2006 INTERIM REMEDIAL MEASURES COMPLETION REPORT FOR THE BEE-JAY SCALES SITE

Chevron Environmental Management Company
& BP America, Inc.

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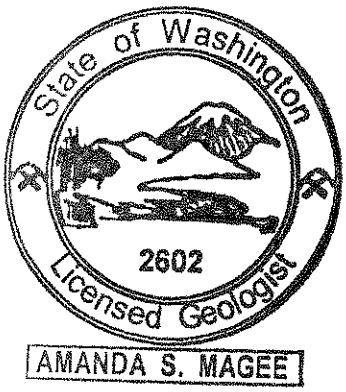

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1.0 INTRODUCTION

This document summarizes the 2006 Interim Remedial Measures (IRM) completed by SECOR International Incorporated (SECOR) on behalf of the Chevron Environmental Management Company (CEMC) and BP America, Incorporated (BP) at the Bee-Jay Scales Site in Sunnyside, Washington (the Site). Activities were conducted in accordance with the *2006 Interim Remedial Measures Work Plan for the Bee-Jay Scales Site*, dated April 14, 2006 and approved by the Department of Ecology on February 7, 2007 (SECOR, 2006b).

This project is being implemented in accordance with the Washington State Department of Ecology (Ecology) Washington Model Toxics Control Act (MTCA) and Ecology Agreed Order No. DE 02TCPCR-3932 (Agreed Order).

1.1 Purpose

The purpose of this report is to summarize and document the following activities conducted as part of the 2006 IRM: 1) the lagoon closure activities; and 2) the treatment of petroleum hydrocarbon impacts using persulfate.

1.2 Report Organization

This report is organized as follows:

- Summaries of the Site background, historical operations, and previous investigations are included in the remaining portion of Section 1;
- A summary of the lagoon closure activities is presented in Section 2;
- A summary of the persulfate treatment is presented in Section 3; and
- Summary and conclusions are presented in Section 4.

1.3 Background

Information regarding the Site description and historical operations at the Site has been adapted from the *Remedial Investigation/Feasibility Study Work Plan, Bee-Jay Scales Site, Sunnyside, WA* (CH2M Hill, 2003) [RI/FS Work Plan] unless otherwise specified. The RI/FS Work Plan was approved by Ecology in March 2003.

1.3.1 Site Description

The Site is located in the city of Sunnyside, within Yakima County, and is composed of two property parcels: Parcel No. 22102522014 and Parcel No. 22102522015 as recorded by the Yakima County Department of Assessment. Parcel No. 22102522014 is located at 116 North 1st Street, and is owned by Bee-Jay Scales, Inc. Parcel No. 22102522015 is located at 301 Warehouse Avenue, and is owned by Hickenbottom & Sons, Inc. Hickenbottom & Sons also owns additional contiguous property on which their business is located.

The Site is divided into six main study areas as follows:

- Area 1 - Liquid Fertilizer Plant and Truck Wash Area
- Area 2 - Dry Fertilizer Area
- Area 3 - Drum Storage Area
- Area 4 - Suspected Historic Washdown Area
- Area 5 - North Area
- Area 6 - Hickenbottom Property

The Site location is shown on Figure 1-1, and the Site layout, including building locations and additional features, is shown on Figure 1-2.

1.3.2 Site History

The Site and adjacent properties have historically been the location of agricultural warehouses, lumber yards, coal storage, and railroad transportation activities since approximately 1906.

Portions of the Site were owned by the Northern Pacific Railroad Company from 1906 until 1989 when purchased by the Glacier Park Company (GPC). An agricultural distribution facility operated at the Site from the 1960s through at least 1986. This facility consisted of buildings and above ground storage tanks (ASTs), and was operated by at least two separate companies: Laneger Agricultural Services and Valley Agricultural, Inc. Documentation also indicates that during the 1970s, Amoco, now known as BP, leased portions of this property from Northern Pacific Railroad. The agricultural distribution facility ASTs have since been removed from the Site. A lagoon, which will be discussed in more detail in subsequent sections, was constructed in the early 1980s to collect water from the washdown of farm chemical applicator vehicles.

The western portion of Lot 10 was purchased by Chevron Chemical Company in 1981 and sold to Bee-Jay Scales, Inc. in 1987. Bee-Jay Scales, Inc. purchased additional portions of Lots 10 and 11 in 1995 and 1996. Please note Lots 10 and 11 are referenced in the Summary of Ownership included as Appendix B of the RI/FS Work Plan, and are not shown on any available figures.

Hickenbottom & Sons, Inc. leased a portion of the Site from the Northern Pacific Railroad Company beginning in 1961 and purchased portions of Lots 10 and 11 in 1992. The Hickenbottom property was previously used as pastureland, and since 1961 has been used for food packing, storage, and a transportation business.

Three businesses currently operate at the Bee-Jay Scales portion of the property: Sandy Farms, a local trucking company; Sanleco, Inc., an interstate trucking company with an on-site tractor-trailer repair garage; and Bee-Jay Scales, a commercial scale operation.

Hickenbottom & Sons, Inc. is a food-processing and distribution company. Most of Hickenbottom & Sons current operation consists of a refrigeration warehouse. The Hickenbottom property that makes up a portion of the Site is currently leased to the Johnson Fruit Company and is used to store produce bins, pallets, tractor-trailer rigs, and other miscellaneous equipment. The remainder of the Hickenbottom & Sons property is used for tractor-trailer and produce storage, as well as transportation.

1.3.3 Summary of Operational History

The summary of operational history is taken directly from the RI/FS Work Plan (CH2M Hill, 2003):

"Based on information obtained from the chain-of-title history, historical aerial photographs, previous investigations, Ecology correspondence files, site reconnaissance and interviews, a summary of the operational history of the Bee-Jay Scales Site based on these sources has been prepared. Interviews conducted with the following individuals contribute to this summary:

- *Mr. Arno Johnson, President-Owner, Bee-Jay Scales and Sandy Farms, September 19, 2002*
- *Mr. Bob Bolden, Manager, Sandy Farms, September 9, 2002*
- *Mr. Jerry Hickenbottom, President, Hickenbottom & Sons, and Mr. Robert Hickenbottom, Past President, Hickenbottom & Sons, September 9, 2002*

There is some conflicting site ownership information presented in the following paragraphs. As was discussed in Section 2.4.1, the title report summarizes occupants of the property. The conflicting information may be related to sources attributing land ownership to facility operators. The accuracy of the information provided by the individuals interviewed for this work plan and previous investigations has not been verified.

Industrial uses on or adjacent to the site began near the turn of the century. Early uses included agricultural warehouses, lumber yards, coal storage, and railroad transportation activities (Hart Crowser, 1990a, Sanborn, 1908 to 1960). According to the Sanborn Fire Insurance Maps prepared for Sunnyside, Washington, there was not a fertilizer plant located on the site prior to 1960. However, there is a liquid fertilizer plant identified southeast of the site that contained ten liquid fertilizer ASTs. The approximate location of this second fertilizer plant is 5th Street and the Northern Pacific Railroad Company right-of-way (Sanborn, 1960).

An agricultural chemical distribution facility operated at the site from the 1960s through at least 1986. At least two separate companies operated the facility: Laneger Agricultural Services and Valley Agriculture Inc. The 1966 aerial photograph shows the presence of buildings and ASTs on the property that indicate the presence of the fertilizer distribution facility.

A letter from the American Oil Company to the Chevron Chemical Company dated July 14, 1972 (Henkens, 1972) was located in the Ecology files for the Bee-Jay Scales Site. The letter includes information on the Sunnyside Farm Service Center fertilizer facility, as the facility was called at that time, and a list of equipment and a site plan. A copy of this information is included in Appendix D. The Sunnyside Farm Service Center consisted of a dry fertilizer plant, liquid fertilizer plant, and a "L.P. gas and anhydrous ammonia plant." According to Mr. Johnson, the L.P. probably referred to liquid pressurized anhydrous ammonia gas. Mr. Johnson indicated that propane was not sold at the site and that he was not aware of any use for propane related to site activities or operations. The dry fertilizer blending plant, located in the southwestern area of the site, was housed inside a 60-foot by 40-foot warehouse and shop addition and included a weigh hopper, 2-ton mixer, bagging machine, holding hopper, railroad car unloader, and other amenities such as electrical equipment, sewer, and water. The liquid fertilizer plant, located in

the southeastern area of the site, included two 20,000-gallon vertical tanks, two 10,000-gallon vertical tanks, one 5,000-gallon vertical tank, three 2,000-gallon vertical tanks, concrete tank pads, aqua converter, chemical pumps, mixer, heater house, loading dock, and amenities such as electrical equipment and piping. The L.P. gas and anhydrous ammonia plant, located in the southeastern area of the site, included one 30,000-gallon L.P. tank, compressor, pump, tank car unloading riser, tank and truck loading riser, 20-ton truck scale with wood dock, 6-foot pit, sump pump, piping, and electrical.

According to the historical aerial photographs (Appendix C), the L.P. tank was removed and a lagoon structure was constructed in the vicinity between 1982 and 1991. This is supported by an invitation-to-bid document, located in the Ecology correspondence files, to refurbish the liquid tank farm and install a holding pond. This bid document is from the Chevron Chemical Company and is dated March 1984. The document specifies removal of a 28-foot by 68-foot concrete pad, construction of a 25-foot by 60-foot, 8-foot-deep holding pond, line holding pond with Chevron Industrial Membrane, attach membrane to drain line, construct a catch basin to connect to the wash rack gutter and drain line to connect to the holding pond. According to an interview with a Sandy Farms representative, Mr. Arno Johnson, conducted by Hart Crowser in 1990 (Hart Crowser, 1990a), the previous owner of the facility, Valley Agriculture Inc., constructed the lagoon in the early 1980s to collect water from the washdown of farm chemical applicator vehicles. The title report indicates that the Chevron Chemical Company owned the property from 1981 to 1987. Mr. Johnson reported that lagoon water was allowed to evaporate; prior to the construction of the lagoon, the water was washed into the public sewer system. In the September 2002 interview, Mr. Johnson indicated that the washdown area was unpaved and unlined before the lagoon was constructed. He also indicated that an earlier washdown area was located on the western portion of the site adjacent the current shop portion of the office/shop building.

The fertilizer facility was not operating at the time of the Hart Crowser study in 1990. The aerial photographs show that the vertical storage tanks in the former liquid fertilizer plant were removed in the late 1990s. Mr. Johnson indicated that the tanks were purchased in 1987 by another agricultural chemical company, NaChur, located across 1st Avenue from the site, and are still in use today.

After Valley Agriculture Inc. ceased operations in 1986, Mr. Arno Johnson purchased only the office/shop building portion of the site. He installed a scale and operated a commercial truck weighing operation, Bee-Jay Scales, with Mr. Neils Brown, a former employee of Valley Agriculture Inc.. In 1987, Mr. Johnson also moved the operations of a dairy and livestock feed business, Sandy Farms, to the site. The feed business was operated inside the warehouse that formerly contained the dry fertilizer plant. Mr. Johnson indicated that in order to meet rigorous USDA standards for storing feed in the warehouse (referred to now as the commodity building), it was thoroughly cleaned by scrubbing, vacuuming, and a final rinse, vacuuming all rinsate. The building was inspected regularly during the feed business tenure. Feed products stored in the commodity building by Sandy Farms included soybean meal, corn distillers, beet pellets, whole grain corn, mill run (wheat hulls), and rapeseed pellets. Sandy Farms ceased operating a livestock feed business in December 1996. Current Sandy Farms operations are limited to activities related to a local trucking company.

Adjacent property up-gradient of the site that could have resulted in migration of contaminants to the site include gas stations formerly present on the west side of 1st Avenue both north and south of Warehouse Avenue and large stock yards (such as Munson Feed Lot) that could have contributed nitrate-related contaminants to the groundwater.

According to Robert Hickenbottom, the Hickenbottom property has been used for food packing, storage, and a transportation business since 1961. Prior to use of the property by Hickenbottom & Sons, the Hickenbottom property was pastureland."

1.4 Previous Investigations

Investigations conducted by previous consultants before July 2003 are documented in the RI/FS Work Plan (CH2M Hill, 2003). Several investigations and evaluations have been conducted by SECOR at the Site. The results of SECOR's previous investigations and evaluations are included in the following reports and memoranda:

- *Phase I Remedial Investigation Report* (SECOR, 2003);
- *Phase II Remedial Investigation Report* (SECOR, 2005a);
- Phase II bench-scale treatability testing and field pilot study (documented in the *Phase II Remedial Investigation Report*);
- BIOSCREEN modeling (documented in the *Preliminary Screening of Remedial Alternatives Technical Memorandum for the Bee-Jay Scales Site* [SECOR, 2005b]); and
- *Phase III Remedial Investigation Report* (SECOR, 2007d).

In addition to the previous investigations, quarterly groundwater monitoring is conducted. The following subsections summarize the key findings of each SECOR investigation and evaluation.

1.4.1 Phase I RI

The Phase I RI activities were conducted in July 2003 and consisted of soil and groundwater investigations.

SECOR collected soil samples from borings installed to depths of up to 11 feet below ground surface (bgs) in each of the six identified areas at the Site. Eight soil borings were installed in Area 1, seven soil borings in Area 2, two soil borings in Area 3, six soil borings in Area 4, five shallow soil borings in Area 5, and seven soil borings were installed in Area 6 (two of which were shallow). Results indicated a total petroleum hydrocarbon as gasoline (TPH-Gx) value exceeded Method C Cleanup Levels (CULs) at a depth of 7.5 feet bgs at A3-SB-002. Also, nitrogen and sulfate compounds were present throughout the unsaturated zone soil samples at high concentrations in potential surface source areas.

Three, two-inch diameter shallow wells were installed at the Site as part of the Phase I groundwater investigation to supplement information provided by three existing wells (MW-1, MW-3, and MW-4). The fourth previously installed monitoring well (MW-2) could not be located. Two of the new wells (MW-5 and MW-6) were installed in Area 2, and one well (MW-7) was installed in Area 5. The constituents requiring further evaluation based on the Phase I RI results were: 1,2-dichloropropane, arsenic, total nitrates and nitrites, sulfate and iron.

Groundwater at the Site was encountered at depths ranging from approximately 7.4 to 11.9 feet bgs during the Phase I RI, and the groundwater flow direction was determined to be south-easterly. The estimated hydraulic conductivity of the water-bearing zone beneath the Site, based on slug tests conducted on all six monitoring wells during Phase I activities, ranged from 8.44E-06 feet per second (ft/s) to 2.67E-03 ft/s (2.57E-04 cm/s to 8.12E-02 cm/s), and the estimated average hydraulic conductivity was 5.23E-04 ft/s (1.59E-02 cm/s).

Consideration of the soil leaching to groundwater pathway was concentrated around the constituents identified above MTCA Method C CULs or secondary Maximum Contaminant Levels (MCLs) in the groundwater investigation. A brief summary of the findings is provided below:

- 1,2-Dichloropropane was not detected in soil at the Site, indicating Site soils are not the source of its detection in groundwater at MW-4;
- Arsenic concentrations in soil were less than or just above the background concentration. Arsenic was further evaluated in the Phase II groundwater investigation;
- The soil data suggested an aboveground source of stored fertilizer that had leached nitrogen compounds (nitrates, nitrites, and ammonia) to the soil. The major nitrogen source area appears to be directly east of the Dry Fertilizer Manufacturing Building in Area 2, and two source areas appear to be located adjacent to the lagoon;
- The potential source areas for sulfate were consistent with identified nitrogen source areas, indicating sulfate may be a component in the fertilizer blends released at the Site; and
- Iron was present in the surface soils at levels below the natural background concentration. These concentrations may be contributing to the presence of iron in groundwater.

1.4.2 Phase II RI

The Phase II activities at the Site included a soil investigation, groundwater investigation, surface water/sediment investigation, and pump testing for hydraulic conductivity.

SECOR conducted the Phase II soil investigation in May 2004. Soil samples were collected from borings installed in Areas 3 and analyzed for TPH-Gx. Soil samples were also collected from borings installed in Area 5 and analyzed for ammonia, iron, nitrates, nitrites, phosphate, and sulfate. Ten of the soil samples from Area 5 were selected for synthetic precipitate leaching procedure (SPLP) analysis following nitrogen compound analysis to more accurately evaluate the soil leaching to groundwater pathway.

The Phase II groundwater investigation consisted of the installation of vertical profile borings and permanent monitoring wells. A total of eighteen temporary monitoring wells were installed in vertical profile boreholes for groundwater sample collection at depths of 10 and 20 feet bgs. The vertical profile borings were installed in Area 1, Area 5, and Area 6. Groundwater samples from the vertical profile borings were analyzed for the following constituents: arsenic, alkalinity, chloride, dissolved oxygen (DO), nitrates, nitrites, ammonia, phosphate, sulfate, iron, herbicides, pH, and oxidation-reduction potential (ORP).

A total of five permanent monitoring wells were installed during various stages of the Phase II investigation. Monitoring well MW-8 was installed in Area 1 in May 2004. Four additional permanent monitoring wells, one off-property (MW-9) and three on-property (MW-10 through MW-12), were installed in October 2004. Groundwater samples were collected from the five permanent monitoring wells and analyzed for arsenic, alkalinity, chloride, DO, nitrogen compounds, phosphate, sulfate, iron, herbicides, pH, and ORP. Samples from MW-10 and MW-11 were also analyzed for VOCs, TPH-Gx, and TPH-Dx.

The surface water/sediment investigation of the lagoon located in the southeastern portion of Area 1 was completed in June 2004. One sample of the lagoon surface water and one sample of the lagoon sediment, along with duplicate samples, were collected to evaluate the nitrogen concentrations.

Single well pump tests were performed at monitoring wells MW-1 and MW-3 through MW-8 to estimate the horizontal hydraulic conductivity of the aquifer. The hydraulic conductivities (K) were calculated to range from 2.74E-05 to 4.12E-04 cm/s, with an average hydraulic conductivity of 1.45E-04 cm/s. This hydraulic conductivity is characteristic of fine sands, organic and inorganic silts, and mixtures of sand, silt, and clay.

The following findings and conclusions were reached from the Phase II RI activities:

Area 3 Soils

- Detected concentrations of TPH-Gx in Area 3 at a depth of 7.5 feet bgs were above MTCA Method B and C CULs.

Area 5 Soils

- Detected concentrations of constituents of concern in subsurface soil in Area 5 did not exceed MTCA Method B and C CULs or other screening criteria.

Area 5 SPLP

- Comparing the detected results of the Area 5 SPLP analysis against MTCA Method B and C groundwater criteria or secondary MCLs, nitrite-N and sulfate did not exceed groundwater standards. Nitrate-N and iron did exceed MTCA Method B and C criteria and secondary MCLs, respectively.

Lagoon Water and Sediment Samples

- Concentrations of ammonia-N were detected in the lagoon surface water and sediment samples. No detections of nitrate-N or nitrite-N were observed.

Groundwater

- Nitrate-N was detected in all newly installed monitoring wells at concentrations above the MTCA Method B criteria. The high concentrations observed in MW-8 and MW-12 are contained within the main nitrate-N source areas as defined in the Phase I RI. High

concentrations of nitrate-N were also detected in MW-9, which is located off-property in a southeasterly direction. The nitrate-N concentrations detected at MW-10 and MW-11 are slightly over the MCTA Method B criteria and likely approach background concentrations.

- Concentration isopleths of nitrate-N developed from the vertical profile sampling show source areas are primarily located in the southeastern portion of the property (Area 1 and the southern section of Area 6).
- Ammonia-N was also detected at MW-8 and MW-12, within the source areas identified during the Phase I RI. Ammonia-N was not detected in MW-9, which suggests that the ammonia is being naturally attenuated and is not migrating off-property.
- 2,4-D (also known as 2,4-dichlorophenoxyacetic acid) was detected in MW-12 at concentrations slightly in excess of the MTCA Method B criteria.
- Arsenic concentrations in all five newly installed monitoring wells exceeded the MTCA Method A, B, and C criteria. However, the range of arsenic concentrations observed are fairly consistent across the property and appear to be within normal background concentrations for arsenic.
- Exceedances of the MTCA Method B and C groundwater criteria were observed in the vertical profile borings at both the 10-foot and 20-foot depths for ammonia-N, arsenic, nitrate-N, and nitrite-N, and at the 20-foot depth for 2,4-D and dinoseb.
- Detected concentrations of benzene in MW-10 exceeded MTCA Method A, B, and C groundwater criteria.

1.4.3 Phase II Treatability Investigation

A treatability investigation, including both a bench-scale study and field pilot study, was conducted as part of the Phase II RI in 2004 to guide future nitrate and herbicide remediation activities. The field pilot study consisted in-situ injection of sodium acetate into four injection wells installed around well MW-4. Results are summarized below:

- The treatability study determined that the most effective treatment was denitrification using acetate as an electron donor.
- The pilot study demonstrated that the injection of acetate was successful in lowering nitrate-N, nitrite-N, and dinoseb concentrations to below detectable limits in the groundwater at MW-4 within a ten-foot diameter for the duration of the monitoring period, and that it also reduced the concentrations of those constituents in saturated soils.
- Groundwater samples collected from borings installed at locations 10 and 15 feet west of the pilot study area were used to determine the range of influence of the pilot study treatment. Nitrate-N detections at levels above the MTCA Method B and C groundwater criteria were observed (maximum of 388 mg/l at SB-PS-003), indicating these boring locations were outside the main zone of influence.
- Elevated concentrations of nitrate and ammonia appear to be toxic to the bacteria that convert ammonia to nitrates.
- Subsurface aeration was not effective in removing ammonia-N concentrations from the groundwater. Although pH adjustment was able to de-ionize the ammonium ions to form ammonia gas, the ammonia gas was absorbed by the overlying soil column before reaching ground surface.

1.4.4 BIOSCREEN Modeling

To assess the transport of nitrate off-property, two methods were utilized. The first was a weight-of-evidence approach, and the second was the use of the BIOSCREEN Natural Attenuation Decision Support System Version 1.4 (BIOSCREEN).

A weight-of-evidence approach for estimating the transport of nitrate was developed for the Site. An average linear velocity of groundwater of approximately 1.2 feet/year was determined using site-specific parameters. This groundwater velocity was assumed to be representative of the aquifer conditions down-gradient of the property.

A groundwater fate and transport model was also used to estimate how far nitrate would travel from the property over various periods of time. Groundwater concentrations for nitrate were modeled with BIOSCREEN. The model was calibrated using site-specific parameters, then used to predict time of travel for nitrate transport toward a down-gradient municipal water supply well. The following predictions were made from the BIOSCREEN modeling:

- The center of the nitrate plume is moving at a rate of approximately 1 to 2 feet per year. Due to dispersion, the front of the plume is shown to move at a rate of approximately 2 to 3 feet per year.
- Dispersion is causing the maximum concentration of the plume to decay exponentially. Thus, the maximum concentration of the plume would decrease at least one order of magnitude by the time it travels 900 feet.
- The plume will require a travel distance of more than one mile (travel time of more than 2000 years) before the maximum concentration of nitrate will decrease by dissolution to less than the Federal Drinking Water MCL of 10 mg/l, and significantly longer to reach the MTCA Method B CUL of 1.6 mg/l.

1.4.5 Phase III RI

The Phase III RI was conducted in March and May 2007, and consisted of the installation and sampling of 12 vertical profile borings and one permanent groundwater monitoring well. Investigation details are included in the *Phase III Remedial Investigation Report*, dated October 26, 2007, and results are summarized below.

Data collected from the Phase III RI were used to address the following objectives:

- Delineate the horizontal and vertical extent of the off-property nitrate impacts down-gradient of the Bee-Jay Scales property;
- If necessary, install one or more monitoring wells at the down-gradient edge of the nitrate plume for performance monitoring; and
- Define a site-specific soil/water partitioning coefficient for nitrate to provide more accurate fate and transport modeling results.

Results suggested the following findings:

- The nitrate results show that the nitrate plume extends off-property. However, the boundaries to the east and west have been delineated to below the Federal MCL for

nitrate of 10 mg/l. The nitrate plume was not fully delineated to the south because a potential second source of nitrate and ammonia was encountered off-site.

- Off-site nitrate concentrations were detected above the MTCA Method B CUL of 1.6 mg/l in 17 out of 19 samples;
- The results suggest an additional source south of the Site contributing to the nitrate plume, most likely located near OP-VP-011. The concentrations determined at a depth of 10 feet bgs from the nitrate test strips jumped from 50 mg/l to 400 mg/l between locations OP-VP-010 and OP-VP-011, and the corresponding concentrations determined by the analytical laboratory jumped from 6.6 mg/l to 133 mg/l.
- Ammonia concentrations (which are indicative of fertilizer impacts) also indicate a potential second source. The ammonia concentration in the on-site source area was 952 mg/l (in the Second Quarter 2007 at MW-4). The ammonia concentration down-gradient of the on-site source area was 186 mg/l (at OP-VP-001), and ammonia was not detected at OP-VP-004. However, the ammonia concentration increased to 1,050 mg/l at location OP-VP-011, which is more than 700 feet from the on-site source.
- The possibility for an additional source down-gradient of the Site is also confirmed by the significant change in groundwater chemistry observed at OP-VP-011 for constituents that include pesticide residuals, alkalinity, salts, and most importantly the elevated arsenic concentrations.
- In addition to nitrate, several constituents (including nitrite, dinoseb, benzene, and 1,2-dichloroethane) were detected above their MTBA Method B CULs at OP-VP-011.
- The property adjacent to OP-VP-011 to the west is owned by the J.R. Simplot Company, a food and agribusiness corporation whose primary activities involve food, fertilizer, turf and horticultural, cattle feeding, and other enterprises related to agribusiness. The property located to the north of OP-VP-011 is owned by Valley Processing, Inc., a fruit juice and concentrate processor.
- TPH-Gx and 2-methylnaphthalene were detected above their MTCA Method B CULs in boring OP-VP-009, indicating there may have been a source of petroleum hydrocarbons in the vicinity of OP-VP-009.
- The BIOSCREEN model was re-calibrated using the Phase III RI data, and showed the effective groundwater flow velocity is approximately 8 to 9 feet per year, and nitrate in groundwater moves approximately 15 to 16 feet per year with dispersion. The leading edge of the nitrate plume is approximately 550 to 600 feet away from the on-site source location, and the high concentrations of nitrate observed 600 to 800 feet down-gradient of the Site likely result from a second source.

The Phase III RI findings showed that most of the objectives were met, including:

- The horizontal extent of the off-property nitrate impacts has been defined, but the complete vertical extent has not due to a potential second source.
- One monitoring well was installed down-gradient of the Site to aid in determining groundwater flow and gradient, but it will not be able to serve as a sentinel well.
- A site-specific soil/water partitioning coefficient for nitrate was determined, but the values were determined to be highly variable and largely similar to typical soil values. Therefore, effects from soil retardation were not included in the model calibration.

Based on the Phase III RI results, a revised sensitive receptor survey was recommended to ensure any additional receptors in the vicinity of the Site are identified and protected. In

addition, to fully evaluate the nitrate plume, installation of an additional vertical profile boring was proposed at an off-site location up-gradient of the potential second source.

1.4.6 Quarterly Groundwater Sampling

Groundwater sampling has been conducted by SECOR at the Site since July 2003, and routine quarterly sampling of the monitoring well network began in September 2005 following the Phase II RI. The monitoring well network has expanded during each investigation, and currently, groundwater samples are collected from twelve monitoring wells: MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-13. Monitoring well locations are shown on Figure 1-2.

Depth to groundwater and total well depth are measured in each well each quarter. Based on the hydrogeologic data collected during the most recent groundwater monitoring event (3Q07), depth to groundwater ranged from 6.21 feet below the top of casing elevation in MW-11 to 11.81 feet below the top of casing elevation in MW-1. The groundwater elevation ranged from 732.35 feet above mean sea level (AMSL) at off-property well MW-13 to 735.89 feet AMSL in the southwestern portion of the Site at MW-11.

The groundwater flow direction is generally to the northeast in the northern portion of the Site (near MW-1 and MW-7) and in an east-southeast direction in the southern portion of the Site and off-site, with a groundwater flow divide observed at the southern edge of Area 5. The most recent groundwater elevation contour map, which is consistent with the historical flow direction, is included as Figure 1-3. Concentrations of detected constituents exceeding MTCA Method B CULs or secondary MCLs are shown at each well location for the last four quarterly events (4Q06 through 3Q07) on Figure 1-4.

2.0 SUMMARY OF LAGOON CLOSURE ACTIVITIES

In a preliminary environmental site assessment conducted by Hart Crowser in 1990, summarized in the RI/FS Work Plan (CH2M Hill, 2003), the following areas of potential concern were identified by visual observations and historical activities regarding the lagoon:

- *The chemical lagoon (Building 3) on the Sandy Farms property was suspected of leakage. Leakage of agricultural chemicals was suspected before lining of the lagoon and possibly through the liner at the time of the assessment.*
- *Soils around the washdown area north of the chemical lagoon were suspected to be contaminated. The area was used to wash agricultural chemical applicator vehicles.*

To remove a potential source and eliminate a safety hazard, the lagoon was slated for closure. The lagoon closure activities were conducted between April 24 and May 18, 2007. Details of each of the lagoon closure tasks are presented below, and photographs of the activities are included in Appendix A.

2.1 Site Meeting

An on-site meeting between SECOR and the property owners (Bee-Jay Scales and Hickenbottom & Sons) was held on April 24, 2007 to determine how the lagoon closure activities could be conducted with the least disruption to business activities. SECOR also met with subcontractors to conduct a pre-job walk-through, during which the scope of work and on-site hazards were discussed.

Dimensions of the affected structures, including the lagoon, concrete tank saddles and debris, and fencing were also recorded during the site visit to confirm and refine the construction estimates included in the work plan.

The lagoon was observed to be sloped, with a footprint approximately 67 feet long by 28 feet wide at the top, and a footprint approximately 53 feet long by 16 feet wide at the base. The approximate depth of the lagoon was 10 feet, with 3 feet of water present at the time of closure. The water in the lagoon was sampled during the site visit in order to generate a profile for disposal.

2.2 Utility Location

A private utility locator was contracted to locate and mark all utilities in the area of the lagoon. Aboveground utilities near the lagoon were located, and though they were not deemed active, were marked with high visibility orange tape so they would not be disturbed.

2.3 Fence Removal

To allow access, the fence along the west side of the lagoon (approximately 70 linear feet in length) was removed. In discussions with the property owner it was determined that replacement of this fence would not be necessary following lagoon closure. Fencing along the

south side of the lagoon was temporarily removed to allow access, but was secured each evening when field personnel departed the Site and was repaired to its original state before the field personnel departed from the Site.

2.4 Debris Removal

The concrete tank saddles (approximately 4 feet high by 10 feet long by 12 inches thick), associated concrete slab (approximately 12 feet long by 12 feet wide by 12 inches thick), concrete debris pile (approximately 11 feet in diameter by 6 feet high), and miscellaneous debris and brush located to the west of the lagoon were removed to eliminate potential safety hazards and allow heavy equipment access to the lagoon. All concrete was broken into pieces of less than 3 feet in size, and the concrete, debris, and brush were loaded into dump trucks and trucked off-site to Alba Excavating in Grandview, Washington.

2.5 Water Removal

Water from the lagoon (approximately 13,000 gallons) was pumped into a Baker tank for temporary storage so the liner and debris in the lagoon could be removed. This water was removed by vacuum trucks for disposal by solidification at Chemical Waste Management in Arlington, Oregon. Disposal documentation is included in Appendix B.

2.6 Stabilization and Lagoon Closure

Following removal of the lagoon water, approximately 1-foot of sediment/sludge was observed in the bottom of the lagoon. Approximately 15 cubic yards (cy) of sand and 28 cy of sawdust were mixed into the lagoon sediment/sludge using the excavator bucket to stabilize it and remove any moisture before transport. The stabilized sediment/sludge was loaded into lined roll-offs.

Following removal of the sediment/sludge, the lagoon liner was removed in sections and loaded into the lined roll-offs. Some minor holes were observed during removal, and soil beneath the liner exhibited slight staining. The stabilized sediment/sludge disposal was handled by Chemical Waste Management in Arlington, Oregon. Disposal documentation is included in Appendix B.

2.7 Calcium Acetate Placement

Once the liner was removed, approximately 1,000 pounds of calcium acetate was placed into the bottom of the lagoon using the excavator bucket. The calcium acetate will allow for treatment of nitrate by serving as an electron donor for enhanced denitrification. Calcium acetate is a highly soluble, food-grade salt that will dissolve into the moisture of the soils to facilitate treatment of soil located immediately below the lagoon. The calcium acetate will further disperse over time by diffusion and convective transport associated with precipitation events.

2.8 Backfill and Compaction

Following calcium acetate placement, the lagoon was backfilled with approximately 348 cy of fill sand. The fill sand was placed and compacted in 1-foot lifts using the excavator and front end loader. Once the lagoon was brought to ground elevation, the lagoon area was graded and the fence along the south side of the lagoon area was re-secured before field personnel departed from the Site.

3.0 SUMMARY OF AREA 3 TREATMENT ACTIVITIES

As previously described in Sections 1.4.1 and 1.4.2, petroleum hydrocarbon compounds have been detected in the soils and groundwater present in Area 3, which is a former drum storage area south of the main entrance gate. During the Phase I RI, two soil borings (A3-SB-001 and A3-SB-002) were installed in Area 3. A TPH-Gx value of 400 mg/kg was observed at a depth of 7.5 feet bgs at A3-SB-002, prompting further investigation. During the Phase II RI, four soil borings (A3-SB-003 through A3-SB-006) and two monitoring wells (MW-10 and MW-11) were installed in Area 3. TPH-Gx was detected in all four soil borings (maximum of 1,800 mg/kg in A3-SB-005) at a depth of 7.5 feet bgs. Several petroleum hydrocarbon constituents, including benzene, were detected at MW-10. Based on these detections, treatment of petroleum hydrocarbons in Area 3 was recommended.

The specified treatment area was located adjacent to one of the Site buildings (prompting the use of in-situ treatment as opposed to excavation that would require shoring) and has dimensions of approximately 40 feet by 40 feet.

3.1 Injection Well Registration

An Underground Injection Control (UIC) registration form was completed in August 2006 to register the four injection wells proposed for this remediation. Receipt of the form was acknowledged by the UIC Coordinator in a letter dated October 12, 2006. The letter stated that the wells were rule authorized, indicating no permits were required.

3.2 Injection Well Installation

Four 2-inch polyvinyl chloride (PVC) chemical injection wells (IW-5 through IW-8; see Figure 3-1) were installed within Area 3 on May 24 and 25, 2007. Wells were spaced approximately 20 feet on center. During the clearing of boring IW-7, a wire was encountered at a depth of approximately 2 feet bgs. IW-7 was re-located by approximately 2 feet and installed without encountering any subgrade obstructions. Each well was screened from 7 to 12 feet bgs using 10-slot screen. Boring logs, with well construction details, are included in Appendix C.

Soils encountered during injection well installation were generally soft, moist silts containing some fine sands. No staining or hydrocarbon odors were observed until nearing the termination of each boring at 12 feet bgs. At this depth, some black staining and hydrocarbon odor were observed.

Soil cuttings from the injection well installation were collected in 55-gallon Department of Transportation-approved drums with proper labeling. The drums were stored on-site pending disposal. Following the event, all drums were removed from the property by an approved hauler, in accordance with State of Washington and federal regulations. Copies of disposal documentation are included in Appendix B.

3.3 In-Situ Injection

Treatment of petroleum hydrocarbons in Area 3 by in-situ injection of a persulfate solution was conducted between June 11 and 15, 2007.

Fourteen 55-pound bags of sodium persulfate were delivered prior to the injection activities. Water for the in-situ treatment was obtained from a spigot on-site, and the sodium persulfate solution was mixed inside a 500-gallon polyethylene tank prior to injection. The injection was performed by placing a submersible pump inside the polyethylene tank and routing the treatment solution through a manifold with the capacity to inject into each of the four wells simultaneously.

Overall, approximately 770 pounds of sodium persulfate were injected into the saturated soil. Wells IW-6, IW-7, and IW-8 each received approximately 1,100 gallons of 2% persulfate solution with 200 gallons of chase water. Injection difficulties were encountered at well IW-5, which received approximately 600 gallons of 4% persulfate solution with approximately 100 gallons of chase water. The injection difficulties at well IW-5 were due to an inadequate seal at the well; therefore, the solution was essentially gravity fed into well IW-5 instead of injected. Because of short-circuiting to the surface, well IW-5 received the full persulfate dosage, but not the full volume of overall injection fluid and chase solution.

During injection at well IW-7, groundwater mounding was monitored at well IW-6. The groundwater elevation started out at approximately 6 feet below grade, but rose to 4 feet below grade during the injection. This indicates the capillary fringe where the petroleum hydrocarbon impacts were previously detected was affected by the injection.

3.4 Injection Monitoring

Some moderate increases in groundwater conductivity were observed, which indicates that the persulfate solution was dispersed throughout the treatment zone. Conductivity increased from approximately 500 to 600 microSiemens per centimeter (µS/cm) to between 1,000 and 1,100 µS/cm at the injection wells. The conductivity at well MW-10 was 480 µS/cm at the end of the injection activities.

The groundwater pH in the treatment zone decreased from 7.0 to 6.5 by the end of the treatment (even though the injection solution pH was 8.2), which indicates that persulfate oxidation reactions were occurring. The groundwater in the injection wells had a distinct petroleum odor prior to treatment, but the odor was not present after treatment.

Quarterly groundwater sampling was conducted in June 2007 (just two weeks after injection) at nearby well MW-10 (shown in Figure 3-1), then again in September 2007. Results were promising as they showed a reduction in petroleum hydrocarbon concentrations between the two events.

Eight constituents (benzene, toluene, ethylbenzene, m,p-xylene, TPH-Gx, naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene) were previously detected at MW-10. Only benzene was detected post-injection during the September 2007 sampling event.

Groundwater results from MW-10 from June 2007 (the 2Q07 sampling event) and September 2007 (the 3Q07 sampling event) for petroleum hydrocarbons that were detected at this well prior to injection are summarized below:

Analyte	June 2007 (Concentration in mg/l)	September 2007 (Concentration in mg/l)	Percent Reduction
Benzene	0.082	0.006	92.7%
Toluene	0.006	<0.005	58.3%
Ethylbenzene	0.04	<0.005	93.8%
m,p-Xylene	0.014	<0.005	82.1%
TPH-Gx	0.43	<0.25	70.9%
Naphthalene	0.012	<0.005	79.2%
1,2,4-Trimethylbenzene	0.015	<0.005	83.3%
1,3,5-Trimethylbenzene	0.008	<0.005	68.8%

An average percent reduction in petroleum hydrocarbon concentrations of over 78% was observed, assuming constituents that were non-detects were one half of their method detection limits.

4.0 SUMMARY AND CONCLUSIONS

The 2006 IRM activities, including both lagoon closure and in-situ injection to treat petroleum hydrocarbons in Area 3, were completed successfully at the Site.

The former lagoon was removed as a potential source and safety hazard, and calcium acetate was placed into the excavation to mitigate any residual impacts remaining in the soil. All activities, including fence removal and re-installation, debris removal, water removal, stabilization, liner removal, calcium acetate placement, and backfill and compaction, were completed safely and without incident.

In-situ injection of sodium persulfate into four injection wells was conducted in Area 3 for the treatment of petroleum hydrocarbons, and promising results were observed in the injection wells during and immediately after injection, and also in groundwater samples from nearby well MW-10 collected three months after injection. An average percent reduction in petroleum hydrocarbon concentrations of over 78% was observed at well MW-10. Concentrations of petroleum hydrocarbons will continue to be monitored at well MW-10 to evaluate if favorable conditions remain in the subsurface.

5.0 REFERENCES

CH2M Hill, 2003. *Remedial Investigation/Feasibility Study Work Plan, Bee-Jay Scales Site, Sunnyside, WA*. February 2003.

Ecology, 2001. Washington State Department of Ecology. Clean-Up Levels and Risk Calculations under the Model Toxics Control Act Cleanup Regulation (CLARC) Version 3.1. November 2001.

SECOR, 2003. *Phase I Remedial Investigation Report, Bee-Jay Scales Site, Sunnyside, Washington*. October 2003.

SECOR, 2005a. *Phase II Remedial Investigation Report for the Bee-Jay Scales Site.* May 17, 2005.

SECOR, 2005b. *Preliminary Screening of Remedial Alternatives Technical Memorandum for the Bee-Jay Scales Site.* November 18, 2005.

SECOR, 2005c. *Third Quarter 2005 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* November 18, 2005.

SECOR, 2006a. *Fourth Quarter 2005 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* March 14, 2006.

SECOR, 2006b. *2006 Interim Remedial Measures Work Plan for the Bee-Jay Scales Site*. April 14, 2006.

SECOR, 2006c. *First Quarter 2006 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* May 25, 2006.

SECOR, 2006d. *Second Quarter 2006 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* August 30, 2006.

SECOR, 2006e. *Third Quarter 2006 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* November 22, 2006.

SECOR, 2007a. *Fourth Quarter 2006 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* February 15, 2007.

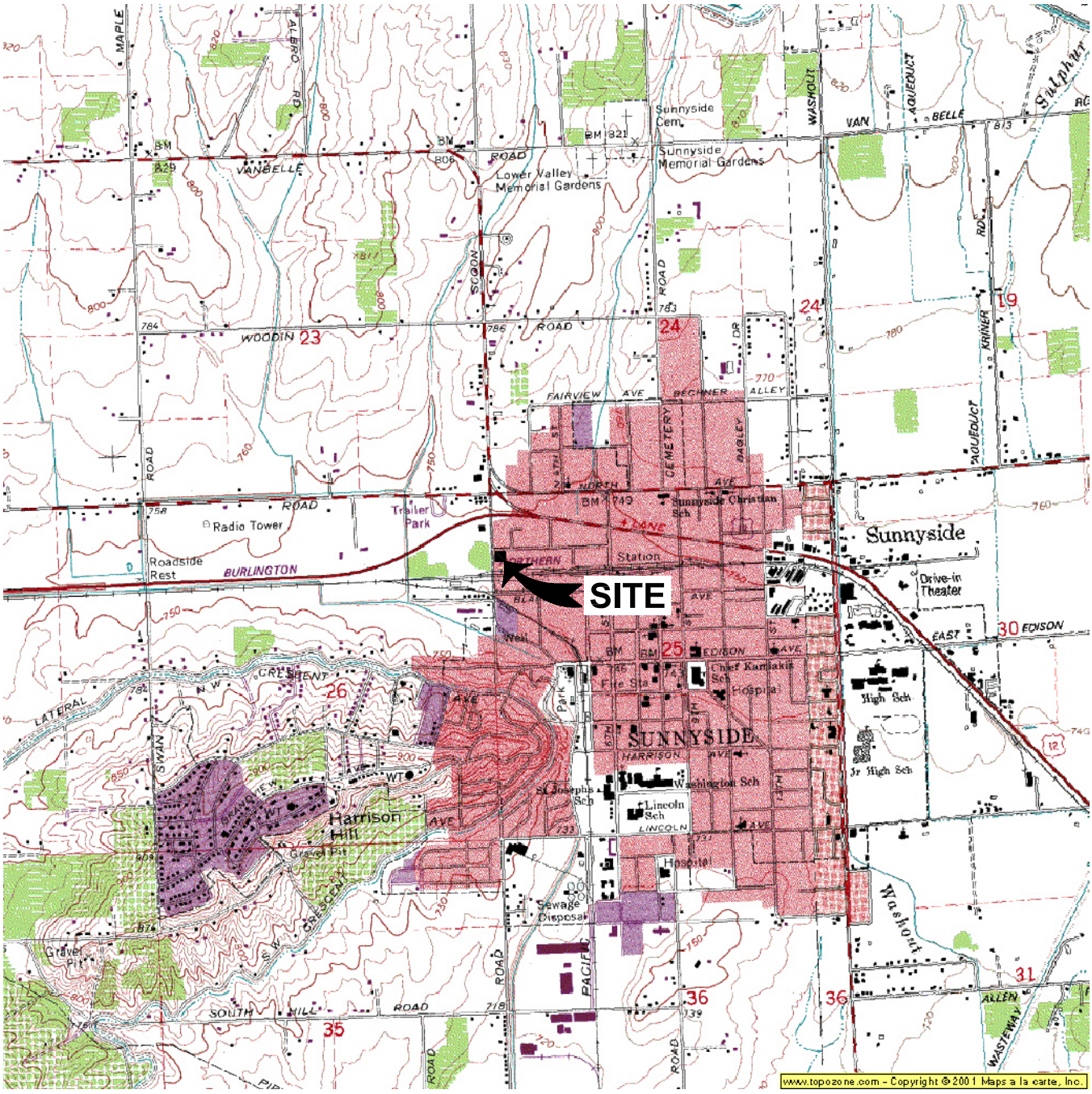
SECOR, 2007b. *First Quarter 2007 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* May 17, 2007.

SECOR, 2007c. *Second Quarter 2007 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* August 23, 2007.

SECOR, 2007d. *Phase III Remedial Investigation Report for the Bee-Jay Scales Site*. October 26, 2007.

SECOR, 2007e. *Third Quarter 2007 Groundwater Monitoring and Sampling Report for the Bee-Jay Scales Site.* November 14, 2007.

FIGURES



QUADRANGLE LOCATION

N

0 1/4 1/2 1

SCALE IN MILE

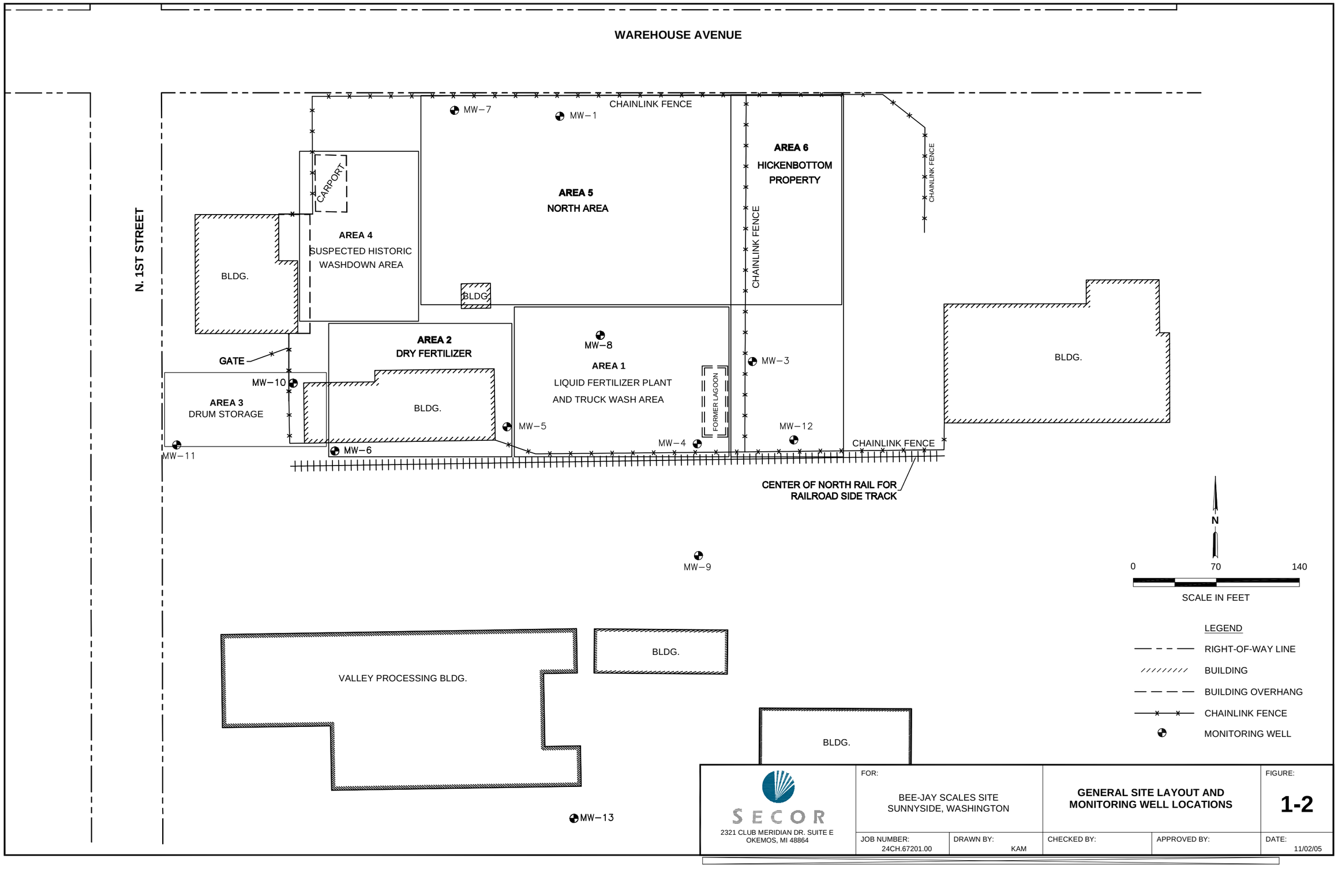
0 1000 2000

1 INCH = 2000 FEET

SOURCE: USGS 7.5 MINUTE QUADRANGLE; SUNNYSIDE, WASHINGTON; 1975

SECOR 2321 CLUB MERIDIAN DR. SUITE E OKEMOS, MI 48864	FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON				FIGURE: **1-1**
	JOB NUMBER: 24CH.67201.00	DRAWN BY: KAM	CHECKED BY:	APPROVED BY:	DATE: 11/02/05

SITE LOCATION MAP



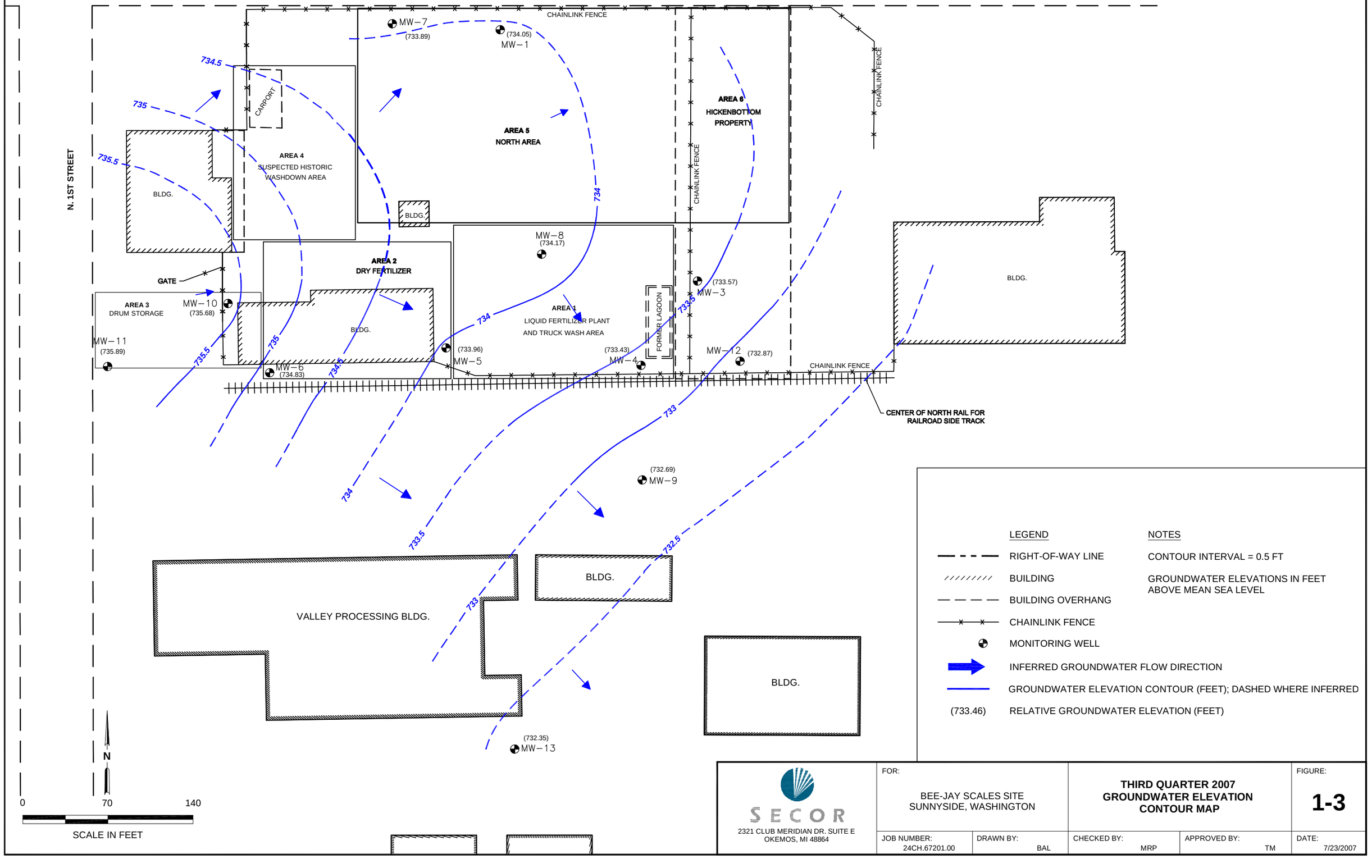
SECOR
2321 CLUB MERIDIAN DR. SUITE E
OKEMOS, MI 48864

FOR:
BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON

GENERAL SITE LAYOUT AND MONITORING WELL LOCATIONS

FIGURE:
1-2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
24CH.67201.00	KAM			11/02/05



LEGEND

- RIGHT-OF-WAY LINE
- BUILDING
- BUILDING OVERHANG
- CHAINLINK FENCE
- MONITORING WELL
- INFERRED GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR (FEET); DASHED WHERE INFERRED
- (733.46) RELATIVE GROUNDWATER ELEVATION (FEET)

NOTES

CONTOUR INTERVAL = 0.5 FT

GROUNDWATER ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL

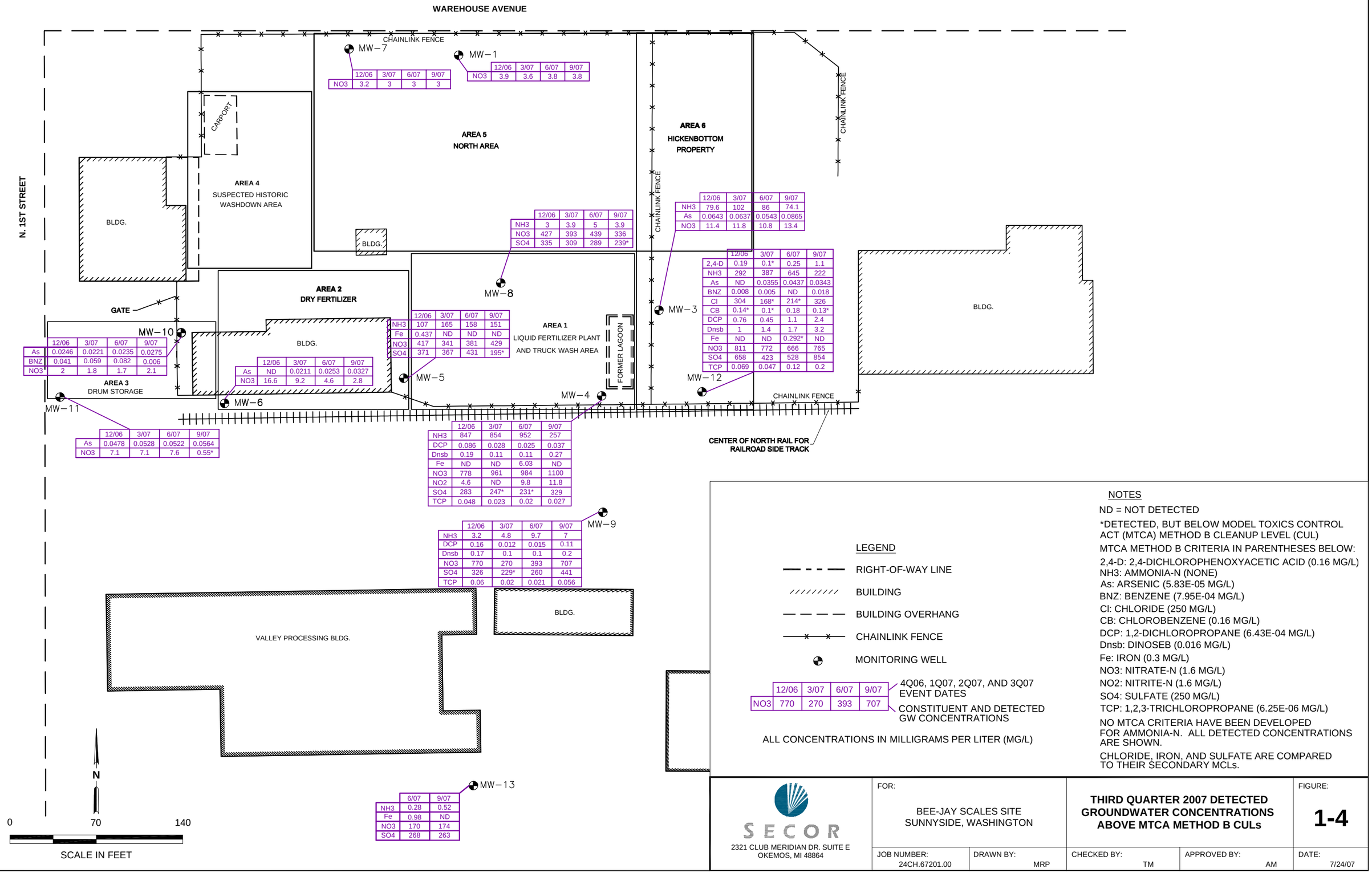
SECOR
2321 CLUB MERIDIAN DR. SUITE E
OKEMOS, MI 48864

FOR: BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON

THIRD QUARTER 2007 GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: **1-3**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
24CH.67201.00	BAL	MRP	TM	7/23/2007



LEGEND

- RIGHT-OF-WAY LINE
- BUILDING
- BUILDING OVERHANG
- CHAINLINK FENCE
- MONITORING WELL

	12/06	3/07	6/07	9/07
NO3	770	270	393	707

4Q06, 1Q07, 2Q07, AND 3Q07 EVENT DATES

CONSTITUENT AND DETECTED GW CONCENTRATIONS

ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (MG/L)

NOTES

ND = NOT DETECTED

*DETECTED, BUT BELOW MODEL TOXICS CONTROL ACT (MTCA) METHOD B CLEANUP LEVEL (CUL)

MTCA METHOD B CRITERIA IN PARENTHESES BELOW:

2,4-D: 2,4-DICHLOROPHENOXYACETIC ACID (0.16 MG/L)
NH3: AMMONIA-N (NONE)
As: ARSENIC (5.83E-05 MG/L)
BNZ: BENZENE (7.95E-04 MG/L)
Cl: CHLORIDE (250 MG/L)
CB: CHLOROBENZENE (0.16 MG/L)
DCP: 1,2-DICHLOROPROPANE (6.43E-04 MG/L)
Dnsb: DINOSEB (0.016 MG/L)
Fe: IRON (0.3 MG/L)
NO3: NITRATE-N (1.6 MG/L)
NO2: NITRITE-N (1.6 MG/L)
SO4: SULFATE (250 MG/L)
TCP: 1,2,3-TRICHLOROPROPANE (6.25E-06 MG/L)

NO MTCA CRITERIA HAVE BEEN DEVELOPED FOR AMMONIA-N. ALL DETECTED CONCENTRATIONS ARE SHOWN.

CHLORIDE, IRON, AND SULFATE ARE COMPARED TO THEIR SECONDARY MCLs.

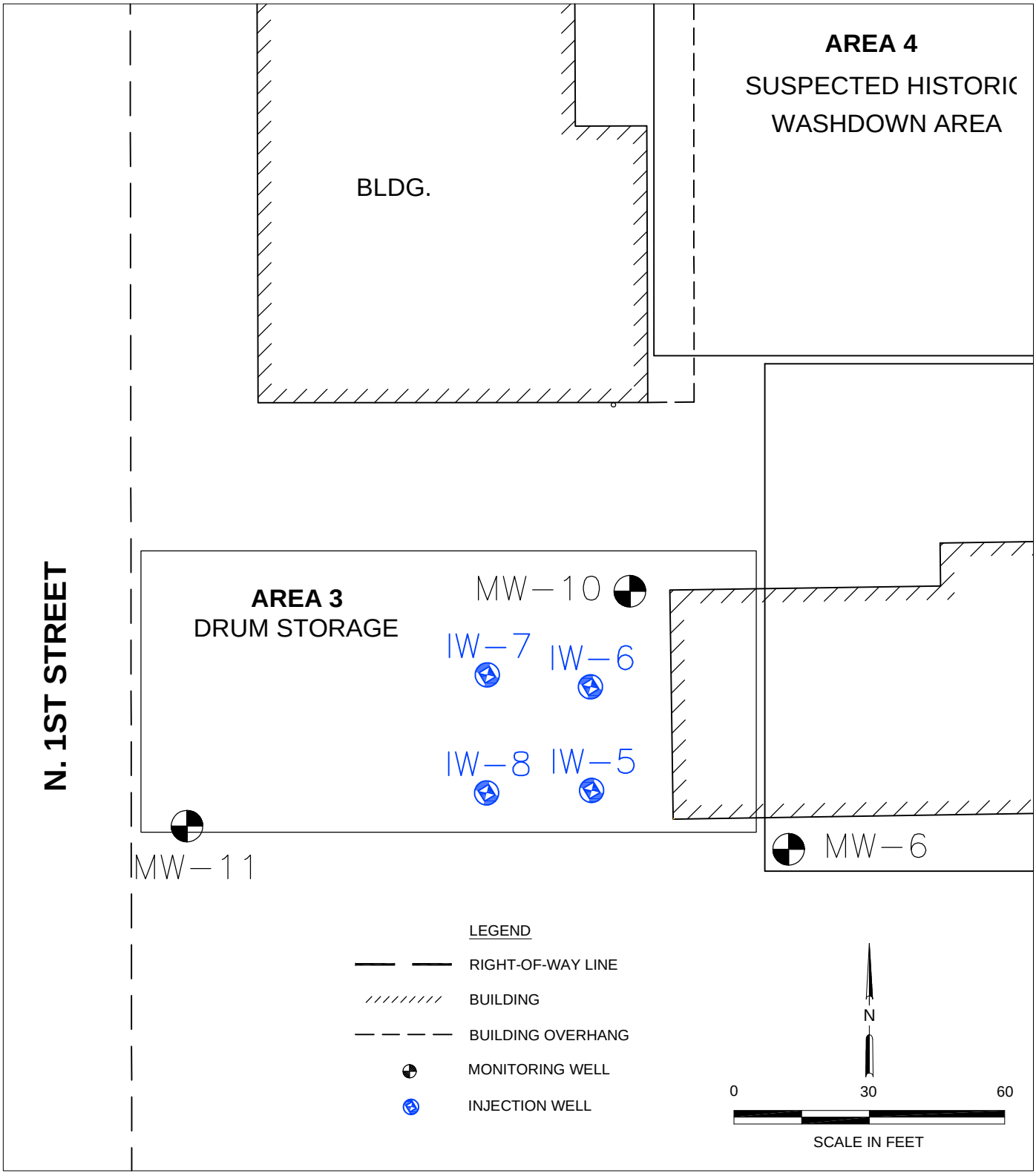
SECOR
2321 CLUB MERIDIAN DR. SUITE E
OKEMOS, MI 48864

FOR: BEE-JAY SCALES SITE
SUNNYSIDE, WASHINGTON

THIRD QUARTER 2007 DETECTED GROUNDWATER CONCENTRATIONS ABOVE MTCA METHOD B CULs

FIGURE: **1-4**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
24CH.67201.00	MRP	TM	AM	7/24/07



SECOR 2321 CLUB MERIDIAN DR., SUITE E OKEMOS, MI 48864	FOR: BEE-JAY SCALES SITE SUNNYSIDE, WASHINGTON	AREA 3 INJECTION WELL LAYOUT			FIGURE: 3-1
	JOB NUMBER: 24CH.67201.00	DRAWN BY: MP	CHECKED BY: TM	APPROVED BY: AM	DATE: 10/03/07

APPENDIX A
LAGOON CLOSURE PHOTOGRAPHS

2006 Interim Remedial Measures Completion Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
December 14, 2007

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 1

Concrete tank saddles and debris removed during closure activities.

PHOTO No. 2

Lagoon prior to closure activities.

SECOR INTERNATIONAL INCORPORATED PHOTOGRAPHIC RECORD	
Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 3

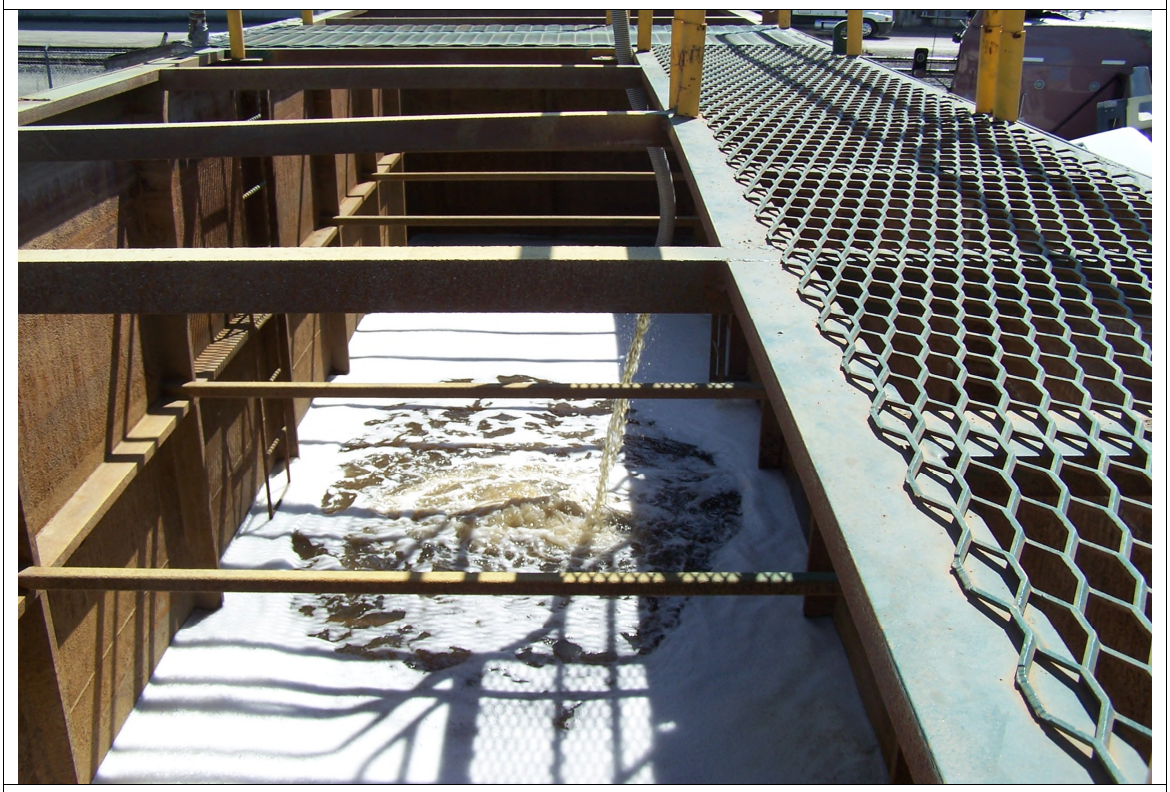
Lagoon and debris prior to closure activities.

PHOTO No. 4

Removal of lagoon material and water.

SECOR INTERNATIONAL INCORPORATED PHOTOGRAPHIC RECORD	
Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 5



Water removal into Baker tank.

PHOTO No. 6

Lagoon following water removal.

SECOR INTERNATIONAL INCORPORATED PHOTOGRAPHIC RECORD	
Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 7

Debris removal from lagoon.

PHOTO No. 8

Lagoon after water and debris removal.

SECOR INTERNATIONAL INCORPORATED PHOTOGRAPHIC RECORD	
Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 9

Addition of sawdust to stabilize remaining lagoon material.

PHOTO No. 10

Stabilization and removal of lagoon material.

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 11

Liner removal.

PHOTO No. 12

Calcium acetate placement.

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 13

Backfill

PHOTO No. 14

Backfill and compaction.

SECOR INTERNATIONAL INCORPORATED PHOTOGRAPHIC RECORD	
Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 15

Dumping of fill material.

PHOTO No. 16

Compaction.

SECOR INTERNATIONAL INCORPORATED
PHOTOGRAPHIC RECORD

Client: CEMC/ARC	**Job Number:** 24CH.67201.00
Site Name: Bee-Jay Scales Site	**Date:** 5/7/2007-5/18/2007

PHOTO No. 17

Grading of final surface.

PHOTO No. 18

Completed lagoon closure.

APPENDIX B
DISPOSAL CERTIFICATION

2006 Interim Remedial Measures Completion Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
December 14, 2007

JUL 19 2007

WASTE MANAGEMENT

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643

BEE JAY SCALES
WAZ000007099
116 N 1ST ST
SUNNYSIDE WA 98944-1302

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc. has received the following waste material:

GENERATOR:	BEE JAY SCALES
MANIFEST #:	15891
CWM TRACKING ID:	389720-01
PROFILE #:	OR100113
LINE ITEM:	1
QUANTITY:	1 TT
RECEIVED DATE:	05/17/07
DISPOSAL PROCESS(ES):	SOLAR EVAPORATION
FINAL DISPOSAL LOCATION:	POND A
DISPOSAL DATE:	05/17/07

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 05/25/07

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643

BEE JAY SCALES
WAZ000007099
116 N 1ST ST
SUNNYSIDE WA 98944-1302

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc. has received the following waste material:

GENERATOR:	BEE JAY SCALES
MANIFEST #:	15892
CWM TRACKING ID:	389721-01
PROFILE #:	OR100113
LINE ITEM:	1
QUANTITY:	1 TT
RECEIVED DATE:	05/17/07
DISPOSAL PROCESS(ES):	SOLAR EVAPORATION
FINAL DISPOSAL LOCATION:	POND A
DISPOSAL DATE:	05/17/07

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 05/25/07

MAY 29 2007

WASTE MANAGEMENT

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643

BEE JAY SCALES
WAZ000007099
116 N 1ST ST
SUNNYSIDE WA 98944-1302

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc. has received the following waste material:

GENERATOR:	BEE JAY SCALES
MANIFEST #:	15893
CWM TRACKING ID:	389737-01
PROFILE #:	OR100113
LINE ITEM:	1
QUANTITY:	1 TT
RECEIVED DATE:	05/18/07
DISPOSAL PROCESS(ES):	SOLAR EVAPORATION
FINAL DISPOSAL LOCATION:	POND A
DISPOSAL DATE:	05/18/07

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Summer

CWMNW RECORDS DEPARTMENT
Date: 05/22/07

MAY 29 2007

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643

BEE JAY SCALES
WAZ000007099
116 N 1ST ST
SUNNYSIDE WA 98944-1302

CERTIFICATE OF DISPOSAL

Chemical Waste Management of the Northwest, Inc. has received the following waste material:

GENERATOR:	BEE JAY SCALES
MANIFEST #:	15894
CWM TRACKING ID:	389738-01
PROFILE #:	OR100113
LINE ITEM:	1
QUANTITY:	1 TT
RECEIVED DATE:	05/18/07
DISPOSAL PROCESS(ES):	SOLAR EVAPORATION
FINAL DISPOSAL LOCATION:	POND A
DISPOSAL DATE:	05/18/07

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above-described waste material was managed in compliance with all applicable laws, regulations, permits and licenses on the date listed above.

Becky Sumner

CWMNW RECORDS DEPARTMENT
Date: 05/22/07

137. Tr. 137 ✓ CWMI

389720

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number WAZ000007099	2. Page 1 of 1	3. Emergency Response Phone (800) 424-9300	4. Waste Tracking Number 15891

5. Generator's Name and Mailing Address
Bee Jay Scales
116 N. 1st St.
Sunnyside WA 98944-1302
Generator's Phone: (509) 837-8280
Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: West Coast Marine Cleaning, Inc. — U.S. EPA ID Number: WAD988479440

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
CWMNW, Inc.
17629 Cedar Springs Lane
Arlington OR 97812-9709
Facility's Phone: (541) 454-2643
U.S. EPA ID Number: ORD089452353

9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non Hazardous Waste Liquid, (X004)	~~TT~~ 1	TT	~~001~~ ~~4,500~~ 3446	~~P~~ gal.
2.				
3.				
4.				

5/23/07 mrs per mark Krenins/wm
PS 5-17-07

13. Special Handling Instructions and Additional Information
1. OR100113, Lagoon water, ERG N/A

Pond A, 2860DP, 3446G

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offeror's Printed/Typed Name: Marisa Patterson as agent for CEMC & Atlantic Richfield Company — Signature: Marisa Patterson — Month 5 Day 16 Year 07

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Robert Sanden — Signature: [signature] — Month 5 Day 16 Year 07
Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Driver changed gallons - [initials] 5/17/07
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Janice Strand — Signature: [signature] — Month 5 Day 17 Year 07

169-BLC-O 6 10498 (Rev. 8/06) DESIGNATED FACILITY TO GENERATOR

BMS

138-266

389721

CWMI

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAZ000007099
2. Page 1 of: 1
3. Emergency Response Phone: (800) 424-9300
4. Waste Tracking Number: 15892

GENERATOR

5. Generator's Name and Mailing Address
Bee Jay Scales
116 N. 1st St.
Sunnyside WA 98944-1302

Generator's Site Address (if different than mailing address)

Generator's Phone: (509) 837-8280

6. Transporter 1 Company Name: West Coast Marine Cleaning, Inc.
U.S. EPA ID Number: WAD988479444D

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CWMNW, Inc.
17629 Cedar Springs Lane
Arlington OR 97812-9709
U.S. EPA ID Number: ORD089452353

Facility's Phone: (541) 454-2643

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Hazardous Waste Liquid, (X004)	~~1~~ 1	TT	~~001~~ 4,500	~~P~~ gal.	
2.		5/22/07 mb per mark Krening/wm				
3.						
4.						

13. Special Handling Instructions and Additional Information
1. OR100113, Lagoon water, ERG N/A

Pond A, 35200P, 4241G

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Marisa Patterson as agent for CEMC of Atlantic Richfield Company
Signature: Marisa Patterson
Month 5 Day 16 Year 07

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John McAtee
Signature: John McAtee
Month 5 Day 16 Year 07

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Janice Strand
Signature
Month 5 Day 17 Year 07

169-BLC-O 6 10498 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR

BMS

Truck 187 389737 CWMI

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: WAZ000007099 | 2. Page 1 of 1 | 3. Emergency Response Phone: (800) 424-9300 | 4. Waste Tracking Number: 15893

GENERATOR

5. Generator's Name and Mailing Address
Bee Jay Scales
116 N. 1st St.
Sunnyside WA 98944-1302
Generator's Phone: (509) 837-8280

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: West Coast Marine Cleaning, Inc. | U.S. EPA ID Number: WAD988479444D

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address
CWMNW, Inc.
17629 Cedar Springs Lane
Arlington OR 97812-9709
Facility's Phone: (541) 454-2643

U.S. EPA ID Number: ORD089452353

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non Hazardous Waste Liquid, (X004)	5.10.07 TR 1 RS	TT	001 4,080 3530 RS 5-10-07	P gal
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
1. OR100113, Lagoon water, ERG N/A X004

3530G
Pond A, 29300P, 14.65%

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Marisa Patterson as agent for CEMC of Atlantic Richfield Company | Signature: Marisa Patterson | Month 5 | Day 17 | Year 07

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Robert Sanders | Signature | Month 5 | Day 17 | Year 07

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Driver changed Total Quantity - DS 5/18/07 Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Tamra Strand | Signature | Month 5 | Day 18 | Year 07

169-BLC-O 6 10498 (Rev. 8/06) DESIGNATED FACILITY TO GENERATOR

RMS

WASTE MANAGEMENT

17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643

May 25, 2007

Bee Jay Scales
116 N 1st St
Sunnyside WA 98944-1302

This letter is to inform your office of the following errors or omissions identified on the manifest, land disposal certification, or other applicable manifest attachment which accompanied your waste shipment on:

Manifest Number:	15893	*Profile Number:*	OR100113
Shipment Date:	5/17/07	*CWMNW Load No.:*	389737
Error:	X	*Omission:*	
Description:	Section 6. The transporter's US EPA ID# should be WAD988479440.		

This information has been corrected/added to our records. Please attach this letter to your original manifest as an addendum.

Becky Sumner

Chemical Waste Management of the Northwest, Inc.

138

389738

CWMI

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
WAZ 0 0 0 0 0 7 0 9 9	1	(800) 424-9300	15894

5. Generator's Name and Mailing Address
Bee Jay Scales
116 N. 1st St.
Sunnyside WA 98944-1302
Generator's Phone: (509) 837-8280

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: West Coast Marine Cleaning, Inc.
U.S. EPA ID Number: WAD 9 8 8 4 7 9 4 4 D

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
CWMNW, Inc.
17629 Cedar Springs Lane
Arlington OR 97812-9709
Facility's Phone: (541) 454-2643
U.S. EPA ID Number: ORD 0 8 9 4 5 2 3 5 3

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non Hazardous Waste Liquid, (X004)	1	TT	001 1765	P gal
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
1. OR100113, Lagoon water, ERG N/A X004

PA, 146.50P, 1765G

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offeror's Printed/Typed Name: Marisa Patterson as agent for CEMC & Atlantic Richfield Company
Signature: Marisa Patterson
Month 5 Day 17 Year 07

15. International Shipments ☐ Import to U.S. ☑ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: John McAfee
Signature: John McAfee
Month 5 Day 17 Year 07

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Driver changed Total Quantity 5/18/07
Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Janice Strand
Signature
Month 5 Day 18 Year 07

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

AMS

WASTE MANAGEMENT
17629 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2643

May 25, 2007

Bee Jay Scales
116 N 1st St
Sunnyside WA 98944-1302

This letter is to inform your office of the following errors or omissions identified on the manifest, land disposal certification, or other applicable manifest attachment which accompanied your waste shipment on:

Manifest Number:	15894	*Profile Number:*	OR100113
Shipment Date:	5/17/07	*CWMNW Load No.:*	389738
Error:	X	*Omission:*	
Description:	Section 6. The transporter's US EPA ID# should be WAD988479440.		

This information has been corrected/added to our records. Please attach this letter to your original manifest as an addendum.

Becky Sumner
Chemical Waste Management of the Northwest, Inc.

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable
(CWM)

Shipper's No. 17370

(Carrier) MP ENVIRONMENTAL SERVICES INC. SCAC _____ Carrier's No. W610467

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at _____ Date _____ From _____

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own route, otherwise to delivery to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any said property over all or any portion of said route to destination, and as to each part of any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and is assigns.

(Mail or street address of consignee for purposes of notification only.)

TO:	**FROM: (ENVIROTECH SYSTEMS INC.)**
Consignee: COLUMBIA RIDGE LANDFILL	Shipper: BEE JAY SCALES
Street: 18177 CEDAR SPRINGS LANE	Street: 116 N., 1st STREET.
Destination: ARLINGTON, OR. 97812-6512	Origin: SUNNYSIDE, WA 98944-1302
Route: HWY	
Delivering CARRIER: MP ENVIRONMENTAL SERVICES INC.	CONTAINER NO. / U.S. DOT Hazmat Reg. Number

No. of Packages	HM	Description of articles, SPECIAL MARKS, AND EXCEPTIONS	Hazard Class	I.D. Number	Packing Group	Weight	Class or Rate	Labels Required	Check Column
1/CM	N/A	NON-REGULATED MATERAL	N/A	N/A	N/A		N/A	NO	N/A
		PER-49 CFR							
		(SOLIDIFIED POND SLUGGE)							

CONTAINER INSPECTION (UPON PICK-UP) LOCATION: CONTAINER# 42114

TARP IN GOOD CONDITION: (YES) NO COMMENTS:

CONTAINER IN GOOD CONDITION: (YES) NO COMMENTS:

FREE STANDING WATER: YES (NO) COMMENTS:

CONTAINER EMPTY AND CLEAN: YES NO COMMENTS:

SIGNATURE OF CONTAINER INSPECTION: [signature]

SPECIAL INSTRUCTIONS: SEND COPIES TO CWMNW, INC.

CRL;PROFILE # 100232WA EXPIRES: (05/15/08)

(ENVIROTECH SYSTEMS INC)

SHIPPER: BEE JAY SCALES CARRIER#1 MP ENVIRONMENTAL SERVICES INC.

X PER: Marisa Pettersen, as agent for CEMEX ARC PER: [signature] DATE: 05-16-07

CONTACT: ALLAN SWENSSON

PHONE: (425)513-5848

Permanent post office address of shipper

EMERGENCY RESPONSE

TELEPHONE NUMBER: (800) 424-9300(WMI CONTRACT)

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation

Placards Required: NO

Remit Freight Bill to: N/A

Address:

City: State: Zip:

COD AMT: N/A

Charges Advanced: N/A

Julie Valdez - CRLRC

STRAIGHT BILL OF LADING = SHORT FORM - Original - Not Negotiable

(CWMI)

Shipper's No. 17371

(Carrier) MP ENVIRONMENTAL SERVICES INC. SCAC _____ Carrier's No. W610467

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at _____ Date _____ From _____

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own route, otherwise to deliver to another carrier on the route to said destination. It is expressly agreed, as to each carrier of all or any said property over all or any portion of said route to destination, and as to each part of any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and is assigns.

(Mail or street address of consignee for purposes of notification only.)

TO:
Consignee: COLUMBIA RIDGE LANDFILL
Street: 18177 CEDAR SPRINGS LANE
Destination: ARLINGTON, OR. 97812-6512
Route: HWY
Delivering CARRIER: MP ENVIRONMENTAL SERVICES INC.

FROM: (ENVIROTECH SYSTEMS INC.)
Shipper: BEE JAY SCALES
Street: 116 N., 1st STREET.
Origin: SUNNYSIDE, WA 98944-1362

CONTAINER NO.

U.S. DOT Hazmat Reg. Number

No. of Packages	HM	Description of articles, SPECIAL MARKS, AND EXCEPTIONS	Hazard Class	I.D. Number	Packing Group	Weight	Class or Rate	Labels Required	Check Column
1/CM	N/A	NON-REGULATED MATERAL	N/A	N/A	N/A	17,000	N/A	NO	N/A
		PER-49 CFR							
		(SOLIDIFIED POND SLUGGE)							

CONTAINER INSPECTION (UPON PICK-UP) LOCATION: CONTAINER# 4264

TARP IN GOOD CONDITION: (YES) NO COMMENTS:

CONTAINER IN GOOD CONDITION: (YES) NO COMMENTS:

FREE STANDING WATER: YES (NO) COMMENTS:

CONTAINER EMPTY AND CLEAN: YES NO COMMENTS:

SIGNATURE OF CONTAINER INSPECTION:

SPECIAL INSTRUCTIONS: SEND COPIES TO CWMNW, INC.

CRL;PROFILE # 10023WA EXPIRES: (05/15/08)

(ENVIROTECH SYSTEMS INC)

SHIPPER: BEE JAY SCALES CARRIER#1 MP ENVIRONMENTAL SERVICES INC.

X PER: Marisa Patterson as agent for CCRC & ARC PER: _____ DATE: 05-16-07

CONTACT: ALLAN SWENSSON

PHONE: (425)513-5848

Permanent post office address of shipper

EMERGENCY RESPONSE

TELEPHONE NUMBER: (800) 424-9300(WMI CONTRACT)

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation

Placards Required: NO

Remit Freight Bill to: N/A

Address:

City: State: Zip:

COD AMT: N/A

Charges Advanced: N/A

Julie Valdez - CRLRC

STRAIGHT BILL OF LADING - SHORT FORM - Original - Not Negotiable

(CWM)

Shipper's No. 17372 & 17373

(Carrier) MP ENVIRONMENTAL SERVICES INC. SCAC _____ Carrier's No. W610468

Received, subject to the classifications and tariffs in effect on the date of this Bill of Lading:

at _____ Date _____ From _____

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below, which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its own route, otherwise to delivery to another carrier on the route to said destination. It is mutually agreed, as to each carrier of all or any said property over all or any portion of said route to destination, and as to each part of any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained (as specified in Appendix B to Part 1035) which are hereby agreed to by the shipper and accepted for himself and is assigns.

(Mail or street address of consignee for purposes of notification only.)

TO:	FROM: (ENVIROTECH SYSTEMS INC.)
Consignee: COLUMBIA RIDGE LANDFILL	Shipper: BEE JAY SCALES
Street: 18177 CEDAR SPRINGS LANE	Street: 116 N., 1st STREET.
Destination: ARLINGTON, OR. 97812-6512	Origin: SUNNYSIDE, WA 98944-1302
Route: HWY	
Delivering CARRIER: MP ENVIRONMENTAL SERVICES INC.	CONTAINER NO. / U.S. DOT Hazmat Reg. Number

No. of Packages	HM	Description of articles, SPECIAL MARKS, AND EXCEPTIONS	Hazard Class	I.D. Number	Packing Group	Weight	Class or Rate	Labels Required	Check Column
2/CM	N/A	NON-REGULATED MATERAL	N/A	N/A	N/A		N/A	NO	N/A
		PER 49 CFR							
		(SOLIDIFIED POND SLUGGE)							

CONTAINER INSPECTION (UPON PICK-UP) LOCATION: CONTAINER# 42119 442127

TARP IN GOOD CONDITION: (YES) NO COMMENTS:

CONTAINER IN GOOD CONDITION: (YES) NO COMMENTS:

FREE STANDING WATER: YES (NO) COMMENTS:

CONTAINER EMPTY AND CLEAN: YES NO COMMENTS:

SIGNATURE OF CONTAINER INSPECTION: Jake O'Brien

SPECIAL INSTRUCTIONS: SEND COPIES TO CWMNW, INC.

CRL;PROFILE # 100232WA EXPIRES: (05/15/08)

(ENVIROTECH SYSTEMS INC)

SHIPPER: BEE JAY SCALES CARRIER#1 MP ENVIRONMENTAL SERVICES INC.

X PER: Maria Patterson as agent for CERCLA ARC PER: Jake O'Brien DATE: 05-17-07

CONTACT: ALLAN SWENSSON

PHONE: (425)513-5848

Permanent post office address of shipper

EMERGENCY RESPONSE TELEPHONE NUMBER: (800) 424-9300(WMI CONTRACT)

Maintained at all times the Hazardous Material is in transportation including storage incidental to transportation

Placards Required: NO

Remit Freight Bill to: N/A

Address:

City: State: Zip:

COD AMT: N/A

Charges Advanced: N/A

Julie Valdez - CRLRC

WASTE MANAGEMENT

WASTE MANAGEMENT
18177 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2030
(541) 454-3312 Fax

May 16, 2007

Envirotech Systems, Inc.
3601 121st St. SW
Lynnwood, WA 98037

CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from Envirotech Systems, Inc.

Date of Disposal:	May 16, 2007
Generator Name:	Bee Jay Scales
Manifest#:	17370
Profile #:	100232WA
Pounds Disposed:	15180 lbs.

I certify, on behalf of the above listed facility, that the above-described non-hazardous waste was managed in compliance with all applicable laws.

Sarah Mastriona

Sarah Mastriona
Special Waste Billing Department

WASTE MANAGEMENT

WASTE MANAGEMENT
18177 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2030
(541) 454-3312 Fax

May 17, 2007

Envirotech Systems, Inc.
3601 121st St. SW
Lynnwood, WA 98037

CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from Envirotech Systems, Inc.

Date of Disposal:	May 17, 2007
Generator Name:	Bee Jay Scales
Manifest#:	17371
Profile #:	100232WA
Pounds Disposed:	18220 lbs.

I certify, on behalf of the above listed facility, that the above-described non-hazardous waste was managed in compliance with all applicable laws.

Sarah Mastriona

Sarah Mastriona
Special Waste Billing Department

WASTE MANAGEMENT

WASTE MANAGEMENT
18177 Cedar Springs Lane
Arlington, OR 97812
(541) 454-2030
(541) 454-3312 Fax

May 17, 2007

Envirotech Systems, Inc.
3601 121st St. SW
Lynnwood, WA 98037

CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Columbia Ridge Landfill has received NON HAZARDOUS Waste material from Envirotech Systems, Inc.

Date of Disposal:	May 17, 2007
Generator Name:	Bee Jay Scales
Manifest#:	17372/73
Profile #:	100232WA
Pounds Disposed:	35740 lbs.

I certify, on behalf of the above listed facility, that the above-described non-hazardous waste was managed in compliance with all applicable laws.

Sarah Mastriona

Sarah Mastriona
Special Waste Billing Department

WASTE MANAGEMENT

October 4, 2007

Bee Jay Scales
116 North 1st Street
Sunnyside, Washington 98944

CERTIFICATE OF DISPOSAL

Waste Management, Inc. dba Hillsboro Landfill has received NON HAZARDOUS Waste material from Bee Jay Scales.

Dates of Disposal:	9/5/07
Ticket Numbers:	1090862
Profile #:	101458OR
Total Tons:	3.02
Waste Type:	IDW Soil

I certify, on behalf of the above listed facility, that the above-described non hazardous waste was managed in compliance with all applicable laws.

Kristin Castner
Waste Approvals Manager

Hillsboro Landfill, Inc.

3205 SE MINTER BRIDGE ROAD HILLSBORO, OR 97123

PERMIT # 101458OR

Tracking Number 11148

PERMIT TO DISPOSE OF NON-HAZARDOUS MATERIALS

This permit authorizes disposal of Customer's waste materials in accordance with the Industrial Waste & Disposal Services Agreement dated *__9/03_____*.

EXPIRES: 11/24/07

GENERATOR: BEE JAY SCALES

DESCRIPTION: *IDW SOIL*	**TONS:** *10*
☐ **SPECIAL WASTE** ☒ **CS** ☐ **C&D** ☐ **CLEAN-UP**	
LOCATION: *SUNNYSIDE, WASHINGTON* *116 N. FIRST STREET*	**COUNTY:*** *Benton - not in metro*
CONTACT: *JUSTIN DAUPHINAIS*	**PHONE:** *503-691-2030*
	FAX: *503-692-7074*

BILLING: *Landfill account SECOR INTERNATIONAL*	**PO#:** *N/A*	**JOB#:** *N/A*

We accept business checks, cash, VISA / Mastercard or charge(with prior approval)

SPECIAL HANDLING : ***NONE:***	
MK	**TyT**

APPROVED: *KRISTIN CASTNER* DATE: ***10/04/07 3:46:18 PM***

A COPY OF THIS PERMIT MUST BE SHOWN BY EACH DRIVER

THERE IS A MINIMUM CHARGE OF $50-$60 FOR EACH LOAD OF SPECIAL WASTE

WASTE MANAGEMENT

HAZARDOUS WASTE IS STRICTLY PROHIBITED

APPENDIX C
INJECTION WELL BORING LOGS

2006 Interim Remedial Measures Completion Report
Chevron Environmental Management Company
& BP America, Inc.

24CH.67201.00
December 14, 2007

SECOR

PROJECT: Bee Jay Scales
LOCATION: Sunnyside, WA
PROJECT NUMBER: 24CH.67281.00
DRILLING STARTED: 5-24-07 COMPLETED: 5-24-07
INSTALLATION STARTED: 5-24-07 COMPLETED: 5-24-07
DRILLING COMPANY: Cascade
DRILLING EQUIPMENT: LAR HSA
DRILLING METHOD: Auger
SAMPLING EQUIPMENT: SPT

WELL / PROBEHOLE / BOREHOLD NO: IW-5
PAGE: 1 OF 1
NORTHING (ft):
EASTING (ft):
LATITUDE:
LONGITUDE:
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft):
BOREHOLE DEPTH (ft):
STATIC DTW (ft):
WELL DEPTH (ft):
WELL CASING DIAMETER (in):
BOREHOLE DIAMETER (in):
LOGGED BY: JD
CHECKED BY:

TIME & DEPTH (feet)	Graphic Log	USCS	DESCRIPTION: Example: SAND; SP; olive (2.5Y5/4); trace 5% fines; 20-30% fine-grained sand; fine-to-coarse gravel; medium-dense; medium plasticity; stiff; moist; no petroleum hydrocarbon odor; no staining	Sample	Time Sample ID Method	Measured Recovery (feet)	Blow Counts	Headspace PID (units)	Depth (feet)	Well Construction or Borehole Backfill
			2" Asphalt 2" thick							
			6" of gravel fill							
1										Concrete seal
2										
3		ML	Silt (ML) light Brown; soft; moist; sand fine 15%, no HCOs no stain					0	2	
4										Bentonite
5										
6										Sand 2' above screen
7		ML	Silt (ML) Brown; soft; wet Fine sand 30%; no odors no stain					0	6	
8										Screen 5 feet
9										
10										
11										
12		ML	Silt (ML) Black; soft; low plastic; saturated; trace fine sand; strong HCO; possible product staining					85.9	11	

TD = 12'

Injection well to 12'

Screen 7-12'.

PROJECT: Bee Jay Scrubs
LOCATION: Sunnyside, WA
PROJECT NUMBER: 24C11.67701.00
DRILLING STARTED: 5-24-07 COMPLETED: 5-24-07
INSTALLATION STARTED: 5-24-07 COMPLETED: 5-24-07
DRILLING COMPANY: Cascade
DRILLING EQUIPMENT: L.A.R HSA
DRILLING METHOD: Auger
SAMPLING EQUIPMENT: SPT

WELL / PROBEHOLE / BOREHOLE NO: IW-6
PAGE: 1 OF 1
NORTHING (ft): EASTING (ft):
LATITUDE: LONGITUDE:
GROUND ELEV (ft): TOC ELEV (ft):
INITIAL DTW (ft): BOREHOLE DEPTH (ft):
STATIC DTW (ft): WELL DEPTH (ft):
WELL CASING DIAMETER (in): BOREHOLE DIAMETER (in):
LOGGED BY: JD CHECKED BY:

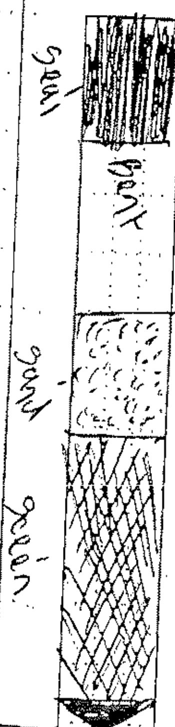
TIME & DEPTH (feet)	Graphic Log	USCS	DESCRIPTION: Example: SAND; SP; olive (2.5Y5/4); trace 5% fines; 20-30% fine-grained sand; fine-to-coarse gravel; medium-dense; medium plasticity; stiff; moist; no petroleum hydrocarbon odor; no staining	Sample	Time Sample ID Method	Measured Recovery (feet)	Blow Counts	Headspace PID (units)	Depth (feet)	Well Construction or Borehole Backfill
			2" thick Asphalt							
1			6" of gravel fill							
2		ML	Silt (ML) lt brown; soft; moist fine sand 10%; no HC odor; no stain					0	2	
3										
4										
5										
6										
7		ML	Silt (ML) Brown; soft; wet fine sand 30%; no odor no staining					0	6	
8										
9										
10										
11										
12		ML	Silt (ML) Black; soft; low plasticity; saturated; trace fine sand 5% strong HC odor					472	11	
			TD = 12'							
			Injection well to 12'							
			Screen 7-12'							

Well Construction: Seal 1', Bentonite, Sand 1', Screen 5'

PROJECT: Bee Jay Scales
LOCATION: Sunnyside WA
PROJECT NUMBER: 24CH.U770I.00
DRILLING STARTED: 5-29-07 COMPLETED: 5-29-07
INSTALLATION STARTED: 5-29-07 COMPLETED: 5-29-07
DRILLING COMPANY: Cascade
DRILLING EQUIPMENT: L.A.R. 1st
DRILLING METHOD: Auger
SAMPLING EQUIPMENT: SPT

WELL / PROBEHOLE / BOREHOLD NO: IW-7
PAGE: 1 OF 1
NORTHING (ft):
EASTING (ft):
LATITUDE:
LONGITUDE:
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft):
BOREHOLE DEPTH (ft):
STATIC DTW (ft):
WELL DEPTH (ft):
WELL CASING DIAMETER (in):
BOREHOLE DIAMETER (in):
LOGGED BY: SD
CHECKED BY:

TIME & DEPTH (feet)	Graphic Log	USCS	DESCRIPTION: Example: SAND; SP; olive (2.5Y5/4); trace 5% fines; 20-30% fine-grained sand; fine-to-coarse gravel; medium-dense; medium plasticity; stiff; moist; no petroleum hydrocarbon odor; no staining	Sample	Time Sample ID Method	Measured Recovery (feet)	Blow Counts	Headspace PID (units)	Depth (feet)	Well Construction or Borehole Backfill
			Asphalt 3" thick							
1			Gravel Fill 7" thick							
2										
3		ML	Silt (ML) Brown; soft; moist fine sand 15%; no HO; no stain					0	2	
4										
5										
6										
7		ML	Silt (ML) Brown; soft; wet fine sand 25%; no odor; no stain					0	6	
8										
9										
10										
11		ML	Silt (ML) Black; soft; low plasticity							
12			wet; trace fine sand 5%; mod HO; stained					63.8	11	
			Total Depth 12' bgs							
			Injection well installed to 12' and screened from 7 to 12' bgs							



PROJECT: Bee Jay Scales
LOCATION: Sunnyside, WA
PROJECT NUMBER: 24CH.167201.00
DRILLING STARTED: 5-25-07 COMPLETED: 5-25-07
INSTALLATION STARTED: 5-25-07 COMPLETED: 5-25-07
DRILLING COMPANY: Cascade
DRILLING EQUIPMENT: L.A.R. USA
DRILLING METHOD: Auger
SAMPLING EQUIPMENT: SPT

WELL / PROBEHOLE / BOREHOLD NO: IW-8
PAGE: 1 OF 1
NORTHING (ft):
EASTING (ft):
LATITUDE:
LONGITUDE:
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft):
BOREHOLE DEPTH (ft):
STATIC DTW (ft):
WELL DEPTH (ft):
WELL CASING DIAMETER (in):
BOREHOLE DIAMETER (in):
LOGGED BY: JD
CHECKED BY:

TIME & DEPTH (feet)	Graphic Log	USCS	DESCRIPTION: Example: SAND; SP: olive (2.5Y5/4); trace 5% fines; 20-30% fine-grained sand; fine-to-coarse gravel; medium-dense; medium plasticity; stiff; moist; no petroleum hydrocarbon odor; no staining	Sample	Time Sample ID Method	Measured Recovery (feet)	Blow Counts	Headspace PID (units)	Depth (feet)	Well Construction or Borehole Backfill
			Asphalt 3" Thick							
1			Gravel Fill 6" thick							
2										
3		ML	Silt (ML) Brown; soft; low plasticity; moist; fine sand 15%; no odor; no stain					0	2	
4										
5										
6										
7		ML	Silt (ML) Brown; soft; wet; fine sand 20%; no odor; no stain					0	6	
8										
9										
10										
11										
12		ML	Silt (ML) Black; soft; low plasticity; wet; trace fine sand 5%; mod HCO; stained					24	11	

T.D. = 12' bgs
Injection well to 12'
Screened from 7 to 12' bgs