01	6.654E+00	1.082E+01	0.000E+00	0.031
CE-144	4.465E-01	2.587E+01	4.216E+01	0.000E+00	0.011
EU-152	-3.412E+00	1.148E+01	1.630E+01	0.000E+00	-0.209
EU-154	3.200E+00	6.752E+00	1.121E+01	0.000E+00	0.285
RA-226	4.294E+01	7.846E+01	1.343E+02	0.000E+00	0.320
AC-228	6.278E-01	1.259E+01	2.093E+01	0.000E+00	0.030
TH-228	7.770E+00	6.313E+00	1.099E+01	0.000E+00	0.707
TH-232	6.260E-01	1.255E+01	2.087E+01	0.000E+00	0.030
U-235	2.977E+01	2.545E+01	4.293E+01	0.000E+00	0.693
U-238	1.645E+02	3.234E+02	5.519E+02	0.000E+00	0.298
AM-241	-4.617E+01	3.041E+01	4.616E+01	0.000E+00	-1.000

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A,07L28801-12      ,06/09/2006 10:30,05/30/2006 11:06,   3.540E+00,WG L28801-12 L
B,07L28801-12      ,LIBD                   ,06/07/2006 09:32,0735L090904
C,K-40     ,YES,   6.136E+01,   4.766E+01,   4.357E+01,,    1.408
C,BE-7     ,NO ,   2.739E+01,   3.081E+01,   5.264E+01,,    0.520
C,CR-51    ,NO ,  -1.636E+01,   3.293E+01,   5.363E+01,,   -0.305
C,MN-54    ,NO ,   4.522E+00,   3.436E+00,   6.163E+00,,    0.734
C,CO-57    ,NO ,   3.100E+00,   3.251E+00,   5.484E+00,,    0.565
C,CO-58    ,NO ,   1.101E-01,   3.336E+00,   5.536E+00,,    0.020
C,FE-59    ,NO ,   6.938E+00,   6.996E+00,   1.248E+01,,    0.556
C,CO-60    ,NO ,   4.433E-03,   3.276E+00,   5.350E+00,,    0.001
C,ZN-65    ,NO ,   4.403E+00,   7.559E+00,   1.305E+01,,    0.337
C,SE-75    ,NO ,  -3.358E-01,   4.568E+00,   7.435E+00,,   -0.045
C,SR-85    ,NO ,   1.867E+01,   4.028E+00,   7.928E+00,,    2.355
C,Y-88     ,NO ,   1.303E-01,   3.545E+00,   5.895E+00,,    0.022
C,NB-94    ,NO ,  -1.912E+00,   3.170E+00,   4.961E+00,,   -0.385
C,NB-95    ,NO ,   2.037E+00,   3.222E+00,   5.592E+00,,    0.364
C,ZR-95    ,NO ,   4.962E-01,   5.982E+00,   9.774E+00,,    0.051
C,MO-99    ,NO ,  -3.027E+01,   2.277E+02,   3.667E+02,,   -0.083
C,RU-103   ,NO ,  -1.811E+00,   3.611E+00,   5.681E+00,,   -0.319
C,RU-106   ,NO ,  -9.525E-01,   3.135E+01,   4.668E+01,,   -0.020
C,AG-110m  ,NO ,   1.168E+00,   3.093E+00,   5.201E+00,,    0.225
C,SN-113   ,NO ,   5.405E-01,   4.252E+00,   7.048E+00,,    0.077
C,SB-124   ,NO ,  -1.029E+00,   8.355E+00,   5.702E+00,,   -0.181
C,SB-125   ,NO ,   4.341E+00,   9.435E+00,   1.584E+01,,    0.274
C,TE-129M  ,NO ,  -8.822E+00,   4.068E+01,   6.552E+01,,   -0.135
C,I-131    ,NO ,  -1.159E+00,   6.705E+00,   1.099E+01,,   -0.106
C,BA-133   ,NO ,   5.917E+00,   5.195E+00,   7.857E+00,,    0.753
C,CS-134   ,NO ,   5.891E+00,   7.809E+00,   6.421E+00,,    0.917
C,CS-136   ,NO ,  -4.386E+00,   4.860E+00,   7.484E+00,,   -0.586
C,CS-137   ,NO ,   4.504E+00,   3.319E+00,   5.936E+00,,    0.759
C,CE-139   ,NO ,   3.794E-01,   3.105E+00,   5.202E+00,,    0.073
C,BA-140   ,NO ,  -1.288E+01,   1.713E+01,   2.707E+01,,   -0.476
C,LA-140   ,NO ,   1.258E+00,   5.428E+00,   9.161E+00,,    0.137
C,CE-141   ,NO ,   3.324E-01,   6.654E+00,   1.082E+01,,    0.031
C,CE-144   ,NO ,   4.465E-01,   2.587E+01,   4.216E+01,,    0.011
C,EU-152   ,NO ,  -3.412E+00,   1.148E+01,   1.630E+01,,   -0.209
C,EU-154   ,NO ,   3.200E+00,   6.752E+00,   1.121E+01,,    0.285
C,RA-226   ,NO ,   4.294E+01,   7.846E+01,   1.343E+02,,    0.320
C,AC-228   ,NO ,   6.278E-01,   1.259E+01,   2.093E+01,,    0.030
C,TH-228   ,NO ,   7.770E+00,   6.313E+00,   1.099E+01,,    0.707
C,TH-232   ,NO ,   6.260E-01,   1.255E+01,   2.087E+01,,    0.030
C,U-235    ,NO ,   2.977E+01,   2.545E+01,   4.293E+01,,    0.693
C,U-238    ,NO ,   1.645E+02,   3.234E+02,   5.519E+02,,    0.298
C,AM-241   ,NO ,  -4.617E+01,   3.041E+01,   4.616E+01,,   -1.000
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Sec. Review: Analyst: LIMS: ___

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 14:32:12.03
TBE10 12892256 HpGe ********** Aquisition Date/Time: 8-JUN-2006 09:49:02.61

LIMS No., Customer Name, Client ID: WG L28801-13 LASALLE

Sample ID : 10L28801-13
Sample Type : WG
Quantity : 3.57040E+00 L
Start Channel : 80 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 11:26:00.
Geometry : 1035L091004
BKGFILE : 10BG060306MT
Real Time : 0 04:42:57.36
Live time : 0 04:42:54.56

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.38*	79	574	1.39	131.88	6.36E-01	4.64E-03	56.9	3.20E+00
2	1	139.84	137	451	1.55	278.85	1.68E+00	8.05E-03	28.2	1.16E+00
3	1	185.47*	51	405	1.40	370.16	1.60E+00	2.98E-03	80.7	2.08E+00
4	1	198.34*	170	439	1.69	395.91	1.55E+00	1.00E-02	27.5	6.42E-01
5	1	352.17*	8	246	2.33	703.72	1.06E+00	4.99E-04	406.8	1.24E+00
6	1	596.83	64	119	3.17	1193.33	7.05E-01	3.80E-03	37.4	1.86E+00
7	1	609.24*	28	120	2.50	1218.17	6.94E-01	1.64E-03	93.0	1.82E+00
8	1	846.90*	3	37	1.98	1693.84	5.36E-01	1.88E-04	460.2	1.39E+00
9	1	869.27	74	104	10.29	1738.61	5.26E-01	4.35E-03	35.5	3.47E+00
10	1	1460.99*	40	19	2.23	2923.14	3.56E-01	2.38E-03	42.6	8.72E-01
11	1	1764.37*	13	18	3.11	3530.58	3.13E-01	7.39E-04	103.9	6.45E-01
12	1	1944.97	40	9	6.12	3892.24	2.95E-01	2.37E-03	19.8	1.79E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	40	10.67*	3.559E-01	4.744E+01	4.744E+01	85.22
RA-226	186.21	51	3.28*	1.595E+00	4.318E+01	4.318E+01	161.45
U-235	143.76	------	10.50*	1.683E+00	------	Line Not Found	------
	163.35	------	4.70	1.659E+00	------	Line Not Found	------
	185.71	51	54.00	1.595E+00	2.623E+00	2.623E+00	161.45
	205.31	------	4.70	1.524E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 10L28801-13 Acquisition date : 8-JUN-2006 09:49:02

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.744E+01	4.744E+01	4.043E+01	85.22	
RA-226	1600.00Y	1.00	4.318E+01	4.318E+01	6.971E+01	161.45	
U-235	7.04E+08Y	1.00	2.623E+00	2.623E+00	4.234E+00	161.45	K
			---	---			
	Total Activity :		9.324E+01	9.324E+01			

Grand Total Activity : 9.324E+01 9.324E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 10L28801-13

Acquisition date : 8-JUN-2006 09:49:02

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.38	79	574	1.39	131.88	128	8	4.64E-03	****	6.36E-01	
1	139.84	137	451	1.55	278.85	275	8	8.05E-03	56.5	1.68E+00	
1	198.34	170	439	1.69	395.91	390	12	1.00E-02	55.1	1.55E+00	
1	352.17	8	246	2.33	703.72	698	12	4.99E-04	****	1.06E+00	
1	596.83	64	119	3.17	1193.33	1187	13	3.80E-03	74.7	7.05E-01	
1	609.24	28	120	2.50	1218.17	1212	13	1.64E-03	****	6.94E-01	
1	846.90	3	37	1.98	1693.84	1691	10	1.88E-04	****	5.36E-01	
1	869.27	74	104	10.29	1738.61	1733	19	4.35E-03	70.9	5.26E-01	
1	1764.37	13	18	3.11	3530.58	3521	19	7.39E-04	****	3.13E-01	
1	1944.97	40	9	6.12	3892.24	3885	12	2.37E-03	39.5	2.95E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	12	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	2	16.67%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	4.744E+01	4.744E+01	4.043E+01	85.22	
RA-226	1600.00Y	1.00	4.318E+01	4.318E+01	6.971E+01	161.45	
			---	---			
	Total Activity :		9.062E+01	9.062E+01			

Grand Total Activity : 9.062E+01 9.062E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	4.744E+01	4.043E+01	4.194E+01	0.000E+00	1.131
RA-226	4.318E+01	6.971E+01	1.113E+02	0.000E+00	0.388

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA

BE-7	-7.908E+00	2.645E+01	4.332E+01	0.000E+00	-0.183
NA-24	-5.831E-02	2.922E-02	Half-Life too short		
CR-51	-1.635E+01	2.869E+01	4.626E+01	0.000E+00	-0.353
MN-54	1.118E-01	2.903E+00	4.687E+00	0.000E+00	0.024
CO-57	-2.431E+00	2.955E+00	4.800E+00	0.000E+00	-0.506
CO-58	-2.614E-01	2.818E+00	4.631E+00	0.000E+00	-0.056
FE-59	1.833E-01	5.530E+00	9.198E+00	0.000E+00	0.020
CO-60	1.567E+00	2.916E+00	4.986E+00	0.000E+00	0.314
ZN-65	-6.219E-01	6.126E+00	1.009E+01	0.000E+00	-0.062
SE-75	3.420E+00	3.937E+00	6.693E+00	0.000E+00	0.511
SR-85	1.604E+01	3.474E+00	6.608E+00	0.000E+00	2.427
Y-88	-1.122E+00	3.227E+00	5.101E+00	0.000E+00	-0.220
NB-94	-4.690E-01	2.702E+00	4.353E+00	0.000E+00	-0.108
NB-95	2.313E+00	2.899E+00	5.019E+00	0.000E+00	0.461
ZR-95	-8.732E-01	5.183E+00	8.518E+00	0.000E+00	-0.103
MO-99	-8.352E+01	1.954E+02	3.168E+02	0.000E+00	-0.264
RU-103	2.267E+00	3.308E+00	5.634E+00	0.000E+00	0.402
RU-106	-2.836E+01	2.639E+01	3.933E+01	0.000E+00	-0.721
AG-110m	1.304E+00	2.715E+00	4.550E+00	0.000E+00	0.287
SN-113	-1.840E+00	3.692E+00	5.896E+00	0.000E+00	-0.312
SB-124	3.835E+00	6.393E+00	5.036E+00	0.000E+00	0.762
SB-125	9.726E-01	7.847E+00	1.282E+01	0.000E+00	0.076
TE-129M	2.570E+01	3.643E+01	6.233E+01	0.000E+00	0.412
I-131	-4.142E-01	6.149E+00	1.003E+01	0.000E+00	-0.041
BA-133	8.525E+00	4.603E+00	6.994E+00	0.000E+00	1.219
CS-134	5.380E+00	5.887E+00	4.884E+00	0.000E+00	1.102
CS-136	-1.771E-01	4.141E+00	6.823E+00	0.000E+00	-0.026
CS-137	1.250E+00	2.923E+00	4.885E+00	0.000E+00	0.256
CE-139	-2.932E+00	2.960E+00	4.731E+00	0.000E+00	-0.620
BA-140	1.942E+00	1.587E+01	2.633E+01	0.000E+00	0.074
LA-140	9.356E-01	4.615E+00	7.778E+00	0.000E+00	0.120
CE-141	7.089E-01	6.811E+00	9.543E+00	0.000E+00	0.074
CE-144	-2.866E+01	2.708E+01	3.660E+01	0.000E+00	-0.783
EU-152	-8.626E+00	1.070E+01	1.417E+01	0.000E+00	-0.609
EU-154	-5.752E+00	6.102E+00	9.882E+00	0.000E+00	-0.582
AC-228	-2.323E+00	1.098E+01	1.716E+01	0.000E+00	-0.135
TH-228	4.125E+00	5.627E+00	9.274E+00	0.000E+00	0.445
TH-232	-2.316E+00	1.095E+01	1.711E+01	0.000E+00	-0.135
U-235	3.038E+01	2.606E+01	3.783E+01	0.000E+00	0.803
U-238	-9.385E+01	2.871E+02	4.574E+02	0.000E+00	-0.205
AM-241	-1.555E+01	2.740E+01	3.867E+01	0.000E+00	-0.402

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A,10L28801-13      ,06/08/2006 14:32,05/30/2006 11:26,   3.570E+00,WG L28801-13 L
B,10L28801-13      ,LIBD                ,06/07/2006 09:32,1035L091004
C,K-40     ,YES,   4.744E+01,   4.043E+01,   4.194E+01,,    1.131
C,RA-226   ,YES,   4.318E+01,   6.971E+01,   1.113E+02,,    0.388
C,BE-7     ,NO ,  -7.908E+00,   2.645E+01,   4.332E+01,,   -0.183
C,CR-51    ,NO ,  -1.635E+01,   2.869E+01,   4.626E+01,,   -0.353
C,MN-54    ,NO ,   1.118E-01,   2.903E+00,   4.687E+00,,    0.024
C,CO-57    ,NO ,  -2.431E+00,   2.955E+00,   4.800E+00,,   -0.506
C,CO-58    ,NO ,  -2.614E-01,   2.818E+00,   4.631E+00,,   -0.056
C,FE-59    ,NO ,   1.833E-01,   5.530E+00,   9.198E+00,,    0.020
C,CO-60    ,NO ,   1.567E+00,   2.916E+00,   4.986E+00,,    0.314
C,ZN-65    ,NO ,  -6.219E-01,   6.126E+00,   1.009E+01,,   -0.062
C,SE-75    ,NO ,   3.420E+00,   3.937E+00,   6.693E+00,,    0.511
C,SR-85    ,NO ,   1.604E+01,   3.474E+00,   6.608E+00,,    2.427
C,Y-88     ,NO ,  -1.122E+00,   3.227E+00,   5.101E+00,,   -0.220
C,NB-94    ,NO ,  -4.690E-01,   2.702E+00,   4.353E+00,,   -0.108
C,NB-95    ,NO ,   2.313E+00,   2.899E+00,   5.019E+00,,    0.461
C,ZR-95    ,NO ,  -8.732E-01,   5.183E+00,   8.518E+00,,   -0.103
C,MO-99    ,NO ,  -8.352E+01,   1.954E+02,   3.168E+02,,   -0.264
C,RU-103   ,NO ,   2.267E+00,   3.308E+00,   5.634E+00,,    0.402
C,RU-106   ,NO ,  -2.836E+01,   2.639E+01,   3.933E+01,,   -0.721
C,AG-110m  ,NO ,   1.304E+00,   2.715E+00,   4.550E+00,,    0.287
C,SN-113   ,NO ,  -1.840E+00,   3.692E+00,   5.896E+00,,   -0.312
C,SB-124   ,NO ,   3.835E+00,   6.393E+00,   5.036E+00,,    0.762
C,SB-125   ,NO ,   9.726E-01,   7.847E+00,   1.282E+01,,    0.076
C,TE-129M  ,NO ,   2.570E+01,   3.643E+01,   6.233E+01,,    0.412
C,I-131    ,NO ,  -4.142E-01,   6.149E+00,   1.003E+01,,   -0.041
C,BA-133   ,NO ,   8.525E+00,   4.603E+00,   6.994E+00,,    1.219
C,CS-134   ,NO ,   5.380E+00,   5.887E+00,   4.884E+00,,    1.102
C,CS-136   ,NO ,  -1.771E-01,   4.141E+00,   6.823E+00,,   -0.026
C,CS-137   ,NO ,   1.250E+00,   2.923E+00,   4.885E+00,,    0.256
C,CE-139   ,NO ,  -2.932E+00,   2.960E+00,   4.731E+00,,   -0.620
C,BA-140   ,NO ,   1.942E+00,   1.587E+01,   2.633E+01,,    0.074
C,LA-140   ,NO ,   9.356E-01,   4.615E+00,   7.778E+00,,    0.120
C,CE-141   ,NO ,   7.089E-01,   6.811E+00,   9.543E+00,,    0.074
C,CE-144   ,NO ,  -2.866E+01,   2.708E+01,   3.660E+01,,   -0.783
C,EU-152   ,NO ,  -8.626E+00,   1.070E+01,   1.417E+01,,   -0.609
C,EU-154   ,NO ,  -5.752E+00,   6.102E+00,   9.882E+00,,   -0.582
C,AC-228   ,NO ,  -2.323E+00,   1.098E+01,   1.716E+01,,   -0.135
C,TH-228   ,NO ,   4.125E+00,   5.627E+00,   9.274E+00,,    0.445
C,TH-232   ,NO ,  -2.316E+00,   1.095E+01,   1.711E+01,,   -0.135
C,U-235    ,NO ,   3.038E+01,   2.606E+01,   3.783E+01,,    0.803
C,U-238    ,NO ,  -9.385E+01,   2.871E+02,   4.574E+02,,   -0.205
C,AM-241   ,NO ,  -1.555E+01,   2.740E+01,   3.867E+01,,   -0.402
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Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 14:36:24.57
TBE11 P-20610B HpGe ********** Aquisition Date/Time: 8-JUN-2006 09:49:03.51

LIMS No., Customer Name, Client ID: WG L28801-14 LASALLE

Sample ID : 11L28801-14
Sample Type : WG
Quantity : 3.41050E+00 L
Start Channel : 40 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 13:11:00.
Geometry : 1135L090204
BKGFILE : 11BG060306MT
Real Time : 0 04:47:15.57
Live time : 0 04:47:09.39

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	0	66.20	185	873	1.25	131.40	5.99E-01	1.08E-02	27.5	
2	0	198.60	179	447	1.10	396.95	1.57E+00	1.04E-02	24.1	
3	0	351.53*	58	218	2.66	703.52	1.08E+00	3.39E-03	56.5	
4	0	595.58	55	100	1.42	1192.40	7.15E-01	3.22E-03	35.0	
5	0	609.35*	85	119	1.60	1219.96	7.02E-01	4.91E-03	32.3	
6	0	1460.58*	75	24	2.32	2921.66	3.54E-01	4.35E-03	25.4	
7	0	1762.03*	65	11	2.37	3523.05	3.04E-01	3.80E-03	21.5	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	75	10.67*	3.540E-01	9.122E+01	9.122E+01	50.80

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 11L28801-14

Acquisition date : 8-JUN-2006 09:49:03

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.122E+01	9.122E+01	4.634E+01	50.80	
		Total Activity :	9.122E+01	9.122E+01			
		Grand Total Activity :	9.122E+01	9.122E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 11L28801-14 Acquisition date : 8-JUN-2006 09:49:03

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	66.20	185	873	1.25	131.40	128	7	1.08E-02	55.0	5.99E-01	
0	198.60	179	447	1.10	396.95	392	11	1.04E-02	48.2	1.57E+00	
0	351.53	58	218	2.66	703.52	698	11	3.39E-03	****	1.08E+00	
0	595.58	55	100	1.42	1192.40	1188	9	3.22E-03	70.1	7.15E-01	
0	609.35	85	119	1.60	1219.96	1215	14	4.91E-03	64.6	7.02E-01	
0	1762.03	65	11	2.37	3523.05	3514	22	3.80E-03	42.9	3.04E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	7	
Number of unidentified lines	6	
Number of lines tentatively identified by NID	1	14.29%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	9.122E+01	9.122E+01	4.634E+01	50.80	
			---	---			
	Total Activity :		9.122E+01	9.122E+01			
	Grand Total Activity :		9.122E+01	9.122E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	9.122E+01	4.634E+01	4.809E+01	0.000E+00	1.897

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	8.958E+00		2.611E+01	4.327E+01	0.000E+00	0.207
NA-24	-4.521E-02		2.852E-02	Half-Life too short		
CR-51	-2.096E+01		3.008E+01	4.861E+01	0.000E+00	-0.431
MN-54	6.098E-01		2.802E+00	4.650E+00	0.000E+00	0.131
CO-57	-1.643E+00		2.937E+00	4.780E+00	0.000E+00	-0.344

CO-58	-3.815E-01	3.061E+00	4.983E+00	0.000E+00	-0.077
FE-59	-3.519E+00	5.994E+00	9.517E+00	0.000E+00	-0.370
CO-60	2.331E+00	2.980E+00	5.191E+00	0.000E+00	0.449
ZN-65	-6.122E-01	6.459E+00	1.062E+01	0.000E+00	-0.058
SE-75	7.661E-01	3.944E+00	6.600E+00	0.000E+00	0.116
SR-85	1.764E+01	3.597E+00	6.829E+00	0.000E+00	2.583
Y-88	2.189E+00	3.303E+00	5.789E+00	0.000E+00	0.378
NB-94	1.423E-01	2.655E+00	4.393E+00	0.000E+00	0.032
NB-95	4.661E-01	2.950E+00	4.895E+00	0.000E+00	0.095
ZR-95	2.761E+00	5.200E+00	8.817E+00	0.000E+00	0.313
MO-99	1.838E+01	1.973E+02	3.265E+02	0.000E+00	0.056
RU-103	-1.111E+00	3.435E+00	5.515E+00	0.000E+00	-0.201
RU-106	-2.123E+01	2.875E+01	4.301E+01	0.000E+00	-0.494
AG-110m	-1.359E-01	2.711E+00	4.473E+00	0.000E+00	-0.030
SN-113	-1.559E+00	3.837E+00	6.205E+00	0.000E+00	-0.251
SB-124	1.440E+00	6.678E+00	4.979E+00	0.000E+00	0.289
SB-125	-4.184E+00	7.832E+00	1.253E+01	0.000E+00	-0.334
TE-129M	3.227E+01	3.832E+01	6.489E+01	0.000E+00	0.497
I-131	4.057E+00	6.014E+00	1.016E+01	0.000E+00	0.399
BA-133	2.154E+00	4.760E+00	6.797E+00	0.000E+00	0.317
CS-134	3.132E+00	4.701E+00	5.317E+00	0.000E+00	0.589
CS-136	2.819E+00	4.319E+00	7.361E+00	0.000E+00	0.383
CS-137	2.048E+00	2.955E+00	5.068E+00	0.000E+00	0.404
CE-139	2.045E+00	2.897E+00	4.825E+00	0.000E+00	0.424
BA-140	-5.842E+00	1.608E+01	2.563E+01	0.000E+00	-0.228
LA-140	-3.785E+00	5.039E+00	7.772E+00	0.000E+00	-0.487
CE-141	-2.726E+00	5.906E+00	9.593E+00	0.000E+00	-0.284
CE-144	-3.103E+01	2.281E+01	3.636E+01	0.000E+00	-0.853
EU-152	-5.220E-01	1.077E+01	1.500E+01	0.000E+00	-0.035
EU-154	4.127E-01	6.044E+00	9.978E+00	0.000E+00	0.041
RA-226	2.634E+01	7.643E+01	1.210E+02	0.000E+00	0.218
AC-228	-2.781E+00	1.284E+01	1.911E+01	0.000E+00	-0.146
TH-228	2.481E+00	5.931E+00	9.256E+00	0.000E+00	0.268
TH-232	-2.773E+00	1.280E+01	1.905E+01	0.000E+00	-0.146
U-235	1.296E+01	2.253E+01	3.750E+01	0.000E+00	0.346
U-238	2.334E+02	2.946E+02	5.156E+02	0.000E+00	0.453
AM-241	-2.448E+01	4.423E+01	5.976E+01	0.000E+00	-0.410

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A,11L28801-14      ,06/08/2006 14:36,05/30/2006 13:11,   3.411E+00,WG L28801-14 L
B,11L28801-14      ,LIBD                ,06/07/2006 09:40,1135L090204
C,K-40     ,YES,   9.122E+01,   4.634E+01,   4.809E+01,,    1.897
C,BE-7     ,NO ,   8.958E+00,   2.611E+01,   4.327E+01,,    0.207
C,CR-51    ,NO ,  -2.096E+01,   3.008E+01,   4.861E+01,,   -0.431
C,MN-54    ,NO ,   6.098E-01,   2.802E+00,   4.650E+00,,    0.131
C,CO-57    ,NO ,  -1.643E+00,   2.937E+00,   4.780E+00,,   -0.344
C,CO-58    ,NO ,  -3.815E-01,   3.061E+00,   4.983E+00,,   -0.077
C,FE-59    ,NO ,  -3.519E+00,   5.994E+00,   9.517E+00,,   -0.370
C,CO-60    ,NO ,   2.331E+00,   2.980E+00,   5.191E+00,,    0.449
C,ZN-65    ,NO ,  -6.122E-01,   6.459E+00,   1.062E+01,,   -0.058
C,SE-75    ,NO ,   7.661E-01,   3.944E+00,   6.600E+00,,    0.116
C,SR-85    ,NO ,   1.764E+01,   3.597E+00,   6.829E+00,,    2.583
C,Y-88     ,NO ,   2.189E+00,   3.303E+00,   5.789E+00,,    0.378
C,NB-94    ,NO ,   1.423E-01,   2.655E+00,   4.393E+00,,    0.032
C,NB-95    ,NO ,   4.661E-01,   2.950E+00,   4.895E+00,,    0.095
C,ZR-95    ,NO ,   2.761E+00,   5.200E+00,   8.817E+00,,    0.313
C,MO-99    ,NO ,   1.838E+01,   1.973E+02,   3.265E+02,,    0.056
C,RU-103   ,NO ,  -1.111E+00,   3.435E+00,   5.515E+00,,   -0.201
C,RU-106   ,NO ,  -2.123E+01,   2.875E+01,   4.301E+01,,   -0.494
C,AG-110m  ,NO ,  -1.359E-01,   2.711E+00,   4.473E+00,,   -0.030
C,SN-113   ,NO ,  -1.559E+00,   3.837E+00,   6.205E+00,,   -0.251
C,SB-124   ,NO ,   1.440E+00,   6.678E+00,   4.979E+00,,    0.289
C,SB-125   ,NO ,  -4.184E+00,   7.832E+00,   1.253E+01,,   -0.334
C,TE-129M  ,NO ,   3.227E+01,   3.832E+01,   6.489E+01,,    0.497
C,I-131    ,NO ,   4.057E+00,   6.014E+00,   1.016E+01,,    0.399
C,BA-133   ,NO ,   2.154E+00,   4.760E+00,   6.797E+00,,    0.317
C,CS-134   ,NO ,   3.132E+00,   4.701E+00,   5.317E+00,,    0.589
C,CS-136   ,NO ,   2.819E+00,   4.319E+00,   7.361E+00,,    0.383
C,CS-137   ,NO ,   2.048E+00,   2.955E+00,   5.068E+00,,    0.404
C,CE-139   ,NO ,   2.045E+00,   2.897E+00,   4.825E+00,,    0.424
C,BA-140   ,NO ,  -5.842E+00,   1.608E+01,   2.563E+01,,   -0.228
C,LA-140   ,NO ,  -3.785E+00,   5.039E+00,   7.772E+00,,   -0.487
C,CE-141   ,NO ,  -2.726E+00,   5.906E+00,   9.593E+00,,   -0.284
C,CE-144   ,NO ,  -3.103E+01,   2.281E+01,   3.636E+01,,   -0.853
C,EU-152   ,NO ,  -5.220E-01,   1.077E+01,   1.500E+01,,   -0.035
C,EU-154   ,NO ,   4.127E-01,   6.044E+00,   9.978E+00,,    0.041
C,RA-226   ,NO ,   2.634E+01,   7.643E+01,   1.210E+02,,    0.218
C,AC-228   ,NO ,  -2.781E+00,   1.284E+01,   1.911E+01,,   -0.146
C,TH-228   ,NO ,   2.481E+00,   5.931E+00,   9.256E+00,,    0.268
C,TH-232   ,NO ,  -2.773E+00,   1.280E+01,   1.905E+01,,   -0.146
C,U-235    ,NO ,   1.296E+01,   2.253E+01,   3.750E+01,,    0.346
C,U-238    ,NO ,   2.334E+02,   2.946E+02,   5.156E+02,,    0.453
C,AM-241   ,NO ,  -2.448E+01,   4.423E+01,   5.976E+01,,   -0.410
```

Sec. Review: Analyst: LIMS: ✓

VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 14:39:58.21
TBE14 P-10933A HpGe ********** Aquisition Date/Time: 8-JUN-2006 09:49:07.59

LIMS No., Customer Name, Client ID: WG L28801-15 LASALLE

Sample ID : 14L28801-15
Sample Type : WG
Quantity : 3.54610E+00 L
Start Channel : 90 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 30-MAY-2006 13:21:00.
Geometry : 1435L091304
BKGFILE : 14BG060306MT
Real Time : 0 04:50:38.65
Live time : 0 04:50:35.80

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.18	135	471	1.26	133.35	4.48E-01	7.73E-03	28.2	3.77E+00
2	1	140.04	135	592	1.92	281.45	1.67E+00	7.75E-03	35.0	1.08E+00
3	1	186.13*	4	453	1.73	373.81	1.64E+00	2.45E-04	*****	2.16E-01
4	1	198.86*	95	398	1.56	399.34	1.60E+00	5.45E-03	42.3	2.20E+00
5	1	238.87*	65	476	1.78	479.47	1.47E+00	3.75E-03	74.7	1.22E+00
6	1	295.95	104	361	1.28	593.79	1.29E+00	5.97E-03	34.4	1.23E+01
7	1	352.00*	29	205	1.65	705.98	1.14E+00	1.68E-03	109.9	1.24E+00
8	1	596.55	52	143	1.98	1194.87	7.78E-01	2.97E-03	49.0	1.80E+00
9	1	609.35*	29	232	1.77	1220.45	7.66E-01	1.66E-03	127.9	1.38E+00
10	1	910.55*	30	64	4.05	1821.22	5.65E-01	1.71E-03	68.3	1.74E+00
11	1	1461.08*	48	35	2.18	2915.59	3.93E-01	2.77E-03	42.6	1.42E+00
12	1	1765.89*	24	15	2.57	3519.47	3.44E-01	1.38E-03	52.1	6.52E-01
13	1	1769.97	31	7	2.57	3527.53	3.43E-01	1.81E-03	27.9	

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	48	10.67*	3.927E-01	5.041E+01	5.041E+01	85.19
RA-226	186.21	4	3.28*	1.640E+00	3.474E+00	3.474E+00	2006.93
AC-228	835.50	------	1.75	6.034E-01	------	Line Not Found	------
	911.07	30	27.70*	5.648E-01	8.309E+00	8.334E+00	136.56
TH-228	238.63	65	44.60*	1.468E+00	4.362E+00	4.401E+00	149.39
	240.98	------	3.95	1.461E+00	------	Line Not Found	------
U-235	143.76	------	10.50*	1.680E+00	------	Line Not Found	------
	163.35	------	4.70	1.685E+00	------	Line Not Found	------
	185.71	4	54.00	1.640E+00	2.110E-01	2.110E-01	2006.93
	205.31	------	4.70	1.582E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 14L28801-15

Acquisition date : 8-JUN-2006 09:49:07

Total number of lines in spectrum	13	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	4	30.77%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.041E+01	5.041E+01	4.295E+01	85.19	
RA-226	1600.00Y	1.00	3.474E+00	3.474E+00	69.73E+00	2006.93	
AC-228	5.75Y	1.00	8.309E+00	8.334E+00	11.38E+00	136.56	
TH-228	1.91Y	1.01	4.362E+00	4.401E+00	6.574E+00	149.39	
U-235	7.04E+08Y	1.00	2.110E-01	2.110E-01	42.35E-01	2006.93	K
			---	---			
	Total Activity :		6.677E+01	6.683E+01			

Grand Total Activity : 6.677E+01 6.683E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 14L28801-15

Acquisition date : 8-JUN-2006 09:49:07

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.18	135	471	1.26	133.35	130	7	7.73E-03	56.4	4.48E-01	
1	140.04	135	592	1.92	281.45	277	10	7.75E-03	70.0	1.67E+00	
1	198.86	95	398	1.56	399.34	395	9	5.45E-03	84.6	1.60E+00	
1	295.95	104	361	1.28	593.79	587	10	5.97E-03	68.9	1.29E+00	
1	352.00	29	205	1.65	705.98	701	10	1.68E-03	****	1.14E+00	
1	596.55	52	143	1.98	1194.87	1190	12	2.97E-03	98.0	7.78E-01	
1	609.35	29	232	1.77	1220.45	1213	16	1.66E-03	****	7.66E-01	
1	1765.89	24	15	2.57	3519.47	3513	20	1.38E-03	****	3.44E-01	
1	1769.97	31	7	2.57	3527.53	3513	20	1.81E-03	55.9	3.43E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	13	
Number of unidentified lines	9	
Number of lines tentatively identified by NID	4	30.77%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.041E+01	5.041E+01	4.295E+01	85.19	
RA-226	1600.00Y	1.00	3.474E+00	3.474E+00	69.73E+00	2006.93	
AC-228	5.75Y	1.00	8.309E+00	8.334E+00	11.38E+00	136.56	
TH-228	1.91Y	1.01	4.362E+00	4.401E+00	6.574E+00	149.39	
		Total Activity :	6.656E+01	6.662E+01			

Grand Total Activity : 6.656E+01 6.662E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Interference Report

No interference correction performed

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.041E+01	4.295E+01	4.356E+01	0.000E+00	1.157
RA-226	3.474E+00	6.973E+01	1.109E+02	0.000E+00	0.031
AC-228	8.334E+00	1.138E+01	1.678E+01	0.000E+00	0.497
TH-228	4.401E+00	6.574E+00	8.058E+00	0.000E+00	0.546

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	5.827E+00		2.554E+01	4.245E+01	0.000E+00	0.137
NA-24	-6.404E-03		2.942E-02	Half-Life too short		
CR-51	-1.572E+01		2.916E+01	4.698E+01	0.000E+00	-0.335
MN-54	-2.220E-01		2.779E+00	4.512E+00	0.000E+00	-0.049
CO-57	-6.610E-02		2.919E+00	4.842E+00	0.000E+00	-0.014
CO-58	-1.752E+00		2.896E+00	4.571E+00	0.000E+00	-0.383
FE-59	2.657E+00		5.891E+00	9.909E+00	0.000E+00	0.268
CO-60	1.274E+00		2.785E+00	4.740E+00	0.000E+00	0.269
ZN-65	1.267E+01		6.221E+00	1.135E+01	0.000E+00	1.117
SE-75	-2.213E+00		3.814E+00	6.206E+00	0.000E+00	-0.357
SR-85	1.721E+01		3.274E+00	6.267E+00	0.000E+00	2.746
Y-88	-1.508E-01		3.272E+00	5.337E+00	0.000E+00	-0.028
NB-94	-3.174E-01		2.577E+00	4.223E+00	0.000E+00	-0.075
NB-95	-1.383E-01		2.955E+00	4.835E+00	0.000E+00	-0.029
ZR-95	-1.174E+00		5.336E+00	8.659E+00	0.000E+00	-0.136
MO-99	5.593E-01		1.956E+02	3.216E+02	0.000E+00	0.002
RU-103	9.939E-01		3.343E+00	5.558E+00	0.000E+00	0.179
RU-106	-3.466E+00		2.720E+01	4.195E+01	0.000E+00	-0.083
AG-110m	-2.984E-01		2.748E+00	4.527E+00	0.000E+00	-0.066
SN-113	2.381E+00		3.756E+00	6.236E+00	0.000E+00	0.382
SB-124	-1.682E+00		7.407E+00	4.871E+00	0.000E+00	-0.345
SB-125	7.588E-01		7.843E+00	1.305E+01	0.000E+00	0.058
TE-129M	-8.155E+00		3.690E+01	6.041E+01	0.000E+00	-0.135
I-131	5.386E-01		6.001E+00	9.802E+00	0.000E+00	0.055
BA-133	5.456E+00		4.513E+00	6.590E+00	0.000E+00	0.828
CS-134	3.057E+00		6.856E+00	5.067E+00	0.000E+00	0.603
CS-136	-3.296E+00		4.200E+00	6.550E+00	0.000E+00	-0.503
CS-137	3.278E-01		3.035E+00	5.048E+00	0.000E+00	0.065
CE-139	2.394E+00		2.827E+00	4.731E+00	0.000E+00	0.506
BA-140	8.385E+00		1.551E+01	2.598E+01	0.000E+00	0.323
LA-140	-8.911E-01		4.967E+00	8.103E+00	0.000E+00	-0.110
CE-141	3.516E+00		6.640E+00	9.465E+00	0.000E+00	0.371
CE-144	-2.008E+01		2.612E+01	3.577E+01	0.000E+00	-0.561
EU-152	-7.198E-01		1.083E+01	1.487E+01	0.000E+00	-0.048
EU-154	-1.743E+00		6.027E+00	9.937E+00	0.000E+00	-0.175
TH-232	8.309E+00	+	1.135E+01	1.720E+01	0.000E+00	0.483
U-235	4.015E+01		2.551E+01	3.761E+01	0.000E+00	1.067
U-238	2.980E+02		3.095E+02	5.375E+02	0.000E+00	0.554
AM-241	-2.425E+01		4.443E+01	6.348E+01	0.000E+00	-0.382

```
A,14L28801-15      ,06/08/2006 14:39,05/30/2006 13:21,   3.546E+00,WG L28801-15 L
B,14L28801-15      ,LIBD                ,06/02/2006 08:23,1435L091304
C,K-40     ,YES,   5.041E+01,   4.295E+01,   4.356E+01,,    1.157
C,RA-226   ,YES,   3.474E+00,   6.973E+01,   1.109E+02,,    0.031
C,AC-228   ,YES,   8.334E+00,   1.138E+01,   1.678E+01,,    0.497
C,TH-228   ,YES,   4.401E+00,   6.574E+00,   8.058E+00,,    0.546
C,BE-7     ,NO ,   5.827E+00,   2.554E+01,   4.245E+01,,    0.137
C,CR-51    ,NO ,  -1.572E+01,   2.916E+01,   4.698E+01,,   -0.335
C,MN-54    ,NO ,  -2.220E-01,   2.779E+00,   4.512E+00,,   -0.049
C,CO-57    ,NO ,  -6.610E-02,   2.919E+00,   4.842E+00,,   -0.014
C,CO-58    ,NO ,  -1.752E+00,   2.896E+00,   4.571E+00,,   -0.383
C,FE-59    ,NO ,   2.657E+00,   5.891E+00,   9.909E+00,,    0.268
C,CO-60    ,NO ,   1.274E+00,   2.785E+00,   4.740E+00,,    0.269
C,ZN-65    ,NO ,   1.267E+01,   6.221E+00,   1.135E+01,,    1.117
C,SE-75    ,NO ,  -2.213E+00,   3.814E+00,   6.206E+00,,   -0.357
C,SR-85    ,NO ,   1.721E+01,   3.274E+00,   6.267E+00,,    2.746
C,Y-88     ,NO ,  -1.508E-01,   3.272E+00,   5.337E+00,,   -0.028
C,NB-94    ,NO ,  -3.174E-01,   2.577E+00,   4.223E+00,,   -0.075
C,NB-95    ,NO ,  -1.383E-01,   2.955E+00,   4.835E+00,,   -0.029
C,ZR-95    ,NO ,  -1.174E+00,   5.336E+00,   8.659E+00,,   -0.136
C,MO-99    ,NO ,   5.593E-01,   1.956E+02,   3.216E+02,,    0.002
C,RU-103   ,NO ,   9.939E-01,   3.343E+00,   5.558E+00,,    0.179
C,RU-106   ,NO ,  -3.466E+00,   2.720E+01,   4.195E+01,,   -0.083
C,AG-110m  ,NO ,  -2.984E-01,   2.748E+00,   4.527E+00,,   -0.066
C,SN-113   ,NO ,   2.381E+00,   3.756E+00,   6.236E+00,,    0.382
C,SB-124   ,NO ,  -1.682E+00,   7.407E+00,   4.871E+00,,   -0.345
C,SB-125   ,NO ,   7.588E-01,   7.843E+00,   1.305E+01,,    0.058
C,TE-129M  ,NO ,  -8.155E+00,   3.690E+01,   6.041E+01,,   -0.135
C,I-131    ,NO ,   5.386E-01,   6.001E+00,   9.802E+00,,    0.055
C,BA-133   ,NO ,   5.456E+00,   4.513E+00,   6.590E+00,,    0.828
C,CS-134   ,NO ,   3.057E+00,   6.856E+00,   5.067E+00,,    0.603
C,CS-136   ,NO ,  -3.296E+00,   4.200E+00,   6.550E+00,,   -0.503
C,CS-137   ,NO ,   3.278E-01,   3.035E+00,   5.048E+00,,    0.065
C,CE-139   ,NO ,   2.394E+00,   2.827E+00,   4.731E+00,,    0.506
C,BA-140   ,NO ,   8.385E+00,   1.551E+01,   2.598E+01,,    0.323
C,LA-140   ,NO ,  -8.911E-01,   4.967E+00,   8.103E+00,,   -0.110
C,CE-141   ,NO ,   3.516E+00,   6.640E+00,   9.465E+00,,    0.371
C,CE-144   ,NO ,  -2.008E+01,   2.612E+01,   3.577E+01,,   -0.561
C,EU-152   ,NO ,  -7.198E-01,   1.083E+01,   1.487E+01,,   -0.048
C,EU-154   ,NO ,  -1.743E+00,   6.027E+00,   9.937E+00,,   -0.175
C,TH-232   ,NO ,   8.309E+00,   1.135E+01,   1.720E+01,,    0.483
C,U-235    ,NO ,   4.015E+01,   2.551E+01,   3.761E+01,,    1.067
C,U-238    ,NO ,   2.980E+02,   3.095E+02,   5.375E+02,,    0.554
C,AM-241   ,NO ,  -2.425E+01,   4.443E+01,   6.348E+01,,   -0.382
```

Sec. Review: Analyst: LIMS: ✓

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VAX/VMS Teledyne Brown Eng. Laboratory Gamma Report: 8-JUN-2006 14:39:53.18
TBE13 P-10727B HpGe ********** Aquisition Date/Time: 8-JUN-2006 09:49:07.19

LIMS No., Customer Name, Client ID: WG WG4094-8 DUP

Sample ID : 13WG4094-8
Sample Type : WG
Quantity : 3.52400E+00 L
Start Channel : 25 Energy Tol : 1.00000
End Channel : 4090 Pk Srch Sens: 5.00000
MDA Constant : 0.00 Library Used: LIBD

Smple Date: 25-MAY-2006 08:35:00.
Geometry : 1335L090904
BKGFILE : 13BG060306MT
Real Time : 0 04:50:32.35
Live time : 0 04:50:27.40

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	%Eff	Cts/Sec	%Err	Fit
1	1	66.30	107	382	1.00	132.69	7.24E-01	6.16E-03	29.0	7.50E-01
2	4	77.12*	46	472	1.14	154.33	1.09E+00	2.62E-03	91.0	3.58E+00
3	1	139.64*	78	591	1.61	279.28	2.02E+00	4.50E-03	60.8	1.97E+00
4	1	185.64*	32	527	1.36	371.25	1.95E+00	1.82E-03	154.0	1.04E+00
5	1	198.10*	102	545	1.32	396.15	1.90E+00	5.84E-03	46.6	2.18E+00
6	1	238.03*	86	565	1.40	475.97	1.74E+00	4.91E-03	62.6	5.70E+00
7	1	351.67*	46	218	1.24	703.20	1.34E+00	2.66E-03	66.7	1.67E+00
8	1	583.15*	1	145	1.95	1166.17	9.26E-01	7.17E-05	*****	1.45E+00
9	1	595.58	61	140	1.44	1191.03	9.12E-01	3.52E-03	38.3	9.74E-01
10	1	608.93*	86	159	1.84	1217.74	8.97E-01	4.95E-03	37.6	1.84E+00
11	1	911.20*	26	72	1.99	1822.60	6.64E-01	1.50E-03	85.1	1.68E+00
12	1	1119.74*	3	39	1.55	2240.07	5.70E-01	1.83E-04	506.8	1.06E+00
13	1	1237.89*	8	38	1.90	2476.67	5.29E-01	4.60E-04	165.2	3.53E+00
14	1	1461.02*	59	48	2.31	2923.63	4.69E-01	3.38E-03	38.9	4.67E+00
15	1	1846.12	26	17	3.27	3695.44	3.99E-01	1.49E-03	32.2	4.51E+00

Flag: "*" = Peak area was modified by background subtraction

Nuclide Line Activity Report

Nuclide Type: natural

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/L	Decay Corr pCi/L	2-Sigma %Error
K-40	1460.81	59	10.67*	4.688E-01	5.189E+01	5.189E+01	77.86
RA-226	186.21	32	3.28*	1.946E+00	2.188E+01	2.188E+01	307.93
AC-228	835.50	------	1.75	7.084E-01	------	Line Not Found	------
	911.07	26	27.70*	6.640E-01	6.234E+00	6.263E+00	170.25
TH-228	238.63	86	44.60*	1.735E+00	4.870E+00	4.938E+00	125.22
	240.98	------	3.95	1.723E+00	------	Line Not Found	------
TH-232	583.14	1	30.25	9.262E-01	1.964E-01	1.964E-01	4529.15
	911.07	26	27.70*	6.640E-01	6.234E+00	6.234E+00	170.25
	969.11	------	16.60	6.342E-01	------	Line Not Found	------
U-235	143.76	------	10.50*	2.023E+00	------	Line Not Found	------
	163.35	------	4.70	2.011E+00	------	Line Not Found	------
	185.71	32	54.00	1.946E+00	1.329E+00	1.329E+00	307.93
	205.31	------	4.70	1.871E+00	------	Line Not Found	------

Flag: "*" = Keyline

Summary of Nuclide Activity
Sample ID : 13WG4094-8

Acquisition date : 8-JUN-2006 09:49:07

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Uncorrected pCi/L	Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.189E+01	5.189E+01	4.040E+01	77.86	
RA-226	1600.00Y	1.00	2.188E+01	2.188E+01	6.739E+01	307.93	
AC-228	5.75Y	1.00	6.234E+00	6.263E+00	10.66E+00	170.25	
TH-228	1.91Y	1.01	4.870E+00	4.938E+00	6.184E+00	125.22	
TH-232	1.41E+10Y	1.00	6.234E+00	6.234E+00	10.61E+00	170.25	
U-235	7.04E+08Y	1.00	1.329E+00	1.329E+00	4.093E+00	307.93	K
			---	---			
	Total Activity :		9.244E+01	9.254E+01			

Grand Total Activity : 9.244E+01 9.254E+01

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

Unidentified Energy Lines
Sample ID : 13WG4094-8

Acquisition date : 8-JUN-2006 09:49:07

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
1	66.30	107	382	1.00	132.69	131	5	6.16E-03	58.1	7.24E-01	
4	77.12	46	472	1.14	154.33	141	17	2.62E-03	****	1.09E+00	
1	139.64	78	591	1.61	279.28	275	9	4.50E-03	****	2.02E+00	
1	198.10	102	545	1.32	396.15	392	10	5.84E-03	93.1	1.90E+00	
1	351.67	46	218	1.24	703.20	698	9	2.66E-03	****	1.34E+00	
1	595.58	61	140	1.44	1191.03	1187	10	3.52E-03	76.5	9.12E-01	
1	608.93	86	159	1.84	1217.74	1212	14	4.95E-03	75.1	8.97E-01	
1	1119.74	3	39	1.55	2240.07	2234	10	1.83E-04	****	5.70E-01	
1	1237.89	8	38	1.90	2476.67	2472	9	4.60E-04	****	5.29E-01	
1	1846.12	26	17	3.27	3695.44	3691	10	1.49E-03	64.5	3.99E-01	

Flags: "T" = Tentatively associated

Summary of Nuclide Activity

Total number of lines in spectrum	15	
Number of unidentified lines	10	
Number of lines tentatively identified by NID	5	33.33%

Nuclide Type : natural

Nuclide	Hlife	Decay	Wtd Mean Uncorrected pCi/L	Wtd Mean Decay Corr pCi/L	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	5.189E+01	5.189E+01	4.040E+01	77.86	
RA-226	1600.00Y	1.00	2.188E+01	2.188E+01	6.739E+01	307.93	
AC-228	5.75Y	1.00	6.038E+00	6.066E+00	13.91E+00	229.35	
TH-228	1.91Y	1.01	4.870E+00	4.938E+00	6.184E+00	125.22	
TH-232	1.41E+10Y	1.00	1.964E-01	1.964E-01	88.94E-01	4529.15	
			---	---			
	Total Activity :		8.488E+01	8.498E+01			

Grand Total Activity : 8.488E+01 8.498E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Interference Report

Interfering		Interfered	
Nuclide	Line	Nuclide	Line
TH-232	911.07	AC-228	911.07

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/L)	Act error	MDA (pCi/L)	MDA error	Act/MDA
K-40	5.189E+01	4.040E+01	3.979E+01	0.000E+00	1.304
RA-226	2.188E+01	6.739E+01	9.493E+01	0.000E+00	0.231

AC-228	6.066E+00	1.391E+01	1.390E+01	0.000E+00	0.436
TH-228	4.938E+00	6.184E+00	7.307E+00	0.000E+00	0.676
TH-232	1.964E-01	8.894E+00	1.566E+01	0.000E+00	0.013

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/L)	K.L. Ided	Act error	MDA (pCi/L)	MDA error	Act/MDA
BE-7	-2.963E+00		2.466E+01	4.043E+01	0.000E+00	-0.073
NA-24	-2.418E+01		9.043E+00	Half-Life too short		
CR-51	1.701E+00		3.053E+01	5.025E+01	0.000E+00	0.034
MN-54	-3.565E+00		2.641E+00	4.100E+00	0.000E+00	-0.869
CO-57	-9.652E-01		2.555E+00	4.097E+00	0.000E+00	-0.236
CO-58	-1.670E+00		2.823E+00	4.454E+00	0.000E+00	-0.375
FE-59	6.975E+00		5.929E+00	1.045E+01	0.000E+00	0.667
CO-60	2.814E-01		2.771E+00	4.563E+00	0.000E+00	0.062
ZN-65	2.971E+00		5.438E+00	9.290E+00	0.000E+00	0.320
SE-75	-9.553E-01		3.488E+00	5.749E+00	0.000E+00	-0.166
SR-85	2.405E+01		3.400E+00	6.658E+00	0.000E+00	3.613
Y-88	-8.554E-01		3.399E+00	4.533E+00	0.000E+00	-0.189
NB-94	-1.604E-01		2.412E+00	3.955E+00	0.000E+00	-0.041
NB-95	4.242E+00		2.882E+00	5.035E+00	0.000E+00	0.843
ZR-95	-6.487E+00		5.106E+00	7.822E+00	0.000E+00	-0.829
MO-99	-2.579E+02		6.424E+02	1.032E+03	0.000E+00	-0.250
RU-103	2.988E+00		3.189E+00	5.425E+00	0.000E+00	0.551
RU-106	-1.017E+01		2.449E+01	3.774E+01	0.000E+00	-0.269
AG-110m	-4.856E-01		2.512E+00	4.113E+00	0.000E+00	-0.118
SN-113	-8.131E-01		3.505E+00	5.645E+00	0.000E+00	-0.144
SB-124	3.000E+00		6.763E+00	4.990E+00	0.000E+00	0.601
SB-125	-4.977E-01		7.073E+00	1.170E+01	0.000E+00	-0.043
TE-129M	1.923E+01		3.668E+01	6.173E+01	0.000E+00	0.311
I-131	2.147E+00		8.431E+00	1.387E+01	0.000E+00	0.155
BA-133	5.185E+00		4.114E+00	6.011E+00	0.000E+00	0.863
CS-134	9.211E+00		5.064E+00	5.109E+00	0.000E+00	1.803
CS-136	-4.520E+00		5.126E+00	7.944E+00	0.000E+00	-0.569
CS-137	-2.028E-01		2.820E+00	4.457E+00	0.000E+00	-0.046
CE-139	-7.409E-01		2.585E+00	4.239E+00	0.000E+00	-0.175
BA-140	-4.470E-01		1.855E+01	3.029E+01	0.000E+00	-0.015
LA-140	2.739E+00		5.611E+00	9.572E+00	0.000E+00	0.286
CE-141	-8.707E-01		6.436E+00	9.053E+00	0.000E+00	-0.096
CE-144	-1.716E+01		2.278E+01	3.156E+01	0.000E+00	-0.544
EU-152	-8.582E+00		9.588E+00	1.268E+01	0.000E+00	-0.677
EU-154	1.541E-01		5.205E+00	8.424E+00	0.000E+00	0.018
U-235	6.971E+00		2.276E+01	3.192E+01	0.000E+00	0.218
U-238	3.541E+01		3.091E+02	4.888E+02	0.000E+00	0.072
AM-241	-2.615E+01		2.423E+01	3.680E+01	0.000E+00	-0.711

```
A,13WG4094-8        ,06/08/2006 14:39,05/25/2006 08:35,   3.524E+00,WG WG4094-8 DU
B,13WG4094-8        ,LIBD                  ,06/07/2006 09:34,1335L090904
C,K-40     ,YES,   5.189E+01,   4.040E+01,   3.979E+01,,    1.304
C,RA-226   ,YES,   2.188E+01,   6.739E+01,   9.493E+01,,    0.231
C,AC-228   ,YES,   6.066E+00,   1.391E+01,   1.390E+01,,    0.436
C,TH-228   ,YES,   4.938E+00,   6.184E+00,   7.307E+00,,    0.676
C,TH-232   ,YES,   1.964E-01,   8.894E+00,   1.566E+01,,    0.013
C,BE-7     ,NO ,  -2.963E+00,   2.466E+01,   4.043E+01,,   -0.073
C,CR-51    ,NO ,   1.701E+00,   3.053E+01,   5.025E+01,,    0.034
C,MN-54    ,NO ,  -3.565E+00,   2.641E+00,   4.100E+00,,   -0.869
C,CO-57    ,NO ,  -9.652E-01,   2.555E+00,   4.097E+00,,   -0.236
C,CO-58    ,NO ,  -1.670E+00,   2.823E+00,   4.454E+00,,   -0.375
C,FE-59    ,NO ,   6.975E+00,   5.929E+00,   1.045E+01,,    0.667
C,CO-60    ,NO ,   2.814E-01,   2.771E+00,   4.563E+00,,    0.062
C,ZN-65    ,NO ,   2.971E+00,   5.438E+00,   9.290E+00,,    0.320
C,SE-75    ,NO ,  -9.553E-01,   3.488E+00,   5.749E+00,,   -0.166
C,SR-85    ,NO ,   2.405E+01,   3.400E+00,   6.658E+00,,    3.613
C,Y-88     ,NO ,  -8.554E-01,   3.399E+00,   4.533E+00,,   -0.189
C,NB-94    ,NO ,  -1.604E-01,   2.412E+00,   3.955E+00,,   -0.041
C,NB-95    ,NO ,   4.242E+00,   2.882E+00,   5.035E+00,,    0.843
C,ZR-95    ,NO ,  -6.487E+00,   5.106E+00,   7.822E+00,,   -0.829
C,MO-99    ,NO ,  -2.579E+02,   6.424E+02,   1.032E+03,,   -0.250
C,RU-103   ,NO ,   2.988E+00,   3.189E+00,   5.425E+00,,    0.551
C,RU-106   ,NO ,  -1.017E+01,   2.449E+01,   3.774E+01,,   -0.269
C,AG-110m  ,NO ,  -4.856E-01,   2.512E+00,   4.113E+00,,   -0.118
C,SN-113   ,NO ,  -8.131E-01,   3.505E+00,   5.645E+00,,   -0.144
C,SB-124   ,NO ,   3.000E+00,   6.763E+00,   4.990E+00,,    0.601
C,SB-125   ,NO ,  -4.977E-01,   7.073E+00,   1.170E+01,,   -0.043
C,TE-129M  ,NO ,   1.923E+01,   3.668E+01,   6.173E+01,,    0.311
C,I-131    ,NO ,   2.147E+00,   8.431E+00,   1.387E+01,,    0.155
C,BA-133   ,NO ,   5.185E+00,   4.114E+00,   6.011E+00,,    0.863
C,CS-134   ,NO ,   9.211E+00,   5.064E+00,   5.109E+00,,    1.803
C,CS-136   ,NO ,  -4.520E+00,   5.126E+00,   7.944E+00,,   -0.569
C,CS-137   ,NO ,  -2.028E-01,   2.820E+00,   4.457E+00,,   -0.046
C,CE-139   ,NO ,  -7.409E-01,   2.585E+00,   4.239E+00,,   -0.175
C,BA-140   ,NO ,  -4.470E-01,   1.855E+01,   3.029E+01,,   -0.015
C,LA-140   ,NO ,   2.739E+00,   5.611E+00,   9.572E+00,,    0.286
C,CE-141   ,NO ,  -8.707E-01,   6.436E+00,   9.053E+00,,   -0.096
C,CE-144   ,NO ,  -1.716E+01,   2.278E+01,   3.156E+01,,   -0.544
C,EU-152   ,NO ,  -8.582E+00,   9.588E+00,   1.268E+01,,   -0.677
C,EU-154   ,NO ,   1.541E-01,   5.205E+00,   8.424E+00,,    0.018
C,U-235    ,NO ,   6.971E+00,   2.276E+01,   3.192E+01,,    0.218
C,U-238    ,NO ,   3.541E+01,   3.091E+02,   4.888E+02,,    0.072
C,AM-241   ,NO ,  -2.615E+01,   2.423E+01,   3.680E+01,,   -0.711
```

TELEDYNE
BROWN ENGINEERING
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931
865-690-6819 (Phone)

Work Order #: L29178 R1

Exelon

July 11, 2006

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Kathy Shaw
Conestoga-Rovers & Associates
45 Farmington Valley Road
Plainville CT 06062

Case Narrative - L29178
EX001-3ESPSALLE-06

07/11/2006 13:14

Sample Receipt

The following samples were received on July 7, 2006 in good condition, unless otherwise noted.

Revision 1:

Client ID corrected to WG-LS-MW-105S-070506-JW-026.

Cross Reference Table

Client ID	Laboratory ID	Station ID(if applicable)
WG-LS-MW-105S-070506-JW-026	L29178-1	

Analytical Method Cross Reference Table

Radiological Parameter	TBE Knoxville Method	Reference Method
H-3 (DIST)	TBE-2010	

TELEDYNE
BROWN ENGINEERING, INC.
A Teledyne Technologies Company
2508 Quality Lane
Knoxville, TN 37931-3133

Case Narrative - L29178
EX001-3ESPSALLE-06

07/11/2006 13:14

H-3 (DIST)

Quality Control

Quality control samples were analyzed as WG4212.

Method Blank
All blanks were within acceptance limits, unless otherwise noted.

Laboratory Control Sample
All laboratory control samples were within acceptance limits, unless otherwise noted.

Duplicate Sample
Duplicates were analyzed for the following samples. All duplicate results were within acceptance limits, unless otherwise noted.

Client ID	Laboratory ID	QC Sample #
WG-LS-MW1055-070506-JW-026	L29178-1	WG4212-3

Certification

This is to certify that Teledyne Brown Engineering - Environmental Services, located at 2508 Quality Lane, Knoxville, Tennessee, 37931, has analyzed, tested and documented samples as specified in the applicable purchase order.

This also certifies that requirements of applicable codes, standards and specifications have been fully met and that any quality assurance documentation which verified conformance to the purchase order is on file and may be examined upon request.

I hereby certify that the above statements are true and correct.

Keith Jeter
Operations Manager

Sample Receipt Summary

07/07/06 11:18

SR #: SR09287

Client: Exelon

Teledyne Brown Engineering
Sample Receipt Verification/Variance Report

Project #: EX001-3ESPSALLE-06

LIMS #: L29178

Initiated By: PMARSHALL
Init Date: 07/07/06 Receive Date: 07/07/06

Notification of Variance

Person Notified:

Contacted By:

Notify Date:

Notify Method:

Notify Comment:

Client Response

Person Responding:

Response Date:

Response Method:

Response Comment

	Criteria	Yes No NA	Comment
1	Shipping container custody seals present and intact.	Y	
2	Sample container custody seals present and intact.	NA	
3	Sample containers received in good condition	Y	
4	Chain of custody received with samples	Y	
5	All samples listed on chain of custody received	Y	
6	Sample container labels present and legible.	Y	
7	Information on container labels correspond with chain of custody	Y	
8	Sample(s) properly preserved and in appropriate container(s)	NA	
9	Other (Describe)	NA	Transferred to glass container at receipt

CONESTOGA-ROVERS & ASSOCIATES
9033 Meridian Way
West Chester, Ohio 45069
(513)942-4750 phone
(513)942-8585 fax

CHAIN-OF-CUSTODY RECORD

SHIPPED TO (Laboratory Name): Teledyne - Brown, Knoxville, TN

L29178

REFERENCE NUMBER: 45136

PROJECT NAME: Exelon - Lasalle Station

SAMPLER'S SIGNATURE: Jeroen **PRINTED NAME:** Winterink

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: Tritium	REMARKS
1	7-5-06	1020	WG-LS-MW1055-070506-JW026	water	2	X	2-Day TAT Required
			TOTAL NUMBER OF CONTAINERS		2		

RELINQUISHED BY: ① Jeroen	DATE: 7-5-06 TIME: 15:00	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: DHL **AIR BILL No.** 563188507744

White	-Fully Executed Copy
Yellow	-Receiving Laboratory Copy
Pink	-Shipper Copy
Goldenrod	-Sampler Copy

SAMPLE TEAM: Winterink

RECEIVED FOR LABORATORY BY: Pat Marshall
DATE: 7/7/06 TIME: 1100

03945

400001-00(SOURCE)GN-CO001

Internal Chain of Custody

Internal Chain of Custody

****

Sample # L29178-1 Containernum 1

Prod	Analyst
H-3 (DIST)	DW

Relinquish Date	Relinquish By	Received By	
07/07/2006 00:00		099999	Sample Custodian

****

Sample # L29178-1 Containernum 2

Prod	Analyst
H-3 (DIST)	DW

Relinquish Date	Relinquish By	Received By	
07/07/2006 00:00		099999	Sample Custodian

****

Sample # L29178-1 Containernum 3

Prod	Analyst
H-3 (DIST)	DW

Relinquish Date	Relinquish By		Received By	
07/07/2006 00:00			099999	Sample Custodian
07/07/2006 17:47	099999	Sample Custodian	030854	Donna Webb
07/07/2006 17:48	030854	Donna Webb	099999	Sample Custodian

07/11/06

Teledyne Brown Engineering
Internal Chain of Custody
Supplemental Sheet

L29178

****

L29178-1 **WG** **WG-LS-MW-105S-070506-JW-026**

Process step	Prod	Analyst	Date
Login		RCHARLES	07/07/06
Aliquot	H-3 (DIST)	DW	07/07/06
Count Room	H-3 (DIST)	KPW	07/07/06

Analytical Results Summary

Report of Analysis

07/11/06 12:55

TELEDYNE BROWN ENGINEERING, INC.
A Teledyne Technologies Company

L29178

Conestoga-Rovers & Associates

Kathy Shaw

EX001-3ESPSALLE-06

Sample ID:	**WG-LS-MW-105S-070506-JW-026**	Collect Start:	07/05/2006 10:20	Matrix:	Ground Water (WG)
Station:		Collect Stop:		Volume:	
Description:		Receive Date:	07/07/2006	% Moisture:	
LIMS Number:	L29178-1				

Radionuclide	SOP#	Activity Conc	Uncertainty 2 Sigma	MDC	Units	Run #	Aliquot Volume	Aliquot Units	Reference Date	Count Date	Count Time	Count Units	Flag Values		
H-3 (DIST)	2010	**7.66E+02**	1.53E+02	1.84E+02	pCi/L		10	ml		07/07/06	60	M	+		

Flag Values

U	=	Compound/Analyte not detected or less than 3 sigma
+	=	Activity concentration exceeds MDC and 3 sigma; peak identified(gamma only)
U*	=	Compound/Analyte not detected. Peak not identified, but forced activity concentration exceeds MDC and 3 sigma
High	=	Activity concentration exceeds customer reporting value
Spec	=	MDC exceeds customer technical specification
L	=	Low recovery
H	=	High recovery

Bolded text indicates reportable value.

No = Peak not identified in gamma spectrum
Yes = Peak identified in gamma spectrum
**** Results are reported on an as received basis unless otherwise noted

MDC - Minimum Detectable Concentration

L29178 R1

QC Results Summary

QC Summary Report for L29178

7/11/2006 1:13:49PM

TELEDYNE BROWN ENGINEERING
A Teledyne Technologies Company

H-3 (DIST)

Method Blank Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Blank Result	Units	Qualifier	P/F
WG4212-1	H-3 (DIST)	WO	07/08/2006 0:42	< 1.830E+00	pCi/Total	U	P

LCS Sample Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Spike Value	LCS Result	Units	Spike Recovery	Range	Qualifier	P/F
WG4212-2	H-3 (DIST)	WO	07/08/2006 0:22	5.05E+002	4.430E+02	pCi/Total	87.8	70-130	+	P

Spike ID: 3H-041706-1
Spike conc: 5.05E+002
Spike Vol: 1.00E+000

Duplicate Summary

TBE Sample ID	Radionuclide	Matrix	Count Date/Time	Original Result	DUP Result	Units	RPD	Range	Qualifier	P/F
WG4212-3 L29178-1	H-3 (DIST)	WG	07/07/2006 21:12	7.660E+02	7.600E+02	pCi/L		<30	*	NE

+	Positive Result
U	Compound/analyte was analyzed, peak not identified and/or not detected above MDC
*	< 5 times the MDC are not evaluated
**	Nuclide not detected
***	Spiking level < 5 times activity
P	Pass
F	Fail
NE	Not evaluated

L29178 R1

Raw Data

Raw Data Sheet (rawdata)
Jul 11 2006, 01:10 pm

Work Order: *L29178* Customer: *Exelon*

Nuclide: *H-3 (DIST)* Project : *EX001-3ESPSALLE-06*

Sample ID Client ID	Run #	Analysis	Reference Date/time	Volume/ Aliquot	Scavenge Date/time	Milking Date/time	Mount Weight	Recovery	Count Date/time	Counter ID	Total counts	Sample dt(min)	Bkg counts	Bkg dt(min)	Eff.	Decay & Ingrowth Factor	Analyst
L29178-1		H-3 DIST		10 ml			0		07-jul-06 22:16	LS7	335	60	2.02	60	.21		DW

WG-LS-MW-105S-070506-JW-026
Activity: 7.66E+02 * Error: 1.53E+02 MDC: 1.84E+02

L29178 R1

APPENDIX E

DATA VALIDATION MEMORANDUM

CONESTOGA-ROVERS & ASSOCIATES

45 Farmington Valley Drive
Plainville, Connecticut 06062
Telephone: (860) 747-1800 Fax: (860) 747-1900
www.CRAworld.com

MEMORANDUM

TO: Steve Quigley

FROM: Kathy Shaw/ks/2/CT

REF. NO.: 45136-24

DATE: June 16, 2006

Revision Date: August 17, 2006

RE: Data Quality Assessment and Verification
Fleetwide Assessment – Hydrogeologic Investigation
LaSalle Station, Marseilles, Illinois

This memorandum details a data verification of the radiochemical data resulting from the collection of 16 groundwater, 6 surface water, five (5) temporary sampling points and five (5) quality control samples from the LaSalle Station in Marseilles, Illinois. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Teledyne Brown Engineering in Knoxville, Tennessee (TBE) in accordance with the methodologies presented in Table 2. The quality control criteria used to assess the data were established by the methods.[1]

Sample Quantitation

The laboratory reported several radionuclides with activity concentrations above the minimum detectable concentration (MDC) and greater than the three (3) sigma critical level (99% confidence interval), but qualified them as not detected due to the presence of interference preventing identification of the major peaks, with a U* flag. Based on the laboratory qualification definition these concentrations should be qualified as not-detected (U*) above the laboratory reported MDC.

Sample Preservation

Samples collected for gamma scan and total strontium analyses are to be preserved to a pH of less than or equal to two (2) during shipment and laboratory storage with nitric acid at the time of collection.
The samples were shipped and maintained in accordance with the sample preservation requirements.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by concurrent preparation and analysis of method blank samples. The method blank samples were reported to be free of radioactive material contamination produced by the laboratory conditions or procedures.

[1] PRESCRIBED PROCEDURE FOR MEASUREMENT OF RADIOACTIVITY IN DRINKING WATER EPA-600/4-80-032

Laboratory Control Sample Analysis

The laboratory control sample (LCS) is a sample containing a known amount of a radionuclide that is equivalent to internal or external control samples prepared by the analytical laboratory or a Federal/State agency. The LCS percent recoveries were within the laboratory or agency control limits, indicating that an acceptable level of overall performance was achieved.

Duplicate Sample Analyses

The laboratory precision of matrix-specific measurement system was monitored by the analyses of duplicate samples. The duplicate relative percent difference (RPD) data were within the acceptance criteria. No targeted analytes were reported as detected in the laboratory duplicate sample sets.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of three (3) field duplicate sample sets. Overall precision for the sampling event and laboratory procedures was monitored using the results of the field duplicate sample sets. Table 3 summarizes the results of the detected analytes in the field duplicate sample sets. No matching pair of analytes were reported as detected in the field duplicate sample sets; therefore, the level of precision could not be determined.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1

SUMMARY OF SAMPLING AND ANALYSES
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Sample Location	*Sample Identification*	*QC Sample*	*Date*	*Time*	*Matrix*	*Analysis*
MW-LS-101S	WG-LS-MW-LS-101S-052406-NK-006		05/24/06	10:50	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-103S	WG-LS-MW-LS-103S-052306-NK-001		05/23/06	11:00	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-104S	WG-LS-MW-LS-104S-052606-NK-020		05/26/06	11:00	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-105S	WG-LS-MW-LS-105S-052606-NK-019		05/26/06	11:10	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-106S	WG-LS-MW-LS-106S-052506-NK-017		05/25/06	10:05	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-107S	WG-LS-MW-LS-107S-052606-NK-018		05/26/06	9:20	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-108S	WG-LS-MW-LS-108S-052506-NK-016		05/25/06	8:40	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-109S	WG-LS-MW-LS-109S-052606-NK-021		05/26/06	12:55	Groundwater	Tritium/Strontium/Gamma Spectrum
Rinsate	RB-LS-052506-NK-010	Rinsate	05/25/06	-	Water	Tritium/Strontium/Gamma Spectrum
MW-LS-110S	WG-LS-MW-LS-110S-052506-NK-011		05/25/06	10:40	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-111S	WG-LS-MW-LS-111S-053006-BW-022		05/30/06	11:06	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-111S	WG-LS-MW-LS-111S-053006-BW-023	Duplicate (022)	05/30/06	11:26	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-112S	WG-LS-MW-LS-112S-053006-BW-024		05/30/06	13:11	Groundwater	Tritium/Strontium/Gamma Spectrum
MW-LS-112S	WG-LS-MW-LS-112S-053006-BW-025	Duplicate (024)	05/30/06	13:21	Groundwater	Tritium/Strontium/Gamma Spectrum
HP-2	WG-LS-HP-2-052406-NK-012		05/24/06	11:00	Groundwater	Tritium/Strontium/Gamma Spectrum
HP-5	WG-LS-HP-5-052406-NK-013		05/24/06	12:00	Groundwater	Tritium/Strontium/Gamma Spectrum
HP-7	WG-LS-HP-7-052406-NK-015		05/24/06	13:40	Groundwater	Tritium/Strontium/Gamma Spectrum
HP-10	WG-LS-HP-10-052406-NK-014		05/24/06	12:45	Groundwater	Tritium/Strontium/Gamma Spectrum
TS-LS-101S	WG-LS-TS-LS-101S-050906-BW-001		05/09/06	10:55	Groundwater	Tritium/Strontium/Gamma Spectrum
TS-LS-102S	WG-LS-TS-LS-102S-050506-BW-002		05/05/06	10:45	Groundwater	Tritium/Strontium/Gamma Spectrum
TS-LS-103S	WG-LS-TS-LS-103S-050506-BW-003		05/05/06	13:55	Groundwater	Tritium/Strontium/Gamma Spectrum
TS-LS-104S	WG-LS-TS-LS-104S-050506-BW-004		05/05/06	16:00	Groundwater	Tritium/Strontium/Gamma Spectrum
TS-LS-105S	WG-LS-TS-LS-105S-050906-BW-005		05/09/06	9:15	Groundwater	Tritium/Strontium/Gamma Spectrum
SW-LS-101	WS-LS-SW-LS-101-052306-NK-002		05/23/06	12:30	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-LS-102	WS-LS-SW-LS-102-052306-NK-003		05/23/06	13:00	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-LS-103	WS-LS-SW-LS-103-052306-NK-004		05/23/06	13:30	Surface Water	Tritium/Strontium/Gamma Spectrum
Rinsate	RB-LS-052306-NK-005	Rinsate	05/23/06	-	Water	Tritium/Strontium/Gamma Spectrum
SW-LS-104	WS-LS-SW-LS-104-052506-NK-008		05/25/06	8:35	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-LS-105	WS-LS-SW-LS-105-052506-NK-009		05/25/06	9:00	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-LS-105	WS-LS-SW-LS-105-052506-NK-018	Duplicate (009)	05/25/06	9:00	Surface Water	Tritium/Strontium/Gamma Spectrum
SW-LS-106	WS-LS-SW-LS-106-052406-NK-007		05/24/06	13:30	Surface Water	Tritium/Strontium/Gamma Spectrum
MW-LS-105S	WG-LS-MW-105S-070506-JW-026		07/05/06	10:20	Groundwater	Tritium

QC - Quality Control
Gamma Spectrum - Barium-140, Cesium-134, Cesium-137, Cobalt-58, Cobalt-60, Iron-59, Lanthanum-140, Manganese-54, Niobium-95, Zinc-65, Zirconium-95
Isotopes not listed in Table 1, but typically detected in environmental samples (i.e. K-40, Be-7, Ra-226, Th-232, etc.) were reported if detected.

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Parameter	*Method* [1]	*Matrix*	*Holding Time*	*Preservation*
Tritium	EPA 906.0	Water	- 6 months	None
Strontium - 89/90 (Total)	EPA 905.0	Water	- 6 months	HNO3 to pH<2
Gamma Spectrum	EPA 901.1	Water	- 6 months	HNO3 to pH<2

[1] EPA-60/40-80-032 August 1980 "Precribed Procedures For Measurement of Radioactivity In Drinking Water

TABLE 3

SUMMARY OF DETECTED ANALYTES IN FIELD DUPLICATE SAMPLE SETS
FLEETWIDE ASSESSMENT
LASALLE GENERATING STATION
MARSEILLES, ILLINOIS

Parameter	*Original Sample ID*	*Original Result*	*Uncertainty @ 2 sigma*	*Duplicate Sample ID*	*Duplicate Result*	*Uncertainty @ 2 sigma*	*RPD*	*Units*
Strontium - 89/90 (Total)	WG-LS-MW-LS-111S-053006-BW-022	1.85	+/- 0.96	WG-LS-MW-LS-111S-053006-BW-023	<0.841	+/- 0.465	NC	pCi/L
Potassium-40	WG-LS-MW-LS-112S-053006-BW-024	91.22	+/- 46.34	WG-LS-MW-LS-112S-053006-BW-025	ND	NA	NC	pCi/L
Potassium-40	WS-LS-SW-LS-105-052506-NK-009	<1.45	+/- 0.77	WG-LS-MW-LS-107S-052606-NK-018	91.77	+/- 37.12	NC	pCi/L
Strontium - 89/90 (Total)		ND	NA		0.874	+/- 0.48	NC	pCi/L

RPD - Relative Percent Difference
NC - Not calculable
ND - Not Detected
NA - Not Applicable