CAP CONSTRUCTION REPORT

Pasco Landfill – Zone B Cap Installation

Pasco, Washington

Submitted to:

Washington Department of Ecology
Eastern Regional Office
4601 N. Monroe Street
Spokane, Washington 99205-1295

Prepared for:

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Washington Department of Ecology
Eastern Regional Office
4601 N. Monroe Street
Spokane, Washington 99205-1295

Attention: Mr. Chuck Gruenenfelder

Subject: Final Cap Construction Report
Pasco Landfill – Zone B Cap Installation
Pasco, Washington

Dear Mr. Gruenenfelder:

AMEC Environment & Infrastructure, Inc. (AMEC) is pleased to present this Revised Final Cap Construction Report (CCR) detailing the construction activities and final as-built design of the work conducted at the above referenced site between May 20 and June 20, 2013. All associated field documentation has been included in the appendices of this report. The Zone B Cap Monitoring & Maintenance Plan also is included as an appendix to this report.

On behalf of Bayer CropScience (BCS), AMEC submitted the draft CCR to the Washington Department of Ecology (Ecology) on October 27 and 30, 2013. In a letter dated November 12, 2013, Ecology responded with conditional approval of the CCR (November 12 Letter), contingent upon BCS/AMEC addressing Ecology's minor comments from the November 12 Letter in a revised final version of the document. This revised final version of the CCR incorporates BCS/AMEC responses to Ecology comments.

As requested by Ecology, BCS will conduct physical removal of tumbleweed growing on the Zone B cap in spring 2014. BCS expects that tumbleweed growth will be significantly less in future years because the cap will not be irrigated. BCS does believe that some tumbleweed growth on the cap is unavoidable unless adjacent landowners implement tumbleweed controls.

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We appreciate Ecology's timely review of the draft CCR that was submitted in October. If you have any questions regarding this revised final CCR, please call Sean Gormley at (503) 639-3400.

Sincerely,

AMEC Environment & Infrastructure, Inc.

Paul Stull, PE
Associate Engineer

REVIEWED BY:

Sean Gormley, EAC, CHMM
Senior Associate/Project Manager

Attachments: Cap Construction Report

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Pasco, Washington

1.0 INTRODUCTION

AMEC Environment & Infrastructure, Inc. (AMEC) has prepared this Cap Construction Report to document the details and final construction layout of the new Pasco Landfill – Zone B Cap (Cap), which was constructed at Zone B (Site, Figure 1) between May 20 and June 20, 2013. The Site, a former herbicide manufacturing waste drum storage area and interim landfill, is part of the Pasco Landfill Superfund Site. The implemented Cap successfully addressed identified environmental risk concerns associated with the SIte. This document includes a narrative of the Cap construction work and the following appendices: as-built drawings (Appendix A), daily tailgate and inspection reports (Appendix B), daily field reports (Appendix C), photograph logs (Appendix D), weight ticket summaries (Appendix E), daily dust monitoring reports (Appendix F), structural fill analytical results (Appendix G); and Cap Monitoring and Maintenance Plan (Appendix H).

2.0 BACKGROUND

On behalf of Bayer CropScience (BCS), AMEC submitted the Draft Final Interim Remedial Action Work Plan for the Pasco Zone B Resource Conservation and Recovery Act (RCRA) Cap (Zone B RAWP) to the Washington Department of Ecology (Ecology) on March 5, 2013. The Zone B RAWP was approved by Ecology in an email dated March 7, 2013, and the final document was submitted to Ecology on March 13, 2013.

Construction of the RCRA Cap was conducted as an independent remedial action pursuant to the standards and provisions set forth in WAC 173 340-515 (Ecology, 2013). Ecology Enforcement Order DE 00TCPER-1325 (2000) identifies Ecology as the lead agency for the Pasco Landfill Site. Therefore, cleanup actions are conducted under the authority of the Washington Model Toxics Control Act (MTCA), Chapter 70.105D Revised Code of Washington (RCW) and accompanying regulations, Chapter 173-340 Washington Administrative Code (WAC).

The Zone B RAWP and the associated design plans were developed in accordance with the Remedial Design/Remedial Action (RD/RA) Handbook (United States Environmental Protection Agency [EPA], 1995) and Final Covers on Hazardous Waste Landfills and Surface Impoundments (EPA, 1989) as guidance documents.

2.1 SITE DESCRIPTION

The Site is located at the former Pasco Landfill which is located on the eastern end of Pasco, Washington and north of US Highway 12 on the edge of an agricultural zone (see Figure 1). Zone B is located northeast of the current Pasco Transfer Station on the Pasco Landfill site (Figure 2). Prior to Cap construction, the Site consisted of an enclosed former landfill with a 12-mil high density polyethylene (HDPE) liner overlying the former drum area and a 6-mil polyethylene (poly) cover over a large shallow excavated area around the south, southwest, and southeastern sides of the former drum area (Figure 2, Site Plan). The soils excavated from this shallow excavation were placed in a large stockpile along the southern end of the drum liner area. The poly covers were maintained with sand bags, and were periodically repaired due to damage caused by wind and ultraviolet (UV) degradation. The purpose of the Cap construction was to provide a long-term (RCRA-compliant) cover for the former drum area, outlying shallow excavation areas, including several recently identified discrete locations.

2.2 SITE HISTORY

Between approximately 5,200 and 5,400 drums of herbicide manufacturing wastes from the manufacture of 2,4-D and MCPA herbicides were disposed of at the former Zone B repository cell by Resource Recovery Corporation (RRC) from December 1972 through October 1973 (Burlington, 1993; PSC, 1998 and 1999). At the time that this waste was disposed in the Zone B repository cell, the facility was approved by the Benton-Franklin District Health Department (BFDHD) for management of industrial wastes (BFDHD, 1972).

A polyethylene cap and a soil cover of unknown thickness were reportedly placed over Zone B in 1976 (Philip Services Corp [PCS], 1998), and a soil cover, approximately 2 feet thick, was placed over Zone B circa 1980 (PSC 1998). All drums were removed from Zone B as an interim remedial action in 2002 (URS, 2002), along with visually impacted soil within the former repository cell and visually impacted soil on the floor of the cell. An interim cover (12-mil polyethylene cap) was also installed during the 2002 interim remedial action.

Sampling events were conducted at Zone B in 2005, 2009, 2010, and 2012; details of these events and the sampling results are provided in the various AMEC-authored documents listed in the reference section of this report. The Zone B Cap was originally planned for installation in 2010 (AMEC, 2010), but was delayed due to discovery of residual contamination during the initial excavation phase of cap installation. The residual contamination was delineated during sampling events in 2012 (AMEC, 2012) and the size of the Cap was subsequently enlarged to ensure that residual contamination would be included under the Cap.

3.0 PROJECT TEAM AND ORGANIZATION

The construction project team consisted of the following organizations and companies:

- *BCS* – Responsible Party.
- *Ecology* – Regulatory Agency Oversight.
- *AMEC* – Project Management, Design, Engineering, Contract Administration, and Construction Oversight.
- *Anderson Environmental Contracting (AEC)* – General civil contractor, who was selected to construct the new Cap.
- *Northwest Linings and Geotextile Products, Inc. (NWL)* – Geomembrane and Geosynthetic Clay Liner (GCL) vendor and installer.
- *Intermountain Testing (IMT)* – Material testing laboratory, who provided field compaction testing.
- *Wildlands* – Hydroseeding vendor and applicator, who assisted in recommending native seed mix that would survive application during the summer months.
- *T&C Construction* – AEC-subcontracted construction surveyors that provided grade elevation survey support during construction; also installed elevation control points for contractor use.
- *DSE, Inc*. – AMEC-subcontracted quality control surveyor that provided final Site survey to confirm compliance with final Cap design; also conducted the initial Site survey that was used to design the Cap and installed the local pins for survey control points.
- *Rick's Custom Fencing (RCF)* – Installed the new perimeter metal cyclone fence and gate. A short section of fencing along the eastern edge of the original Cap area was salvaged and the new fence was tied into this fence by RCF.
- *Freestone (Eric Jensen)* – Freestone provided on-site support and the subsequent irrigation work to establish the vegetation layer over the Cap surface.

4.0 HEALTH AND SAFETY

AMEC and the general contractor (AEC) both prepared health and safety plans to cover the work tasks of their respective personnel. Several hazards are associated with a construction project of this scope. The majority of the potential site hazards were associated with dump truck traffic (importing materials) and working construction equipment around workers on the Cap. Direct eye contact between equipment operators and workers was required when the two were simultaneously inside a contact zone. All subcontractors were briefed on the work site safety issues and they conducted themselves accordingly. In order to address the daily and changing

safety challenges at the Site, AMEC led daily safety "tailgate" meetings with all members of AEC and its subcontractors. Personnel that arrived after a daily safety meeting were directed to review the daily safety meeting with AMEC's on-site engineer prior to entering the Site. Copies of the tailgate meeting roster and daily safety concerns are included in Appendix B.

AMEC, AEC, and all subcontractors conducted the Site construction activities without a loss-time event or near-miss incident. No safety violations or associated shutdowns were identified during the entire period of Site construction.

5.0 CAP CONSTRUCTION

The following sections discuss the various elements of the Cap construction work and related details.

5.1 SCHEDULE

Based upon anticipated work scope activities and material availability, the construction schedule was estimated to be approximately five weeks. Site preparation work began on May 20, 2013. The Cap construction was completed, with the exception of the irrigation system, on June 20, 2013. The irrigation system was completed the following week and irrigation of the hydroseeded areas was initiated. Site irrigation was conducted for several weeks (through August 30, 2013) to ensure that the hydroseeding material was able to become adequately established during the summer months. Daily field reports are included in Appendix C. Daily photograph logs are included in Appendix D.

5.1.1 Site Preparation

Prior to the construction of the new Cap, several tasks were performed to prepare the Site for construction. These tasks included the following:

1. *Fence Demolition* – The original Cap area was enclosed with a standard chain link fence that was located within the new Cap construction zone. The fencing was removed using a trackhoe and placed in piles or directly into a dump truck. The majority of the posts were initially installed via direct-push and, to remove, were pulled directly up and out of the ground. All of the fencing material was loaded onto the contractor's dump trucks and taken to a local metal recycling facility. Bases of fence posts were decontaminated prior to recycling as a conservative measure.
2. *Stockpile Area Preparation* – The contractor prepared two locations for stockpiling imported materials. These were located to the west and southwest of the Cap. A construction road

looped around the western stockpile area and along the northern side of the southwestern stockpile area. The contractor utilized these areas to stockpile the perimeter rock, sand, structural fill, and topsoil. Different types of imported materials were adequately segregated during the construction process.

3. *Roadway Improvements* – Prior to receiving delivered materials via dump trucks, the contractor improved the existing roads by watering and compaction. The first few loads of structural fill were applied to the loop roadway (around the western stockpile) to improve that area for truck traffic. During the project, the contractor would routinely wet and compact these roadways and the Site's main roadway to control dust and minimize impacts to the roads by the dump truck traffic.

4. *Grubbing and Debris clearing* – Prior to Site preparation and construction activities, a significant amount of garbage, vegetation, and general debris material had accumulated within the new Cap construction zone. During the removal of the original Site fence, the contractor recovered these materials and after segregating out the recycled fencing, it was removed to the adjacent transfer facility for disposal. Upon completion of this work, the Site was relatively free of all unwanted debris material.

5. *Survey Control Points* – In order to maintain elevation control of the Site during construction and grading work, the contractor subcontracted a surveyor to install grade control points around the Site to provide fixed known elevation points for construction reference. On May 29, T&C Construction (Tim Scott) shot preliminary grades and installed elevation control points at locations outside the Cap construction zone to ensure they could be utilized throughout the project. The surveyor used the original surveyor's control pins as the basis for the vertical and horizontal control points, which maintained consistency between AMEC's design survey, prior survey work, and the construction grading survey. The survey work throughout this project has been consistent and based upon original survey control pins on the property.

6. *Temporary Construction Fence Installation* – The contractor installed metal T-bar posts and fixed standard orange temporary construction fencing around the outer perimeter of the construction site (well away from the edge of the zone where contaminants were present) to provide a clear visual barrier to site access and keep windblown debris out of the construction zone. This construction fence was inspected daily and repairs or modifications were made to it, as needed. At completion of Cap construction, the temporary fence was removed; the T-bars were recycled and the fencing was disposed of at the adjacent transfer facility.

The majority of site preparation work was conducted during May 20 and 21, 2013. For additional details regarding these activities, please reference these dates in appendix materials. After the Site preparation was completed, the contractor began receiving construction materials and initiating the installation of the Cap.

5.2 ADDITIONAL EXCAVATION AREAS

Prior to the placement of any Cap materials or geosynthetics, five additional excavation areas (AE-1 to AE-5) were measured out, delineated with paint, and excavated by AEC. Refer to drawing C-2 in Appendix A and the Photograph Logs in Appendix D for a layout of the excavated areas. All of the excavation areas were located along the edge of the existing shallow excavation area and were excavated to a depth of 5-feet below ground surface. All of the material excavated from these areas was placed around the central stockpile in the center of the Cap construction zone. After the soils were excavated, the structural fill (G-layer material) was backfilled and compacted into each shallow cavity. All of the excavated material was covered with 12-mil poly cover and held down with sand bags and structure fill pockets.

5.3 CAP CONSTRUCTION

The Cap construction consists of several layers of discrete materials that were installed in accordance with EPA cap design requirements and AMEC's design documents. This section describes each of those layers and their construction. Refer to the construction as-builts in Appendix A for a surveyed layout of the materials and Cap construction.

5.3.1 Original 12-mil HDPE Liner and Temporary Poly Cover

After the 2002 drum removal, a 12-mil HDPE liner was installed over the original Zone B drum cell. During subsequent explorations, a large shallow excavation area was produced and the excavated material was placed at the south end of the Zone B drum cell. The entire excavation area and stockpile were covered with a series of poly covers with a variable thickness of about 6 mil. Sandbags were placed over the poly covers and original HDPE liner to prevent wind damage and hold them in place. AMEC provided routine inspections and repairs of these covers, as necessary. In order to minimize any contact between the material under the liner and poly covers, AMEC's design required that the liner and covers remain in place and be covered with the structural fill material. The contractor was required to use care and maintain a minimum of 12 inches of compacted structural fill cover over the original cover to alleviate damage or movement.

5.3.2 Structural Fill

The largest fill component installed in the new Cap was the structural fill material. This material consisted of a ¾-inch minus clean crushed rock type material and was provided by Connel Sand & Gravel (quarry located on northern edge of Pasco, Washington – north of airport). The EPA requires a minimum of 1-foot vertical thickness of this material under the geomembrane and GCL layers. In order to develop the required grade (specify minimum grade) and accommodate this minimum thickness throughout the Cap, several areas required significant additional structural fill. Throughout the placement of this material, the contractor wet the material and compacted it to maintain dust control and achieve the desired compaction density. The structural fill was designed to extend only out to the edge of the Cap and not to the edge of the Liner Extension. Refer to the construction as-built documents in Appendix A for detail on the structural fill.

5.3.2.1 Preconstruction Material Testing

AEC collected two composite samples of the structural fill and tested them for petroleum hydrocarbons (NWTPH), volatile organic compounds (EPA Method 8260), semi-volatile organic compounds (EPA Method 8270), and metals (RCRA 8 Metals) using appropriate regulatory protocols. The analytical tests were performed by Friedman and Bruya, Inc. laboratory in Seattle, WA (results provided in Appendix G). The results of these tests indicated that no elevated concentrations of any of these constituents were present in the composite samples. AMEC approved the application of the material after receiving these results. The composite sample was also tested for gradation at IMT labs and found to be acceptable for installation.

5.3.2.2 Placement and Compaction

The fill material was placed out onto the new Cap with a loader until entry points with the minimum separation was established to allow for direct placement from the vendor's dump trucks. The material was placed in maximum lifts of 12-inches vertical and compacted with a flat self-propelled roller to achieve the minimum required compaction of 90 percent (%).

The contractor subcontracted IMT to provide field compaction testing with a nuclear density testing gauge. Compaction testing conducted by IMT is provided in Table 1 below.

Table 1: Compaction Testing

Date of Compaction Testing	Number and Area of Tests	Range of Compaction Results
May 31, 2013	16 locations 8 in the morning and 8 in the evening	91 to 103%
June 4, 2013	16 locations (primarily on the northern end) 8 in the morning and 8 in the evening	91 to 100.5%
June 5, 2013	8 locations (all on the western side of the Cap)	92 to 99.9%

NOTE: All measurements at or exceeding 100% compaction of the standard unit are considered to be at or near 100% achievable compaction. Refer to the Compaction Testing figures (Figures 3-A through 3-C) for the results of the respective test locations.

Based upon the compaction tests conducted at 40 locations across the Cap, all of the G-layer surface test locations met or exceeded the minimum compaction requirements. The compaction test results confirmed that the surface of the structural fill layer would provide the required base for the geosynthetic and overlying layers.

5.3.2.3 Survey

The contractor used a laser building level system to shoot elevations during installation of this material to determine when adequate elevations had been achieved. The contractor's surveyor, T&C Construction (Tim Scott), installed the elevation points prior to G-layer completion and provided multiple construction control points. Based upon the field surveys and these control points, the G-layer and subsequent layers complied with the final AMEC design for the Cap. Some field adjustments were made to the grading design to improve slopes and minimize excessive fill in certain areas. All of these grading changes were discussed with Ecology in the field prior to implementation and verbally approved by Ecology. The changes complied with grading requirements and were successfully constructed by AEC, and are reflected in the attached as-built drawings. DSE & Associates conducted the final quality control survey on June 17th, 2013. This survey was the final and as-built survey for the Cap. The results of this survey were used to prepare the final as-built drawing set.

5.3.3 Geosynthetic Liner System

The geosynthetic liner system consisted of two primary elements with four separate poly materials. All of the geosynthetic materials were designed to extend beyond the edge of Cap to the edge of the Liner extension to provide additional protection from lateral movement of infiltrating water to soils underlying the Cap. The two primary elements are the following:

A) Cap Liner – The Cap liner consists of the 40-mil HDPE geomembrane and the underlying GCL protection layer.

   a. Geomembrane – All of the geomembrane sheets consisted of 23 feet wide by 760 feet long HDPE 40-mil Microspike/Smooth (top side textured) rolls. Five welding cords were also supplied with the Geomembrane for heat-fusion welding of the panels and all destructive testing patches. NW Linings mounted a roll mechanism on a telehandler and used it to roll out the Geomembrane panels. Refer to the photograph logs in Appendix D for pictures depicting this process.

   b. GCL – All of the GCL material consisted of 150 feet long by 15 feet wide rolls of Cetco LO-Bentomat DN (double non-woven) granular clay liner . The GCL is a clay impregnated geotextile material designed to pad and protect the geomembrane from underlying threats of puncture. Twelve bags of bentonite chips were provided with these rolls to provide seals between the GCL mats where they were overlain. A minimum overlay of 6-inches of GCL mats was provided at all sides where GCL mats were connected. These rolls were rolled out in the same fashion as the geomembrane rolls. The stockpiled GCL rolls, located at the Site from the 2010 construction phase, were deemed unusable by the vendor (NW Linings) and were replaced by new material.

B) Cap Topsoil Base – A geotextile layer is placed between the 1-foot thick sand layer, which overlies the Cap Liner, and the top soil layer to maintain separation between these layers. Orange poly construction fencing is placed over the geotextile to provide a clear visual warning of any excavation work that may occur at the Site in the future that further excavation will damage the underlying Cap Liner.

Refer to the next section for details concerning the Liner installation and testing work. Also refer to the daily field reports (Appendix C) for the details and quantities of the imported geosynthetic materials.

5.3.3.1 Stockpiled Geosynthetic Liner Material Inspection

The 2010 Cap construction project was stalled due to excavation explorations and lack of delineating data. The Cap was not installed in 2010, but the liner materials (GCL and geomembrane rolls) were stored at the Pasco Landfill Site near Zone B. AMEC attempted to keep these materials covered and in good order for potential reuse in the final Cap construction. On May 23, 2013, NWL's representative (Richard Kamienski) inspected the stockpiled GCL and geomembrane rolls. Mr. Kamienski determined that all 13 of the GCL rolls were unfit for use at the Cap but that both of the geomembrane rolls were in acceptable condition. The two geomembrane

roll numbers were 823341-10 and 823345-10 (40 mil HDPE Microspike/Smooth – with a combined total of 34,960 square feet) and were the same type of 40-mil geomembrane ordered to cover the rest of the Cap.

In order to alleviate needless landfill waste, AMEC directed AEC to roll all 13 of the unfit GCL rolls out onto the Cap prior to structural fill (G-layer) placement. Applying the unfit GCL under the structural fill provides some benefit to long-term cap stability by providing an increased level of underlying protection. On May 28, 2013, AEC rolled out all 13 rolls of unfit GCL on the northwest corner of the new Cap over an area outside of the excavation zone and beyond the limit of known contamination. All of the rolls were covered by several feet of fill, beginning with structural fill, which passed density testing.

5.3.3.2 Geosynthetic Liner System Installation

The Liner System was installed in two parts. First the GCL layer was placed and sealed with bentonite chips. Then the geomembrane panels was rolled out directly over the GCL layer. All of the panels were heat-fusion welded together with a continuous double seam along the entire edge of the panels. This provided double seams throughout and a suitable pressure chamber to confirm integrity of the seals.

5.3.3.3 Geomembrane Testing

All of the seams and patches required to complete the installation of the Cap geomembrane cover were pressure tested in accordance with standard industry practices and manufacturer requirements. All of the seams consisted of a double heat-fusion weld to provide redundant sealing protection between HDPE panels and to provide a void chamber that could be pressure tested to confirm the integrity of both welds. The pressure test was conducted by sealing both ends of the seam with heat tools and clamps, then piercing the space with a pressure needle and filling the void with compressed air to a pressure of approximately 30 pounds per square inch (psi) for a period of 5 minutes, generally. A weld would be considered successful (i.e., pass the test) if it held the 30 psi pressure level with no significant change during the test period. Table 2 below lists the tests that were conducted on the independent panel seams.

Table 2: Summary of Seam Test Results

Date	Seam #	Start	End	Result
June 8, 2013	S-1	30 psi @ 10:55	30 psi @ 11:00	Approved
	S-2	30 psi @ 12:52	30 psi @ 12:57	Approved
	S-3	30 psi @ 17:25	30 psi @ 17:29	Approved
	S-4	30 psi @ 17:27	30 psi @ 17:32	Approved
June 9, 2013	S-5	30 psi @ 11:48	30 psi @ 11:53	Approved
	S-6	30 psi @ 11:50	30 psi @ 11:55	Approved
	S-7	30 psi @ 13:54	30 psi @ 13:59	Approved
June 10, 2013	S-8	30 psi @ 9:35	30 psi @ 9:42	Approved
	S-9	30 psi @ 18:30	30 psi @ 18:35	Approved
June 11, 2013	S-10	30 psi @ 10:10	30 psi @ 10:15	Approved
	S-11	30 psi @ 12:00	30 psi @ 12:05	Approved
	S-12	30 psi @ 14:51	30 psi @ 14:56	Approved
	S-13	30 psi @ 15:00	30 psi @ 15:05	Approved

NOTE: The seam number always joins the panel of the same number and the panel of the next number.

5.3.4 Sand Drainage Layer

A 1-foot thick compacted sand layer was installed between the Cap Liner element and the Cap Topsoil Base element, per EPA requirements and AMEC's design. The sand was a concrete sand type (typical silica sand passing about 85% through a No. 8 sieve and passing about 3% through a No. 50 sieve) and was provided by Central PreMix (Pasco, Washington). The function of this layer is to drain any water from the topsoil down to the geomembrane where it will be directed to the perimeter rock swales and down to the infiltration basin. No alterations to the installation of this layer were made in the field. This material was also tested in the same manner as the structural fill (Section 5.3.2.1). No unacceptable concentrations of tested compounds were identified in the imported sand materials.

5.3.5 Topsoil and Seeding

The final and top layer of the Cap construction consists of a 2-foot compacted layer of imported topsoil that is indicative of the native soils in the region. The topsoil was provided by Mahaffey Enterprises, Inc. (Kennewick, Washington plant). AMEC and the contractor worked with Wildlands (hydroseeding vendor) to ensure that the provided topsoil and hydroseed mix was adequate to provide a suitable base for establishment during the summer months. Two components of the proposed hydroseed mix were found to be impossible to procure due to seed shortages, so AMEC proposed an alternative mix that was approved by Ecology in an email dated June 5, 2013.

5.3.6 Erosion Protection Rock

The Cap was designed with a liner extension around the entire perimeter of the edge of the Cap. Both the topsoil and sand layers taper out within this extension area. All of the geosynthetic materials are extended out to the end of the liner extension, where the topsoil and sand layers taper out. Overlying the outer end of the extension is a layer of larger clean crushed rock used to provide easy drainage, erosion protection, and an access roadway around the Cap. The erosion protection rock consists of a 1.5- to 3-inch clean crushed quarry spalls provided by Central PreMix. The erosion protection rock was placed around the outer perimeter of the liner extension with a minimum thickness of approximately 9 inches. The remaining rock was installed in the center of the northern and southern ends of the new topsoil layer to provide solid entry and exit points from the top of the Cap if vehicle access is needed. This rock was installed and compacted using the roller and construction equipment. No compaction testing of these materials was conducted due to its size, physical properties, and method of installation.

5.3.7 New Perimeter Fence

During the final stages of the Cap installation and placement of the erosion protection rock, RCF arrived and began the installation of the new permanent perimeter fence. The fence consisted of 6-foot-high metal cyclone fencing with three strands of barb wire along the top. A single entry point consisting of a pair of 5-foot 6-inch wide swing gates was installed near the southeast corner of the Site perimeter, beyond the edge of the liner extension. All of the posts except for the corners and the gate posts were driven directly into the ground by pneumatic drivers near the end of the project.

The corner and gate posts for the permanent fencing were installed at the beginning of the project before installation of the G-layer material using an auger and secured with concrete. Although not expected to be contaminated, all of the soils generated by the auger were placed on the existing 6-mil poly cover and covered with the structural fill (G-layer) material. The equipment was rinsed and decontaminated in the Cap wash basin (see Section 7.0 below) before departure from the Site.

5.3.8 Final Quality Control Survey

AMEC subcontracted DSE to conduct a final quality control survey after AEC deemed the Cap grading work to be completed. The results of the quality control survey indicated that the final installed grading work, as approved by Ecology in the field, complied with EPA cap regulations. An as-built of the Cap topography is provided on drawing C-3 in Appendix A, and representative cross sections are provided on drawing C-5.

5.4 AIR MONITORING

Due to the potential for dust and airborne particles to create a hazard during construction, AEC was directed to water down the Site and compact it in lifts not exceeding 12-inches (vertically) to minimize airborne potential. In order to quantifiably confirm the success of the dust control measures, AMEC collected dust level data approximately hourly during the working hours each day. AMEC used a DustTrak Model 8520 – Unit TSI-1, to collect the high reading, low reading, and average readings at each sample location. The unit was activated during each sampling event then allowed to settle down so real time data could be collected. During damp periods or after any precipitation, dust readings were not collected due to the nearly absent dust. The permissible exposure limit for the respirable fraction of airborne particulate matter is 5 milligrams per cubic meter (mg/m^3) (WAC 296-62-07510). At no time was this maximum threshold exceeded during the construction period. Details are provided in the Daily Dust Monitoring Reports in Appendix F.

5.5 DEVIATIONS FROM CAP DESIGN

During the course of the field construction activities, several deviations to the original design and specifications were discussed or realized during the period of construction. The deviations to the original design and specifications that were approved by AMEC and Ecology are listed in the table below.

Table 3: Deviations from Cap Design and Installation Plan

Date Approved	Description of Deviation
May 21, 2013	AMEC identifies that the markers for excavation AE-4 were slightly offset from their actual design positions along the edge of the eastern fence. AMEC only found that the only markers not accurately positioned were those for AE-4. AMEC confirmed this with the other AE locations and other survey markers and adjusted it to the final location along the eastern site fence. AMEC discussed this change with Ecology and this was verbally approved by Ecology in the field.
May 22, 2013	AMEC approved the use of piles of structural fill to assist the sand bags in holding down the new 12-mil poly cover over the soil stockpiles excavated from AE-1, AE-2, and AE-3. Structural fill was placed over this material to assist in holding down the covers.
May 23, 2013	AMEC determines that two components of the proposed seed mix specified in the RAWP are not available due to seed shortages. AMEC initiates discussions with AEC and their vendor Wildlands to determine an alternate seed mix.
May 24, 2013	AMEC confirms that the deviation between the drawings and the specifications require perimeter erosion control rock of 1- to 3-inch diameter clean crushed rock instead of 6-inch diameter clean crushed rock shown on the plans.
May 28, 2013	AEC requests using the structural fill material for the entire G-Layer since the material that has been placed is compacting well as a competent smooth surface.
June 4, 2013	AMEC and AEC discuss the slope of some of the Cap's perimeter grades where excess structural fill material is to be placed, per design. AMEC determines that these slopes can be reduced by reducing the amount of material while still complying with EPA cap requirements. AMEC stresses that the critical elevations around the Cap must be maintained but that some can be adjusted to improve slope stability. AMEC discusses this concept with Ecology in the field and Ecology verbally approves this design deviation during the site visit..

In addition, a few minor adjustments were conducted during the course of construction but do not warrant discussion since they did not impact the design or specifications in a significant manner. For example, the use and application of a small volume (specify) of excess perimeter erosion protection rock on top of the northern and southern vehicle access points in order to provide additional stabilization and protection during vehicle operation adjacent to the cap.

6.0 MEETINGS AND DOCUMENTATION

AMEC documented the progress of construction and the safety management and meetings throughout the course of the field work. The following sections address the manner in which AMEC documented the field activities.

6.1.1 Daily Safety Meetings and Tailgate Reports

Construction safety during this project was paramount. There were a few but serious potential hazards that existed throughout the project that consisted mainly of the use of large construction equipment and frequent dump trucks entering and exiting the site. At the beginning of each day, AMEC led daily "tailgate" safety meetings where these hazards were openly discussed with all site workers. When Ecology managers, vendors, or additional site workers entered the site, AMEC

immediately conducted a safety meeting with them to ensure they were briefed on the existing safety hazards. A log of the daily tailgate safety meetings is included in Appendix B.

6.1.2 Daily Field Reports

AMEC continually logged the progress of the Cap construction and noted significant events or issues. The information that was included on the daily field reports included time and work conducted, material arrival information, task list, deviations, health and safety issues, notes and comments, testing results, and logging of contractor/vendor time on site. At the conclusion of each day, the field report was completed electronically and submitted to the AMEC project manager for distribution to the client and Ecology managers via email. The daily field reports have been included in Appendix C.

6.1.3 Daily Photograph Logs

AMEC photo-documented the Cap construction work on daily basis. Selected photographs were placed in a daily photograph log with descriptions of the work and progress shown in the respective photographs. The photograph logs provide a clear chronological history of the work conducted at the site. The daily photograph logs are included in Appendix D.

6.1.4 Cap Monitoring & Maintenance Plan

This construction report was prepared to document all of the field activities and pertinent construction information that can be utilized as a reference of the Cap installation work performed. A Cap Monitoring & Maintenance Plan (CMMP) has been prepared to provide ongoing support of the completed Cap. The CMMP is provided in Appendix H.

7.0 EQUIPMENT CONTAMINATION AND REMEDIATION WASTE MANAGEMENT

All soils and other potentially contaminated materials were incorporated under the G-layer of the cap. A wash basin was constructed at the base of the G-layer to allow equipment decontamination during site preparation and excavation of contaminated soils. The wash basin was constructed with a geomembrane liner so all water was captured, and the collected water was left to naturally dry out in the sun prior to being covered by the G-layer materials. No potentially contaminated waste materials were generated or contacted once construction of the G-layer began.

8.0 CONCLUSION

This Cap Construction Report has documented the field activities and associated work conducted at the Pasco Landfill – Zone B Cap between May 20 and June 20, 2013. The Cap construction effort was successfully completed without a single safety issue. It is the opinion of AMEC that the

final constructed Cap substantially complies with the intent of the purpose of the Cap, plans, specification, and EPA design requirements and should function properly with typical inspections and maintenance activities. These maintenance activities are detailed in the CMMP in Appendix H.

Following the completion of the construction work at the site, regular irrigation of the site was conducted to ensure successful growth of the hydroseeded areas. Significant and successful growth of vegetation can be seen at the site. This vegetation will provide additional stabilization of the Cap surface from rainfall and wind erosion, and will be monitored during the next growing season to ensure that vegetated layer becomes fully established.

REFERENCES

AMEC, 2005. Zone B Confirmation Surface Soil Sampling Technical Memorandum, Pasco Landfill Zone B, prepared for Bayer CropScience, LP, prepared by AMEC Earth & Environmental, submitted to Washington Department of Ecology, July 11, 2005.

AMEC, 2006a. Draft Interim Remedial Action Work Plan and Preliminary Design, Pasco Landfill Zone B, prepared by AMEC Earth & Environmental, submitted to Washington Department of Ecology, November 1, 2006.

AMEC, 2006b. Addendum 1 to Draft Interim Remedial Action Work Plan, Post Excavation Confirmation Surface Soil Sampling and Analysis Plan, Pasco Landfill Zone B, prepared by AMEC Earth & Environmental, submitted to Washington Department of Ecology, November 28, 2006.

AMEC, 2009a. Revised Final Pre Excavation Surface Soil Sampling and Analysis Plan, Pasco Landfill Zone B, Pasco, Washington, prepared by AMEC Earth & Environmental, submitted to Washington Department of Ecology May 14, 2009.

AMEC, 2009b. Pre Excavation Surface Soil Sampling Technical Memorandum, Pasco Landfill Zone B, Pasco, Washington, prepared by AMEC Earth & Environmental, submitted to Washington Department of Ecology November 17, 2009.

AMEC, 2010. Final Interim Remedial Action Work Plan (RAWP) for the Pasco Zone B RCRA Cap. May 12, 2010.

AMEC, 2011. Pasco Zone B Sampling and Analysis Plan Revision 2, submitted to Ecology on December 7, 2011.

AMEC, 2012. Pasco Zone B Soil Sampling Technical Memorandum, submitted to Ecology on August 16, 2012.

BFDHD (Benton-Franklin District Health Department), 1972. Benton-Franklin District Health Department, Re: Disposal of Hazardous Wastes at Pasco Disposal Site in Pasco, Washington. November 2, 1972.

Burlington Environmental (Burlington Environmental Inc.), 1993. Final Draft Phase I Remedial Investigation, Pasco Landfill. Prepared for Pasco Landfill PLP Group, prepared by Burlington Environmental Inc., Technical Services Division. December 1993.

Philip Services Corp (PCS), 1998. Final Phase II Remedial Investigation Report, Pasco Landfill, Pasco, Washington. Prepared for Pasco Landfill PLP Group, prepared by Philip Services Corporation. March 13, 1998.

PSC, 1999. Final Draft Feasibility Study Report, Pasco Landfill, Pasco, Washington. Prepared for Pasco Landfill PLP Group, prepared by Philip Services Corporation. April 28, 1999.

U.S. Environmental Protection Agency, 1989. Final Covers on Hazardous Waste Landfills and Surface Impoundments, EPA 530-SW-89-047, July 1989.

U.S. Environmental Protection Agency, 1995. Remedial Design/Remedial Action Handbook, June 1995.

URS, 2002. Interim Action Completion Report Zone B Removal, Pasco Sanitary Landfill, prepared by URS Corporation for Philip Services Corporation, July 2002.

Washington State Department of Ecology (Ecology), 2000. In the Matter of Interim Actions at: Pasco Sanitary Landfill, Pasco Washington, No. DE 00TCPER-1325 Enforcement Order, June 30, 2000

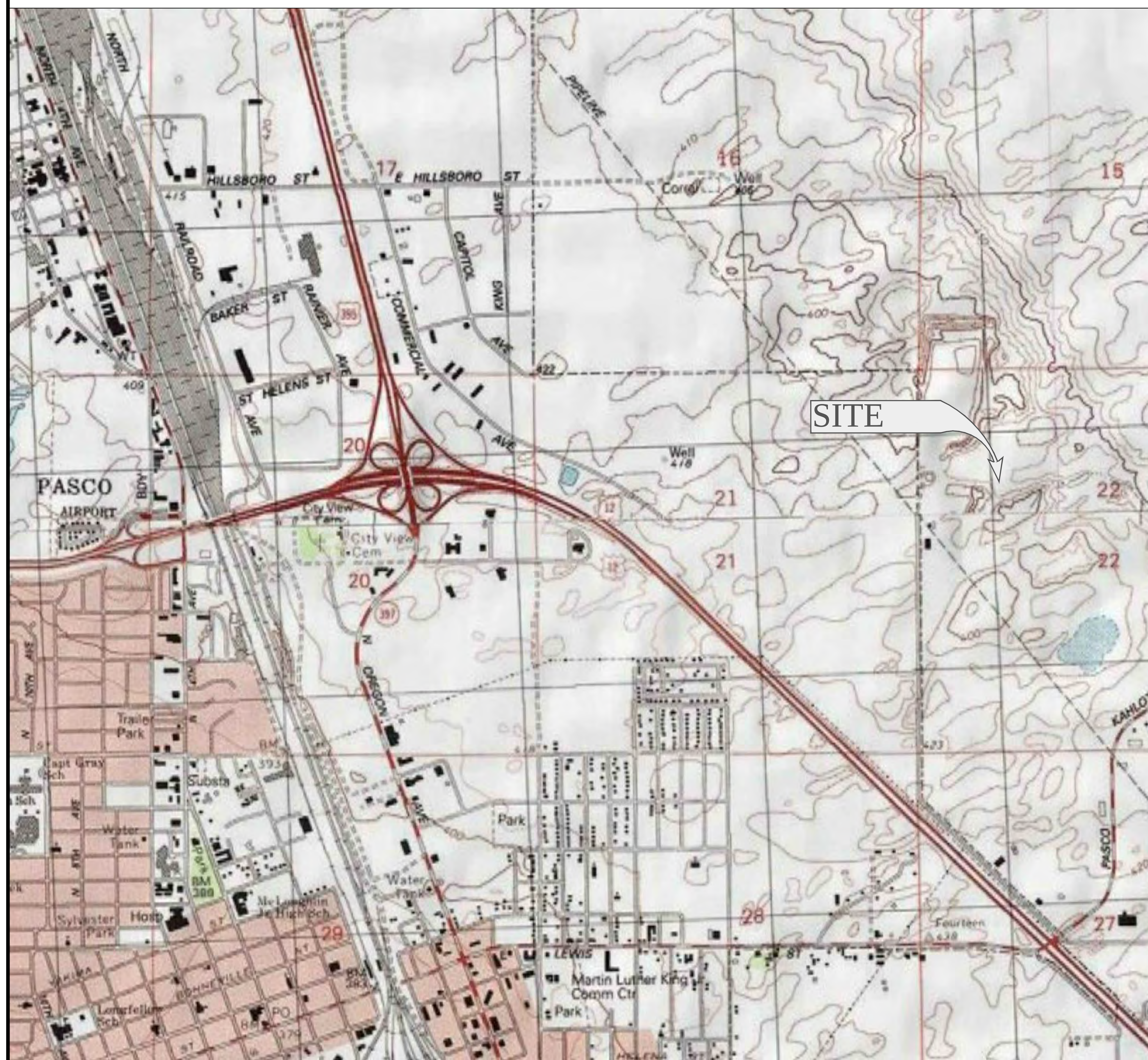
Ecology, 2013. RE: Pasco Landfill NPL Site Independent Remedial Actions at Zone B, February 12, 2013.

LIMITATIONS

This report was prepared exclusively for Bayer CropScience by AMEC Environment & Infrastructure, Inc. The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in AMEC services and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This Cap Construction Report is intended to be used by Bayer CropScience for Zone B of the Pasco Sanitary Landfill, Pasco, Washington only, subject to the terms and conditions of its contract with AMEC. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

PASCO LANDFILL ZONE B
PASCO, WASHINGTON

INDEX OF DRAWINGS



ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
Unimproved dirt
U.S. Route
State Route
Interstate Route

USGS TOPO

AERIAL PHOTO OF SITE

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.

CLIENT: BAYER CROPSCIENCE

AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

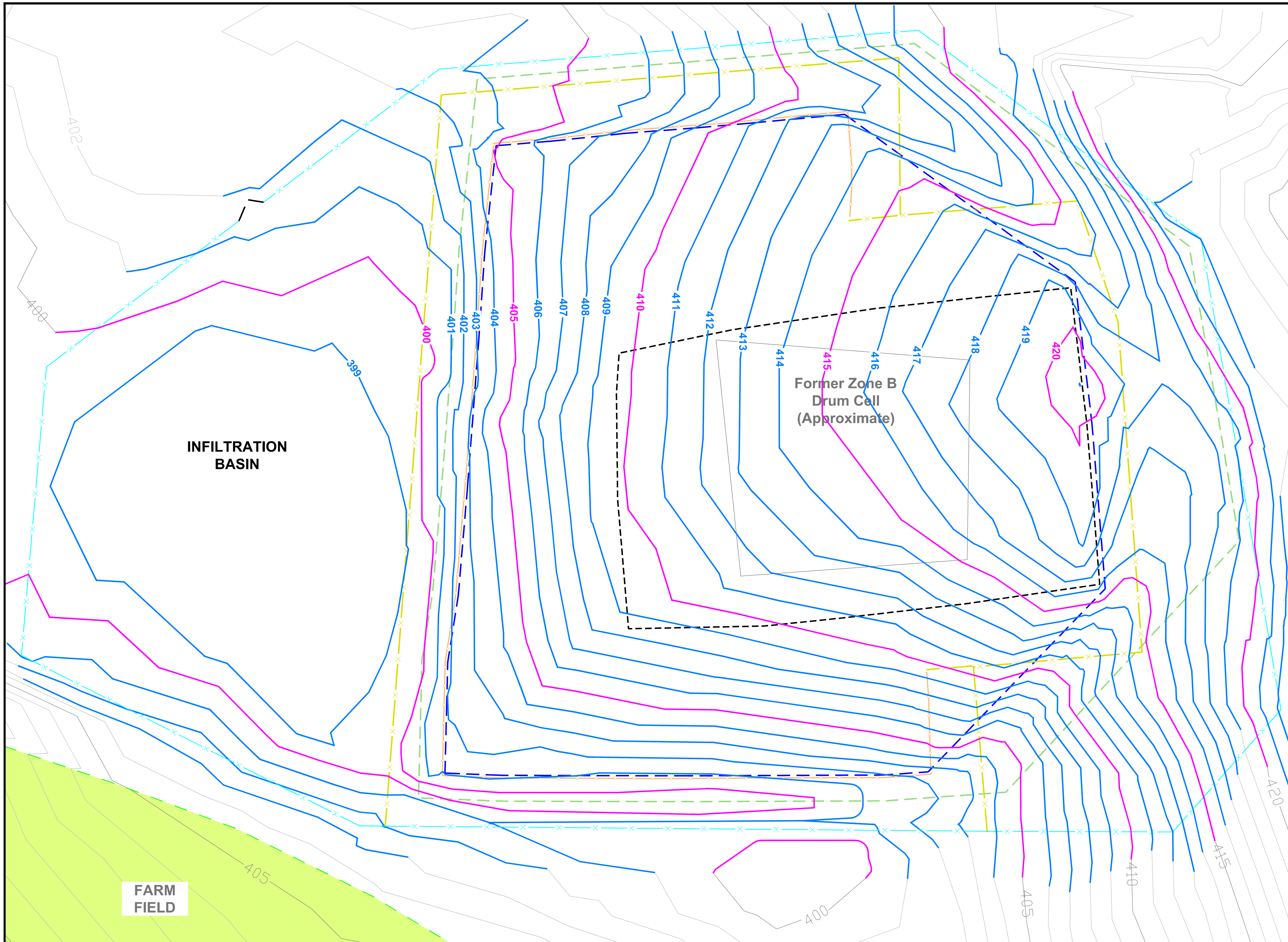
DATUM:	NAD83
PROJECTION:	WA SP S. Ft.
DRAWN BY:	PM
REVIEWED BY:	PS
ORIGINAL SCALE:	AS NOTED

PROJECT: PASCO LANDFILL ZONE B, PASCO, WASHINGTON

TITLE: SITE LOCATION

PROJECT NO.:	4-61M-107051
REVISION NO.	A
DATE:	OCTOBER 2013
DRAWING NO.:	1
SHEET NO.:	1 of 5

K:\10000\10700\10705\10705-1\dwg_ZoneB_Cap_CCR\Compaction_Testing_As-Built.dwg – 1-SITE LOCATION – Dec. 23, 2013 8:56am – patrick.mccarthy



LEGEND

- AS-BUILT CONTOUR (MAJOR)
- AS-BUILT CONTOUR (MINOR)
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- TEMPORARY CONSTRUCTION FENCE
- EXISTING CHAIN-LINK FENCING
- ADDITIONAL CHAIN-LINK FENCING
- CHAIN-LINK FENCE TO REMOVE
- PROPERTY BOUNDARY
- EDGE OF CAP
- EDGE OF LINER EXTENSION

INFILTRATION AREA = 13,293 FT^2

CAP FOOTPRINT = 55,256 FT^2

LINER FOOTPRINT = 77,210 FT^2

0' 30' 60' 90'
1" = 60'

SOURCE:
POST-CONSTRUCTION TOPOGRAPHIC SURVEY PERFORMED BY DSE & ASSOCIATES, 6/17/2013

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.

CLIENT: BAYER CROPSCIENCE

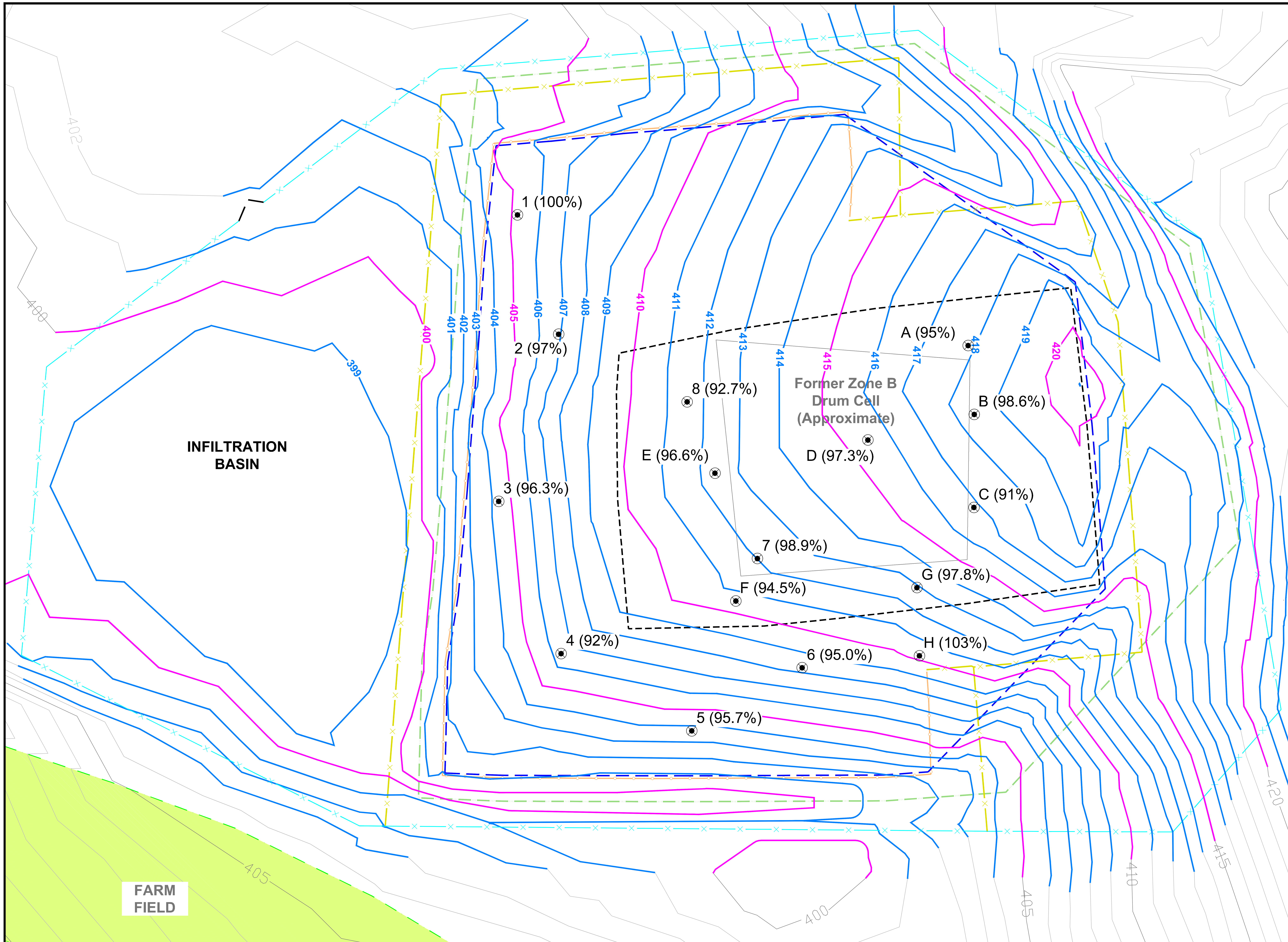
AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM: NAD83
PROJECTION: WA SP S. Ft.
DRAWN BY: PM
REVIEWED BY: PS
ORIGINAL SCALE: AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: SITE LAYOUT

PROJECT NO.: 4-61M-107051
REVISION NO. A
DATE: OCTOBER 2013
DRAWING NO.: 2
SHEET NO.: 2 of 5



LEGEND

1 (100%)	COMPACTION TEST LOCATION AND RESULT PERCENT OF PROCTOR BASE NUMBER = AM TESTING LETTERS = PM TESTING
	AS-BUILT CONTOUR (MAJOR)
	AS-BUILT CONTOUR (MINOR)
	EXISTING CONTOUR (MAJOR)
	EXISTING CONTOUR (MINOR)
	EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
	TEMPORARY CONSTRUCTION FENCE
	EXISTING CHAIN-LINK FENCING
	ADDITIONAL CHAIN-LINK FENCING
	CHAIN-LINK FENCE TO REMOVE
	PROPERTY BOUNDARY
	EDGE OF CAP
	EDGE OF LINER EXTENSION

INFILTRATION AREA = 13,293 FT^2

CAP FOOTPRINT = 55,256 FT^2

LINER FOOTPRINT = 77,210 FT^2

0' 30' 60' 90'
1" = 60'

SOURCE:
POST-CONSTRUCTION TOPOGRAPHIC SURVEY PERFORMED BY DSE & ASSOCIATES, 6/17/2013

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.

CLIENT: BAYER CROPSCIENCE

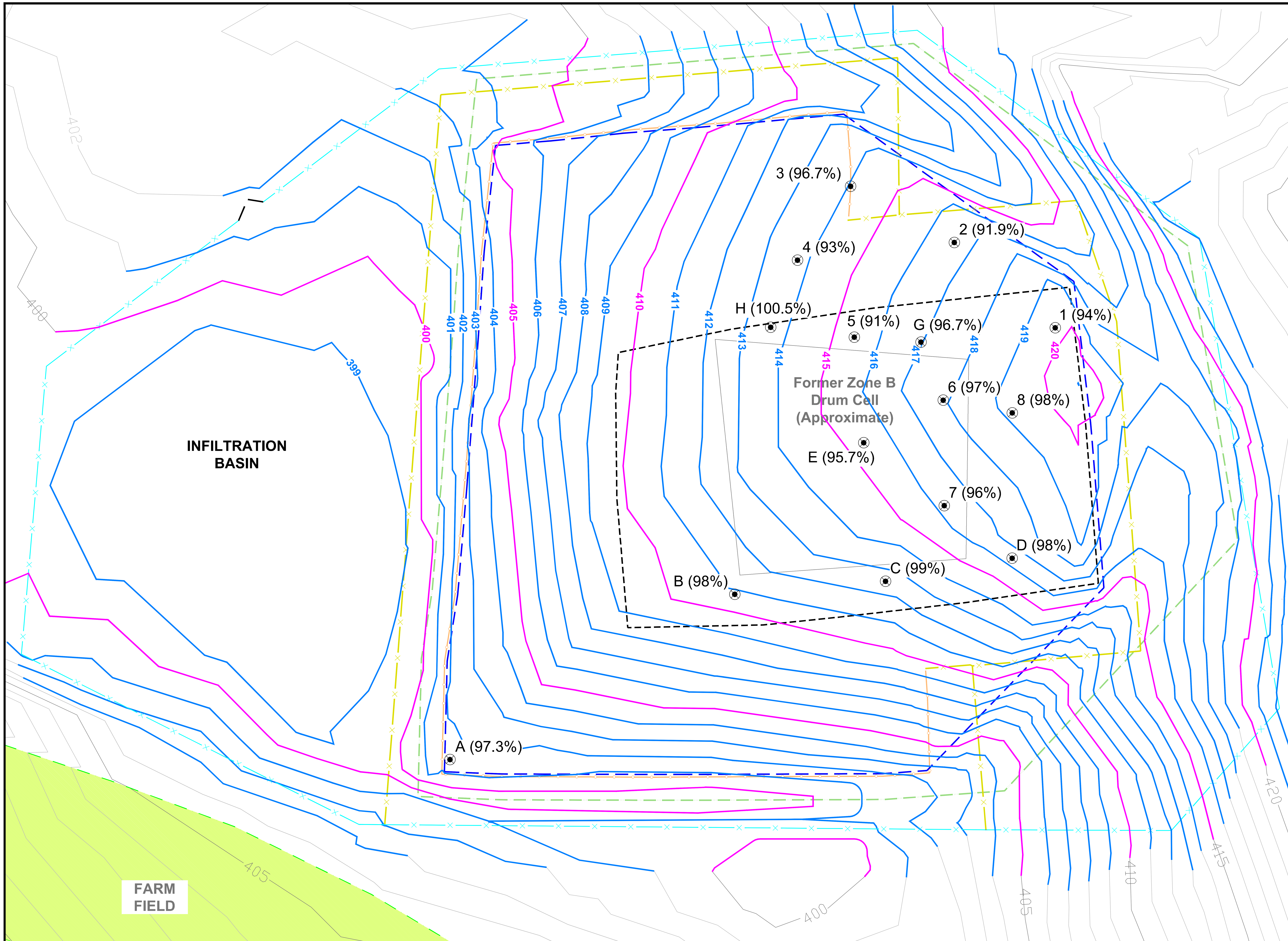
AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM:	NAD83
PROJECTION:	WA SP S. Ft.
DRAWN BY:	PM
REVIEWED BY:	PS
ORIGINAL SCALE:	AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: COMPACTION TESTING
MAY 31, 2013

PROJECT NO.:	4-61M-107051
REVISION NO.	A
DATE:	OCTOBER 2013
DRAWING NO.:	3-A
SHEET NO.:	3 of 5



LEGEND

- 1 (100%) — COMPACTION TEST LOCATION AND RESULT PERCENT OF PROCTOR BASE; NUMBER = AM TESTING; LETTERS = PM TESTING
- AS-BUILT CONTOUR (MAJOR)
- AS-BUILT CONTOUR (MINOR)
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- TEMPORARY CONSTRUCTION FENCE
- EXISTING CHAIN-LINK FENCING
- ADDITIONAL CHAIN-LINK FENCING
- CHAIN-LINK FENCE TO REMOVE
- PROPERTY BOUNDARY
- EDGE OF CAP
- EDGE OF LINER EXTENSION

INFILTRATION AREA = 13,293 FT^2

CAP FOOTPRINT = 55,256 FT^2

LINER FOOTPRINT = 77,210 FT^2

0' 30' 60' 90'
1" = 60'

SOURCE:
POST-CONSTRUCTION TOPOGRAPHIC SURVEY PERFORMED BY DSE & ASSOCIATES, 6/17/2013

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.

CLIENT: BAYER CROPSCIENCE

AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM: NAD83
PROJECTION: WA SP S. Ft.
DRAWN BY: PM
REVIEWED BY: PS
ORIGINAL SCALE: AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: COMPACTION TESTING
JUNE 4, 2013

PROJECT NO.: 4-61M-107051
REVISION NO. A
DATE: OCTOBER 2013
DRAWING NO.: 3-B
SHEET NO.: 4 of 5

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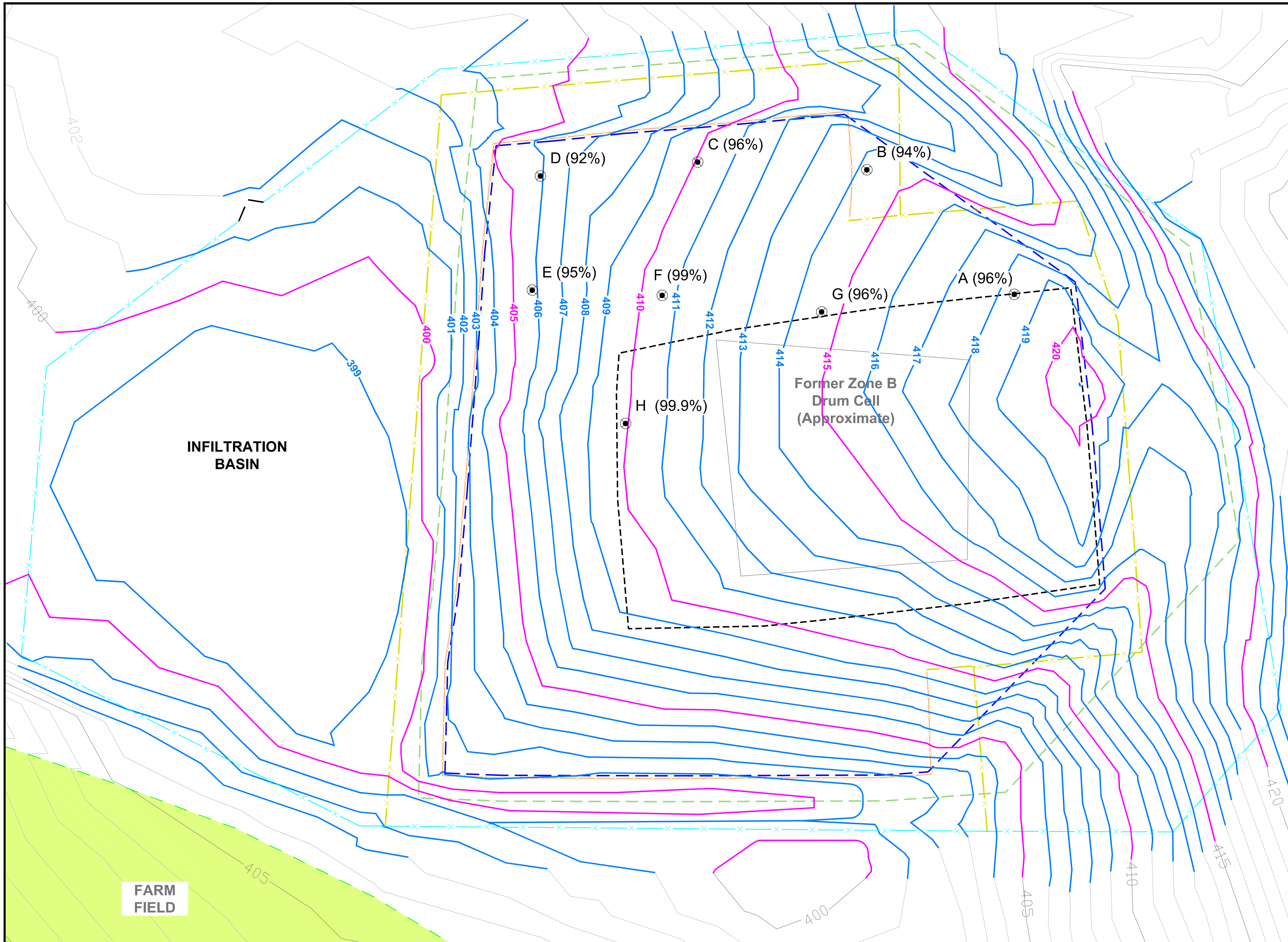


LEGEND

- 1 (100%) — COMPACTION TEST LOCATION AND RESULT, PERCENT OF PROCTOR BASE; NUMBER = AM TESTING; LETTERS = PM TESTING
- AS-BUILT CONTOUR (MAJOR)
- AS-BUILT CONTOUR (MINOR)
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- TEMPORARY CONSTRUCTION FENCE
- EXISTING CHAIN-LINK FENCING
- ADDITIONAL CHAIN-LINK FENCING
- CHAIN-LINK FENCE TO REMOVE
- PROPERTY BOUNDARY
- EDGE OF CAP
- EDGE OF LINER EXTENSION

INFILTRATION AREA = 13,293 FT^2

CAP FOOTPRINT = 55,256 FT^2

LINER FOOTPRINT = 77,210 FT^2

0' 30' 60' 90'

1" = 60'

NOTE: THESE DRAWINGS ARE THE PROPERTY OF AMEC ENVIRONMENT AND INFRASTRUCTURE, INC. AND ARE NOT TO BE REPRODUCED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF AMEC ENVIRONMENT AND INFRASTRUCTURE, INC. AND ITS CLIENT.

SOURCE:
POST-CONSTRUCTION TOPOGRAPHIC SURVEY PERFORMED BY DSE & ASSOCIATES, 6/17/2013

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.

CLIENT: BAYER CROPSCIENCE

AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM:	NAD83
PROJECTION:	WA SP S. Ft.
DRAWN BY:	PM
REVIEWED BY:	PS
ORIGINAL SCALE:	AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

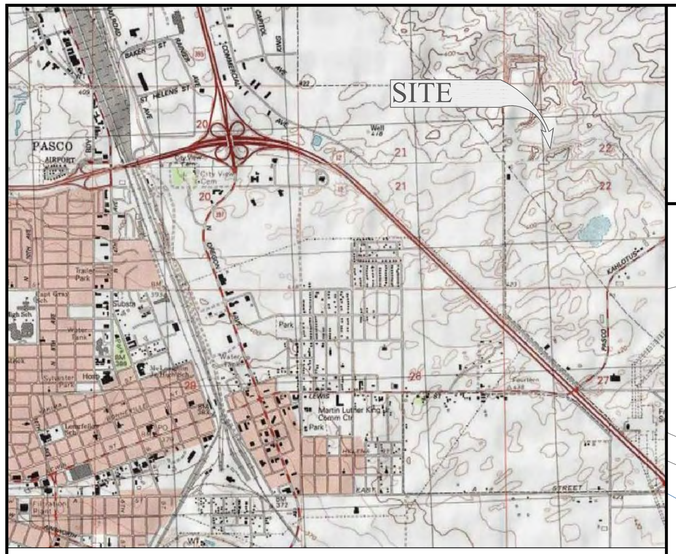
TITLE: COMPACTION TESTING
JUNE 5, 2013

PROJECT NO.:	4-61M-107051
REVISION NO.	A
DATE:	OCTOBER 2013
DRAWING NO.:	3-C
SHEET NO.:	5 of 5

APPENDIX A

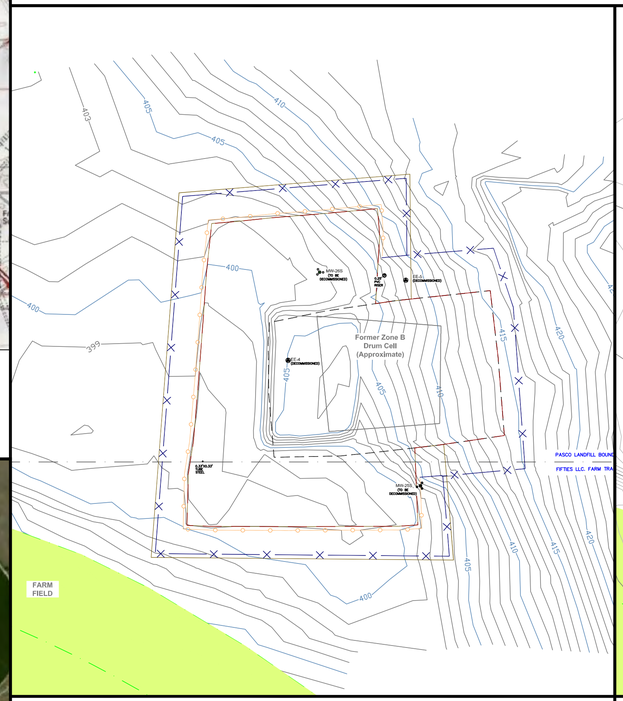
As-Built Drawings

PASCO LANDFILL ZONE B
PASCO, WASHINGTON



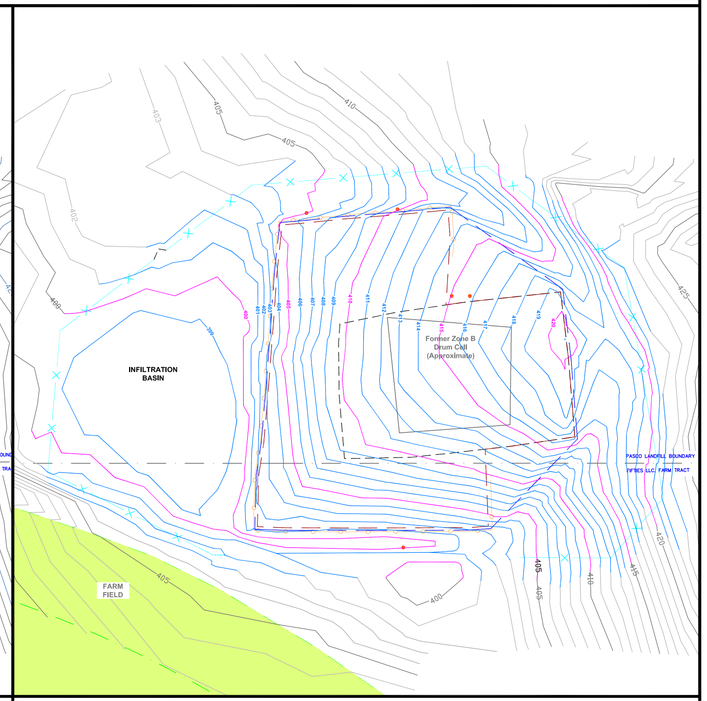
USGS TOPO

AERIAL PHOTO OF SITE



PRE-CONSTRUCTION

0' 30' 60' 90'
1" = 60'



POST-CONSTRUCTION

0' 30' 60' 90'
1" = 60'

LEGEND

- TEMPORARY CONSTRUCTION FENCING
- EXISTING CHAIN-LINK FENCING
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- PROPERTY BOUNDARY
- STUDY AREA
- EXISTING EXCAVATION
- EXISTING CONTOUR MAJOR
- EXISTING CONTOUR MINOR

INDEX OF DRAWINGS

SOURCE:
PRE-CONSTRUCTION TOPOGRAPHIC SURVEY
PERFORMED BY DSE & ASSOCIATES, 11/21/2011

POST-CONSTRUCTION TOPOGRAPHIC SURVEY
PERFORMED BY DSE & ASSOCIATES, 6/17/2013

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.
A	06	02	2013	PROPOSED CAP DESIGN	PS	X
B	08	07	2013	AS-BUILT CAP DESIGN	PS	X

CLIENT: BAYER CROPSCIENCE

AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM: NAD83
PROJECTION: WA SP S. Ft.
DRAWN BY: PM
REVIEWED BY: PS
ORIGINAL SCALE: AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: TITLE SHEET

PROJECT NO.: 4-61M-107051
REVISION NO.: B
DATE: JULY 2013
DRAWING NO.: T-1
SHEET NO.: 1 of 7

K:\10000\10700\10705-1\arc\As-Built\T-1_C-1_C-2_C-3_C-4_C-5_C-6_As-Built.dwg - T-1 - Nov 22, 2013 12:23pm - patrick.mccarthy

LEGEND

- SOIL SAMPLE LOCATION
- ADDITIONAL SOIL SAMPLE BORING
- TEMPORARY CONSTRUCTION FENCING
- EXISTING CHAIN-LINK FENCING
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- PROPERTY BOUNDARY
- STUDY AREA
- EXISTING EXCAVATION
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)

BGS — BELOW GROUND SURFACE

pg/g — PICOGRAMS PER GRAM

TEQ RESULTS

0 TO 3 FEET BGS

- <5 pg/g TEQ
- 5-10 pg/g TEQ
- >10 pg/g TEQ
- 23 — TEQ VALUE > 5 pg/g

3 TO 6 FEET BGS

- INDICATES THE 3 TO 6 FOOT BGS INTERVAL SAMPLE WAS ANALYZED

ALL 3 TO 6 FOOT BGS SAMPLE RESULTS WERE <5 pg/g

NOTES:

1. NO HERBICIDE OR PHENOL ANALYTES WERE DETECTED ABOVE SCREENING LEVELS.

0' 30' 60' 90'
1" = 60'

SOURCE:
TOPOGRAPHIC SURVEY PERFORMED BY DSE & ASSOCIATES, 11/21/2011

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.
A	06	02	2013	PROPOSED CAP DESIGN	PS	X
B	08	07	2013	AS-BUILT CAP DESIGN	PS	X

CLIENT: BAYER CROPSCIENCE

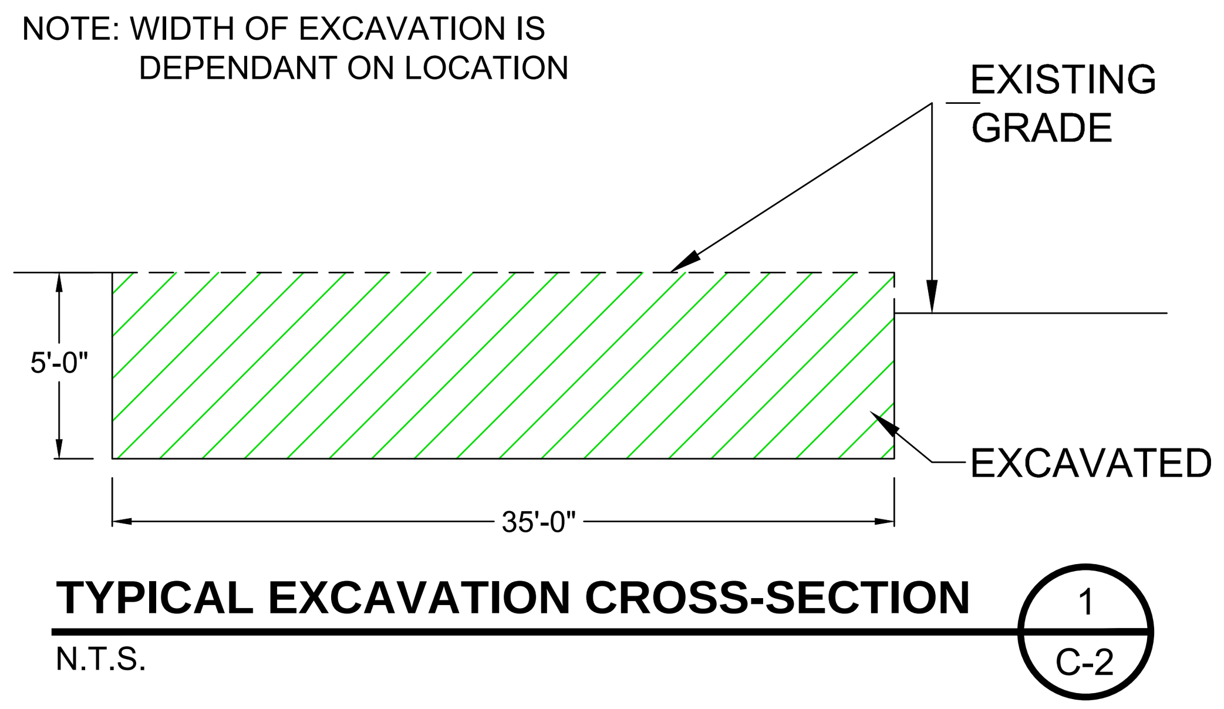
AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

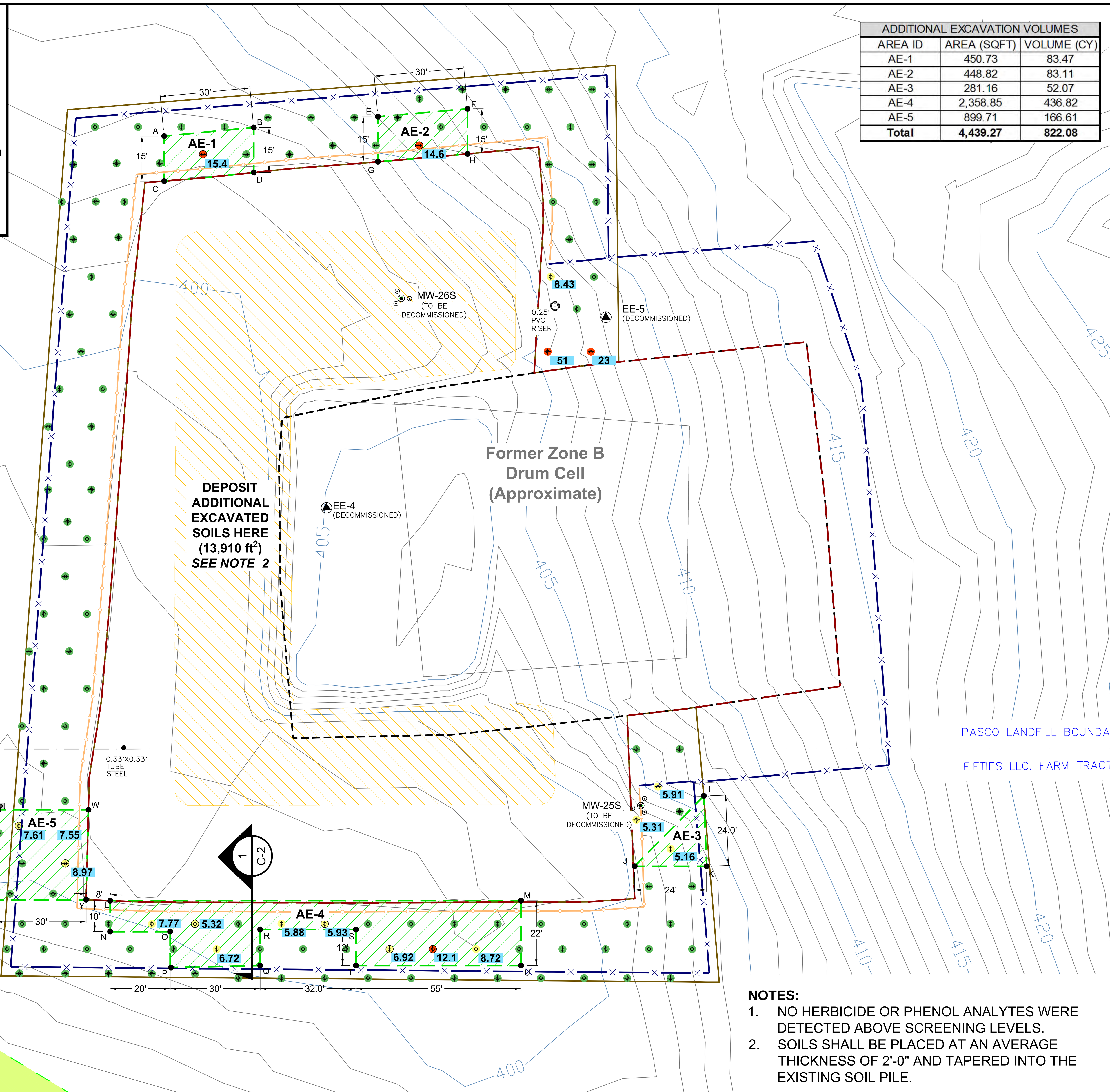
DATUM:	NAD83
PROJECTION:	WA SP S. Ft.
DRAWN BY:	PM
REVIEWED BY:	PS
ORIGINAL SCALE:	AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: PRE-CONSTRUCTION SITE PLAN

PROJECT NO.:	4-61M-107051
REVISION NO.:	B
DATE:	JULY 2013
DRAWING NO.:	C-1
SHEET NO.:	2 of 7





ADDITIONAL EXCAVATION VOLUMES		
AREA ID	AREA (SQFT)	VOLUME (CY)
AE-1	450.73	83.47
AE-2	448.82	83.11
AE-3	281.16	52.07
AE-4	2,358.85	436.82
AE-5	899.71	166.61
Total	**4,439.27**	**822.08**

LEGEND

- SOIL SAMPLE LOCATION
- ADDITIONAL SOIL SAMPLE BORING
- TEMPORARY CONSTRUCTION FENCING
- EXISTING CHAIN-LINK FENCING
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- PROPERTY BOUNDARY
- STUDY AREA
- EXISTING EXCAVATION
- ADDITIONAL EXCAVATION
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)

BGS BELOW GROUND SURFACE

pg/g PICOGRAMS PER GRAM

TEQ RESULTS

0 TO 3 FEET BGS

- <5 pg/g TEQ
- 5-10 pg/g TEQ
- >10 pg/g TEQ
- 23 TEQ VALUE > 5 pg/g

NOTES:

1. NO HERBICIDE OR PHENOL ANALYTES WERE DETECTED ABOVE SCREENING LEVELS.
2. SOILS SHALL BE PLACED AT AN AVERAGE THICKNESS OF 2'-0" AND TAPERED INTO THE EXISTING SOIL PILE.

1" = 60'

SOURCE: TOPOGRAPHIC SURVEY PERFORMED BY DSE & ASSOCIATES, 11/21/2011

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.
A	06	02	2013	PROPOSED CAP DESIGN	PS	X
B	08	07	2013	AS-BUILT CAP DESIGN	PS	X

CLIENT: BAYER CROPSCIENCE

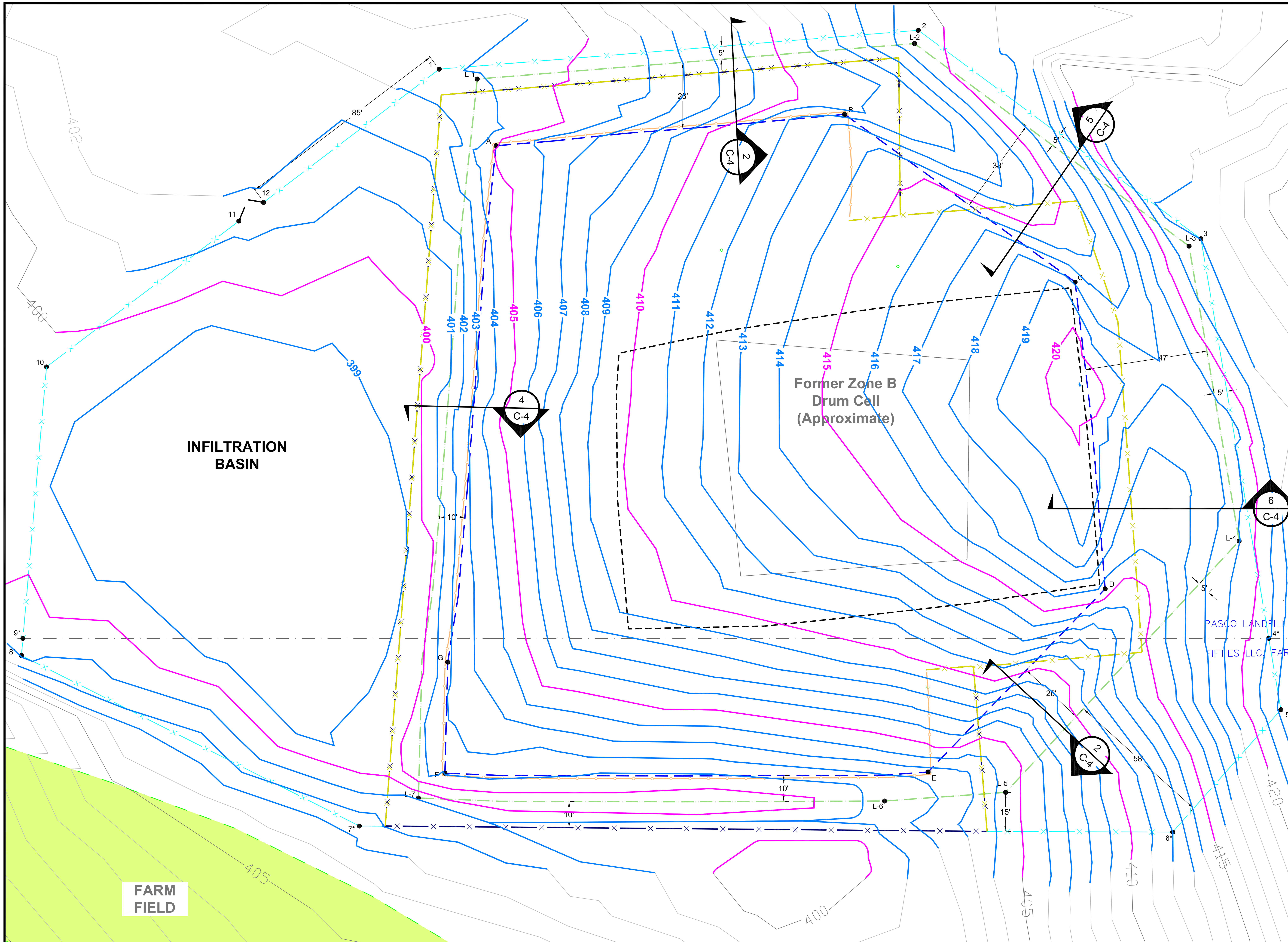
AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM: NAD83
PROJECTION: WA SP S. Ft.
DRAWN BY: PM
REVIEWED BY: PS
ORIGINAL SCALE: AS NOTED

PROJECT: PASCO LANDFILL ZONE B PASCO, WASHINGTON

TITLE: EXTENT OF ADDITIONAL EXCAVATIONS

PROJECT NO.: 4-61M-107051
REVISION NO.: B
DATE: APRIL 2013
DRAWING NO.: C-2
SHEET NO.: 3 of 7



LEGEND

- AS-BUILT CONTOUR (MAJOR)
- AS-BUILT CONTOUR (MINOR)
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- TEMPORARY CONSTRUCTION FENCE
- EXISTING CHAIN-LINK FENCING
- ADDITIONAL CHAIN-LINK FENCING
- CHAIN-LINK FENCE TO REMOVE
- PROPERTY BOUNDARY
- EDGE OF CAP
- EDGE OF LINER EXTENSION

INFILTRATION AREA = 13,293 FT^2

CAP FOOTPRINT = 55,256 FT^2

LINER FOOTPRINT = 77,210 FT^2

CAP CORNER POSITIONS		
CORNER ID	EASTING	NORTHING
A	2007096.095	337633.736
B	2007083.972	337768.6163
C	2007148.855	337857.7879
D	2007267.504	337869.4125
E	2007338.387	337800.8899
F	2007338.848	337613.9354
G	2007295.909	337615.015
WASHINGTON STATE PLANE SOUTH US FEET; NAD 83		

FENCE CORNER POSITIONS		
CORNER ID	EASTING	NORTHING
1	2007066.481	337611.7179
2	2007051.451	337797.1016
3	2007132.105	337906.4597
4*	2007286.692	337932.7127
5*	2007314.294	337937.4002
6*	2007361.641	337895.5366
7*	2007359.298	337580.837
8*	2007293.32	337450.0546
9*	2007286.718	337450.628
10	2007181.681	337459.7506
11	2007125.248	337534.1942
12	2007118.007	337543.7461
* - DENOTES CORNER WITHIN FIFTIES LLC. PROPERTY		
WASHINGTON STATE PLANE SOUTH US FEET; NAD 83		

EDGE OF LINER CORNER POSITIONS		
CORNER ID	EASTING	NORTHING
L-1	2007070.303	337626.4464
L-2	2007056.586	337795.6401
L-3	2007134.931	337901.8681
L-4	2007249.04	337921.2469
L-5	2007346.269	337830.9116
L-6	2007349.615	337784.0416
L-7	2007348.441	337603.6911
WASHINGTON STATE PLANE SOUTH US FEET; NAD 83		

0' 30' 60' 90'
1" = 60'

SOURCE:
TOPOGRAPHIC SURVEY PERFORMED BY DSE & ASSOCIATES, 6/17/2013

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.
A	06	02	2013	PROPOSED CAP DESIGN	PS	X
B	08	07	2013	AS-BUILT CAP DESIGN	PS	X

CLIENT: BAYER CROPSCIENCE

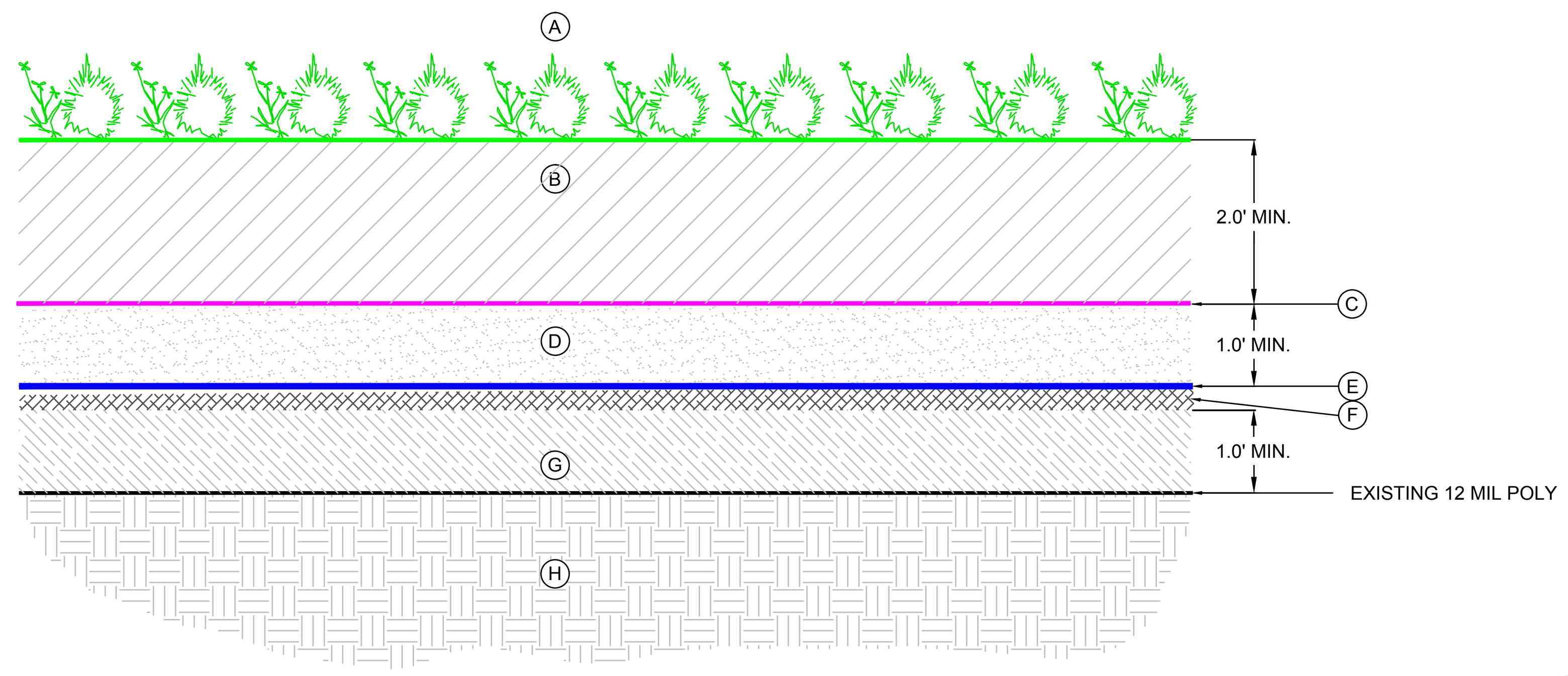
AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM: NAD83
PROJECTION: WA SP S. Ft.
DRAWN BY: PM
REVIEWED BY: PS
ORIGINAL SCALE: AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: SITE GRADING PLAN AND CAP PLAN

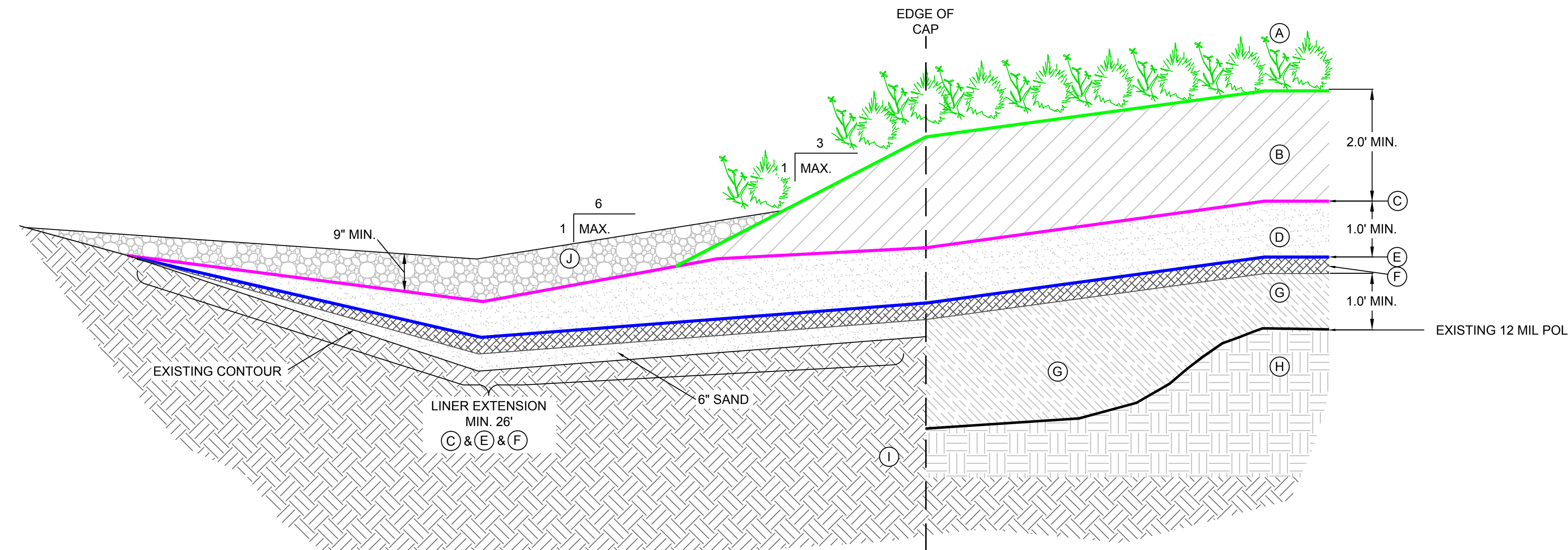
PROJECT NO.: 4-61M-107051
REVISION NO.: B
DATE: JULY 2013
DRAWING NO.: C-3
SHEET NO.: 4 of 7



TYPICAL CAP SECTION

NTS (MINIMUM CAP LAYER THICKNESSES)

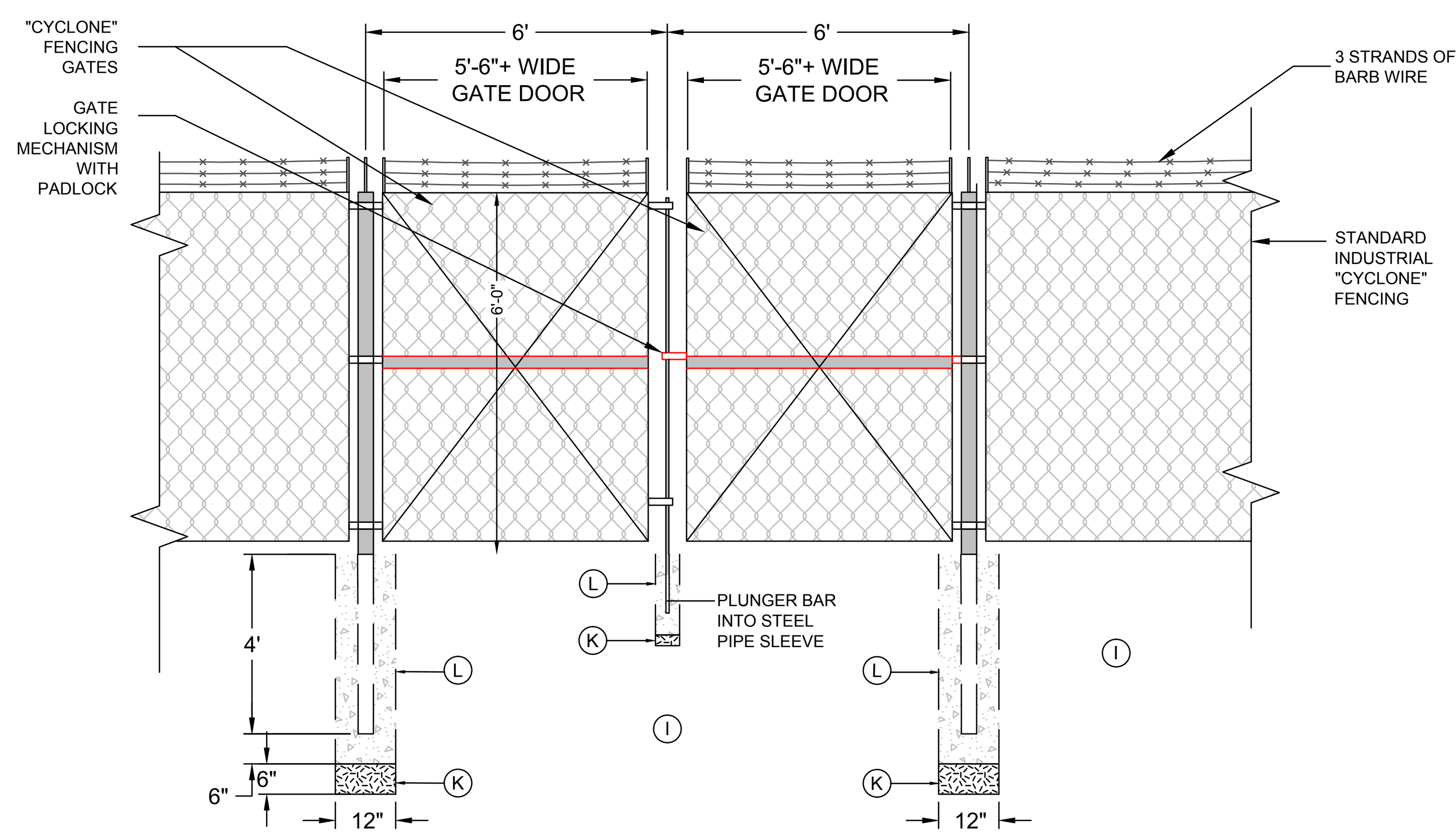
1
C-4



CAP PERIMETER SECTIONS (TYPICAL)

NTS

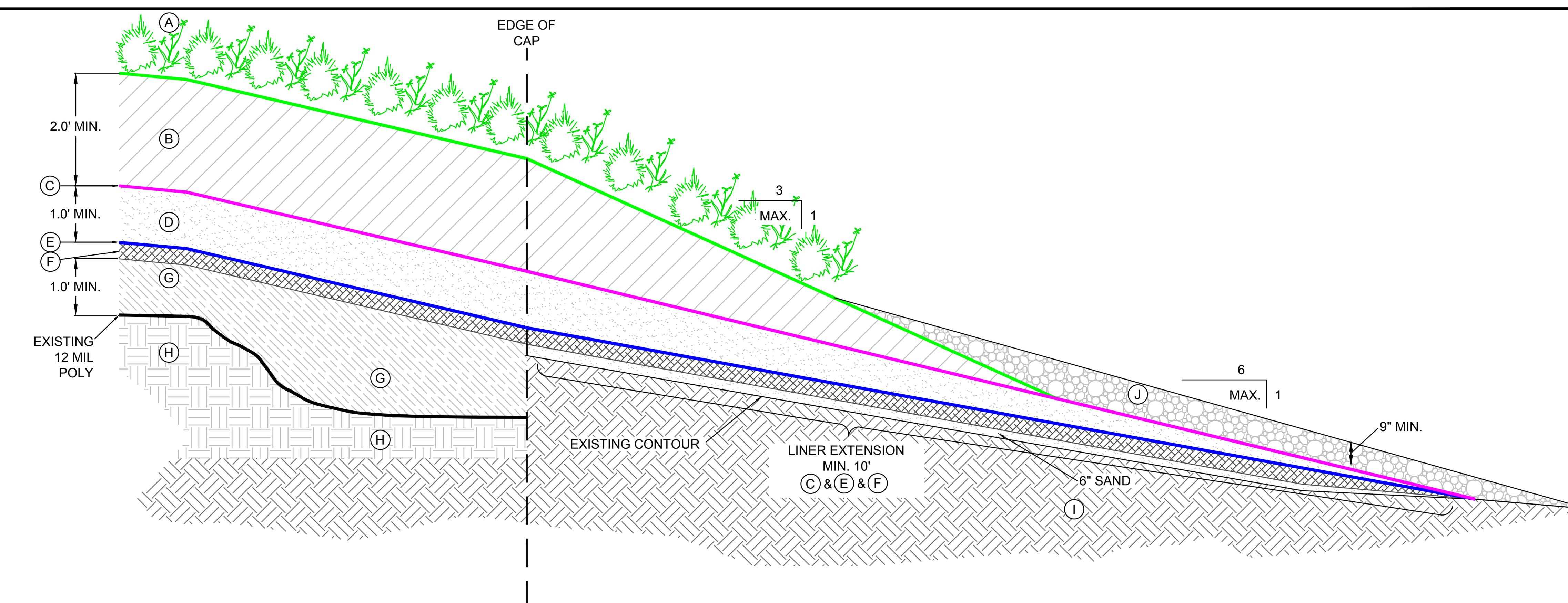
2
C-4



TYPICAL DOUBLE GATE - SECTION VIEW

NTS

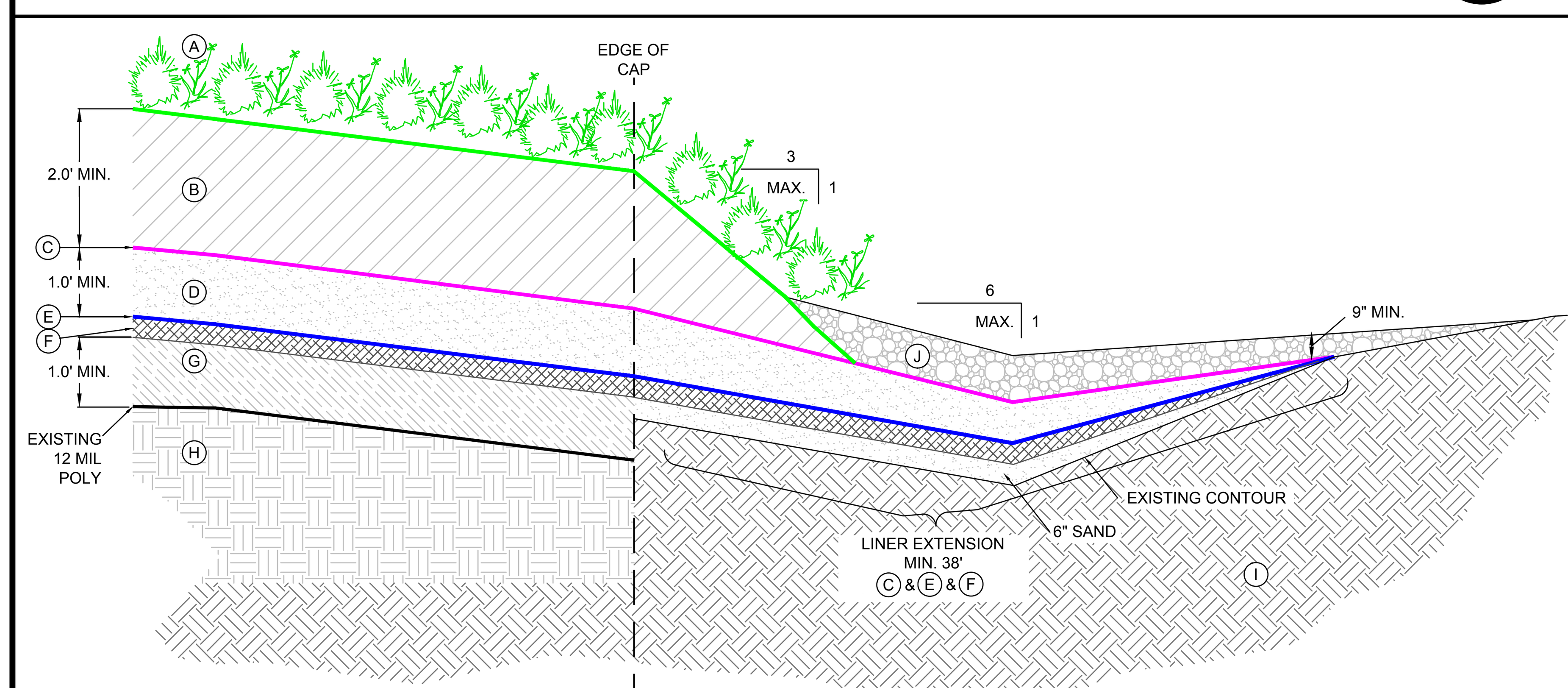
3
C-4



EROSION PROTECTION DETAIL - SOUTH (TYPICAL)

NTS

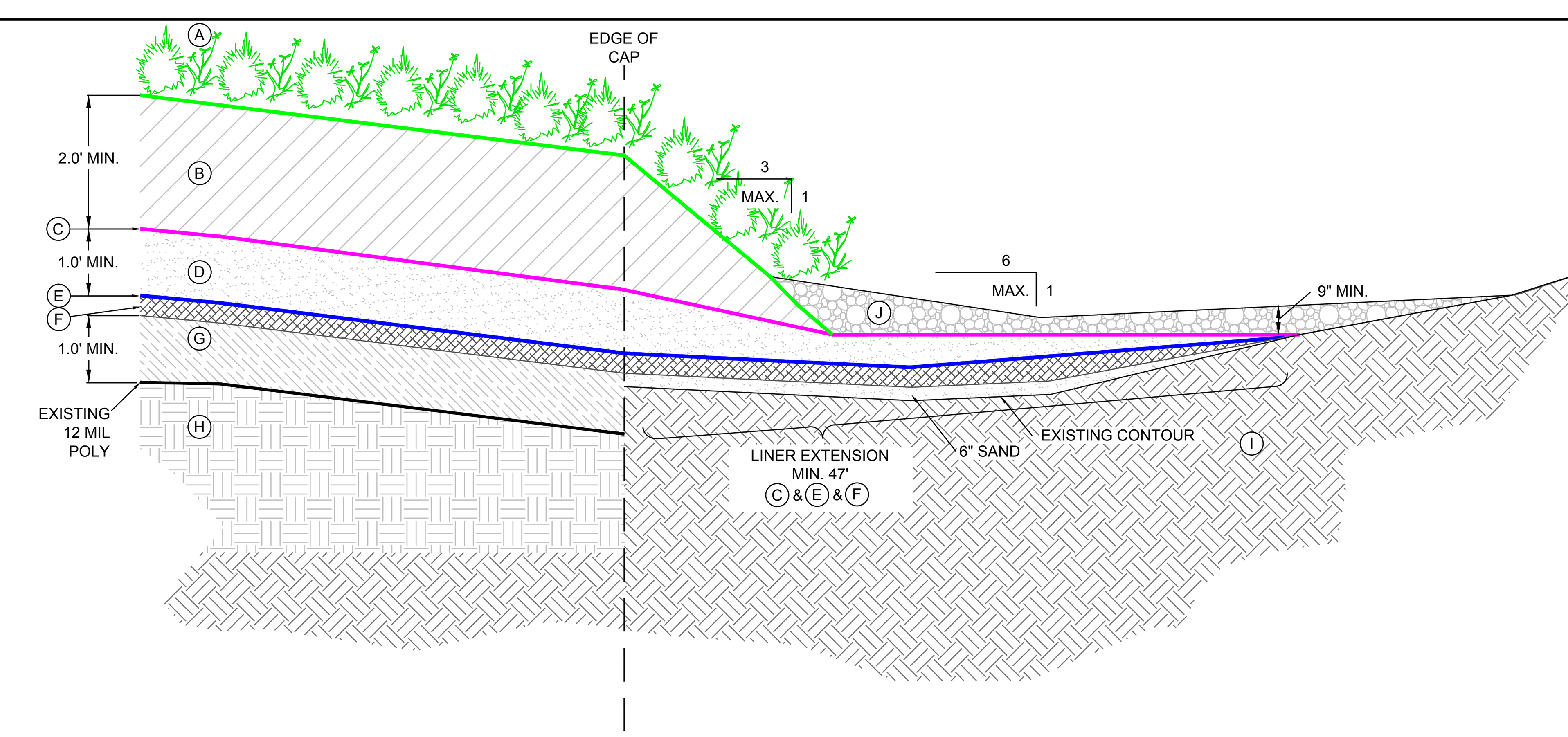
4
C-4



EROSION PROTECTION DETAIL - NORTHWEST (TYPICAL)

NTS

5
C-4



EROSION PROTECTION DETAIL - NORTH (TYPICAL)

NTS

6
C-4

NOTES:

1. THE OUTER PERIMETER OF THE CAP SHALL HAVE SLOPES NO GREATER THAN 3:1. THE EROSION PROTECTION BASE SHALL NOT EXCEED A SLOPE OF 6:1.
2. A LAYER OF ORANGE POLY TEMPORARY CONSTRUCTION FENCING SHALL BE LAID DOWN DIRECTLY OVER THE TOP OF THE GEOTEXTILE TO ACT AS A VISUAL BARRIER FOR ANY FUTURE EXCAVATION WORK TO MITIGATE DAMAGE OF THE GEOMEMBRANE. THIS VISUAL BREAK MATERIAL SHALL COVER THE ENTIRE AREA OF THE GEOMEMBRANCE AND GCL. THE ORANGE POLY FENCING SHALL BE PLACED IN ROWS WITH NO LESS THAN 6" OF OVERLAPPING BETWEEN ROWS.
3. EDGE OF CAP - THE EXTENT OF THE COMPLIANT RCRA C COVER SYSTEM WHICH EXTENDS OVER THE ENTIRE AREA REQUIRING THE CAP BASED ON SITE SAMPLING WORK.

MATERIAL LIST:

A - NATIVE GRASS SPECIES (HYDROSEEDED AFTER CONSTRUCTION)
B - TOPSOIL LAYER
C - GEOTEXTILE LAYER WITH VISUAL BARRIER (TEMP CONSTRUCTION ORANGE POLY FENCE) OVERLYING GEOTEXTILE
D - SAND DRAINAGE MATERIAL
E - LAYFIELD EL6140 GEOMEMBRANE OR EQUIVALENT
F - LAYFIELD GCL OR EQUIVALENT BARRIER
G - NATIVE SOIL / GENERAL CLEAN FILL
H - EXISTING SOILS UNDER EXISTING POLY CAP
I - NATIVE SURROUNDING SOILS
J - 1" to 3" CLEAN CRUSHED ROCK EROSION PROTECTION BASE
K - 3/4" MINUS CRUSHED ROCK
L- CONCRETE

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.
A	06	02	2013	PROPOSED CAP DESIGN	PS	X
B	08	07	2013	AS-BUILT CAP DESIGN	PS	X

CLIENT: BAYER CROPSCIENCE

AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM: NAD83
PROJECTION: WA SP S. Ft.
DRAWN BY: PM
REVIEWED BY: PS
ORIGINAL SCALE: AS NOTED

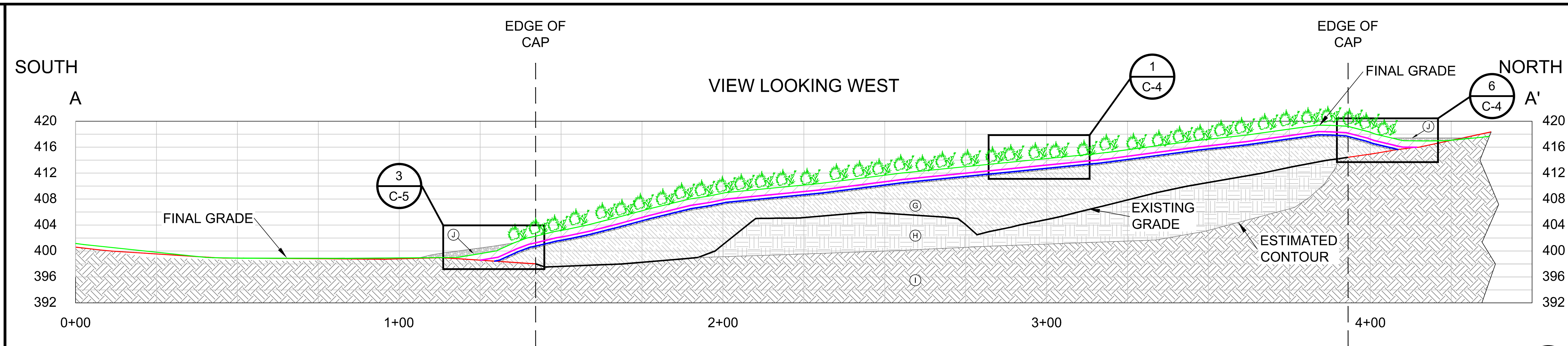
PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: CAP DETAILS

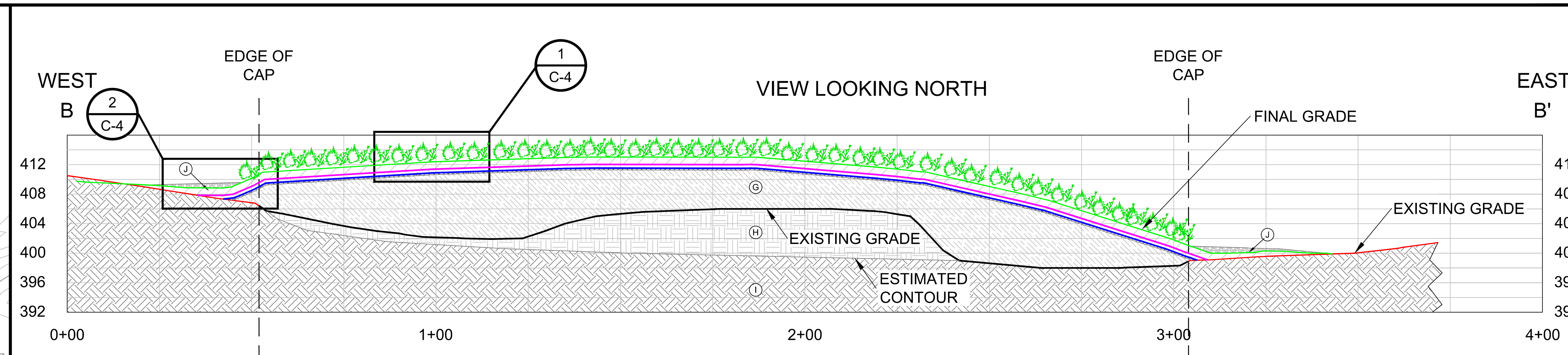
PROJECT NO.: 4-61M-107051
REVISION NO.: B
DATE: JULY 2013
DRAWING NO.: C-4
SHEET NO.: 5 of 7

MATERIAL LIST:

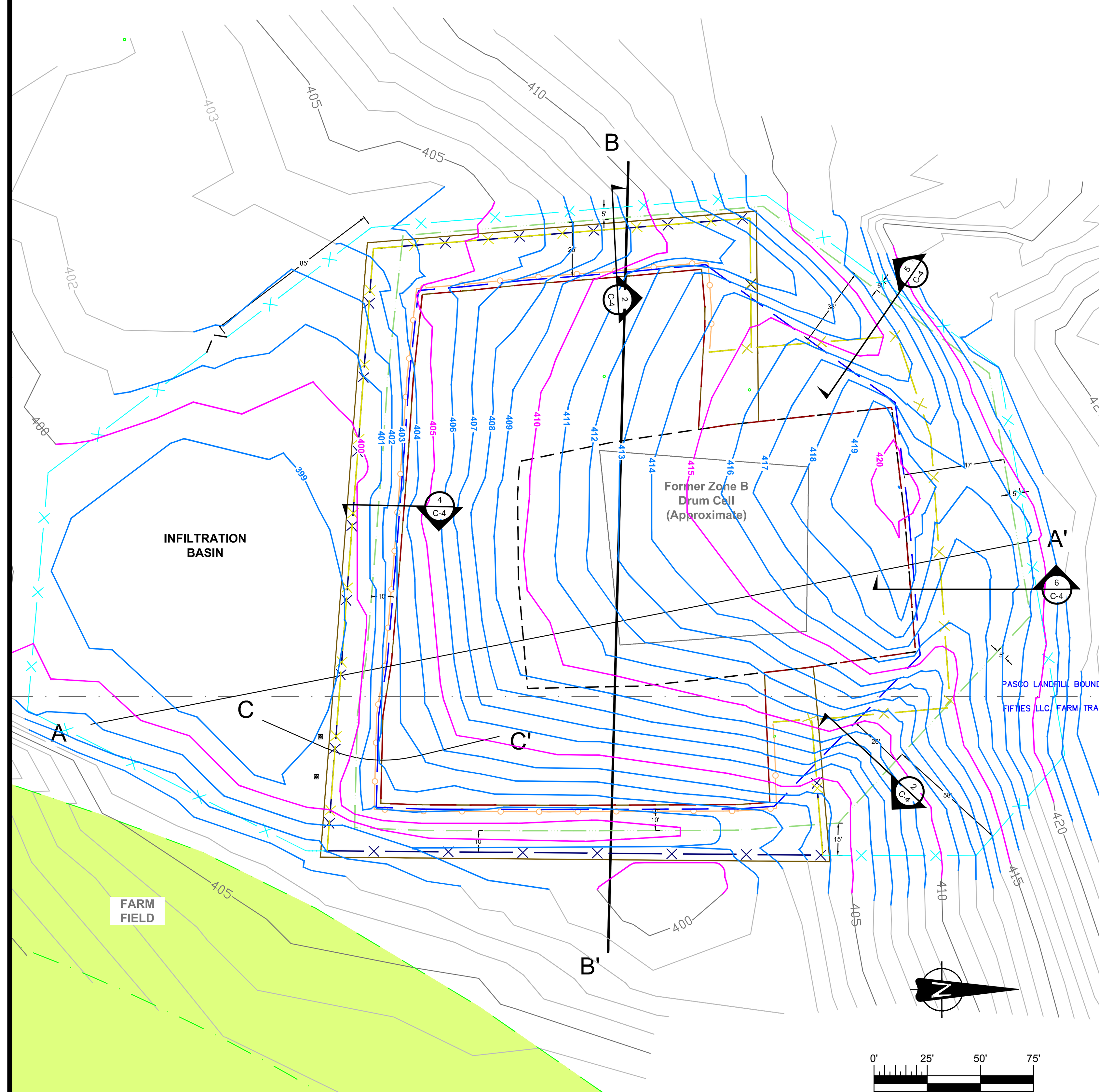
- A - NATIVE GRASS SPECIES (HYDROSEEDED AFTER CONSTRUCTION)
- B - TOPSOIL LAYER
- C - GEOTEXTILE LAYER WITH VISUAL BARRIER (TEMP CONSTRUCTION ORANGE POLY FENCE) OVERLYING GEOTEXTILE
- D - SAND DRAINAGE MATERIAL
- E - LAYFIELD EL6140 GEOMEMBRANE OR EQUIVALENT
- F - LAYFIELD GCL OR EQUIVALENT BARRIER
- G - NATIVE SOIL / GENERAL CLEAN FILL
- H - EXISTING SOILS UNDER EXISTING POLY CAP
- I - NATIVE SURROUNDING SOILS
- J - 1" TO 3" CRUSHED CLEAN ROCK



CROSS-SECTION A-A'
HORIZONTAL SCALE : 1"=20'
VERTICAL SCALE: 1" = 10'
1 / C-5



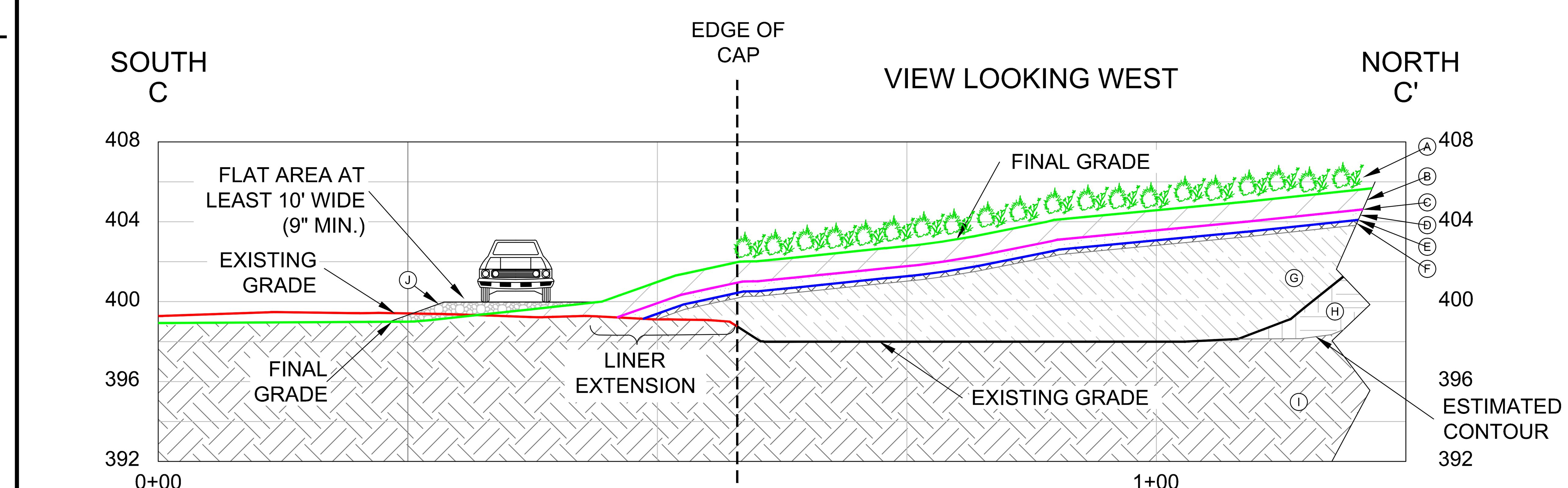
CROSS-SECTION B-B'
HORIZONTAL SCALE : 1"=20'
VERTICAL SCALE: 1" = 10'
2 / C-5



CROSS-SECTION LAYOUT
1"=50'
4 / C-5

CROSS-SECTION LAYOUT LEGEND

- AS-BUILT CONTOUR (MAJOR)
- AS-BUILT CONTOUR (MINOR)
- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXTENT OF TEMPORARY 12 MIL PLASTIC COVER PLACED IN 2002
- TEMPORARY CONSTRUCTION FENCE
- EXISTING CHAIN-LINK FENCING
- ADDITIONAL CHAIN-LINK FENCING
- CHAIN-LINK FENCE TO REMOVE
- PROPERTY BOUNDARY
- EDGE OF CAP



CROSS-SECTION C-C'
HORIZONTAL SCALE : 1"=10'
VERTICAL SCALE: 1" = 5'
3 / C-5

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.
A	06	02	2013	PROPOSED CAP DESIGN	PS	X
B	08	07	2013	AS-BUILT CAP DESIGN	PS	X

CLIENT: BAYER CROPSCIENCE

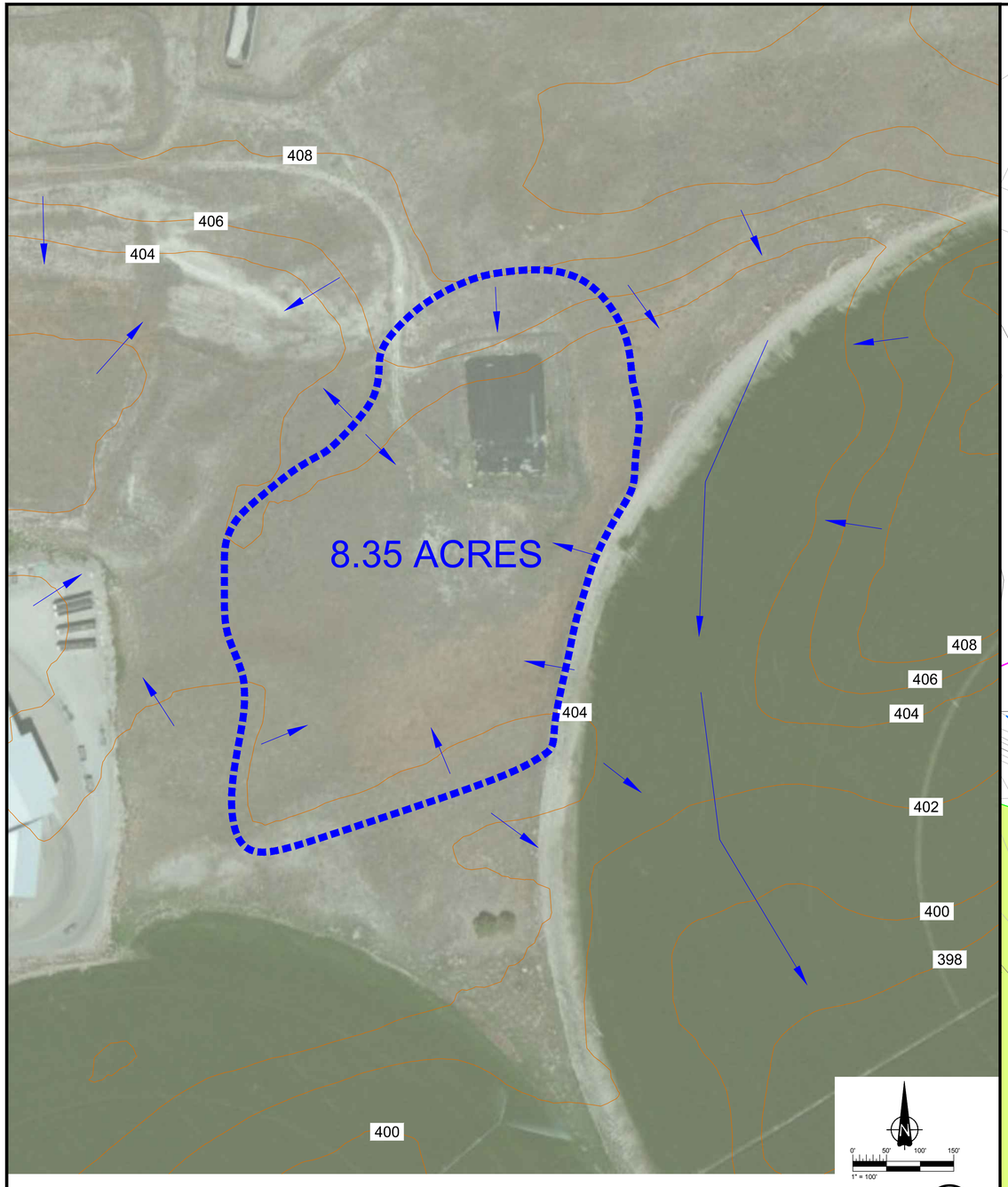
AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM:	NAD83
PROJECTION:	WA SP S. Ft.
DRAWN BY:	PM
REVIEWED BY:	PS
ORIGINAL SCALE:	AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: CAP CROSS SECTIONS

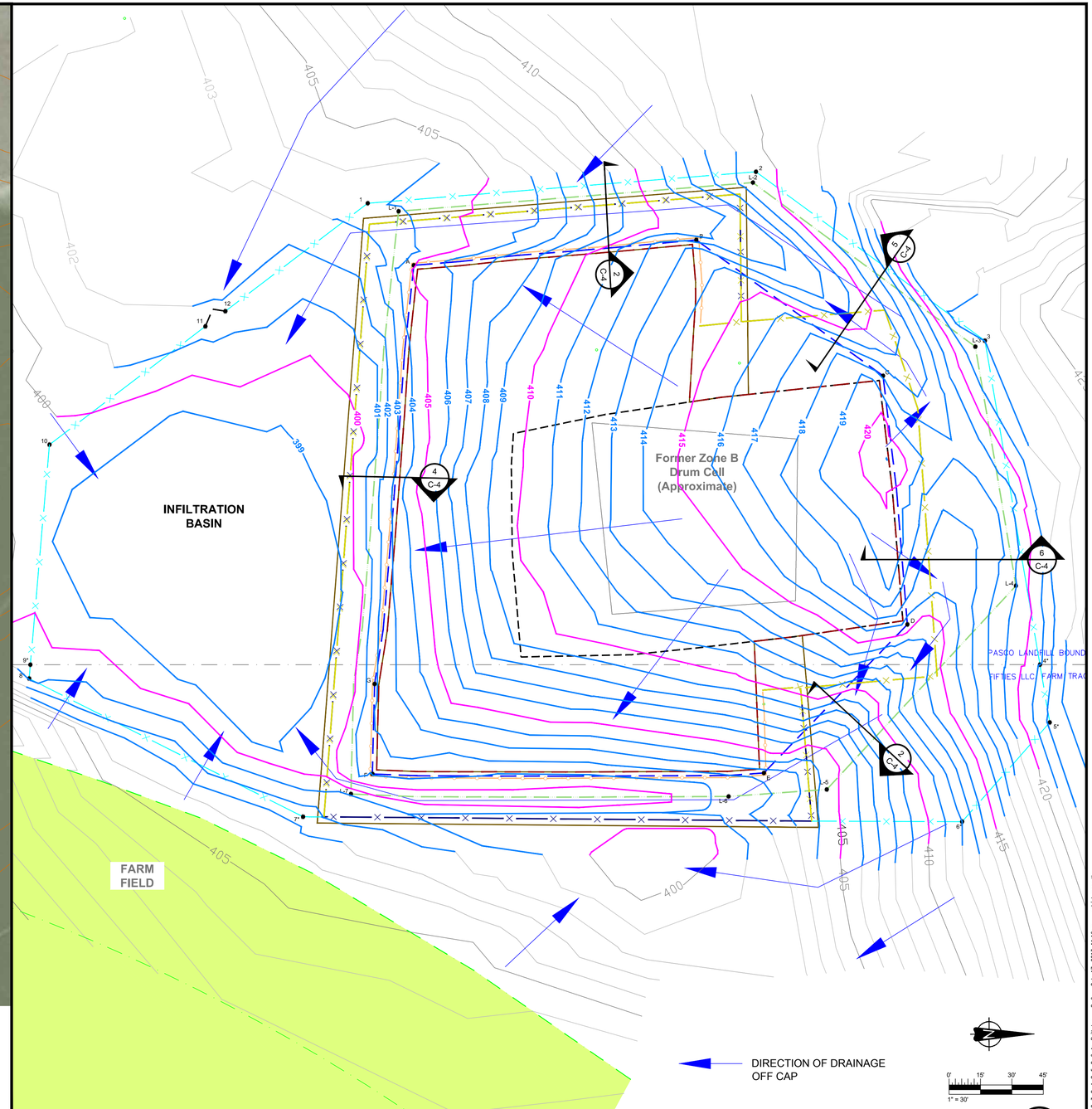
PROJECT NO.:	4-61M-107051
REVISION NO.:	B
DATE:	JULY 2013
DRAWING NO.:	C-5
SHEET NO.:	6 of 7



ESTIMATED DRAINAGE AREA

1"=100'

1
C-6



CAP DRAINAGE PATTERN

1"=30'

2
C-6

NOTE: THESE DRAWINGS ARE THE PROPERTY OF AMEC ENVIRONMENT AND INFRASTRUCTURE, INC. AND ARE NOT TO BE REPRODUCED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF AMEC ENVIRONMENT AND INFRASTRUCTURE, INC. AND ITS CLIENT.

REV	DATE	MONTH	YEAR	REVISION DESCRIPTION	ENG.	APPR.
A	06	02	2013	PROPOSED CAP DESIGN	PS	X
B	08	07	2013	AS-BUILT CAP DESIGN	PS	X

CLIENT: BAYER CROPSCIENCE

AMEC
7376 S.W. Durham Road
Portland, OR. U.S.A. 97224

DATUM: NAD83
PROJECTION: WA SP S. Ft.
DRAWN BY: PM
REVIEWED BY: PS
ORIGINAL SCALE: AS NOTED

PROJECT: PASCO LANDFILL ZONE B
PASCO, WASHINGTON

TITLE: ESTIMATED DRAINAGE BASIN AND CAP DRAINAGE PATTERN

PROJECT NO.: 4-61M-107051
REVISION NO. B
DATE: JULY 2013
DRAWING NO.: C-6
SHEET NO.: 7 of 7

K:\10000\107000\107051\Cad\As-Built\1_1-C-1_C-2_C-3_C-4_C-5_C-6_As-Built.dwg – C-6 – Oct. 17, 2013 11:16pm – patrick.mccarthy

APPENDIX B

Daily Tailgate / Inspection Report

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 20th 2013
Site Location:	Pasco, Washington	**Page:**	1 of
Arrival:	8:30 AM	**Departure:**	
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Set-up / Mobize - equipment driving about / traffic (pay attention to traffic)
2) Fence cutting - cutting equipment to remove / cut fencing (proper PPE)
3) Garbage clean-up - use proper gloves / PPE
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	8:30AM					X	
Sean Gormley	AMEC E & I	N/A						
Robin Johnston	AMEC E & I	N/A						
Steve Anderson	AEC							
Rod Rea	AEC	9:15					X	
Noah Brandt	AEC	12:45					X	
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	9:15					X	
Dan Namock	AEC	9:15					X	
Robert Anderson	AEC	9:15					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** Adsorbent pads / booms / containment

Fire Extinguisher Kit(s): (YES) / NO **Notes:** All equipment has individual extinguishers

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray for under fueling

General Notes: Spill Kits: 1 large drum kit
2 5-gallon bucket kits

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 21, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00AM	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Heat Stress - warm/hot day - drink often
2) Rock truck traffic - watch for traffic, keep eye contact
3) Excavator grubbing/fence removal - direct eye contact, watch boom
4) Dust control - water truck/trailer on main road
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00AM					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	600					X	
Noah Brandt	AEC	600					X	
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	6:00					X	
Dan Namock	AEC	6:00					X	
Robert Anderson	AEC	6:00					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) NO **Notes:** One in each truck / one in excavator

Secondary Containment Kit(s) for Fueling: (YES) NO **Notes:** Fiberglass tray

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 22, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00 Am	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Digging in impacted zones - proper PPE and decontamination procedures
2) Truck/equipment traffic - Dump trucks, crew trucks, heavy equipment
3) Demo work - watch step and debris
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00Am					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	600					X	
Noah Brandt	AEC	600					X	
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	600					X	
Dan Namock	AEC	600					X	
Robert Anderson	AEC	600					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks / equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Used during fueling / greasing

General Notes: AEC wore dust masks during windy periods / excavation and backfilling work.

DAILY TAILGATE / INSPECTION REPORT

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 23, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	5:30 AM	**Departure:**	18:05
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Truck / equipment traffic - gravel dump trucks / heavy equipment - watch out
2) Dust control - keep gravel / soils damp with water truck / trailer
3) Demolition work - demo/removal of fence be aware of hazards and wear gloves
4) Heat - temperatures should get warmer - keep hydrated and wear appropriate clothing
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	5:30AM					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	5:30 AM					X	
Noah Brandt	AEC	5:30					X	
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	5:30	X				X	
Dan Namock	AEC	5:30					X	
Robert Anderson	AEC	5:30					X	
Nicole Lucero	AEC	10:15					X	
Chuck Gruenenfelder	Ecology	10:20					X	
Jeremy Schmidt	Ecology	10:20					X	
Richard Kamionka	NWR	11:45					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 5-gallon bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** On equipment / trucks

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray kit

General Notes: Wear dust masks when needed

DAILY TAILGATE / INSPECTION REPORT

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 24, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00	**Departure:**	12:35
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Gravel grading / Equipment - Watch out for equipment and traffic
2) Fence installation - One man auger and two man crew (watch out for crew)
3) Old cyclone fence removal - Excavator to remove and move to dump truck
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00AM					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	~~7:00~~ 6:00					X	
Noah Brandt	AEC	6:00 AM					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	6:00 AM					X	
Dan Namock	AEC	6:00					X	
Robert Anderson	AEC	6:00AM					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** in trucks / equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Used for equipment fueling

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 28th 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	7:30 AM	**Departure:**	16:40
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Equipment / Gravel Trucks - watch out for equipment / traffic
2) Debris / garbage removal - move all materials with equipment
3)
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:30					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	730					X	
Noah Brandt	AEC	7:30					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	7:30					X	
Dan Namock	AEC	7:30					X	
Robert Anderson	AEC	730					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** in equipment / trucks

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:**

General Notes: Grading of "G" layer and debris removal

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 29, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	7:00 AM	**Departure:**	16:50
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Gravel deliverics / equipment work - watch out for equipment / eye contact
2) Grading work - bulldozer / roller in close quarters / watch out for equipment
3) Surveyor grading - watch out for surveyor in construction zone
4) Slippery equipment - wet equipment makes it slippery on/off
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC	10:35					X	
Rod Rea	AEC	700					X	
Noah Brandt	AEC	700					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	7:00					X	
Dan Namock	AEC	7:00					X	
Robert Anderson	AEC	7:00					X	
TIM SCOTT	T+C CONST STAFF	7:00					X	
C. Govenenfelder	Ecology	10:15					X	
J. Schmidt	Ecology	10:15					X	
L. Perales	IMT	16:00					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:**

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass pan kit

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 30, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	7:00	**Departure:**	17:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Gravel truck deliveries – watch out for truck traffic
2) Construction equipment –
3)
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	700					X	
Noah Brandt	AEC	700					X	PPT ISO N13
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	7:00					X	
Dan Namock	AEC	7:00					X	
Robert Anderson	AEC	7:00					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** On trucks / equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	May 30, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	7:00	**Departure:**	17:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Gravel delivery trucks - watch out for trucks
2) Construction Equipment - eye contact / proper PPE
3) Dust control - water down site
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	700					X	
Noah Brandt	AEC	700					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	7:00					X	
Dan Namock	AEC	7:00					X	
Robert Anderson	AEC	700					X	
Leo Perales	IMT	7:15					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** On equipment / trucks

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass pan

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 3, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	8:00 AM	**Departure:**	17:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Gravel / Sand / Topsoil Trucks - lots of traffic today (watch out)
2) Construction Equipment - Visual connection when close to equipment
3) Heat - wear protection / sunscreen and keep up fluids
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	8:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	8:00					X	
Noah Brandt	AEC	800					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	8:00					X	
Dan Namock	AEC							
Robert Anderson	AEC	800					X	
TIM SCOTT	T&C Const	1120					X	
Bennet Gerba	AEC	2:40pm					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:**

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 4, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	7:00	**Departure:**	17:15
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Delivery trucks - watch out for truck traffic
2) Construction Equipment - watch out for AEC construction equipment
3) Heat - Hot weather => use sunscreen and drink water
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	700					X	
Noah Brandt	AEC	7:00					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	7:00					X	
Dan Namock	AEC							
Robert Anderson	AEC	7:00					X	
Bennet Geiba	AEC	7:00					X	
Leo Perales	IMT	8:30					X	
JEFF SAVAGE	TRIAD ASSOCIATES	12:45					X	
LUKE MILLER	TRIAD ASSOC.	12:45					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:**

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray with pads

General Notes: IMT tech on-site in morning and afternoon.

DAILY TAILGATE / INSPECTION REPORT

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 5, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	7:00	**Departure:**	17:05
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Truck traffic - Watch out for truck traffic / deliveries all over site
2) Equipment use - Roller, water truck, bulldozer, trackhoe, loader all working
3) Heat - Drink often, sunscreen, watch out for each other.
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	700					X	
Noah Brandt	AEC	700					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	7:00					X	
Dan Namock	AEC							
Robert Anderson	AEC	7:00					X	
Bennet Gerba	AEC	7:00					X	
Nicole Lucero	AEC	7:00					X	
JEFF SAVAGE	TRIAD ASSOC.	9:20					X	
LUKE MILLER	TRIAD ASSOC.	9:20					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** Drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:**

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 6, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	7:00	**Departure:**	16:40
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Truck traffic - be aware of soil/topsoil truck traffic
2) Equipment work - be aware/eye contact with roller, bulldozer, excavator, loader, etc.
3) Heat - drink often and use protection/watch each other
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	700					X	
Noah Brandt	AEC	700					X	PDS NJB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	7:00					X	
Dan Namock	AEC							
Robert Anderson	AEC	700					X	
Brian Gerber	AEC	7:00					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) NO **Notes:** In trucks/equipment

Secondary Containment Kit(s) for Fueling: (YES) NO **Notes:** Fiberglass tray and absorbent pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 7, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:45	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Truck traffic - Watch out for sand / topsoil delivery trucks
2) Construction Equipment - Roller, loader, trackhoe, and forklift equipment - eye contact
3) Heat - Drink, coverup, use sunscreen as necessary
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:45					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	645					X	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC							
Robert Anderson	AEC							
[illegible]	AEC	6:45	X				X	
Alejandro Santana	NWL	1:15 PM					X	Alejandro Santana
Matolio CRUZ	NWL	1:15 PM					X	Matolio CRUZ

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 55 gal drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks and equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** 1 fiberglass tray and absorpent pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 8, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00AM	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Construction Equipment – eye contact and be careful to avoid
2) Heat – watch out for each other and drink often
3) Liner equipment – rolls and equipment are heavy and could roll over someone
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	600					X	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC						X	
Robert Anderson	AEC							
Alejandro Santana	NWL	6:00 AM					X	
Bunnel Cruz A	NWL	6:00 AM					X	
Gerardo – Sr	NWL	6:00 AM					X	
MOISES	NWL	6:00 AM					X	
Arturo Rebollo	NW.L	6:00 AM					X	
Natalio CRUZ	NW L	6:00 AM					X	
Bennet Gerlz	AEC	6:00 AM	X				X	
Mike Greenwood	AEC	8:10					X	
DAVID Hook	AEC	8:10					X	
		8:10						

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In equipment /

Secondary Containment Kit(s) for Fueling: (YES) NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

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Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 9, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00 AM	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Construction Equipment – AEC and NWL construction equipment – watch out / eye contact
2) Hot tools / liner – Wear gloves when handing hot tools and liner
3) Weather (Heat) – Keep hydrated and watch out for each other / use sunscreen
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	600					X	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC	6:00					X	
Robert Anderson	AEC							
Mike Greenwood	AEC	600					X	
Bennet Gerba	AEC	6:00					X	
DAVID Hook	AEC	6:00					X	
Alejandro Santana	NWL	7:00					X	
Manuel Cruz	NWL	7:00 AM					X	
Mario Cruz	NWL	7:00AM					X	
Natolio CRUZ	NWL	7:00AM					X	
Guardo Salgado	NWL	7:00AM					X	
Arturo Rebollo	NWL	7:00AM					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In equipment / trucks

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 10, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1 ~~18:45~~
Arrival:	6:00 AM	**Departure:**	18:45
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Construction Equipment – Eye contact and be aware of workers on BD/TeleH/Loader/Trackhoe/Roller/Dump Truck
2) Heat – Hydrate often watch each other for heat stress
3) Truck traffic – Watch out for dump truck and GCL delivery
4) Hot tools – Wear gloves and be aware hot tools on liner and around workers
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00AM					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	600					X	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC	6:00					X	
Robert Anderson	AEC							
Bennet Gerber	AEC	6:00	X				X	
DAVID HOOK	AEC	6:00					X	
Mike Cruse	AEC	600					X	
Alejandro Santana	NWL	7:00					X	
Moises Cruz	NWL	7:00					X	
Natolio CRUZ	NWL	7:00AM					X	
Runnel Cruz	NWL	7:00AM					X	
Gerardo Salgado	NWL	7:00AM					X	
Arturo Rebollo	NWL	7:00AM					X	
Jaremy Schmidt	Ecology	10:45					X	
Chuck Gruenenfelder	Ecology	10:45					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In equipment and trucks

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass trays and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 11, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00 AM	**Departure:**	18:30
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Heat – Keep hydrated and watch other workers for heat stress
2) Construction Equipment – Maintain eye contact and watch out for
3) Truck traffic – Perimeter rock truck deliveries - watch out for trucks
4) Hot tools – HPDE welding tools are hot - wear gloves
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	600					8	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC	6:00					X	Dan Namock
Robert Anderson	AEC							
Bennet Gerke	AEC	6:00					X	
Mike Greenwood	Aec	6:00					X	Mike Greenwood
DAVID Hook	AEC	6:00					X	David Hook
Runnel Cruz	NWL	7:00 am					X	
Gerardo Sa-	N	7:00 am					X	
Alejandro Santana	NWJ	7:00					X	Alejandro Santana
Mario Cruz	NWL	7:00					X	
Arturo Rebollo	NWL	7:00					X	
Natolio CRUZ	NWL	7:00AM					X	Natolio CRUZ

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** Drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks and equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 12, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00 AM	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Construction Equipment - Eye contact with operators (loader/bulldozer/DT/TH)
2) Truck traffic - Rock deliveries during the day watch out
3) Heat - Keep hydrated and watch each other for heat stress
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	6:00					X	
Noah Brandt	AEC	6:00					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	6:00					X	
Dan Namock	AEC	6:00					X	
Robert Anderson	AEC	6:00					X	
Dennot Gomez	AEC	6:00					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 ~~bucket~~ bucket

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In ~~trucks~~ and equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray + pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 13, 2013
Site Location:	Pasco, Washington	**Page:**	1 of
Arrival:	6:00	**Departure:**	
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Construction Equipment - Eye contact and watch out for loader/trackhoe/DT/BD
2) Truck traffic - Watch out for rock delivery trucks/trailers
3) Heat - Keep hydrated and watch each other for heat stress.
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	600					X	
Noah Brandt	AEC	600					X	NB
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	6:00	X				X	
Dan Namock	AEC	6:00					X	
Robert Anderson	AEC	600	X				X	
Bennet Gerba	AEC	6:00	X				X	
William Boyd	Ricks Fencing	8:40					X	
Ben Fitzgerald	Ricks Fencing	8:40					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks and equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

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7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 14, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	5:00 AM	**Departure:**	12:35
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Heat - Keep hydrated and watch each other for heat stress
2) Construction Equipment - Keep eye contact and be aware of dump truck, trackhoe, water truck, loader, bulldozer
3)
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	5:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	500					X	
Noah Brandt	AEC	500					X	
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC	5:00	X				X	
Dan Namock	AEC	5:00					X	
Robert Anderson	AEC	500					X	
	AEC	5:00					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** Drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks and equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

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Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 17, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	8:00	**Departure:**	18:20
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Fence installation - Wear proper PPE for installation work
2) Construction Equipment - Keep eye contact with operators of loader, BD, DT, WT
3) Heat - Keep hydrated and watch each other for heat stress
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	8:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	8:00					X	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC							
Robert Anderson	AEC	8:00	*				X	
Bennet Gerbe	AEC	8:00	*				X	
William Boyd	Ricks Fence	8:40					X	
Charles Zyph	Ricks Fence	8:40					X	
Brandon Groulx	Ricks Fence	11:00					X	
Ed Dewlow	DSE	2:00					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks / equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec
Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 18, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	6:00 AM	**Departure:**	18:45
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Construction Equipment – Keep eye contact around trucks, Bulldozer, trackhoe, WT
2) Heat – Keep hydrated and watch out for each other for heat stress
3) Fencing Installation – Use proper PPE for installation work (gloves, eye gear, etc)
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	6:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	6:00					X	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC							
Robert Anderson	AEC	6:00					X	
Bennet Gerba	AEC	6:00	X				X	
William Boyd	Ricks Fence	7:25					X	
Charles Zapp	Ricks Fence	7:25					X	
Ed DeMuth	DSE	9:00					X	
Brandon Gouley	Ricks Fence	12:45					X	
Anthony Wakefield	Ricks Fencing	4:40					X	

INSPECTION LOG:

Spill Containment Kit(s): (YES) / NO **Notes:** 1 drum kit / 2 bucket kits

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks / equipment

Secondary Containment Kit(s) for Fueling: (YES) / NO **Notes:** Fiberglass tray and pads

General Notes:

DAILY TAILGATE / INSPECTION REPORT

amec

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 19, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	@ 7:00 AM	**Departure:**	18:55
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Construction Equipment - Eye contact and give space to bulldozer, water truck, ~~etc~~ etc.
2) Trucks - Fencing and hydroseeding truck traffic, look out for each other
3) Hand Tools - Wear gloves and eye gear when needed and use tools properly
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:00					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC	700					X	
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC	7:00					X	
Robert Anderson	AEC							
Bennet Gerk	AEC	7:00	X				X	
Steve Webb	WLI	7:50					X	
Ivan Cervantes	W.I.	7:50					X	
William Boyd	Ricks Fence	7:50					X	
Charles Zypk	Ricks Fence	7:50					X	
Brandon Gowens	Ricks Fence	7:50					X	
C. Gruenenfelder	ECOLOGY	10:15					X	
J. Schmidt	Ecology	10:15					X	
William A Wakefield	Ricks Fencing	11:30					X	
		12:40					X	

INSPECTION LOG:

Spill Containment Kit(s): YES / (NO) **Notes:** No fueling / transfer today

Fire Extinguisher Kit(s): (YES) / NO **Notes:** In trucks / equipment

Secondary Containment Kit(s) for Fueling: YES / (NO) **Notes:** No fueling / transfer today

General Notes:

DAILY TAILGATE / INSPECTION REPORT

Environment & Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Project No:	4-61M-10705-1 P-02	**Date:**	June 20, 2013
Site Location:	Pasco, Washington	**Page:**	1 of
Arrival:	7:55 AM	**Departure:**	16:15
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Safety Topics

1) Fencing installation - wear proper PPE / gloves for work
2)
3)
4)
5)

Name (Print)	Company	Arrival Time	SSO	PPE A	PPE B	PPE C	PPE D	Signature
Paul Stull, PE	AMEC E & I	7:55					X	
Sean Gormley	AMEC E & I							
Robin Johnston	AMEC E & I							
Steve Anderson	AEC							
Rod Rea	AEC							
Noah Brandt	AEC							
Archie Smith	AEC							
Curt Lichtenstein	AEC							
Brian Johnson	AEC							
Dan Namock	AEC							
Robert Anderson	AEC							
William Boyd	Ricks Fence	8:15					X	
Charles Zypp	Ricks Fence	8:15					X	
Brandon Gooch	Ricks Fence	11:45					X	
Eric Jensen	Ricks Fence	10:00					X	

INSPECTION LOG:

Spill Containment Kit(s): YES / (NO) **Notes:** No fueling

Fire Extinguisher Kit(s): (YES) / NO **Notes:** On truck

Secondary Containment Kit(s) for Fueling: YES / (NO) **Notes:** No fueling

General Notes: Only one truck with Rick's Fencing crew of 2 today
Second truck arrived @ 11:45 with 1 crew

APPENDIX C

Daily Field Reports

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 20, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	8:30	**Departure:**	17:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Sunny and mild - 70s to 80s		

FIELD REPORT NOTES

Time:	Field Notes:
8:30	Arrival at the site. Inspected the site and took some pre-construction pictures. AEC excavator on-site
9:00	Talked with Eric Jensen prior to AEC arriving.
9:15	AEC arrives at the site (3-men) with crew truck, watering trailer, dump truck. Conducted tailgate safety mtg.
10:10	Conducted some dust monitoring of north and south sides of the site. AEC prepping for dust control work.
10:20	AEC starts watering with trailer (dust control)
11:00	AEC begins site grubbing by removing tumbleweeds and garbage from west side of the site.
12:00	1st AEC dump truck load leaves the site with grubbing material for transfer station.
12:40	2nd AEC work truck (2 men) arrives at the site with work trailer.
12:45	Conducted safety tailgate meeting with new AEC arrivals.
13:05	Porta-potty arrives at the site is placed in the Northwest corner of the site.
14:00	AEC starts the installation of the T-bars for the new orange perimeter construction fence. 2nd AEC dump truck load leaves the site with grubbing material for transfer station.
14:30	AEC begins removal of the cyclone fence along the western side of the site (near SW corner).
15:00	AMEC receives final analytical lab results for "G" fill material (8260, 8270, RCRA 8 metals) and approves the material for application on the site. AEC confirms with rock company that fill material deliveries begin tomorrow.
15:15	3rd AEC dump truck load leaves the site with grubbing material for transfer station.
16:10	4th AEC dump truck load leaves the site with grubbing material for transfer station.
16:20	Most of the cyclone fence along the western side of the site has been removed.
16:30	AEC completes the installation of the perimeter orange construction fence along the south and western sides of the site. Connects to the SE and NW corners of the cyclone fencing.
16:35	AEC concludes work for the day.
16:45	AMEC and AEC QCM conduct end of day inspection of the site and discuss the work for tomorrow.
17:00	AMEC departs the site and locks the outer gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 20, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	8:30 AM	**Departure:**	5:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Sunny and mild - 70s to 80s		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Removed tumbleweeds from south and west side of site.
2) Removed cyclone fence from west side of site.
3) Installed t-bars and orange construction fencing along south and west sides.
4) Dust control with water trailer along main road
5)
6)
7)

Changes to Plans or Specifications

1) None
2)
3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1) Rock is schedule to start arriving tomorrow.
2) Water truck and front end loader/bulldozer arriving tomorrow.

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC	8:30	16:45	3	8:15	01:00:45
AEC	12:40	16:45	2	4:05	00:08:10
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**AEC Labor Hours Total =**		01:08:55

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 21, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Clear/sunny/mild PM - Dry/Cloudy/raining		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	Arrival at the site. Inspected the site and took some pre-construction pictures.
6:10	Conducted safety tailgate meeting.
6:25	AEC fills water trailer and begins road watering
6:50	AEC starts grubbing SW corner inside the original cyclone fence
7:00	AMEC/AEC begin to mark out the AE excavations with paint
7:10	1st AEC dump truck load leaves for transfer station with grubbing materials - AEC grubbing south end
7:30	AEC starts work installing orange perimeter construction fencing on east/north sides.
7:55	2nd AEC dump truck load leaves for transfer station with grubbing materials
8:15	1st load of imported rock arrives (from Connelll Sand and Gravel)
8:55	3rd AEC dump truck load leaves for transfer station with grubbing materials
9:00	AEC begins to build gravel pad between AE-1 and AE-2 over liner area in shallow excavation area
9:10	AEC trackhoe starts removing cyclone fencing along south side / AEC/AMEC marking out AE-3/4/5 sites
9:25	2nd load of imported rock (G layer rock) arrives - dropped between AE-1 and AE-2
9:41	3rd load of imported rock (G layer rock) arrives - dropped between AE-1 and AE-2
9:50	4th load of imported rock (G layer rock) arrives - dropped between AE-1 and AE-2 / Completed marking AE
10:15	5th load of imported rock (G layer rock) arrives - dropped between AE-1 and AE-2 / Front loader arrives
10:40	6th load of imported rock (G layer rock) arrives - dropped between AE-1 and AE-2
10:55	7th load of imported rock (G layer rock) arrives - dropped at road area near GCL stockpile
11:00	Job site trailer arrives / AEC loading fencing and scrap metal into dump truck for recycling
11:10	8th load of imported rock (G layer rock) arrives - dropped at road area near GCL stockpile
11:20	AEC dump truck leaves to recycle metal
11:25	9th load of imported rock (G layer rock) arrives - dropped near GCL stockpile
11:35	10th load of imported rock (G layer rock) arrives - dropped near GCL stockpile
11:42	11th load of imported rock (G layer rock) arrives / AEC moves yellow container out of construction zone
11:55	12th load of imported rock (G layer rock) arrives / AEC building rock road between AE-1/2
12:20	13th load of imported rock (G layer rock) arrives / Orange fencing marking layer materials arrive / raining
12:30	14th load of imported rock (G layer rock) arrives / AEC trackhoe removing NW/NE corner of cyclone fencing
12:45	15th load of imported rock (G layer rock) arrives / AEC dump truck returns
12:50	16th load of imported rock (G layer rock) arrives
13:00	17th load of imported rock (G layer rock) arrives / AEC load their dump truck with gravel
13:10	18th load of imported rock (G layer rock) arrives / AEC begins dropping rock between AE-1/2
13:20	AEC drops second load of rock from dump truck between AE-1/2 / Rain stops
13:30	19th load of imported rock (G layer rock) arrives
13:40	20th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5
13:50	21st load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 building road into site
14:00	22nd load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5
14:10	23rd load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5
14:20	24th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5
14:30	25th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5
14:45	26th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 21, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Clear/sunny/mild PM - Dry/Cloudy/raining		

FIELD REPORT NOTES

Time:	Field Notes (continued):
15:00	27th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 with front loader
15:20	28th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 with front loader
15:35	29th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 with front loader
15:40	30th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 / OCF installed N sid
15:45	31st load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 / OCF installed N sid
16:10	32nd load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 / Water truck arrives
16:15	33rd load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 / OCF installed N sid
16:20	34th load of imported rock (G layer rock) arrives / AEC drops load at corner of AE-4/5 / OCF installed N sid
18:00	Site closed down and inspection made and gate locked. AMEC and AEC departed

Task List

1) Rick's Custom Fencing arrived to discuss the work
2) AE excavations marked out.
3)
4)
5)
6)
7)

Changes to Plans or Specifications

1) None
2)
3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1) AE Excavations marked out
2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC	6:00	18:00	5	12:00	02:12:00
				0:00	00:00:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:12:00

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 22, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Windy, cloudy, light rain in afternoon		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	Arrival at the site. Inspected the site and took some pre-construction pictures. AEC excavator on-site
6:10	Conducted safety tailgate meeting.
6:30	AEC preps for work / fueling and greasing equipment
6:45	AEC moving gravel from stockpile (up by GCL roles) down to the SE corner / west side of site.
7:00	AEC spreading gravel along the east road to prep for excavation of AE-3
7:30	AEC preps crew and equipment to start excavation of AE-3
7:50	AEC begins excavation of AE-3 / they marked the trackhoe bucket with a "4-ft" depth for checking depth.
8:15	Rental bulldozer is delivered.
9:00	AEC completes excavation of AE-3 down to the 4-ft level and begins to set up decon area Gravel starts to arrive.
9:40	Bucket decontamination completed and begins to excavate final "5th" foot of AE-3 excavation. Dust control (wetting) of AE-3 excavated soils.
10:10	Excavation of AE-3 to 5-ft depth nearly done.
10:20	AEC completes excavatin of AE-3 and begins backfilling and compacting AE-3 with gravel
12:15	AEC uses the bulldozer near AE-1 and AE-2 to spread gravel out for excavation pad over existing site liner. AEC completes the backfilling and compacting AE-3
12:35	AEC begins excavation of AE-2 / AEC continues dust control of AE-3 stockpile.
13:00	AEC completes excavation of AE-2 down to 4-ft / starts to excavation of AE-1
13:30	AEC completes excavation of AE-1 down to 4-ft / begins to decontaminate trackhoe bucket
13:40	AEC begins 5th foot excavation of AE-1
13:55	AEC completes final 5th foot excavation of AE-1 / begins the 5th foot excavation of AE-2.
14:00	AEC begins to backfill and compact AE-1
14:10	AEC begins to backfill and compact AE-2 / AE-1 half backfilled / AEC begins to spread out excavated soils
16:15	AEC completes the backfilling and compaction of AE-1 and AE-2 and spreading of AE-1/2 stockpiled soils.
16:20	AEC starts to cover AE-1 and AE-2 stockpiled soils / decontaminating trackhoe bucket
16:40	AEC starts to cover AE-3 stockpiled soils
17:20	AEC completes covering AE-1/AE-2/AE-3 soils and begins the installation of orange construction fencing
17:30	AEC completes orange construction fencing installation and conducts some road compaction with roller.
18:00	AMEC and AEC departs the site and locks the outer gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 22, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Windy, cloudy, light rain in afternoon		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Excavated and backfilled AE-1/2/3 areas
2) Placement of excavated materials and covered with 12-mil liner.
3)
4)
5)
6)
7)

Changes to Plans or Specifications

1) AMEC authorizes the use of clean gravel piles to help hold down AE-1, AE-2, and AE-3 soil covers.

2)

3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1) Site is ready for excavation of AE-4 and AE-5 to be conducted on May 23, 2013

2) Road along western side is improved with gravel to allow for dump truck dropping gravel.

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC	6:00	18:00	3	12:00	01:12:00
				0:00	00:00:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:12:00

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 23, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	5:30	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Windy, cloudy, light rain in afternoon		

FIELD REPORT NOTES

Time:	Field Notes:
5:30	Arrival at the site. AMEC conducts the safety tailgate meeting
5:45	AEC preps for work / fueling and greasing equipment
5:55	AEC watering the roads / moving gravel from stockpile area by old GCL to area between AE-1 and AE-2.
6:10	AEC begins prepping for excavation work at AE-4 (north end).
6:20	AEC starts excavating AE-4 at the north end of the area.
7:20	AEC stops moving gravel / starts work on improving the loop road for gravel deliveries
8:15	Gravel delivery trucks begin arriving (four trucks dedicated to the site today)
8:45	AEC completes excavation of AE-4 down to 4-ft bgs / starts spreading excavated soils from AE-4
8:50	AEC begins excavation down to 4-ft in AE-5.
8:55	Gravel deliveries begin dropping gravel at area between AE-1 and AE-2.
9:30	AEC completes digging AE-5 down to 4-ft bgs / AEC decontaminates the bucket from the trackhoe
9:50	AEC begins excavating the final 5th foot bgs in AE-5.
10:00	AEC completes excavation down to final 5th foot bgs in AE-5 and starts to backfill and compact AE-5.
10:15	AEC (Nicole L.) arrives at the site for safety check
10:20	Wash. Dept. of Ecology reps (Chuck / Jeremy) arrive. Discussed site work with them.
11:45	NW Liners (Richard) arrives at the site to inspect stockpiled geomembrane and GCL.
12:10	The two Wash. Dept. of Ecology reps depart the site.
12:20	AEC completes the backfilling and compaction of AE-5 and continues to work on the the loop road.
12:35	AEC begins to excavate the 5th foot bgs from AE-4 and is stockpiling gravel for backfill.
12:45	AEC begins to backfill the southern end of AE-4.
13:20	AEC finishes the final 5th foot of excavation of soils (AE-4) while continuing to backfill and compact AE-4
15:45	AEC decontaminates the bulldoze (used to spread AE-4/5 soils) / AEC (Nicole) departs the site
16:00	AEC begins to prep for covering AE-4 and AE-5 excavation soils (surrounding the "hump")
16:15	AEC starts to set out the covers for the AE-4 and AE-5 soils / Hertz arrives to repair the dozer.
16:50	AEC completes the backfilling and compaction of AE-5.
17:50	AEC completes covering the AE-4 an AE-5 soils with 12-mil tarp. Starts installing OCF around the site.
18:00	Hertz repair truck/tech departs the site an AEC completes the installation of the OCF.
18:05	AMEC and AEC departs the site and locks the outer gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 23, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	5:30 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Windy, cloudy, light rain in afternoon		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Excavated and backfilled areas AE-4 and AE-5.
2) Placement of excavated materials and covered with 12-mil liner.
3) Placement of gravel over the liner for the AE soils.
4) Continued to receive gravel from trucks.
5)
6)
7)

Changes to Plans or Specifications

1) AMEC discusses the potential for using a different mix of grass seeds since specified mix is not available locally according to the hydroseeding rep.
2)
3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1) All excavation areas have been excavated and backfilled/compacted
2) All AE-4 and AE-5 soils have been covered with 12-mil tarp and covered with gravel around the base of the "hump"

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC	5:30	18:00	5	12:30	02:14:30
AEC (Nicole L)	10:15	15:45	1	5:30	00:05:30
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:20:00

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 24, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	12:30
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Windy, cloudy, light rain in afternoon		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	Arrival at the site. AMEC conducts the safety tailgate meeting
6:15	AEC preps for work / fueling and greasing equipment
6:30	AEC begins loading gravel from upper stockpile area (by GCL rolls)
6:45	AEC begins removal of remaining cyclone fencing along northern end of site.
7:20	AEC loads first load of cyclone fencing scrap to metal recycling at Schnitzer steel (local)
7:25	AEC starts grading grave by AE-1/2 and finishes moving upper gravel stockpile
7:30	AEC leaves with 1st load of cyclone fencing to scrap metal recycling
7:40	Rick's Custom Fencing and Decking crew (2 men) arrives to install corner posts for new perimeter fencing AMEC gives them a safety tailgate meeting then shows them the locations and markers for the fence posts
8:00	Rick's Custom Fencing starts with fence post installation work (NW corner of new perimeter fence)
8:10	Gravel deliveries (G layer material) begins to arrive (only two trucks today)
8:35	AEC loads/leaves with 2nd load of cyclone fencing for scrap metal recycling.
9:30	AEC loads/leaves with 3rd load of cyclone fencing for scrap metal recycling.
10:45	AEC begins to collect fence post auger soils for placement around "hump" and under 12mil liner
11:10	Last gravel delivery for the day / AEC spreads out last gravel around "hump" / places collected fence post soils under 12-mil liner near NW corner of "hump".
11:20	AEC begins installing OCF (orange construction fencing) for closing up site.
11:30	AEC/AMEC end of day inspection of the site.
11:35	AEC crew departs the site.
11:45	Hertz rental arrives to pick up bull dozer and bring in new one. Current one is having mechanical problems.
12:00	Rick's Custom Fencing crew completes post installation work and departs site.
12:10	Hertz rental departs the site.
12:30	AMEC locks up and departs the site.

DAILY FIELD REPORT

Environment and
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7376 SW Durham Road
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Phone: 503-639-3400
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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 24, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	12:30 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Windy, cloudy, light rain in afternoon		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Subcontractor installation of new perimeter fence corner posts.
2) Hertz rental recovers bull dozer and drops off new one
3) Move remaining upper G layer gravel to cap area.
4) Delivery of G layer material and spreading it around cap.
5) Installation of auger soils under 12-mil liner from fence posts.
6)
7)

Changes to Plans or Specifications

1) AMEC confirms that the perimeter erosion protection rock is 1" to 3" diameter clean crushed rock (as in specs) and not the 6" crushed rock on the plans. AMEC informs AEC (Rod) of this clarification at the site.
2)
3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)
2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC	6:00	11:35	5	5:35	01:03:55
				0:00	00:00:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:03:55

DAILY FIELD REPORT

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Phone: 503-639-3400
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PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 28, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:30	**Departure:**	16:40
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Light breeze, partly cloudy, mild temp (60 to 70s)		

FIELD REPORT NOTES

Time:	Field Notes:
7:30	Arrival at the site. AMEC conducts the safety tailgate meeting
7:45	AEC preps for work / fueling and greasing equipment
8:00	AEC begins compacting and watering main road prior to gravel delivery trucks arriving.
8:10	AEC begins to load debris into AEC dump truck for disposal at transfer station
8:15	Gravel delivery trucks begin arriving at the site
9:00	AEC loads old GCL (not deemed acceptable by NW Linings) into AEC dump truck for transport to cap site.
9:35	AEC begins to roll out the old GCL rolls onto area along west side of original cap liner (NW corner of site).
11:05	AEC begins to collect empty old sandbags/debris garbage into AEC dump truck
11:35	AEC dump truck departs for disposal of debris at transfer station.
12:05	AEC completes covering up the entire "Hump" with G layer gravel (approximately 1+ ft thick compacted)
12:10	AEC drops off second load of old GCL rolls on NW corner of site / begins to roll them out over other ones
12:30	AEC begins to cover over the original cap liner with G layer gravel. AEC is wetting and compacting.
14:30	AEC completes rolling out the last (13 rolls of GCL) old GCL roll onto the NW corner of the site.
15:45	AEC crew (4 men) depart the site. AEC foreman (Rod R.) remains with AMEC to close up work at site.
15:50	Hertz Rental arrives to drop off LGP bull dozer and to pick up standard bull dozer (used only today).
16:20	Last gravel delivery truck departs the site. AEC begins to install the OCF in open sections.
16:30	AEC completes installation of OCF. AMEC and AEC inspect the site at end of work day.
16:40	AEC and AMEC depart the site and lock the gate.

DAILY FIELD REPORT

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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 28, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:30 AM	**Departure:**	4:40 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	Light breeze, partly cloudy, mild temp (60 to 70s)		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Continue to deliver, spread, wet, and compact G layer gravel over the cap.
2) Hertz rental recovers bull dozer and drops off new one
3) Roll out all (13) of the old GCL rolls onto the site ground (base of G layer) on NW corner of the site.
4) Collection of debris and tumbleweeds for disposal at transfer station.
5) Installation of OCF at the end of the work day.
6)
7)

Changes to Plans or Specifications

1) AMEC discusses the use of existing G layer materials for entire G layer zone. Material is compacting well and appears to be suitable for entire G layer. Material must meet compaction testing requirements.
2)
3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)
2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC	7:30	15:45	4	8:15	01:09:00
AEC (foreman)	7:30	16:40	1	9:10	00:09:10
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:18:10

DAILY FIELD REPORT

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PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 29, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:00	**Departure:**	16:40
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM rain and cool / PM dry and cool (hard rain later)		

FIELD REPORT NOTES

Time:	Field Notes:
7:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5 and AEC's surveyor.
7:15	AEC preps for work / fueling and greasing equipment
7:40	AEC starts grading and compaction work of remaining stockpiled G-layer material from yesterday Surveyor set up to shoot grades for G-layer and locks into northern and southern DSE control points.
8:10	Gravel delivery trucks begin to arrive.
9:40	AEC grades and compacts roadway area / morning rain stops.
10:20	Department of Ecology arrives (Jeremy and Chuck).
10:30	Safety tailgate meeting with DOE personnel
10:35	AEC president (Steve Anderson) arrives at the site and AMEC conduct safety tailgate with Steve.
11:10	AEC confirms that two more gravel delivery trucks will be working at the site today
11:20	AEC president departs
11:55	Ecology Q/A meeting and schedule discussion with AMEC (DOE will be back with more people next Thursday during liner installation work).
12:00	DOE personnel depart the site / Eric Jensen conducts the Monthly Site Inspection.
12:25	AEC's surveyor completes laying out the G-layer grading stakes and perimeter and departs the site.
14:15	Two additional gravel delivery trucks arrive.
15:40	Intermountain Materials Testing and Geotechnical (IMT) arrives at the site to conduct "nuke gauge" density testing of compacted G-layer. Conduct safety tailgate for single IMT worker. Results: AE-1 = 105% Compaction rated against 100% compaction of protor sample of AE-2 = 99.5% G-layer material. AE-3 = 97% AE-4 = North end =93% South end = 98% AE-5 = 102% Approximately 18 density tests were taken of entire G-layer material with six taken on the top of the "Hump". All tests met or exceeded 90% compaction requirement with lowest result being 93%.
15:45	AEC calls off 3 of its crew (departs) / final labor is using roller to compact while final deliveries drop morning stockpile.
16:15	IMT tech departs the site. Pelican Fuel arrives with tanker truck to fuel AEC equipment.
16:20	AEC stops compaction of G-layer and starts to install open sections of OCF / Pelican starts fueling
16:35	Final gravel delivery of the day / Hard rain starts / Pelican Fuel departs the site.
16:45	AEC completes OCF installation and drives to entrance.
16:50	AMEC and AEC lock up and depart the site.

DAILY FIELD REPORT

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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 29, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:00 AM	**Departure:**	4:40 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG

Average Daily Weather Conditions: AM rain and cool / PM dry and cool (hard rain later)

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Continue to deliver, spread, wet, and compact G layer gravel over the cap.
2) Fueling of AEC equipment at the end of the day.
3) AEC's surveyor lays out edge of liner, edge of cap, and grading stakes for G-layer
4) Collection of debris and tumbleweeds for disposal at transfer station.
5) Installation of OCF at the end of the work day.
6) Eric Jensen conducts Monthly site inspection
7)

Changes to Plans or Specifications

1) AMEC working on revised hydroseeding mix due to inability to get required mix locally.

2)

3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (3 man crew)	7:00	15:45	3	8:45	01:02:15
AEC (2 man crew)	7:00	16:50	2	9:50	00:19:40
Tim Scott (surveyor)	7:00	12:25	1	5:25	00:05:25
IMT	15:40	16:15	1	0:35	00:00:35
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:03:55

DAILY FIELD REPORT

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PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 30, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:00	**Departure:**	17:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM rain and cool / PM dry and cool (hard rain later)		

FIELD REPORT NOTES

Time:	Field Notes:
7:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5 and AEC's surveyor.
7:15	AEC preps for work / fueling and greasing equipment
7:30	AEC begins grading/compacting/watering gravel stockpiles from end of the prior day
8:25	Gravel delivery trucks begin to arrive.
9:00	AEC sends one worker on appointment run
10:20	White side dump gravel delivery truck has a problem with hydraulic dump mechanism (no leaks). AEC uses the trackhoe to empty the gravel from the bed. Other driver fixes the problem by reconnecting the electrical control mechanism.
13:00	AEC worker returns to the site.
14:20	AEC lines out the perimeter swales on the NW and NE corners of the site between the Edge of Liner (EOL) and Edge of CAP (EOC).
14:40	AEC begins construction grading/wetting/compaction of NE swale (between EOL and EOC).
16:30	AEC completes about 90% of the NE swale / AEC begins installation of open section of OCF
16:35	Last gravel delivery truck arrives / AEC completes installation of OCF
16:40	AEC crew of 4 departs the site / AMEC conducts end of day site inspection
17:00	AMEC and AEC (1-crew - Rod R) lock up and depart the site.

DAILY FIELD REPORT

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Phone: 503-639-3400
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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 30, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:00 AM	**Departure:**	5:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM rain and cool / PM dry and cool (hard rain later)		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Continue to deliver, spread, wet, and compact G layer gravel over the cap.
2) Begins to grading work for swales on NW and NE corners of the site
3) Installation of OCF at the end of the work day.
4)
5)
6)
7)

Changes to Plans or Specifications

1) AMEC working on revised hydroseeding mix due to inability to get required mix locally.

2)

3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (3 man crew)	7:00	16:40	3	9:40	01:05:00
AEC (1 man crew)	7:00	9:00	1	2:00	00:02:00
AEC (1 man crew)	13:00	16:40	1	3:40	00:03:40
AEC (1 man crew)	7:00	17:00	1	10:00	00:10:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:20:40

DAILY FIELD REPORT

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PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	May 31, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:00	**Departure:**	17:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, light wind		

FIELD REPORT NOTES

Time:	Field Notes:
7:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5
7:15	AEC preps for work / fueling and greasing equipment / IMT tech arrives (give him safety tailgate) for testing
7:20	AEC begins grading/compacting/watering gravel stockpile / IMT tech begins compaction density testing.
7:35	IMT tech completes round of compaction density testing and departs - see results below:

Point 1 =	100 %	Point 5 =	95.7 %	Refer to attached map for	
Point 2 =	97.0 %	Point 6 =	95.0 %	the approximate locations	
Point 3 =	96.3 %	Point 7 =	98.9 %	of the compaction tests.	
Point 4 =	92.0 %	Point 8 =	92.7 %	**All points pass testing.**	

8:05	Gravel delivery trucks begin to arrive / AEC begins work grubbing NW swale area.
11:05	AEC refuels trackhoe / pauses on NW swale work
11:10	AEC grubs liner extension area on northern side of original liner.
11:15	AEC refuels bulldozer
12:15	AEC (2 man crew) departs the site
14:00	Porta-potty vac-truck arrives to service the unit. / Water truck is down due to mechanical issue
14:30	Hertz repair truck arrives / Trackhoe completes about 90% of NW swale work
14:45	Hertz repair truck departs - Water truck working again (starter was frozen).
15:45	AEC sets up and begins loading remaining debris and garbage into the AEC dump truck.
15:55	IMT tech arrives for afternoon compaction testing.
16:05	IMT tech begins compaction testing of recent filled/compacted areas.
16:25	IMT tech concludes afternoon compaction density testing. See results:

Point A =	95 %	Point E =	96.6 %	Refer to attached map for the	
Point B =	98.6 %	Point F =	94.5 %	approximated locations of the	
Point C =	91.0 %	Point G =	95 %	afternoon compaction tests.	
Point D =	97.3 %	Point H =	103 %	**All points pass testing.**	

16:40	Last gravel delivery truck for the day departs the site.
16:45	AMEC conducts site inspection prior to departure.
17:00	AMEC / AEC lock up gate and depart the site.

DAILY FIELD REPORT

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Phone: 503-639-3400
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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	May 31, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:00 AM	**Departure:**	5:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, light wind		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Continue to deliver, spread, wet, and compact G layer gravel over the cap.
2) Begin grubbing and grading work for swales on NW and NE corners and northern end of the site
3) Installation of OCF at the end of the work day.
4) Compaction density testing of recent G-layer areas
5) Garbage and debris loading into AEC dump truck
6)
7)

Changes to Plans or Specifications

1) AMEC working on revised hydroseeding mix due to inability to get required mix locally.

2)

3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (3 man crew)	7:00	17:00	3	10:00	01:06:00
AEC (2 man crew)	7:00	12:15	2	5:15	00:10:30
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:16:30

DAILY FIELD REPORT

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Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 3, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	8:00	**Departure:**	17:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, light wind		

FIELD REPORT NOTES

Time:	Field Notes:
8:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 4
8:10	G-layer gravel/sand/topsoil delivery trucks start arriving. Sand and topsoil are being stockpiled (see photo)
8:15	AEC begins preparations for the day (fueling, greasing, moving equipment)
8:20	AEC begins grading/watering/compacting G-layer piles, building sand stockpile in inside of "loop", and building stockpile of topsoil just SW of the SW corner of the liner extension.
9:30	AEC conducts some additional work on the NW swale areas.
11:45	AEC conduct some additional work on the NE swale area.
13:20	AEC surveyor (Tim Scott) arrives at the site to provide updated grading control points / safety tailgate
14:40	AEC (1 man) operator arrives at the site. AMEC conducts safety tailgate.
16:25	AEC begins final grading work for the day and prepares the sand/topsoil stockpiles for next morning
16:35	AEC begins installation of OCF / Surveyor (Tim Scott) departs site
16:45	Last gravel delivery truck for the day departs the site.
16:50	AEC completes the installation of OCF
17:00	AMEC / AEC lock up gate and depart the site.

DAILY FIELD REPORT

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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 3, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	8:00 AM	**Departure:**	5:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, light wind		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Continue to deliver, spread, wet, and compact G layer gravel over the cap.
2) Continue grubbing and grading work for swales on NW and NE corners and northern end of the site
3) Installation of OCF at the end of the work day.
4) Surveyor installation of additional grade control points.
5) Deliveries of sand and topsoil for on-site stockpiles
6)
7)

Changes to Plans or Specifications

1) AMEC working on revised hydroseeding mix due to inability to get required mix locally.

2) AMEC approves reduction in conformance tests for geomsynthetics as long as there is a deduction in the bid that corresponds to the reduction in testing and the tests comply with ASTM standards.
3)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (4 man crew)	7:00	17:00	4	10:00	01:16:00
AEC (1 man crew)	14:40	17:00	1	2:20	00:02:20
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:18:20

DAILY FIELD REPORT

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Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 4, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:00	**Departure:**	17:15
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes:
7:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5
7:05	AEC preps for the day's work - fuels/greases equipment, charge water truck Sand and topsoil trucks begin arriving.
7:15	AEC begins grading, watering, compaction of G-layer stockpiles from prior day
8:15	G-layer gravel trucks begin deliveries
8:30	IMT technician arrives - AMEC conducts safety tailgate - tech begins compaction density testing
	Results of testing: Point A = 97.3%, Point B = 98.0%, Point C = 99.0%, Point D = 98.0%, Point E = 95.7%, Point F = 94.8%, Point G = 97.0%, Point H = 100.5%
	All compaction tests pass. Refer to map for approximate locations of tests (conducted in recent lifts).
8:55	IMT technician concludes tests and departs.
9:35	Pelican Fuel arrives and begins fueling equipment and trucks
9:55	Pelican Fuel departs the site.
12:40	Triad arrives on-site / AMEC conducts safety tailgate / Triad begins survey of new well elevations.
14:10	Triad completes work and departs / They will be back on-site tomorrow to complete the work
14:30	AMEC sends AEC revised hydroseed mix for vendor review
16:20	Last G-layer delivery truck departs. Sand and topsoil delivery trucks cease for the day
16:30	IMT technician arrives - AMEC conducts safety tailgate - tech begins compaction density testing
	Results of testing: Point 1 = 94.0%, Point 2 = 91.9%, Point 3 = 96.7%, Point 4 = 93.0%, Point 5 = 91.0%, Point 6 = 97.0%, Point 7 = 96.0%, Point 8 = 98.0%
	All compaction tests pass. Refer to map for approximate locations of tests (conducted in recent lifts).
16:45	IMT technician concludes tests and departs.
17:00	AEC concludes the grading, watering, compaction work on G-layer and begins OCF installation
17:05	AEC crew departs the site / AMEC conducts end of day site inspection
17:15	AMEC departs site and locks gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 4, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:00 AM	**Departure:**	5:15 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Continue to deliver, spread, wet, and compact G layer gravel over the cap.
2) Grading of ridge peak between NW/NE swales
3) Installation of OCF at the end of the work day.
4) Triad surveyor work for elevations and locations of two new wells
5) Deliveries of sand and topsoil for on-site stockpiles
6)
7)

Changes to Plans or Specifications

1) AMEC submits revised hydroseeding mix to vendor due to inability to get initial mix locally.

2) AMEC approves slight change in g-layer grading to lower some of the steeper slopes on the g-layer to make the installation of the overlying sand layer easier. All changes are being made in locations where excess g-layer material was shown so that entire g-layer is still compliant with EPA cap thickness requirements. Field observations and survey work has been conducted to ensure compliance.

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (5 man crew)	7:00	17:05	5	10:05	02:02:25
				0:00	00:00:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:02:25

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 5, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:00	**Departure:**	17:05
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes:
7:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5 + 1 (Nicole)
7:05	AEC preps for the day's work - fuels/greases equipment, charge water truck Sand and topsoil trucks begin arriving.
7:15	AEC (Nicole) conducts AEC site safety briefing
8:13	G-layer gravel trucks begin deliveries / AEC begins grading, watering, compaction, and stockpile loading
9:20	Triad (Surveyors) arrives on the site - AMEC conducts safety tailgate briefing - Triad begins well survey
9:30	Triad completes survey work for two new monitoring wells and departs.
9:55	AEC - Nicole departs the site.
10:15	Hertz repair truck arrives at the site to repair bull dozer that is experiencing problems.
11:05	AEC begins grubbing and grading work in infiltration basin after moving OCF back to southern edge of new perimeter fencing.
12:05	AEC pauses on grubbing and grading work in infiltraiton basin / AEC orders final 12 loads of G-layer gravel
13:20	Hertz arrives and delivers replacement bulldozer.
13:45	Hertz departs the site with broken bulldozer.
14:10	Last G-layer delivery truck departs the site.
14:35	NW Linings truck arrives and delivers three rolls of geomembrane and five coils of plastic welding cord.
14:50	AEC begins to off load the geomembrane rolls from the flatbed truck with the trackhoe.
15:05	AEC concludes the off loading of geomembrane rolls from the truck and places them SW of the SE corner of the edge of liner extension.
15:20	NW Linings flatbed truck departs the site.
16;15	IMT technician arrives - AMEC conducts safety tailgate - tech begins compaction density testing
	Results of testing: Point A = 96.0%, Point B = 94.0%, Point C = 96.0%, Point D = 92.0%, Point E = 95.0%, Point F = 99.0%, Point G = 96.0%, Point H = 99.9%
	All compaction tests pass. Refer to map for approximate locations of tests (conducted in recent lifts).
16:30	IMT technician concludes tests and departs.
16:40	Final sand/topsoil delivery truck departs the site.
16:50	AEC concludes the grading, watering, compaction work on G-layer and begins OCF installation
17:00	AEC departs the site / AMEC conducts site end of day inspection.
17:05	AMEC departs the site and locks the gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 5, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:00 AM	**Departure:**	5:05 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:

Field Notes (continued):

Delivered Rolls of new Geomembrane from NW Linings

Roll #	Type	Thickness (mil)	Width (ft)	Length (ft)	Area (SF)	
822334-13	HDPE Microspike/Smooth	40	23	##	17480	
822335-13	HDPE Microspike/Smooth	40	23	##	17480	
822336-13	HDPE Microspike/Smooth	40	23	##	17480	
				Total Area of New rolls =	52440	SF

Also includes 5-rolls of plastic welding cord

Task List

1) Continue to deliver, spread, wet, and compact G layer gravel over the cap. G-layer completed at end of day.
2) Grubbing and grading work in infiltration basin
3) Installation of OCF at the end of the work day.
4) Triad surveyor work for elevations and locations of two new wells (completes survey work)
5) Deliveries of sand and topsoil for on-site stockpiles
6) Delivery of 3 rolls of 40-mil geomembrane and 5 coils of plastic welding cord.
7)

Changes to Plans or Specifications

1) Ecology approves AMEC revised hydroseed mix.

2) Ecology approves AMEC's adjustments to the G-layer grading in order to improve slopes for sand layer installation.

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (5 man crew)	7:00	17:00	5	10:00	02:02:00
AEC (1 woman crew)	7:00	9:55	1	2:55	00:02:55
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:04:55

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 6, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:00	**Departure:**	16:40
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes:
7:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5
7:05	Sand and topsoil trucks begin arriving.
7:15	AEC preps for the day - begins managing sand/topsoil stockpiles and smoothing out the G-layer cap
8:00	AEC dump truck loaded with garbage departs the site for the transfer station for disposal
8:15	AEC dump truck returns from the transfer station
9:20	AMEC conducts visual inventory of two original geomembrane rolls: Roll # 823341-10, 823345-10 Both appear to be textured like the three new rolls and same thickness.
10:05	AEC begins grading out SE corner of between the EOC (edge of cap) and EOL (edge of liner)
12:30	AEC concludes the compaction/watering/grading or the CAP area and SE/E corner and swale area.
12:40	AEC sends crew of 3 departs the site / G-layer cap is done and ready for GCL and geomembrane layers
13:00	AEC loader maintains the incoming sand and topsoil loads and stockpiles
14:40	The geosynthetic (sand and topsoil barrier) deliver truck arrives with 20 rolls of geosynthetic
15:05	AEC off loads all 20 rolls of geosynthetic:
15:12	Geosynthetic delivery truck departs the site.
16:30	Final sand/topsoil delivery truck departs the site. AEC begins installation of OCF.
16:35	AEC completes installation of OCF and departs the site / AMEC conducts site end of day inspection.
16:40	AMEC departs the site and locks the gate.

Roll #	Roll #	Roll #
110110476	110110440	110117652
110110459	110110439	110110437
110110480	110110457	110110435
110110456	110110434	110110430
110110468	110110438	110110476
110110478	110117646	110117653
110110479	110110441	

DAILY FIELD REPORT

Environment and
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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 6, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:00 AM	**Departure:**	4:40 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:

Field Notes (continued):

Originl Rolls of new Geomembrane from NW Linings (reported specs)

Roll #	Type	Thickness (mil)	Width (ft)	Length (ft)	Area (SF)	
823341-10	HDPE Microspike/Smooth	40	23	##	17480	
823345-10	HDPE Microspike/Smooth	40	23	##	17480	
				Total Area of New rolls =	34960	SF
				Total Area of 5 rolls onsite =	**87400**	**SF**

Task List

1) Complete G-layer - compact, water, smooth out top of g-layer and prepare it for GCL and geomembrane layers
2) Complete grubbing and grading of SE corner of CAP area and infiltration basin
3) Installation of OCF at the end of the work day.
4) Delivery of 20 rolls of geosynthetics (barrier between sand and topsoil layers)
5) Complete grading work along eastern side of the area between EOC and EOL.
6)
7)

Changes to Plans or Specifications

1)

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (2 man crew)	7:00	16:35	2	9:35	00:19:10
AEC (3 man crew)	7:00	12:40	3	5:40	00:17:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:12:10

DAILY FIELD REPORT

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Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 7, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:45	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot late wind		

FIELD REPORT NOTES

Time:	Field Notes:
6:45	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 2 - Bennett is now AEC SSO
6:50	AEC preps for day / moves scrap metal / moves end of prior day sand and topsoil piles near stockpiles
7:35	Sand and topsoil trucks begin arriving.
7:40	NW Linings (NWL) telehandler delivery truck arrives at the site and off loads telehandler
7:50	NWL delivery truck departs
8:10	AEC marks out the Edge of Liner (EOL) boundaries around the entire cap.
8:20	AEC marks out the X and Y-axis offsets for the corners of the Edge of Cap (EOC) with posts.
8:35	AEC completes marking out the X and Y-axis offsets for the EOC corners.
10:30	Ecology arrives - AMEC gives summary briefing/safety tailgate with Chuck and Jeremy about work progress
12:05	Ecology departs the site.
13:15	NWL crew (2 men - foreman Alex) arrives at the site with dually truck and trailer/empty sand bags. AMEC conducts safety tailgate with NWL crew.
13:45	NWL discusses the liner/GCL work with AEC/AMEC and requests change to orientation of liner on the eastern side of the CAP from N to S to E to W. AMEC requests written change in layout from NWL for approval.
13:55	NWL requests some loads of sand from AEC stockpile to fill their empty sandbags (approximately 1,000).
14:10	Porta-Potty vac truck arrives and services unit.
14:30	NWL crew departs the site.
14:40	Hertz rental arrives with LGP bulldozer and picks up the standard bulldozer
14:45	Last sand/topsoil truck departs the site. This is the final sand/topsoil truck for the site stockpiles
15:05	NWL crew returns to the site.
15:10	1st GCL delivery truck arrives and off loads 13 rolls of GCL and 12 50-lb bags of bentonite:

GCL Roll #	Roll Weight (lb)	GCL Roll #	Roll Weight (lb)	Standards for Rolls
00002669	2825	00002665	2760	Length = 150-ft
00002684	2795	00002654	2670	Width = 15-ft
00002676	2800	00002663	2800	
00002671	2810	00002653	2710	Lot# =201322LO
00002672	2785	00002662	2810	Type = DN
00002667	2775	00002661	2745	
		00002670	2765	Cetco LO Bentomat

15:25	AEC begins to off load the GCL rolls and bentonite bags from truck
16:00	GCL delivery truck departs the site.
16:05	AEC departs the site (2-man crew)
17:45	AMEC conducts end of day site inspection
18:00	AMEC / NWL crew depart the site and lock the gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 7, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:45 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot late wind		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Mark out boundaries of the EOL
2) Mark out the X and Y-axis offsets for the EOC corners
3) Complete stockpiling topsoil and sand - final deliveries
4) Off load GCL rolls and bentonite bags from delivery truck
5) NWL - Making sandbags
6)
7)

Changes to Plans or Specifications

1) NWL may decide to alter their liner plan with a change in the orientation of the liner on the eastern side of the CAP. AMEC requires a revised layout to be submitted from approval. NWL is still considering a change.
2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (2 man crew)	6:45	16:05	2	9:20	00:18:40
NWL (2 man crew)	13:15	14:30	2	1:15	00:02:30
NWL (2 man crew)	15:05	18:00	2	2:55	00:05:50
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:03:00

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 8, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny/warm / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 2 / NWL crew of 6
6:10	NWL preps for work / unloads trailer / builds roll out frame for telehandler
6:55	NWL has 1st GCL roll loaded and prepares to installon west side of site
7:20	NWL begins installation of 2nd roll of GCL
7:40	NWL begins installation of 3rd roll of GCL / AEC compacting SE corner of site
8:10	AEC crew (3) arrives at the site / AEC and AMEC shoot grades on east side of the site.
8:20	NWL mounts 4th roll of GCL on telehander
8:30	NWL begins installation of 4th roll of GCL / AEC working on grading work on SE corner of CAP
8:40	NWL begins installation of 5th roll of GCL / AEC working on grading work on SE corner of CAP
8:55	NWL begins installation of 6th roll of GCL / AEC working on grading work on SE corner of CAP
9:10	NWL begins installation of 7th roll of GCL / AEC working on grading work on SE corner of CAP
9:15	2nd GCL delivery truck arrives
9:30	NWL begins installation of 8th roll of GCL / AEC begins off-loading GCL rolls from truck
9:45	NWL begins rolling out 1st geomembrane roll of panel P-1
10:00	NWL begins heating seams and placing bentonite between GCL panels / GCL delivery truck departs
10:35	NWL begins rolling out panel P-2 with 1st roll of geomembrane / 11:05 - NWL rolls out panel P-3 from roll 1
11:25	NWL begins installation of 9th roll of GCL / AEC begins off-loading GCL rolls from truck
11:30	NWL begins field liner tests for welds on seams S-1 (Panel 1 and 2) and S-2 (P-2 and P-3) - Both approved
13:15	NWL begins installation of 10th roll of GCL / AEC begins installing sand over the approved geomembrane
13:25	NWL patches small section of weld on S-2 that did not hold pressure (retested and passed)
13:45	NWL begins installation of 11th roll of GCL
14:25	NWL begins installation of 12th roll of GCL
14:55	NWL begins installation of 13th roll of GCL
15:10	NWL begins installation of 14th roll of GCL
15:40	NWL begins installation of geomembrane panel P-4 with second roll of geomembrane
15:50	AEC begins rolling out the Orange Construction Fencing (OCF) material on GeoFabric / topsoil placed over
16:20	NWL starts welding seam S-3 (panels P-3 and P-4)
16:25	NWL starts installation geomembrane panel P-5
16:50	NWL starts welding seam S-4 (panels P-4 and P-5)
17:00	AEC - 2 crew depart the site
17:20	AEC - remaining 3 crew depart the site / NWL completes seam weld S-4
17:25	NWL begins test of seams S-3 and S-4
17:35	NWL moves equipment
17:50	NWL departs the site / AMEC begins site inspection.
18:00	AMEC departs the site and locks the gate.

DAILY FIELD REPORT

Environment and
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7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 8, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny/warm / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes (continued):
	Weld Test Results: Air test of seam S-1: 30 psi @ 10:55 - 30 psi @ 11:00 = APPROVED Air test of seam S-2: 30 psi @ 12:52 - 30 psi @ 12:57 = APPROVED Air test of seam S-3: 30 psi @ 17:25 - 30 psi @ 17:29 = APPROVED Air test of seam S-4: 30 psi @ 17:27 - 30 psi @ 17:32 = APPROVED Air test of seam S-1A (end section): 30 psi @ 11:20 - 30 psi @ 11:25 = APPROVED - This was the small section of the northern end of seam S-1 that required a patch and was retested

GCL	GCL Roll #	Roll Weight (lb)	GCL Roll #	Roll Weight (lb)	Standards for Rolls
Delivery	00002674	2790	00002683	2795	Length = 150-ft
Manifest	00002675	2800	00002685	2770	Width = 15-ft
	00002677	2800	00002686	2800	
	00002678	2785	00002688	2825	Lot# =201322LO
	00002680	2775	00002689	2790	Type = DN
	00002681	2820	00002690	2790	
	00002682	2795	00002691	2845	Cetco LO Bentomat

Task List

1) AEC Placing and grading sand and topsoil layers
2) AEC laying out Geo-Fabric and OCF
3) NWL rolling out GCL and Geomembrane liner and welding/testing seams between panels
4)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (5 man crew)	6:00	17:00	2	11:00	00:22:00
NWL (6 man crew)	6:00	17:50	6	11:50	02:23:00
AEC (5 man crew)	8:10	17:20	3	9:10	01:03:30
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		05:00:30

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 9, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:45	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot late wind		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5 - Bennett is now AEC SSO
6:10	AEC preps for day / Begins expanding sand layer over geomembrane panels and watering road for the day
7:00	NWL crew (6 men) arrives on-site and AMEC gives safety tailgate.
7:20	NW lays out remainder of GCL roll #14 / AEC continues to drop and grade sand layer
7:30	NWL starts laying out GCL roll #15 and cuts out test sample DS-2 on seam S-4.
7:45	AEC begins laying out Geo-Fabric and OCF over new sand.
7:50	NWL starts laying out GCL roll #16 / AEC sends 1 man for ice and water and supplies
7:55	NWL completes patch and vacuum tests patch for DS-2 sample. Patch for DS-2 APPROVED.
8:05	NWL starts laying out GCL roll #17 / AEC begins grading topsoil over new OCF
8:20	NWL starts laying out GCL roll #18 / AEC begins loading sand and topsoil over CAP.
8:30	NWL starts laying out GCL roll #19 / AEC grading out new topsoil
8:45	NWL starts laying out GCL roll #20 / AEC grading out new topsoil
9:00	NWL starts laying out GCL roll #21 / AEC grading out new topsoil
9:20	NWL starts laying out GCL roll #22 / AEC grading out new topsoil
9:35	NWL starts laying out GCL roll #23 / AEC grading out new topsoil
9:50	NWL starts laying out GCL roll #24 and final roll of day (5 panels) / AEC man returns - continues grading
10:00	NWL begins set up to start rolling out geomembrane (3rd new roll)
10:20	NWL rolls out panel 6 (P-6) of the geomembrane / AEC rolling out Geo-Fabric and OCF over sand layer
10:35	NWL begins welding seam S-5 (between P-5 and P-6) / AEC rolling out Geo-Fabric and OCF over sand
10:40	NWL rolls out P-7 of the geomembrane / AEC rolling out Geo-Fabric and OCF over sand layer
10:55	NWL rolls out P-8 of the geomembrane / AEC rolling out Geo-Fabric and OCF over sand layer / grades TP
11:10	NWL completes welding seam S-5 and starts pressure test / NWL gets about 50% of 8th panel with roll out
11:15	NWL starts welding seam S-6 / Starts roll out of remainder of P-8 (geomembrane) with remaining roll
11:35	NWL completes welding S-6 / NWL preps for the butt weld for panel P-8.
11:45	NWL conducts air tests for seams S-5 and S-6
12:00	NWL crew departs for lunch / AEC continues to placing/grading sand and topsoil layers
12:15	AEC break for lunch
12:45	NEW crew returns from lunch / 13:00 - AEC crew ends lunch break
13:10	NWL collects seam test sample DS-3 cut out of seam S-6 (P6/7) / NWL welds butt seam BS-8A on P-8
13:15	NWL starts welding seam S-7 (P-7/8) / AEC continues placing sand and topsoil
13:35	NWL tests patch for sample DS-3
13:45	NWL begins air test of seam S-7
14:10	AEC begins filling sand area between EOL and EOC in western swale
14:30	NWL crew (all 6) departs / AEC starts laying out Geo-Fabric and OCF and topsoil over sand layer
17:45	AMEC conducts end of day site inspection / AEC crew of 5 departs
18:00	AMEC departs the site and locks the gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 9, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:45 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot late wind		

FIELD REPORT NOTES

Time:	Field Notes (continued):
	Weld Tests: Air test of seam S-5: 30 psi @ 11:48 - 30 psi @ 11:53 = APPROVED Air test of seam S-6: 30 psi @ 11:50 - 30 psi @ 11:55 = APPROVED Air test of seam S-7: 30 psi @ 13:54 - 30 psi @ 13:59 = APPROVED Air test of seam BS-8A: 30 psi @ 13:18 - 30 psi @ 13:23 = APPROVED

Task List

1) AEC Placing and grading sand and topsoil layers
2) AEC laying out Geo-Fabric and OCF
3) AEC placing sand in western swale area
4) NWL rolling out GCL and Geomembrane liner and welding/testing seams between panels
5)
6)
7)

Changes to Plans or Specifications

1) NWL will install liner in accordance with their original design - NO CHANGE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (5 man crew)	6:00	17:55	5	11:55	02:11:35
NWL (6 man crew)	7:00	14:30	6	7:30	01:21:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		04:08:35

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 10, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:45
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5
6:10	AEC preps for day
6:25	AEC begins placing sand and topsoil layers.
6:45	NWL crew (6 men) arrives on-site and AMEC gives safety tailgate.
7:10	NWL starts laying out GCL roll #25 / AEC continues to place and grade topsoil and sand layers
7:25	NWL starts laying out GCL roll #26 / AEC rolling out Geo-Fabric and OCF over sand layer
7:35	First delivery truck of sand arrives (small amount of sand was remaining after deliveries last week).
7:40	NWL starts laying out GCL roll #27 / AEC rolling out Geo-Fabric and OCF over sand layer
8:10	NWL starts preparing to roll out geomembrane roll #4 (first of original two rolls)
8:20	NWL starts rolling out geomembrane panel P-9 / AEC grading sand and topsoil layers + rolling OCF + GF
8:40	Pelican Fuel arrives and begins fueling trucks and equipment
8:45	NWL begins welding seam S-8 (between P-8/P-9)
9:15	NWL completes welding seam S-8 / AEC continues grading sand and topsoil
9:35	NWL begins pressure test of S-8
9:45	NWL collects seam test sample DS-4 cut out of seam S-8 (P8/9) / starts installing patch/ Pelican departs
10:10	NWL completes vacuum test of DS-4 patch - APPROVED - Sand approved across half of panel P-9
10:35	Ecology arrives at the site - AMEC conducts safety tailgate and summary briefing / site walk
10:45	NWL departs the site (waiting for GCL delivery) / AEC works on NW swale area sanding
11:55	Ecology departs the site
12:10	First delivery truck of perimeter rock arrives (places rock stockpile in area just east of topsoil pile
13:30	AEC breaks for lunch
14:00	AEC returns from lunch / NWL crew returns from break / AEC continues sand/topsoil placing and grading
14:40	GCL delivery truck arrives with 14 rolls of GCL (see list)
15:00	AEC starts off loading GCL delivery truck with trackhoe / NWL starts placing GCL roll # 28
15:15	AEC completes off loading GCL delivery truck / GCL delivery truck departs
15:20	NW L starts placing GCL roll #29 / AEC placing and grading sand and topsoil layers
15:35	NW L starts placing GCL roll #30 / AEC placing and grading sand and topsoil layers
15:55	NW L starts placing GCL roll #31 / AEC placing and grading sand and topsoil layers
16:10	NW L starts placing GCL roll #32 / AEC placing and grading sand and topsoil layers
16:25	NW L starts placing GCL roll #33 / AEC placing and grading sand and topsoil layers
16:30	AEC departs the site (5 crew)
16:50	NW L starts placing GCL roll #34 (only partial use of roll)
17:00	NWL preparing to roll out geomembrane panel P-10 from GM roll #4
17:05	Last perimeter rock delivery truck
17:25	NWL starts welding seam S-9 (between P-9 and P-10 of geomembrane)

DAILY FIELD REPORT

Environment and
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7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 10, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:45 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes (continued):
18:30	NWL tests seam S-9
18:40	NWL crew departs (5 men) / AMEC conducts site inspection
18:45	AMEC departs the site and locks the gate.

Weld Tests:

Air test of seam S-8: 30 psi @ 9:35 - 30 psi @ 9:42 = APPROVED
Air test of seam S-9: 30 psi @ 18:30 - 30 psi @ 18:35 = APPROVED

Task List

1) AEC Placing and grading sand and topsoil layers
2) AEC laying out Geo-Fabric and OCF
3) AEC placing sand in western swale area
4) NWL rolling out GCL and Geomembrane liner and welding/testing seams between panels
5) GCL delivery truck arrives with third and final GCL delivery - AEC off loads the truck for NWL
6) Sand and perimeter rock deliveries
7)

GCL Delivery Summary

Cetco LO-Bentomat DN	Roll #	Weight (lb)	Roll #	Weight (lb)	Roll #	Weight (lb)
	00002651	2700	00002658	2800	00002668	2815
Type: DN	00002652	2705	00002659	2735	00002673	2820
Lot #: 201322LO	00002655	2660	00002660	2730	00002679	2800
All rolls = 150-ft x 15-ft	00002656	2650	00002664	2835	00002687	2775
	00002657	2690	00002666	2820		

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (5 man crew)	6:00	16:30	5	10:30	02:04:30
NWL (6 man crew)	6:45	10:45	6	4:00	01:00:00
NWL (5 man crew)	14:00	18:40	5	4:40	00:23:20
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		04:03:50

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 11, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:30
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/windy / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	Arrival at the site. AMEC conducts the safety tailgate meeting. AEC crew of 5
6:10	AEC preps for day
6:30	AEC starts N swale / sand and topsoil layer work / perimeter rock prep on the west side
6:50	NWL arrives / safety tailgate (NWL crew of 6)
7:10	NWL starts to roll out remainder of GCL roll #34
7:20	NWL starts laying out GCL roll #35 / AEC grading and loading sand / topsoil layers
7:30	NWL starts laying out GCL roll #36 / AEC grading and loading sand / topsoil layers / Geofabric and OCF
7:40	NWL starts laying out GCL roll #37 / AEC grading and loading sand / topsoil layers / Geofabric and OCF
7:55	NWL starts laying out GCL roll #38 / AEC grading and loading sand/topsoil layers BS-13A cut/seam welded
8:10	NWL starts laying out GCL roll #39 / AEC grading and loading sand / topsoil layers / Geofabric and OCF
8:25	NWL starts laying out GCL roll #40 / AEC grading and loading sand/topsoil layers BS-14A cut/seam welded
8:45	NWL COMPLETED GCL INSTALLATION - One extra full roll of GCL left over
8:50	NWL starts installation of Geomembrane panel P-11 using roll #5 (original)
8:55	Hertz rental truck arrives for roller (departs at 9:10 with roller on trailer)
9:15	First perimeter erosion protection rock delivery truck arrives
9:25	NWL starts installation of Geomembrane panel P-12 using roll #5 (original) and starts welding seam S-10
9:55	NWL completes weld of S-10 and starts pressure test
10:20	NWL takes seam sample DS-5 (P-10/11) / Completes welding patch at 10:30
10:45	Fixed tear in P-10 / 10:50 - NWL starts pulling panel P-12 / 11:15 - NWL welds butt seam BS-12A (N end)
11:20	NWL starts welding seam S-11 (between P-11 and P-12 of geomembrane)
11:30	NWL starts rolling out geomembrane panel P-13
11:50	NW completes seam weld S-11 and starts pressure test.
12:05	NWL departs for lunch
12:45	NWL returns from lunch
13:00	AEC sends 2 crew home
13:10	NWL starts welding seam S-12 (between P-12 and P-13 of geomembrane)
13:20	NWL lays out the northern end of P-14 geomembrane
13:45	NWL completes welding seam S-12 and starts testing
13:55	NWL completes rolling out panel P-14 / starts welding BS-14A butt weld (only small part of last roll left)
14:00	NWL starts welding BS-14B / Finishes welding BS-14A
14:05	NWL starts welding BS-14C / Finishes welding BS-14B
14:15	NWL starts welding seam S-13 (Between panels P-14 and P-14) / finishes welding BS-14C
14:35	NWL finishes welding seam S-13 and starts test
15:25	NWL cuts out DS-6 test sample / welds patch
16:30	NWL completes work for day and begins site cleanup
16:45	AEC crew (3) departs the site

DAILY FIELD REPORT

Environment and
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7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 11, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:30 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/windy / PM - clear, sunny, hot		

FIELD REPORT NOTES

Time:	Field Notes (continued):
18:20	NWL crew departs (6 men) / AMEC conducts site inspection
18:30	AMEC departs the site and locks the gate.
	Weld Tests:
	Air test of seam S-10: 30 psi @ 10:10 - 30 psi @ 10:15 = APPROVED
	Air test of seam S-11: 30 psi @ 12:00 - 30 psi @ 12:05 = APPROVED
	Air test of seam S-12: 30 psi @ 14:51 - 30 psi @ 14:56 = APPROVED
	Air test of seam S-13: 30 psi @ 15:00 - 30 psi @ 15:05 = APPROVED
	Air test of BS-14A: 41 psi @ 15:38 - 41 psi @ 15:43 = APPROVED
	Air test of BS-14B: 34 psi @ 15:28 - 34 psi @ 15:33 = APPROVED
	Air test of BS-14C: 40 psi @ 15:46 - 40 psi @ 15:52 = APPROVED

Task List

1) GCL and Geomembrane installation completed
2) NWL completes testing and installation of geomembrane
3) First perimeter rock delivery arrives
4)
5)
6)
7)

Changes to Plans or Specifications

1)

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (5 man crew)	6:00	13:00	5	7:00	01:11:00
NWL (6 man crew)	6:50	18:20	6	11:30	02:21:00
AEC (3 man crew)	13:00	16:45	3	3:45	00:11:15
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		04:19:15

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 12, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, warm, light wind		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	AMEC / AEC arrival at the site (crew 6) / conduct safety tailgate and discuss the work for the day
6:15	AEC prep equipment and fuel for the day
6:25	AEC begins spreading and grading sand and topsoil layers and installing Geo-Fabric and OCF rolls
8:30	Perimeter rock delivery trucks begin to arrive at the site
11:30	AEC sets up builder's level and shoots critical grade points to gauge the grade after topsoil placement
15:50	AEC begins placing materials along EOC perimeter to grade out between EOC and EOL on W/NW swale
16:10	AEC starts laying out Geo-Fabric in the W/NW swales for rock coverage and grading work.
16:15	AEC completes the placement of the sand layer over the entire CAP (to all EOC boundaries).
16:35	The last perimeter rock delivery truck departs the site.
17:20	AEC sends 1 crew for some equipment diesel fuel and schedules Pelican Fueling delivery for next day AM
17:55	AEC preps for departure and AMEC conducts end of day site inspection
18:00	AMEC and AEC depart the site and lock the gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 12, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, warm, light wind		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Placement of sand and topsoil layers
2) Installation of Geo-Fabric and OCF over top of sand layer
3) Check grades with builder's level at some critical points
4) Delivery of perimeter rock to site stockpile
5) Grading of sand and topsoil layers
6) Grading and material placement and Geo-Fabric into western and northwestern swales (between EOC and EOL)
7)

Changes to Plans or Specifications

1) NONE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1) It appears the the critical grades in the center of the CAP have adequate thicknesses of material based upon reference hub placed by AEC surveyor and AEC's laser builder's level.
2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (6 man crew)	6:00	18:00	6	12:00	03:00:00
				0:00	00:00:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		03:00:00

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 13, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:00
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, warm, light wind		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	AMEC / AEC arrival at the site (crew 6) / conduct safety tailgate and discuss the work for the day
6:10	AEC prep equipment and fueling/greasing equipment for the day
6:35	AEC placing sand for perimeter swales / management of stockpiles / watering site and roads
7:35	AEC begins laying out Geo-Fabric and OCF on eastern end of CAP and grading sand and topsoil layers
8:15	AEC begins placement of perimeter rock on the southern end of the western swale.
8:20	AEC begins to shoot some grades to confirm elevation of EOC contours.
8:30	Rick's Custom Fence arrives (2 crew) to view site prior to starting work on next Monday morning.
8:35	Pelican Fuel arrives to fuel equipment and truck tanks.
8:55	Rick's Custom Fence arrives (2 crew) departs the site.
9:10	Pelican Fuel departs the site after completing fueling work.
11:30	AEC placing and grading perimeter rock in W/NW swale and grading/placing sand/topsoil on eastern EOC.
14:10	AEC shooting additional grades along southern EOC to confirm elevations and prepare for final grading.
15:45	AEC loading sand base along the eastern and northeastern swales and perimeter rock on north swale.
17:40	AEC ceases work and puts away equipment / AMEC starts end of day site inspection
17:55	AEC departs the site.
18:00	AMEC departs the site and lock the gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 13, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:00 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny / PM - clear, warm, light wind		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Placement of sand and topsoil layers
2) Installation of Geo-Fabric and OCF over top of sand layer
3) Check grades with builder's level at some critical points along eastern, southern, and northern EOC.
4) Grading of sand and topsoil layers
5) Installation of Geo-Fabric and perimeter rock in W / NW / N swale areas.
6) Fuel delivery for equipment and truck tanks.
7) Rick's Custom Fencing observing the site for the fence work starting on Monday.

Changes to Plans or Specifications

1) NONE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1) AEC used DSE survey pin #1002 @ elevation 400.52-ft to shoot EOC grades on eastern and southern sides. This pin is located just south of the new SE corner of the new perimeter fence.
2) AEC used Tim Scott survey hub adjacent to trailer @ elevation 416.72-ft to shoot EOC grades on northern and northwestern sides.

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (6 man crew)	6:00	17:55	6	11:55	02:23:30
				0:00	00:00:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:23:30

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 14, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	5:00	**Departure:**	12:35
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny/some wind		

FIELD REPORT NOTES

Time:	Field Notes:
5:00	AMEC / AEC arrival at the site (crew 6) / conduct safety tailgate
5:10	AEC prep equipment and fueling/greasing equipment for the day / discuss the work for the day
5:30	AEC begins the following work items for the day: 1) Grading outer edge of the southern EOC/EOL zone for prep for perimeter rock 2) Placing sand/Geo-Fabric/rock in the North and NE swale areas 3) Watering roadways and work zone 4) Finishing the rough grading of the CAP and smoothing out finished areas
9:30	AEC starts work on the eastern swale - sanding, geo-fabric, and perimeter rock placement
9:45	AEC grading out the southern edge of the CAP (EOC to EOL) zone
9:50	AEC and AMEC shoot some grades to confirm elevations at corners of the EOC
10:05	AEC bulldozer placing/grading perimeter rock in Eastern swale
12:00	AEC completes perimeter rock work and rough grading of the CAP and perimeter swales
12:10	AEC departs the site.
12:15	Abe septic service arrives to service the site porta-potty
12:25	Abe septic service departs the site.
12:35	AMEC departs the site and lock the gate.

DAILY FIELD REPORT

Environment and
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7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 14, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	5:00 AM	**Departure:**	12:35 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - clear/sunny/some wind		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Placement of final sand and topsoil layers
2) Installation of Geo-Fabric and OCF over top of sand layer
3) Check grades with builder's level at some critical points along CAP perimeter and internal pinch points
4) Grading of sand and topsoil layers
5) Installation of Geo-Fabric and perimeter rock in NE / E / S swales
6) Rough final grading of CAP
7)

Changes to Plans or Specifications

1) NONE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (6 man crew)	6:00	12:10	6	6:10	01:13:00
				0:00	00:00:00
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:13:00

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 17, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	8:00	**Departure:**	18:45
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Cloudy/ cool PM - Cloudy / cool		

FIELD REPORT NOTES

Time:	Field Notes:
8:00	AEC / AMEC arrival / safety tailgate meeting / Prep for equipment (grease / fueling)
8:15	AEC loader lays out extra width of perimeter rock along southern EOL.
8:40	Rick Custom Fence fence crew (2) arrive / safety tailgate
8:50	Rick Custom Fence fence crew park and begin work.
9:00	AEC loader begins to drop rock on the North peak of the EOC/EOL to build vehicle access point on N end.
9:10	AEC completing grading work on SW access corner
9:20	AEC laying out the geo-fabric and perimeter road on SW corner of EOC/EOL
10:15	AEC starts laying out southern access road onto cap with rock
10:20	AEC collecting garbage and scrap metal around site for disposal / recycle
10:55	Rick's Custom Fence installing posts / problem with driver machine @ 12:30 (go for parts)
12:00	AEC finishes loading scrap metal and leaves with the trailer
13:10	ACE Septic service arrives to take Porta-potty - Departs @ 13:20
13:55	Rick's Custom Fence returns with larger pneumatic driver for posts
14:15	DSE surveyor (Ed DeWilde) arrives for QC survey/LLA work - conduct safety tailgate
14:35	DSE surveyor set up on northern control point
14:40	AEC continuing to load garbage and debris in dump truck
14:45	DSE shoots CAP corners /easter swale - continues with LLA survey (14:55)
15:10	AEC dump truck leaves for transfer station
15:30	AEC dump truck returns from transfer station
15:35	AEC starts laying out gravel in easter swale
16:45	AEC completes laying out gravel in easter swale
15:10	AEC departs the site.
18:10	Rick's Custom Fence completes work for the day - driving posts
18:15	Rick's Custom Fence departs the site / AMEC begins site inspection
18:20	AMEC departs the site and locks the outer gate.

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 17, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	8:00 AM	**Departure:**	6:45 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Cloudy/ cool PM - Cloudy / cool		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Installation of the fence posts
2) Installation of gravel along outer perimeter in the SW and eastern swales
3)
4)
5)
6)
7)

Changes to Plans or Specifications

1) NONE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (6 man crew)	8:00	15:10	6	7:10	01:19:00
Rick's Custom Fence	8:40	18:15	2	9:35	00:19:10
				0:00	00:00:00
				0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:14:10

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 18, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	6:00	**Departure:**	18:45
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM and PM - Cloudy and cool		

FIELD REPORT NOTES

Time:	Field Notes:
6:00	AEC / AMEC arrival / safety tailgate meeting / Prep for equipment (grease / fuel) - (3 crew)
6:10	AEC preps equipment for the day / discusses the work
6:30	AEC watering roadways and edges of cap / finish raking on CAP
7:00	AEC uses bulldozer to do fine/finsh grading
7:20	Rick's Custom Fencing crew arrives (2)
7:50	Rick's Custom Fencing starts post install on west side of fence perimeter
9:00	AEC grading out stockpile areas / roadway
9:30	Pelican Fuel arrives and fuels truck tanks and equipment (Departs 9:50AM)
12:00	Rental flatbed arrives to pick up telehandler
12:10	Rental flatbed depart from site with telehandler
12:20	AMEC / AEC walk site
12:30	Rick's Custom Fencing installs top posts on the fence
12:40	AEC preps equipment for departure / AEC conducts finishing work around the site
12:45	Rick's Custom Fencing adds 1 crew for site (3 total)
13:30	AEC truck / trailer departs (1 crew)
14:00	Job trailer truck arrives and hooks up traiiler
14:25	Job trailer truck departs with trailer
15:00	AEC uses bulldozer to condut finish grading work around CAP perimeter / staging area
15:05	AEC arrives to pick up trackhoe (1 crew arrives)
15:40	AEC rips surface of infiltration basin
15:50	AEC completes bulldozer work / Conducts stockpile area / entry watering
16:40	Rick's Custom Fencing adds 4th worker to crew / safety tailgate
17:00	AEC completes work - departs site (3 crew)
18:40	Ricks Custom Fencing started pulling fence in SE corner/ almost completed top bar/cable - not in NE
18:45	Rick's Custom Fencing departs (4-crew) / AMEC completes inspections and depart /locks the gate

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 18, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	6:00 AM	**Departure:**	6:45 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM and PM - Cloudy and cool		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Installation of fencing
2) AEC finish work of perimeter rock
3) Job trailer taken away from the site
4) Telehandler removed from the site
5) AEC trackhoe removed form the site
6)
7)

Changes to Plans or Specifications

1) NONE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (3 man crew)	6:00	17:00	3	11:00	01:09:00
Rick's Custom Fence	7:20	18:45	2	11:25	00:22:50
AEC (1 man crew)	13:30	17:00	1	3:30	00:03:30
Rick's Custom Fence	16:40	18:45	1	2:05	00:02:05
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:13:25

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 19, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:00	**Departure:**	18:55
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Cloudy damp & cool/PM - Damp, light rain		

FIELD REPORT NOTES

Time:	Field Notes:
7:00	AEC / AMEC arrival / safety tailgate meeting - (3 crew)
7:10	AEC / AMEC discuss work for the day / prepping equipment for the day / Start loading excavator for remova
7:30	AEC meeting Wildlands rep to discuss hydroseeding work
7:45	Wildlands crew (2) and Rick's (3) arrive / safety tailgate
8:00	Wildlands / Rick's set up for work
8:10	Wildlands starts hydroseeding east half of CAP
8:15	AEC semi-trackhoe trailer departs
8:30	Wildlands leaves for more water/east half of CAP is done
8:45	Wildlands returns and starts hydroseeding north area of CAP, TS stockpile area, west side of CAP
8:50	AEC rips more of the infiltration basin / finishes grades perimeter rock after Wildland work
9:10	Wildlands completes westside of CAP / goes to fill for loop area
9:30	Wildlands starts hydroseeding circle / parking areas
9:50	Wildlands completes work and departs
10:00	AEC dump truck departs (1 crew)
10:15	Ecology arrives (Chuck / Jeremy) / safety tailgate / discuss work
11:30	Rick's Custom Fencing adds 1 crew / safety tailgate
11:40	Ecology departs
12:10	AEC crew departs (1) with van+water trailer
12:40	Rick's Custom Fencing adds (1) more crew arrives/safety tailgate
14:10	Rick's Custom Fencing installing barb wires and ties
18:45	Rick's Custom Fencing starts to demob / AMEC conducts inspection
15:55	Rick's Custom Fencing / AMEC depart the site and lock gate

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 19, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:00 AM	**Departure:**	6:55 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Cloudy damp & cool/PM - Damp, light rain		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) AEC demobilization of equipment
2) Fencing installation continues
3) Hydroseeding of site by Wildlands
4)
5)
6)
7)

Changes to Plans or Specifications

1) NONE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
AEC (1 man crew)	7:00	12:10	3	5:10	00:15:30
AEC (1 man crew)	7:00	10:00	2	3:00	00:06:00
AEC (1 man crew)	7:00	8:15	1	1:15	00:01:15
Rick's Custom Fence	7:45	18:55	3	11:10	01:09:30
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		02:08:15

DAILY FIELD REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME:	Pasco Landfill Cap Project - Cap Construction Project Pasco, Washington		
Project No:	4-61M-10705-1 P-02	**Date:**	June 20, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	1 of 2
Arrival:	7:55	**Departure:**	16:15
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Cloudy, cool, windy / PM - Cloudy, cool, windy		

FIELD REPORT NOTES

Time:	Field Notes:
7:55	AMEC arrival at the site
8:10	Rick's Custom Fencing crew arrives (3) in one truck to complete fencing installation work a) Re-work old east fence / install barb wire / install gates b) Trailer truck also arrives and takes Gator (departs at 8:20) c) Clean up / finish work
8:15	Safety tailgate for Rick's Custom Fencing crew
10:00	Eric Jensen arrive - safety tailgate He has trailer with irrigation piping supplies for CAP He sets up at north end of the perimeter rock access road with tools and materials
11:45	Ricks Custom Fence second truck (1 crew) arrives with gates and starts gate installation Conduct safety tailgate for new crew
14:15	Rick's Custom Fencing starts installation of gates
14:30	Flatbed arrives to recover the bulldozer / gate installation complete
15:35	Rick's CF - 1 crew departs in one truck
16:10	Rick's CF - 2 crew completes work and departs / AMEC conducts end of final inspection
16:15	AMEC departs and leaves Eric Jensen who is working on irrigation installation

DAILY FIELD REPORT

Environment and
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7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Pasco, Washington

Project No:	4-61M-10705-1 P-02	**Date:**	June 20, 2013
Site Location:	Pasco Landfill, Wash.	**Page:**	2 of 2
Arrival:	7:55 AM	**Departure:**	4:15 PM
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Cloudy, cool, windy / PM - Cloudy, cool, windy		

FIELD REPORT NOTES

Time:	Field Notes (continued):

Task List

1) Completion of fencing work - installation of gate and cleanup and barb wire
2) Eric Jensen begins installation of irrigation system
3) Removal of final equipment
4) Final site inspection
5)
6)
7)

Changes to Plans or Specifications

1) NONE

2)

Health and Safety

Near Misses	NONE
Accidents	NONE
Action	N/A

Notes and Comments

1)

2)

Contractor	Arrival	Departure	Qty of Personnel	Total Hours	Labor Man-Hours
Rick's Custom Fence	8:10	16:10	3	8:00	01:00:00
Rick's Custom Fence	11:45	15:35	2	3:50	00:07:40
Eric Jensen	10:00	16:15	1	6:15	00:06:15
			0	0:00	00:00:00
Contractor's Rep. (Initials)			**Contractor Labor Hours Total =**		01:13:55

APPENDIX D

Photograph Log

APPENDIX E

Weight Ticket Summaries

13-038 - Weight Tickets

Vendor	Loads	Total Weight	BTD Vendor					
Connell Sand & Gravel - Fill	489	15,049.60	15,049.60	10,379.03	CY G Class Material	1.45	904 ton	623 CY - Credit
				9,755.59	BILLABLE G Class Material			
Central PreMix - Concrete Sand	174	5,209.60	5,209.60	3,858.96	CY Drainage	1.35		
Central PreMix - Quarry Spalls	32	1,070.06	875.07	583.38	CY Rock	1.5		
Mahaffey - Top Soil	192	5,853.94		4,037.20	CY Vegetative	1.45		
Total:	887	20,259.20						

Connell Sand & Gravel - 13-038

Load Count	Date	Ticket #	Total Weight Pounds	Tare Weight Pounds	Net Weight Pounds	Total Weight In Tons	Invoice Number	Notes
1	5/21/2013	54011266	98,080	37,960	60,120	30.06	27231	
1	5/21/2013	54011262	97,320	37,960	59,360	29.68	27231	
1	5/21/2013	54011258	102,340	37,960	64,380	32.19	27231	
1	5/21/2013	54011254	105,260	37,960	67,300	33.65	27231	
1	5/21/2013	54011250	95,880	37,960	57,920	28.96	27231	
1	5/21/2013	54011246	96,820	37,960	58,860	29.43	27231	
1	5/21/2013	54011242	100,140	37,960	62,180	31.09	27231	
1	5/21/2013	54011298	92,020	37,960	54,060	27.03	27231	
1	5/21/2013	54011293	105,440	37,960	67,480	33.74	27231	
1	5/21/2013	54011290	100,920	37,960	62,960	31.48	27231	
1	5/21/2013	54011228	104,400	37,960	66,440	33.22	27231	
1	5/21/2013	54011261	98,380	37,500	60,880	30.44	27231	
1	5/21/2013	54011257	91,300	37,500	53,800	26.90	27231	
1	5/21/2013	54011253	94,600	37,500	57,100	28.55	27231	
1	5/21/2013	54011249	92,280	37,500	54,780	27.39	27231	
1	5/21/2013	54011245	91,040	37,500	53,540	26.77	27231	
1	5/21/2013	54011237	89,620	37,500	52,120	26.06	27231	
1	5/21/2013	54011234	90,860	37,500	53,360	26.68	27231	
1	5/21/2013	54011231	94,780	37,500	57,280	28.64	27231	
1	5/21/2013	54011241	91,380	37,500	53,880	26.94	27231	
1	5/21/2013	54011265	103,420	38,140	65,280	32.64	27231	
1	5/21/2013	54011260	103,420	38,140	65,280	32.64	27231	
1	5/21/2013	54011256	102,500	38,140	64,360	32.18	27231	
1	5/21/2013	54011252	99,640	38,140	61,500	30.75	27231	
1	5/21/2013	54011248	95,480	38,140	57,340	28.67	27231	
1	5/21/2013	54011244	101,900	38,140	63,760	31.88	27231	
1	5/21/2013	54011240	97,680	38,140	59,540	29.77	27231	
1	5/21/2013	54011236	101,980	38,140	63,840	31.92	27231	
1	5/21/2013	54011232	102,240	38,140	64,100	32.05	27231	
1	5/21/2013	54011267	96,240	38,140	58,100	29.05	27231	
1	5/21/2013	54011263	99,140	37,420	61,720	30.86	27231	
1	5/21/2013	54011259	99,000	37,420	61,580	30.79	27231	
1	5/21/2013	54011255	99,720	37,420	62,300	31.15	27231	
1	5/21/2013	54011251	99,500	37,420	62,080	31.04	27231	
1	5/21/2013	54011247	95,800	37,420	58,380	29.19	27231	
1	5/21/2013	54011243	93,620	37,420	56,200	28.10	27231	
1	5/21/2013	54011239	94,880	37,420	57,460	28.73	27231	
1	5/21/2013	54011235	95,480	37,420	58,060	29.03	27231	
1	5/21/2013	54011229	100,160	37,420	62,740	31.37	27231	
1	5/22/2013	54011272	90,120	37,120	53,000	26.50	27231	
1	5/22/2013	54011276	93,380	37,120	56,260	28.13	27231	
1	5/22/2013	54011280	94,340	37,120	57,220	28.61	27231	
1	5/22/2013	54011284	98,440	37,120	61,370	30.66	27231	
1	5/22/2013	54011288	97,540	37,120	60,420	30.21	27231	
1	5/22/2013	54011292	94,980	37,120	57,860	28.93	27231	
1	5/22/2013	54011296	95,600	37,120	58,480	29.24	27231	
1	5/22/2013	54011299	97,140	37,120	60,020	30.01	27231	
1	5/22/2013	54011302	94,720	37,120	57,600	28.80	27231	
1	5/22/2013	54011305	99,520	37,120	62,400	31.20	27231	
1	5/22/2013	54011308	95,020	37,120	57,900	28.95	27231	
1	5/22/2013	54011312	98,520	37,120	61,400	30.70	27231	
1	5/22/2013	54011269	100,280	38,300	61,980	30.99	27231	
1	5/22/2013	54011273	95,840	38,300	57,540	28.77	27231	
1	5/22/2013	54011277	97,440	38,300	59,140	29.57	27231	
1	5/22/2013	54011281	102,840	38,300	64,540	32.27	27231	
1	5/22/2013	54011285	100,380	38,300	62,080	31.04	27231	
1	5/22/2013	54011289	99,460	38,300	61,160	30.58	27231	
1	5/22/2013	54011293	101,620	38,300	63,320	31.66	27231	
1	5/22/2013	54011297	105,240	38,300	66,940	33.47	27231	
1	5/22/2013	54011300	102,640	38,300	64,340	32.17	27231	
1	5/22/2013	54011303	104,740	38,300	66,440	33.22	27231	
1	5/22/2013	54011306	102,800	38,300	64,500	32.25	27231	
1	5/22/2013	54011310	104,680	38,300	66,380	33.19	27231	
1	5/22/2013	54011314	103,320	38,300	65,020	32.51	27231	
1	5/22/2013	54011268	97,860	37,800	60,060	30.03	27231	
1	5/22/2013	54011271	97,720	37,800	59,920	29.96	27231	
1	5/22/2013	54011275	95,520	37,800	57,720	28.86	27231	
1	5/22/2013	54011279	94,560	37,800	56,760	28.38	27231	
1	5/22/2013	54011283	97,680	37,800	59,880	29.94	27231	
1	5/22/2013	54011287	97,750	37,800	59,960	29.98	27231	
1	5/22/2013	54011291	98,060	37,800	60,260	30.13	27231	
1	5/22/2013	54011295	94,580	37,800	56,780	28.39	27231	
1	5/22/2013	54011298	96,860	37,800	59,060	29.53	27231	
1	5/22/2013	54011301	97,820	37,800	60,020	30.01	27231	
1	5/22/2013	54011304	96,660	37,800	58,860	29.43	27231	
1	5/22/2013	54011307	91,200	37,800	53,400	26.70	27231	
1	5/22/2013	54011311	97,220	37,800	59,420	29.71	27231	
1	5/22/2013	54011270	104,240	37,980	66,260	33.13	27231	

1	5/22/2013	54011274	93,820	37,980	55,840	27.92	27231
1	5/22/2013	54011278	101,160	37,980	63,180	31.59	27231
1	5/22/2013	54011282	102,860	37,980	64,880	32.44	27231
1	5/22/2013	54011286	101,220	37,980	63,240	31.62	27231
1	5/22/2013	54011290	101,900	37,980	63,920	31.96	27231
1	5/22/2013	54011294	103,800	37,980	65,820	32.91	27231
1	5/22/2013	54011309	101,460	37,980	63,480	31.74	27231
1	5/22/2013	54011313	105,300	37,980	67,320	33.66	27231
1	5/23/2013	54011319	98,580	37,680	60,900	30.45	27231
1	5/23/2013	54011322	105,260	37,680	67,580	33.79	27231
1	5/23/2013	54011326	102,140	37,680	64,460	32.23	27231
1	5/23/2013	54011330	102,780	37,680	65,100	32.55	27231
1	5/23/2013	54011335	102,080	37,680	64,400	32.20	27231
1	5/23/2013	54011339	104,340	37,680	66,660	33.33	27231
1	5/23/2013	54011343	104,320	37,680	66,640	33.32	27231
1	5/23/2013	54011347	104,720	37,680	67,040	33.52	27231
1	5/23/2013	54011351	104,800	37,680	67,120	33.56	27231
1	5/23/2013	54011355	102,220	37,680	64,540	32.27	27231
1	5/23/2013	54011358	104,080	37,680	66,400	33.20	27231
1	5/23/2013	54011316	90,900	37,360	53,540	26.77	27231
1	5/23/2013	54011320	95,660	37,360	58,300	29.15	27231
1	5/23/2013	54011324	99,100	37,360	61,740	30.87	27231
1	5/23/2013	54011328	98,860	37,360	61,500	30.75	27231
1	5/23/2013	54011332	99,260	37,360	61,900	30.95	27231
1	5/23/2013	54011336	99,520	37,360	62,160	31.08	27231
1	5/23/2013	54011341	99,780	37,360	62,420	31.21	27231
1	5/23/2013	54011345	99,460	37,360	62,100	31.05	27231
1	5/23/2013	54011349	98,040	37,360	60,680	30.34	27231
1	5/23/2013	54011353	97,560	37,360	60,200	30.10	27231
1	5/23/2013	54011317	102,760	38,260	64,500	32.25	27231
1	5/23/2013	54011321	100,140	38,260	61,880	30.94	27231
1	5/23/2013	54011325	104,280	38,260	66,020	33.01	27231
1	5/23/2013	54011329	104,540	38,260	66,280	33.14	27231
1	5/23/2013	54011333	104,040	38,260	65,780	32.89	27231
1	5/23/2013	54011337	104,900	38,260	66,640	33.32	27231
1	5/23/2013	54011340	104,740	38,260	66,480	33.24	27231
1	5/23/2013	54011344	101,220	38,260	62,960	31.48	27231
1	5/23/2013	54011348	101,380	38,260	63,120	31.56	27231
1	5/23/2013	54011352	101,460	38,260	63,200	31.60	27231
1	5/23/2013	54011356	102,460	38,260	64,200	32.10	27231
1	5/23/2013	54011315	89,860	37,800	52,060	26.03	27231
1	5/23/2013	54011318	89,700	37,800	51,900	25.95	27231
1	5/23/2013	54011323	99,600	37,800	61,800	30.90	27231
1	5/23/2013	54011327	91,540	37,800	53,740	26.87	27231
1	5/23/2013	54011331	99,720	37,800	61,920	30.96	27231
1	5/23/2013	54011334	93,220	37,800	55,420	27.71	27231
1	5/23/2013	54011338	93,220	37,800	55,420	27.71	27231
1	5/23/2013	54011342	92,380	37,800	54,580	27.29	27231
1	5/23/2013	54011346	94,320	37,800	56,520	28.26	27231
1	5/23/2013	54011350	94,060	37,800	56,260	28.13	27231
1	5/23/2013	54011354	91,460	37,800	53,660	26.83	27231
1	5/23/2013	54011357	92,820	37,800	55,020	27.51	27231
1	5/24/2013	54011359	101,400	37,820	63,580	31.79	27231
1	5/24/2013	54011361	101,180	37,820	63,360	31.68	27231
1	5/24/2013	54011363	99,680	37,820	61,860	30.93	27231
1	5/24/2013	54011365	100,220	37,820	62,400	31.20	27231
1	5/24/2013	54011367	100,660	37,820	62,840	31.42	27231
1	5/24/2013	54011360	93,680	37,700	55,980	27.99	27231
1	5/24/2013	54011362	90,420	37,700	52,720	26.36	27231
1	5/24/2013	54011364	90,620	37,700	52,920	26.46	27231
1	5/24/2013	54011366	97,660	37,700	59,960	29.98	27231
1	5/24/2013	54011368	95,140	37,700	57,440	28.72	27231
1	5/28/2013	54011371	99,820	37,080	62,740	31.37	27231
1	5/28/2013	54011375	98,060	37,080	60,980	30.49	27231
1	5/28/2013	54011379	99,860	37,080	62,780	31.39	27231
1	5/28/2013	54011383	99,440	37,080	62,360	31.18	27231
1	5/28/2013	54011390	102,880	37,080	65,800	32.90	27231
1	5/28/2013	54011394	97,580	37,080	60,500	30.25	27231
1	5/28/2013	54011398	97,860	37,080	60,780	30.39	27231
1	5/28/2013	54011402	99,640	37,080	62,560	31.28	27231
1	5/28/2013	54011406	98,860	37,080	61,780	30.89	27231
1	5/28/2013	54011411	99,160	37,080	62,080	31.04	27231
1	5/28/2013	54011415	100,360	37,080	63,280	31.64	27231
1	5/28/2013	54011372	104,080	38,200	65,880	32.94	27231
1	5/28/2013	54011376	103,340	38,200	65,140	32.57	27231
1	5/28/2013	54011380	104,320	38,200	66,120	33.06	27231
1	5/28/2013	54011384	105,040	38,200	66,840	33.42	27231
1	5/28/2013	54011389	104,920	38,200	66,720	33.36	27231
1	5/28/2013	54011393	101,400	38,200	63,200	31.60	27231
1	5/28/2013	54011397	101,580	38,200	63,380	31.69	27231
1	5/28/2013	54011401	104,120	38,200	65,920	32.96	27231
1	5/28/2013	54011405	100,620	38,200	62,420	31.21	27231
1	5/28/2013	54011409	105,040	38,200	66,840	33.42	27231

1	5/28/2013	54011413	104,060	38,200	65,860	32.93	27231
1	5/28/2013	54011417	104,060	38,200	65,860	32.93	27231
1	5/28/2013	54011369	96,020	38,400	57,620	28.81	27231
1	5/28/2013	54011373	93,100	38,400	54,700	27.35	27231
1	5/28/2013	54011377	94,820	38,400	56,420	28.21	27231
1	5/28/2013	54011381	94,860	38,400	56,460	28.23	27231
1	5/28/2013	54011385	93,420	38,400	55,020	27.51	27231
1	5/28/2013	54011387	95,120	38,400	56,720	28.36	27231
1	5/28/2013	54011391	94,900	38,400	56,500	28.25	27231
1	5/28/2013	54011395	93,400	38,400	55,000	27.50	27231
1	5/28/2013	54011399	95,320	38,400	56,920	28.46	27231
1	5/28/2013	54011399	93,400	38,400	55,000	27.50	27231
1	5/28/2013	54011407	94,420	38,400	56,020	28.01	27231
1	5/28/2013	54011410	94,980	38,400	56,580	28.29	27231
1	5/28/2013	54011414	96,200	38,400	57,800	28.90	27231
1	5/28/2013	54011370	103,560	37,520	66,040	33.02	27231
1	5/28/2013	54011374	99,420	37,520	61,900	30.95	27231
1	5/28/2013	54011378	104,020	37,520	66,500	33.25	27231
1	5/28/2013	54011382	103,880	37,520	66,360	33.18	27231
1	5/28/2013	54011386	102,220	37,520	64,700	32.35	27231
1	5/28/2013	54011388	104,160	37,520	66,640	33.32	27231
1	5/28/2013	54011392	100,580	37,520	63,060	31.53	27231
1	5/28/2013	54011396	104,340	37,520	66,820	33.41	27231
1	5/28/2013	54011400	103,180	37,520	65,660	32.83	27231
1	5/28/2013	54011404	104,220	37,520	66,700	33.35	27231
1	5/28/2013	54011408	102,300	37,520	64,780	32.39	27231
1	5/28/2013	54011412	102,580	37,520	65,060	32.53	27231
1	5/28/2013	54011416	103,780	37,520	66,260	33.13	27231
1	5/29/2013	54011419	92,600	37,920	54,680	27.34	27231
1	5/29/2013	54011423	90,720	37,920	52,800	26.40	27231
1	5/29/2013	54011427	91,660	37,920	53,740	26.87	27231
1	5/29/2013	54011431	90,880	37,920	52,960	26.48	27231
1	5/29/2013	54011435	91,080	37,920	53,160	26.58	27231
1	5/29/2013	54011439	91,300	37,920	53,380	26.69	27231
1	5/29/2013	54011443	90,100	37,920	52,180	26.09	27231
1	5/29/2013	54011447	97,740	37,920	59,820	29.91	27231
1	5/29/2013	54011451	90,600	37,920	52,680	26.34	27231
1	5/29/2013	54011456	94,640	37,920	56,720	28.36	27231
1	5/29/2013	54011461	97,620	37,920	59,700	29.85	27231
1	5/29/2013	54011465	97,000	37,920	59,080	29.54	27231
1	5/29/2013	54011469	97,980	37,920	60,060	30.03	27231
1	5/29/2013	54011421	101,140	38,240	62,900	31.45	27231
1	5/29/2013	54011425	99,340	38,240	61,100	30.55	27231
1	5/29/2013	54011429	100,300	38,240	62,060	31.03	27231
1	5/29/2013	54011433	100,120	38,240	61,880	30.94	27231
1	5/29/2013	54011437	104,560	38,240	66,320	33.16	27231
1	5/29/2013	54011441	103,200	38,240	64,960	32.48	27231
1	5/29/2013	54011445	99,600	38,240	61,360	30.68	27231
1	5/29/2013	54011449	100,320	38,240	62,080	31.04	27231
1	5/29/2013	54011454	97,320	38,240	59,080	29.54	27231
1	5/29/2013	54011459	100,100	38,240	61,860	30.93	27231
1	5/29/2013	54011463	99,160	38,240	60,920	30.46	27231
1	5/29/2013	54011466	101,660	38,240	63,420	31.71	27231
1	5/29/2013	54011418	100,140	37,740	62,400	31.20	27231
1	5/29/2013	54011422	97,160	37,740	59,420	29.71	27231
1	5/29/2013	54011426	104,360	37,740	66,620	33.31	27231
1	5/29/2013	54011430	100,080	37,740	62,340	31.17	27231
1	5/29/2013	54011434	100,080	37,740	62,340	31.17	27231
1	5/29/2013	54011438	103,680	37,740	65,940	32.97	27231
1	5/29/2013	54011442	100,880	37,740	63,140	31.57	27231
1	5/29/2013	54011446	99,020	37,740	61,280	30.64	27231
1	5/29/2013	54011450	102,280	37,740	64,540	32.27	27231
1	5/29/2013	54011455	104,840	37,740	67,100	33.55	27231
1	5/29/2013	54011460	104,000	37,740	66,260	33.13	27231
1	5/29/2013	54011464	103,000	37,740	65,260	32.63	27231
1	5/29/2013	54011468	102,520	37,740	64,780	32.39	27231
1	5/29/2013	54011453	104,700	41,240	63,460	31.73	27231
1	5/29/2013	54011458	100,660	41,240	59,420	29.71	27231
1	5/29/2013	54011467	104,600	41,240	63,360	31.68	27231
1	5/29/2013	54011420	96,240	37,360	58,880	29.44	27231
1	5/29/2013	54011424	95,020	37,360	57,660	28.83	27231
1	5/29/2013	54011428	97,420	37,360	60,060	30.03	27231
1	5/29/2013	54011432	97,180	37,360	59,820	29.91	27231
1	5/29/2013	54011436	101,540	37,360	64,180	32.09	27231
1	5/29/2013	54011440	101,160	37,360	63,800	31.90	27231
1	5/29/2013	54011444	98,740	37,360	61,380	30.69	27231
1	5/29/2013	54011448	98,480	37,360	61,120	30.56	27231
1	5/29/2013	54011452	97,640	37,360	60,280	30.14	27231
1	5/29/2013	54011457	100,420	37,360	63,060	31.53	27231
1	5/29/2013	54011462	97,180	37,360	59,820	29.91	27231
1	5/30/2013	54011479	101,300	38,200	63,100	31.55	27231
1	5/30/2013	54011478	103,960	38,200	65,760	32.88	27231
1	5/30/2013	54011483	104,140	38,200	65,940	32.97	27231

1	5/30/2013	54011488	104,640	38,200	66,440	33.22	27231
1	5/30/2013	54011493	105,420	38,200	67,220	33.61	27231
1	5/30/2013	54011498	102,640	38,200	64,440	32.22	27231
1	5/30/2013	54011503	104,280	38,200	66,080	33.04	27231
1	5/30/2013	54011508	104,140	38,200	65,940	32.97	27231
1	5/30/2013	54011513	103,620	38,200	65,420	32.71	27231
1	5/30/2013	54011518	102,900	38,200	64,700	32.35	27231
1	5/30/2013	54011471	96,880	37,020	59,860	29.93	27231
1	5/30/2013	54011476	96,860	37,020	59,840	29.92	27231
1	5/30/2013	54011481	101,180	37,020	64,160	32.08	27231
1	5/30/2013	54011486	98,680	37,020	61,660	30.83	27231
1	5/30/2013	54011491	100,440	37,020	63,420	31.71	27231
1	5/30/2013	54011496	100,520	37,020	63,500	31.75	27231
1	5/30/2013	54011501	99,920	37,020	62,900	31.45	27231
1	5/30/2013	54011506	103,140	37,020	66,120	33.06	27231
1	5/30/2013	54011511	100,800	37,020	63,780	31.89	27231
1	5/30/2013	54011516	100,280	37,020	63,260	31.63	27231
1	5/30/2013	54011521	97,280	37,020	60,260	30.13	27231
1	5/30/2013	54011470	101,760	38,020	63,740	31.87	27231
1	5/30/2013	54011475	99,260	38,020	61,240	30.62	27231
1	5/30/2013	54011480	104,720	38,020	66,700	33.35	27231
1	5/30/2013	54011485	102,500	38,020	64,480	32.24	27231
1	5/30/2013	54011489	103,480	38,020	65,460	32.73	27231
1	5/30/2013	54011494	104,160	38,020	66,140	33.07	27231
1	5/30/2013	54011499	100,180	38,020	62,160	31.08	27231
1	5/30/2013	54011504	103,520	38,020	65,500	32.75	27231
1	5/30/2013	54011509	100,440	38,020	62,420	31.21	27231
1	5/30/2013	54011514	103,160	38,020	65,140	32.57	27231
1	5/30/2013	54011519	102,120	38,020	64,100	32.05	27231
1	5/30/2013	54011523	103,120	38,020	65,100	32.55	27231
1	5/30/2013	54011526	104,100	38,020	66,080	33.04	27231
1	5/30/2013	54011472	98,480	42,420	56,060	28.03	27231
1	5/30/2013	54011477	98,040	42,420	55,620	27.81	27231
1	5/30/2013	54011482	99,400	42,420	56,980	28.49	27231
1	5/30/2013	54011487	98,900	42,420	56,480	28.24	27231
1	5/30/2013	54011492	105,160	42,420	62,740	31.37	27231
1	5/30/2013	54011497	104,800	42,420	62,380	31.19	27231
1	5/30/2013	54011502	104,300	42,420	61,880	30.94	27231
1	5/30/2013	54011507	102,540	42,420	60,120	30.06	27231
1	5/30/2013	54011512	104,720	42,420	62,300	31.15	27231
1	5/30/2013	54011517	100,540	42,420	58,120	29.06	27231
1	5/30/2013	54011517	101,200	42,420	58,780	29.39	27231
1	5/30/2013	54011525	102,300	42,420	59,880	29.94	27231
1	5/30/2013	54011474	94,380	37,740	56,640	28.32	27231
1	5/30/2013	54011479	93,280	37,740	55,540	27.77	27231
1	5/30/2013	54011484	92,140	37,740	54,400	27.20	27231
1	5/30/2013	54011490	93,600	37,740	55,860	27.93	27231
1	5/30/2013	54011495	96,940	38,200	58,740	29.37	27231
1	5/30/2013	54011500	94,000	37,740	56,260	28.13	27231
1	5/30/2013	54011505	95,440	37,740	57,700	28.85	27231
1	5/30/2013	54011510	92,760	37,740	55,020	27.51	27231
1	5/30/2013	54011515	94,340	37,740	56,600	28.30	27231
1	5/30/2013	54011520	93,860	37,740	56,120	28.06	27231
1	5/30/2013	54011524	94,820	37,740	57,080	28.54	27231
1	5/30/2013	54011560	95,940	37,740	58,200	29.10	27231
1	5/31/2013	54011537	98,160	37,380	60,780	30.39	27231
1	5/31/2013	54011541	100,400	37,380	63,020	31.51	27231
1	5/31/2013	54011546	99,660	37,380	62,280	31.14	27231
1	5/31/2013	54011551	100,140	37,380	62,760	31.38	27231
1	5/31/2013	54011556	97,360	37,380	59,980	29.99	27231
1	5/31/2013	54011561	98,780	37,380	61,400	30.70	27231
1	5/31/2013	54011566	97,380	37,380	60,000	30.00	27231
1	5/31/2013	54011571	97,680	37,380	60,300	30.15	27231
1	5/31/2013	54011576	103,260	37,380	65,880	32.94	27231
1	5/31/2013	54011581	101,860	37,380	64,480	32.24	27231
1	5/31/2013	54011530	104,940	38,180	66,760	33.38	27231
1	5/31/2013	54011534	101,080	38,180	62,900	31.45	27231
1	5/31/2013	54011538	103,520	38,180	65,340	32.67	27231
1	5/31/2013	54011542	104,700	38,180	66,520	33.26	27231
1	5/31/2013	54011547	103,020	38,180	64,840	32.42	27231
1	5/31/2013	54011552	103,920	38,180	65,740	32.87	27231
1	5/31/2013	54011557	102,600	38,180	64,420	32.21	27231
1	5/31/2013	54011562	104,620	38,180	66,440	33.22	27231
1	5/31/2013	54011567	102,740	38,180	64,560	32.28	27231
1	5/31/2013	54011572	104,020	38,180	65,840	32.92	27231
1	5/31/2013	54011577	101,480	38,180	63,300	31.65	27231
1	5/31/2013	54011582	104,320	38,180	66,140	33.07	27231
1	5/31/2013	54011533	105,420	37,660	67,760	33.88	27231
1	5/31/2013	54011544	102,060	37,660	64,400	32.20	27231
1	5/31/2013	54011549	104,900	37,660	67,240	33.62	27231
1	5/31/2013	54011554	103,140	37,660	65,480	32.74	27231
1	5/31/2013	54011559	102,900	37,660	65,240	32.62	27231
1	5/31/2013	54011564	103,200	37,660	65,540	32.77	27231

1	5/31/2013	54011569	104,540	37,660	66,880	33.44	27231
1	5/31/2013	54011574	101,040	37,660	63,380	31.69	27231
1	5/31/2013	54011579	102,160	37,660	64,500	32.25	27231
1	5/31/2013	54011584	102,720	37,660	65,060	32.53	27231
1	5/31/2013	54011587	97,820	37,660	60,160	30.08	27231
1	5/31/2013	54011529	96,560	37,720	58,840	29.42	27231
1	5/31/2013	54011531	97,540	37,720	59,820	29.91	27231
1	5/31/2013	54011535	97,380	37,720	59,660	29.83	27231
1	5/31/2013	54011539	95,140	37,720	57,420	28.71	27231
1	5/31/2013	54011543	94,760	37,720	57,040	28.52	27231
1	5/31/2013	54011548	95,900	37,720	58,180	29.09	27231
1	5/31/2013	54011553	96,740	37,720	59,020	29.51	27231
1	5/31/2013	54011558	94,460	37,720	56,740	28.37	27231
1	5/31/2013	54011563	96,260	37,720	58,540	29.27	27231
1	5/31/2013	54011568	93,300	37,720	55,580	27.79	27231
1	5/31/2013	54011573	95,340	37,720	57,620	28.81	27231
1	5/31/2013	54011578	95,060	37,720	57,340	28.67	27231
1	5/31/2013	54011583	95,540	37,720	57,820	28.91	27231
1	5/31/2013	54011586	93,060	37,720	55,340	27.67	27231
1	5/31/2013	54011529	102,500	41,800	60,700	30.35	27231
1	5/31/2013	54011532	101,540	41,800	59,740	29.87	27231
1	5/31/2013	54011536	103,540	41,800	61,740	30.87	27231
1	5/31/2013	54011540	102,660	41,800	60,860	30.43	27231
1	5/31/2013	54011545	103,160	41,800	61,360	30.68	27231
1	5/31/2013	54011550	105,160	41,800	63,360	31.68	27231
1	5/31/2013	54011555	103,240	41,800	61,440	30.72	27231
1	5/31/2013	54011560	104,240	41,800	62,440	31.22	27231
1	5/31/2013	54011565	102,160	41,800	60,360	30.18	27231
1	5/31/2013	54011570	102,280	41,800	60,480	30.24	27231
1	5/31/2013	54011575	103,920	41,800	62,120	31.06	27231
1	5/31/2013	54011580	102,680	41,800	60,880	30.44	27231
1	5/31/2013	54011585	103,880	41,800	62,080	31.04	27231
1	6/3/2013	54011590	97,660	37,060	60,600	30.30	27231
1	6/3/2013	54011595	99,920	37,060	62,860	31.43	27231
1	6/3/2013	54011600	99,420	37,060	62,360	31.18	27231
1	6/3/2013	54011605	100,920	37,060	63,860	31.93	27231
1	6/3/2013	54011610	100,080	37,060	63,020	31.51	27231
1	6/3/2013	54011615	99,060	37,060	62,000	31.00	27231
1	6/3/2013	54011620	99,240	37,060	62,180	31.09	27231
1	6/3/2013	54011624	100,600	37,060	63,540	31.77	27231
1	6/3/2013	54011628	100,020	37,060	62,960	31.48	27231
1	6/3/2013	54011633	101,940	37,060	64,880	32.44	27231
1	6/3/2013	54011592	104,200	38,160	66,040	33.02	27231
1	6/3/2013	54011597	103,900	38,160	65,740	32.87	27231
1	6/3/2013	54011602	104,520	38,160	66,360	33.18	27231
1	6/3/2013	54011607	105,240	38,160	67,080	33.54	27231
1	6/3/2013	54011612	103,700	38,160	65,540	32.77	27231
1	6/3/2013	54011617	102,980	38,160	64,820	32.41	27231
1	6/3/2013	54011621	100,540	38,160	62,380	31.19	27231
1	6/3/2013	54011626	104,000	38,160	65,840	32.92	27231
1	6/3/2013	54011630	104,680	38,160	66,520	33.26	27231
1	6/3/2013	54011634	103,180	38,160	65,020	32.51	27231
1	6/3/2013	54011637	105,320	38,160	67,160	33.58	27231
1	6/3/2013	54011580	103,320	37,660	65,660	32.83	27231
1	6/3/2013	54011593	102,440	37,660	64,780	32.39	27231
1	6/3/2013	54011598	105,000	37,660	67,340	33.67	27231
1	6/3/2013	54011603	104,480	37,660	66,820	33.41	27231
1	6/3/2013	54011609	104,240	37,660	66,580	33.29	27231
1	6/3/2013	54011614	103,340	37,660	65,680	32.84	27231
1	6/3/2013	54011591	104,500	41,800	62,700	31.35	27231
1	6/3/2013	54011596	103,280	41,800	61,480	30.74	27231
1	6/3/2013	54011601	101,420	41,800	59,620	29.81	27231
1	6/3/2013	54011606	102,760	41,800	60,960	30.48	27231
1	6/3/2013	54011611	103,660	41,800	61,860	30.93	27231
1	6/3/2013	54011616	100,200	41,800	58,400	29.20	27231
1	6/3/2013	54011619	103,140	41,800	61,340	30.67	27231
1	6/3/2013	54011623	103,480	41,800	61,680	30.84	27231
1	6/3/2013	54011627	104,520	41,800	62,720	31.36	27231
1	6/3/2013	54011631	102,960	41,800	61,160	30.58	27231
1	6/3/2013	54011635	102,320	41,800	60,520	30.26	27231
1	6/3/2013	54011589	94,800	37,720	57,080	28.54	27231
1	6/3/2013	54011594	96,740	37,720	59,020	29.51	27231
1	6/3/2013	54011599	95,240	38,160	57,080	28.54	27231
1	6/3/2013	54011604	96,500	37,720	58,780	29.39	27231
1	6/3/2013	54011608	96,980	37,720	59,260	29.63	27231
1	6/3/2013	54011613	94,900	37,720	57,180	28.59	27231
1	6/3/2013	54011618	94,320	37,720	56,600	28.30	27231
1	6/3/2013	54011622	94,260	37,720	56,540	28.27	27231
1	6/3/2013	54011625	94,360	37,720	56,640	28.32	27231
1	6/3/2013	54011629	95,600	37,720	57,880	28.94	27231
1	6/3/2013	54011632	96,340	37,720	58,620	29.31	27231
1	6/3/2013	54011636	96,080	37,720	58,360	29.18	27231
1	6/3/2013	54011638	95,300	37,720	57,580	28.79	27231

1	6/4/2013	54011648	99,100	37,440	61,660	30.83	27231
1	6/4/2013	54011651	98,660	37,440	61,220	30.61	27231
1	6/4/2013	54011654	99,260	37,440	61,820	30.91	27231
1	6/4/2013	54011658	98,000	37,440	60,560	30.28	27231
1	6/4/2013	54011662	98,760	37,440	61,320	30.66	27231
1	6/4/2013	54011666	99,830	37,440	62,390	31.19	27231
1	6/4/2013	54011670	98,640	37,440	61,200	30.60	27231
1	6/4/2013	54011674	97,860	37,440	60,420	30.21	27231
1	6/4/2013	54011644	96,980	37,740	59,240	29.62	27231
1	6/4/2013	54011647	95,880	37,740	58,140	29.07	27231
1	6/4/2013	54011649	96,420	37,740	58,680	29.34	27231
1	6/4/2013	54011652	95,880	37,740	58,140	29.07	27231
1	6/4/2013	54011655	95,360	37,740	57,620	28.81	27231
1	6/4/2013	54011659	96,120	37,740	58,380	29.19	27231
1	6/4/2013	54011663	95,360	37,740	57,620	28.81	27231
1	6/4/2013	54011667	96,860	37,740	59,120	29.56	27231
1	6/4/2013	54011671	95,860	37,740	58,120	29.06	27231
1	6/4/2013	54011675	95,820	37,740	58,080	29.04	27231
1	6/4/2013	54011678	95,620	37,740	57,880	28.94	27231
1	6/4/2013	54011639	102,460	41,520	60,940	30.47	27231
1	6/4/2013	54011641	103,280	41,520	61,760	30.88	27231
1	6/4/2013	54011643	102,320	41,520	60,800	30.40	27231
1	6/4/2013	54011645	103,960	41,520	62,440	31.22	27231
1	6/4/2013	54011650	101,800	41,520	60,280	30.14	27231
1	6/4/2013	54011653	101,240	41,520	59,720	29.86	27231
1	6/4/2013	54011657	102,100	41,520	60,580	30.29	27231
1	6/4/2013	54011661	102,920	41,520	61,400	30.70	27231
1	6/4/2013	54011665	104,440	41,520	62,920	31.46	27231
1	6/4/2013	54011668	101,940	41,520	60,420	30.21	27231
1	6/4/2013	54011675	103,000	41,520	61,480	30.74	27231
1	6/4/2013	54011676	101,400	41,520	59,880	29.94	27231
1	6/4/2013	54011640	104,540	38,140	66,400	33.20	27231
1	6/4/2013	54011642	104,660	38,140	66,520	33.26	27231
1	6/4/2013	54011646	104,760	38,140	66,620	33.31	27231
1	6/4/2013	54011656	105,220	38,140	67,080	33.54	27231
1	6/4/2013	54011660	105,180	38,140	67,040	33.52	27231
1	6/4/2013	54011664	103,900	38,140	65,760	32.88	27231
1	6/4/2013	54011669	104,880	38,140	66,740	33.37	27231
1	6/4/2013	54011673	102,540	38,140	64,400	32.20	27231
1	6/4/2013	54011677	103,960	38,140	65,820	32.91	27231
1	6/5/2013	54011680	94,480	37,800	56,680	28.34	27231
1	6/5/2013	54011684	96,960	37,800	59,160	29.58	27231
1	6/5/2013	54011688	98,420	37,800	60,620	30.31	27231
1	6/5/2013	54011692	97,020	37,800	59,220	29.61	27231
1	6/5/2013	54011696	97,040	37,800	59,240	29.62	27231
1	6/5/2013	54011700	99,080	37,800	61,280	30.64	27231
1	6/5/2013	54011704	96,220	37,800	58,420	29.21	27231
1	6/5/2013	54011708	97,040	37,800	59,240	29.62	27231
1	6/5/2013	54011717	96,840	37,800	59,040	29.52	27231
1	6/5/2013	54011716	96,800	37,800	59,000	29.50	27231
1	6/5/2013	54011681	103,780	38,140	65,640	32.82	27231
1	6/5/2013	54011686	105,020	38,140	66,880	33.44	27231
1	6/5/2013	54011690	102,640	38,140	64,500	32.25	27231
1	6/5/2013	54011694	103,180	38,140	65,040	32.52	27231
1	6/5/2013	54011698	104,100	38,140	65,960	32.98	27231
1	6/5/2013	54011702	101,520	38,140	63,380	31.69	27231
1	6/5/2013	54011706	102,980	38,140	64,840	32.42	27231
1	6/5/2013	54011710	102,220	38,140	64,080	32.04	27231
1	6/5/2013	54011714	103,980	38,140	65,840	32.92	27231
1	6/5/2013	54011682	103,540	37,180	66,360	33.18	27231
1	6/5/2013	54011685	98,840	37,180	61,660	30.83	27231
1	6/5/2013	54011689	98,880	37,180	61,700	30.85	27231
1	6/5/2013	54011693	101,080	37,180	63,900	31.95	27231
1	6/5/2013	54011697	100,060	37,180	62,880	31.44	27231
1	6/5/2013	54011701	98,380	37,180	61,200	30.60	27231
1	6/5/2013	54011705	98,120	37,180	60,940	30.47	27231
1	6/5/2013	54011709	100,400	37,100	63,220	31.61	27231
1	6/5/2013	54011713	97,880	37,180	60,700	30.35	27231
1	6/5/2013	54011717	97,280	37,100	60,100	30.05	27231
1	6/5/2013	54011679	100,100	37,680	62,420	31.21	27231
1	6/5/2013	54011683	104,900	37,680	67,220	33.61	27231
1	6/5/2013	54011687	105,500	37,680	67,820	33.91	27231
1	6/5/2013	54011691	104,420	37,680	66,740	33.37	27231
1	6/5/2013	54011695	105,340	37,680	67,660	33.83	27231
1	6/5/2013	54011699	105,020	37,680	67,340	33.67	27231
1	6/5/2013	54011703	105,420	37,680	67,740	33.87	27231
1	6/5/2013	54011707	102,460	37,680	64,780	32.39	27231

1	6/5/2013	54011711	102,320	37,680	64,640	32.32	27231
1	6/5/2013	54011715	100,920	37,680	63,240	31.62	27291

489	15,049.60
Total Loads	Total Tons

Central Pre-Mix Concrete Co - 13-038
Concrete ASTM

Load Count	Date	Ticket #	Total Weight Pounds	Tare Weight Pounds	Net Weight Pounds	Total Weight In Tons	Invoice Number	Notes
38	6/3/2013					1,147.99	16-1828747	
39	6/4/2013					1,186.33	16-1829270	
35	6/5/2013					1,047.11	16-1829652	
32	6/6/2013					959.69	16-1830512	
24	6/7/2013					716.25	16-1831146	
6	6/10/2013					152.23	16-1831913	
174						5,209.60		
Total Loads						Total Tons		

Central Pre-Mix Concrete Co - 13-038
Quarry Spalls

Load Count	Date	Ticket #	Total Weight Pounds	Tare Weight Pounds	Net Weight Pounds	Total Weight In Tons	Invoice Number	Notes
1	6/10/2013					95.25	16-1831913	
1	6/11/2013					31.62	16-1832777	
24	6/12/2013					748.20	16-1828747	
6	6/18/2013					194.99	16-1836216	
32						1,070.06		
Total Loads						Total Tons		

Mahaffey Enterprises - 13-038

Load Count	Date	Ticket #	Total Weight Pounds	Tare Weight Pounds	Net Weight Pounds	Total Weight In Tons	Invoice Number	Notes
1	6/3/2013	Truck 222	91,780	34,880	56,900	28.45		
1	6/3/2013	Truck 222	94,580	34,880	59,700	29.85		
1	6/3/2013	Truck 222	93,100	34,880	58,220	29.11		
1	6/3/2013	Truck 222	96,060	34,880	61,180	30.59		
1	6/3/2013	Truck 222	88,960	34,880	54,080	27.04		
1	6/3/2013	Truck 222	94,760	34,880	59,880	29.94		
1	6/3/2013	Truck 222	98,440	34,880	63,560	31.78		
1	6/3/2013	Truck 222	74,340	34,880	39,460	19.73		
1	6/3/2013	Truck 82	95,780	41,220	54,560	27.28		
1	6/3/2013	Truck 82	94,840	41,220	53,620	26.81		
1	6/3/2013	Truck 82	105,500	41,220	64,280	32.14		
1	6/3/2013	Truck 82	102,700	41,220	61,480	30.74		
1	6/3/2013	Truck 82	108,400	41,220	67,180	33.59		
1	6/3/2013	Truck 82	107,360	41,220	66,140	33.07		
1	6/3/2013	Truck 83	109,660	41,740	67,920	33.96		
1	6/3/2013	Truck 83	107,860	41,740	66,120	33.06		
1	6/3/2013	Truck 83	108,100	41,740	66,360	33.18		
1	6/3/2013	Truck 83	112,300	41,740	70,560	35.28		
1	6/3/2013	Truck 83	107,700	41,740	65,960	32.98		
1	6/3/2013	Truck 83	96,160	41,740	54,420	27.21		
1	6/3/2013	Truck 233	94,780	38,440	56,340	28.17		
1	6/3/2013	Truck 233	86,340	38,440	47,900	23.95		
1	6/3/2013	Truck 233	96,340	38,440	57,900	28.95		
1	6/3/2013	Truck 233	96,220	38,440	57,780	28.89		
1	6/3/2013	Truck 233	96,080	38,440	57,640	28.82		
1	6/3/2013	Truck 233	97,200	38,440	58,760	29.38		
1	6/3/2013	Truck 220	103,820	38,420	65,400	32.70		
1	6/3/2013	Truck 220	92,760	38,420	54,340	27.17		
1	6/3/2013	Truck 220	105,560	38,420	67,140	33.57		
1	6/3/2013	Truck 220	103,520	38,420	65,100	32.55		
1	6/3/2013	Truck 220	106,100	38,420	67,680	33.84		
1	6/3/2013	Truck 220	97,540	38,420	59,120	29.56		
1	6/3/2013	Truck 220	98,520	38,420	60,100	30.05		
1	6/3/2013	Truck 11	106,720	40,620	66,100	33.05		
1	6/3/2013	Truck 11	107,060	40,620	66,440	33.22		
1	6/3/2013	Truck 11	105,420	40,620	64,800	32.40		
1	6/3/2013	Truck 11	107,160	40,620	66,540	33.27		
1	6/3/2013	Truck 11	105,980	40,620	65,360	32.68		
1	6/3/2013	Truck 11	104,900	40,620	64,280	32.14		
1	6/4/2013	Truck 7	96,120	40,020	56,100	28.05		
1	6/4/2013	Truck 11	104,420	40,620	63,800	31.90		
1	6/4/2013	Truck 11	103,440	40,620	62,820	31.41		
1	6/4/2013	Truck 11	102,060	40,620	61,440	30.72		
1	6/4/2013	Truck 11	102,740	40,620	62,120	31.06		
1	6/4/2013	Truck 11	100,300	40,620	59,680	29.84		
1	6/4/2013	Truck 11	102,660	40,620	62,040	31.02		
1	6/4/2013	Truck 82	102,780	41,220	61,560	30.78		
1	6/4/2013	Truck 82	99,040	41,220	57,820	28.91		
1	6/4/2013	Truck 82	102,220	41,220	61,000	30.50		
1	6/4/2013	Truck 82	100,280	41,220	59,060	29.53		
1	6/4/2013	Truck 82	106,640	41,220	65,420	32.71		
1	6/4/2013	Truck 82	105,300	41,220	64,080	32.04		
1	6/4/2013	Truck 82	100,540	41,220	59,320	29.66		
1	6/4/2013	Truck 83	105,560	41,740	63,820	31.91		
1	6/4/2013	Truck 83	100,640	41,740	58,900	29.45		
1	6/4/2013	Truck 83	107,820	41,740	66,080	33.04		
1	6/4/2013	Truck 83	104,540	41,740	62,800	31.40		
1	6/4/2013	Truck 83	107,600	41,740	65,860	32.93		
1	6/4/2013	Truck 83	107,460	41,740	65,720	32.86		
1	6/4/2013	Truck 83	105,240	41,740	63,500	31.75		
1	6/4/2013	Truck 220	102,520	38,420	64,100	32.05		
1	6/4/2013	Truck 220	94,020	38,420	55,600	27.80		
1	6/4/2013	Truck 220	98,020	38,420	59,600	29.80		
1	6/4/2013	Truck 220	98,900	38,420	60,480	30.24		
1	6/4/2013	Truck 220	100,080	38,420	61,660	30.83		
1	6/4/2013	Truck 220	97,060	38,420	58,640	29.32		
1	6/4/2013	Truck 220	98,180	38,420	59,760	29.88		
1	6/4/2013	Truck 220	100,860	38,420	62,440	31.22		
1	6/4/2013	Truck 222	87,300	34,880	52,420	26.21		
1	6/4/2013	Truck 222	90,760	34,880	55,880	27.94		
1	6/4/2013	Truck 222	88,520	34,880	53,640	26.82		
1	6/4/2013	Truck 222	89,520	34,880	54,640	27.32		
1	6/4/2013	Truck 222	91,300	34,880	56,420	28.21		
1	6/4/2013	Truck 222	94,360	34,880	59,480	29.74		
1	6/4/2013	Truck 222	85,500	34,880	50,620	25.31		
1	6/4/2013	Truck 222	91,040	34,880	56,160	28.08		

1	6/4/2013	Truck 233	97,400	38,440	58,960	29.48
1	6/4/2013	Truck 233	96,240	38,440	57,800	28.90
1	6/4/2013	Truck 233	96,480	38,440	58,040	29.02
1	6/4/2013	Truck 233	96,180	38,440	57,740	28.87
1	6/4/2013	Truck 233	94,760	38,440	56,320	28.16
1	6/4/2013	Truck 233	89,380	38,440	50,940	25.47
1	6/4/2013	Truck 233	92,800	38,440	54,360	27.18
1	6/4/2013	Truck 233	98,120	38,440	59,680	29.84
1	6/5/2013	Truck 7	102,740	40,020	62,720	31.36
1	6/5/2013	Truck 7	99,420	40,020	59,400	29.70
1	6/5/2013	Truck 11	103,280	40,620	62,660	31.33
1	6/5/2013	Truck 11	107,440	40,620	66,820	33.41
1	6/5/2013	Truck 11	107,720	40,620	67,100	33.55
1	6/5/2013	Truck 11	103,800	40,620	63,180	31.59
1	6/5/2013	Truck 11	106,580	40,620	65,960	32.98
1	6/5/2013	Truck 11	98,680	40,620	58,060	29.03
1	6/5/2013	Truck 82	105,360	41,220	64,140	32.07
1	6/5/2013	Truck 82	104,380	41,220	63,160	31.58
1	6/5/2013	Truck 82	103,940	41,220	62,720	31.36
1	6/5/2013	Truck 82	105,860	41,220	64,640	32.32
1	6/5/2013	Truck 82	107,960	41,220	66,740	33.37
1	6/5/2013	Truck 82	102,320	41,220	61,100	30.55
1	6/5/2013	Truck 83	109,900	41,740	68,160	34.08
1	6/5/2013	Truck 83	105,820	41,740	64,080	32.04
1	6/5/2013	Truck 83	104,320	41,740	62,580	31.29
1	6/5/2013	Truck 83	109,480	41,740	67,740	33.87
1	6/5/2013	Truck 83	111,800	41,740	70,060	35.03
1	6/5/2013	Truck 83	107,440	41,740	65,700	32.85
1	6/5/2013	Truck 83	106,200	41,740	64,460	32.23
1	6/5/2013	Truck 220	99,180	38,420	60,760	30.38
1	6/5/2013	Truck 220	100,860	38,420	62,440	31.22
1	6/5/2013	Truck 220	101,780	38,420	63,360	31.68
1	6/5/2013	Truck 220	99,320	38,420	60,900	30.45
1	6/5/2013	Truck 220	103,680	38,420	65,260	32.63
1	6/5/2013	Truck 220	101,980	38,420	63,560	31.78
1	6/5/2013	Truck 220	104,840	38,420	66,420	33.21
1	6/5/2013	Truck 220	101,820	38,420	63,400	31.70
1	6/5/2013	Truck 222	85,780	34,880	50,900	25.45
1	6/5/2013	Truck 222	90,180	34,880	55,300	27.65
1	6/5/2013	Truck 222	95,020	34,880	60,140	30.07
1	6/5/2013	Truck 222	90,300	34,880	55,420	27.71
1	6/5/2013	Truck 222	89,840	34,880	54,960	27.48
1	6/5/2013	Truck 222	90,360	34,880	55,480	27.74
1	6/5/2013	Truck 222	91,240	34,880	56,360	28.18
1	6/5/2013	Truck 222	89,740	34,880	54,860	27.43
1	6/5/2013	Truck 222	86,300	34,880	51,420	25.71
1	6/5/2013	Truck 233	93,120	38,440	54,680	27.34
1	6/5/2013	Truck 233	97,820	38,440	59,380	29.69
1	6/5/2013	Truck 233	97,120	38,440	58,680	29.34
1	6/5/2013	Truck 233	96,400	38,440	57,960	28.98
1	6/5/2013	Truck 233	93,400	38,440	54,960	27.48
1	6/5/2013	Truck 233	99,080	38,440	60,640	30.32
1	6/5/2013	Truck 233	94,660	38,440	56,220	28.11
1	6/6/2013	Truck 11	100,600	40,620	59,980	29.99
1	6/6/2013	Truck 11	103,320	40,620	62,700	31.35
1	6/6/2013	Truck 11	103,480	40,620	62,860	31.43
1	6/6/2013	Truck 11	103,780	40,620	63,160	31.58
1	6/6/2013	Truck 11	104,400	40,620	63,780	31.89
1	6/6/2013	Truck 11	105,940	40,620	65,320	32.66
1	6/6/2013	Truck 11	106,440	40,620	65,820	32.91
1	6/6/2013	Truck 67	102,520	45,300	57,220	28.61
1	6/6/2013	Truck 67	109,760	45,300	64,460	32.23
1	6/6/2013	Truck 67	110,380	45,300	65,080	32.54
1	6/6/2013	Truck 67	111,040	45,300	65,740	32.87
1	6/6/2013	Truck 67	111,300	45,300	66,000	33.00
1	6/6/2013	Truck 82	100,520	41,220	59,300	29.65
1	6/6/2013	Truck 82	103,340	41,220	62,120	31.06
1	6/6/2013	Truck 82	105,260	41,220	64,040	32.02
1	6/6/2013	Truck 82	105,300	41,220	64,080	32.04
1	6/6/2013	Truck 82	106,540	41,220	65,320	32.66
1	6/6/2013	Truck 82	109,060	41,220	67,840	33.92
1	6/6/2013	Truck 220	99,740	38,420	61,320	30.66
1	6/6/2013	Truck 220	101,220	38,420	62,800	31.40
1	6/6/2013	Truck 220	103,340	38,420	64,920	32.46
1	6/6/2013	Truck 220	103,860	38,420	65,440	32.72
1	6/6/2013	Truck 220	104,700	38,420	66,280	33.14
1	6/6/2013	Truck 220	107,300	38,420	68,880	34.44
1	6/6/2013	Truck 220	110,160	38,420	71,740	35.87
1	6/6/2013	Truck 222	88,240	34,880	53,360	26.68
1	6/6/2013	Truck 222	90,160	34,880	55,280	27.64
1	6/6/2013	Truck 222	91,420	34,880	56,540	28.27

1	6/6/2013	Truck 222	92,160	34,880	57,280	28.64
1	6/6/2013	Truck 222	93,620	34,880	58,740	29.37
1	6/6/2013	Truck 222	93,640	34,880	58,760	29.38
1	6/6/2013	Truck 222	95,200	34,880	60,320	30.16
1	6/6/2013	Truck 222	95,460	34,880	60,580	30.29
1	6/6/2013	Truck 253	95,240	38,440	56,800	28.40
1	6/6/2013	Truck 233	95,340	38,440	56,900	28.45
1	6/6/2013	Truck 233	95,860	38,440	57,420	28.71
1	6/6/2013	Truck 233	96,160	38,440	57,720	28.86
1	6/6/2013	Truck 233	96,260	38,440	57,820	28.91
1	6/6/2013	Truck 233	97,100	38,440	58,660	29.33
1	6/6/2013	Truck 233	99,440	38,440	61,000	30.50
1	6/7/2013	Truck 11	103,980	40,620	63,360	31.68
1	6/7/2013	Truck 11	103,620	40,620	63,000	31.50
1	6/7/2013	Truck 11	108,340	40,620	67,720	33.86
1	6/7/2013	Truck 11	101,320	40,620	60,700	30.35
1	6/7/2013	Truck 11	105,020	40,620	64,400	32.20
1	6/7/2013	Truck 67	100,080	45,300	54,780	27.39
1	6/7/2013	Truck 67	107,620	45,300	62,320	31.16
1	6/7/2013	Truck 67	106,140	45,300	60,840	30.42
1	6/7/2013	Truck 67	107,660	45,300	62,360	31.18
1	6/7/2013	Truck 67	103,360	45,300	58,060	29.03
1	6/7/2013	Truck 67	108,700	45,300	63,400	31.70
1	6/7/2013	Truck 68	77,920	45,300	32,620	16.31
1	6/7/2013	Truck 82	105,720	41,220	64,500	32.25
1	6/7/2013	Truck 82	103,940	41,220	62,720	31.36
1	6/7/2013	Truck 82	105,720	41,220	64,500	32.25
1	6/7/2013	Truck 82	104,600	41,220	63,380	31.69
1	6/7/2013	Truck 82	105,000	41,220	63,780	31.89
1	6/7/2013	Truck 82	104,120	41,220	62,900	31.45
1	6/7/2013	Truck 220	105,540	38,420	67,120	33.56
1	6/7/2013	Truck 220	104,100	38,420	65,680	32.84
1	6/7/2013	Truck 220	102,920	38,420	64,500	32.25
1	6/7/2013	Truck 220	102,820	38,420	64,400	32.20
1	6/7/2013	Truck 220	102,620	38,420	64,200	32.10

192	5,853.94
Total Loads	Total Tons

APPENDIX F

Daily Dust Monitoring Report

DAILY DUST MONITORING REPORT

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** May 20, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 8:30 AM | **Departure:** 17:00
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: Sunny / mild (70-80)

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
9:00	South	Prep / Pre-setup	0.008	0.016	0.012	NO
9:10	North	↓ ↓	0.010	0.020	0.015	NO
10:30	South	Staging / road watering	0.012	0.040	0.26	NO
10:35	North	↓ ↓	0.010	0.120	0.077	NO
11:50	South	Brush removal / road water	0.011	1.020	0.216	NO
11:55	North	↓ / ↓	0.012	0.080	0.044	NO
13:05	South	Brush removal / loading	0.007	0.019	0.010	NO
13:10	North	↓ / ↓	0.049	0.108	0.069	NO
14:35	South	↓ / ↓	0.008	0.033	0.016	NO
14:40	North	↓ / ↓	0.007	0.149	0.043	NO
15:35	South	Brush / Fence Removal / loading	0.007	0.204	0.052	NO
15:40	North	↓ ↓ / ↓	0.006	0.031	0.011	NO
16:40	South	Work done - Departure	0.007	0.034	0.017	NO
16:45	North	↓ ↓	0.009	0.088	0.021	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** May 21, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 6:00 AM | **Departure:** 18:00

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: Clear, sunny - mild/hot 70-80

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:30	North	Site start-up / prep	0.019	0.046	0.028	NO
6:35	South	↓ / ↓	0.017	0.054	0.027	NO
7:50	North	Grubbing South side / trucking	0.045	0.467	0.112	NO
7:55	South	↓ / ↓	0.017	0.102	0.051	NO
9:05	North	Gravel drop/moving	0.024	0.196	0.075	NO
9:10	South	↓ / ↓	0.031	0.204	0.061	NO
10:00	North	| / |	0.036	1.230	0.179	NO
10:05	South	↓ / ↓	0.052	0.852	0.120	NO
10:55	North	| / |	0.014	0.395	0.071	NO
11:00	South	↓ / ↓	0.013	0.427	0.113	NO
12:00	North	Building pad	0.083	0.221	0.125	NO
12:05	South	↓ ↓	0.021	0.202	0.110	NO
14:20	North	| | SE corner	0.009	0.0025	0.015	NO
14:25	South	↓ ↓ ↓ ↓	0.012	0.039	0.021	NO
15:40	North	| | | |	0.011	0.094	0.029	NO
15:45	South	↓ ↓ ↓ ↓	0.016	0.071	0.031	NO
16:55	North	| | | |	0.015	0.091	0.036	NO
17:00	South	↓ ↓ ↓ ↓	0.022	0.085	0.042	NO
18:05	North	Departure	0.007	0.025	0.017	NO
18:10	South	↓ ↓	0.010	0.028	0.014	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

Rained between about 12:00 and 13:20

DAILY DUST MONITORING REPORT

amec
Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** May 22, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 6:00 AM | **Departure:** 18:00
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: Windy / cloudy

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:00	North	Prep for work	0.004	0.054	0.022	NO
6:05	South	↓ ↓	0.007	0.060	0.030	NO
7:15	North	Moving gravel	0.012	0.082	0.036	NO
7:20	South	↓ ↓ / Exc. AE-3	0.010	0.068	0.040	NO
8:10	North	↓ ↓ / ↓	0.016	0.092	0.041	NO
8:15	South	↓ ↓ / ↓	0.020	0.048	0.024	NO
9:30	North	↓ ↓ / ↓	0.011	0.080	0.032	NO
9:35	South	↓ ↓ / ↓	0.007	0.106	0.070	NO
10:45	North	↓ ↓ / Backing AE-3	0.017	0.208	0.091	NO
10:50	South	↓ ↓ / ↓	0.010	0.136	0.048	NO
12:00	North	↓ ↓ / ↓	0.004	0.112	0.026	NO
12:05	South	↓ ↓ / ↓	0.003	0.257	0.053	NO
13:15	North	↓ ↓ / Excv. AE-1/2	0.005	0.044	0.028	NO
13:20	South	↓ ↓ ↓ ↓	0.018	0.092	0.053	NO
14:30	North	↓ ↓ / Backfilling AE-2	0.005	0.052	0.020	NO
14:40	South	↓ ↓ / ↓ ↓	0.008	0.078	0.035	NO
15:20	North	↓ ↓ / ↓ ↓	0.008	0.110	0.030	NO
15:25	South	↓ ↓ / ↓ ↓	0.014	0.172	0.061	NO
16:15	North	↓ ↓ / ↓ ↓	0.001	0.101	0.015	NO
16:20	South	↓ ↓ / ↓ ↓	0.009	0.125	0.030	NO
17:30	North	Site shutdown	0.012	0.048	0.026	NO
17:35	South	↓ ↓	0.007	0.039	0.018	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

AEC uses water truck to wet excavated materials and backfill material.

DAILY DUST MONITORING REPORT

amec

Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** May 23, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 5:30 AM | **Departure:** 18:05

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: Mild / Cloudy to clear

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
5:50	North	Prepping for work	0.001	0.009	0.002	NO
5:50	South	↓ ↓ ↓	0.005	0.021	0.011	NO
6:50	North	Exc. of AE-4 / Moving Gravel	0.001	0.006	0.002	NO
6:55	South	↓ / ↓	0.002	0.008	0.003	NO
8:10	Northwest	↓ / ↓	0.002	0.006	0.003	NO
8:15	Southeast	↓ / ↓	0.005	0.018	0.008	NO
9:30	Northwest	Ex of AE-5 / ↓	0.009	0.301	0.085	NO
9:35	Southeast	↓ / ↓	0.003	0.241	0.070	NO
10:50	Northwet	Backfill AE-5 / ↓	0.002	0.078	0.044	NO
10:55	Southeast	↓ / ↓	0.005	0.098	0.064	NO
12:00	Northwest	↓ / ↓	0.003	0.056	0.020	NO
12:05	Southeast	↓ / ↓	0.003	0.008	0.004	NO
13:15	Northwest	Excavate AE-4 / ↓	0.006	0.042	0.008	NO
13:20	Southeast	↓ / ↓	0.004	0.029	0.011	NO
14:15	Northwest	Backfill AE-4 / ↓	0.007	0.108	0.039	NO
14:20	Southeast	↓ / ↓	0.006	0.283	0.028	NO
15:20	Northwest	↓ / ↓	0.008	0.108	0.040	NO
15:25	Southeast	↓ / ↓	0.005	0.049	0.011	NO
16:50	Northwest	↓ / N/A	0.003	0.101	0.047	NO
16:55	Southeast	↓ / ↓	0.006	0.157	0.016	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** May 24, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 6:00 AM | **Departure:** 12:35

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: Raining at arrival / mild and cloudy

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:30	North	Prepping for work	0.002	0.022	0.010	NO
6:35	South	↓ ↓	0.003	0.018	0.008	NO
7:45	North	Moving gravel / demo	0.006	0.088	0.040	NO
7:50	South	↓ ↓ / ↓	0.005	0.074	0.032	NO
9:05	North	↓ ↓ / ↓	0.006	0.108	0.029	NO
9:10	South	↓ ↓ / ↓	0.004	0.122	0.051	NO
10:10	Northwest	↓ ↓ / ↓	0.003	0.091	0.036	NO
10:15	Southeast	↓ ↓ / ↓	0.002	0.168	0.068	NO
11:20	Northwest	↓ ↓ / ↓	0.004	0.123	0.055	NO
11:25	Southeast	↓ ↓ / ↓	0.009	0.086	0.027	NO
12:30	North	Departure	0.002	0.026	0.011	NO
12:35	South	↓	0.004	0.041	0.018	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** May 28, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 7:30 AM | **Departure:** 16:40

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: Dry, cloudy, wild

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
7:45	North	Site preparation	0.003	0.028	0.012	NO
7:50	South	↓ ↓	0.004	0.021	0.010	NO
8:50	North	Grading / Truck traffic	0.008	0.142	0.036	NO
8:55	South	↓ / ↓ ↓	0.003	0.104	0.041	NO
10:00	North	↓ / ↓ ↓	0.002	0.384	0.031	NO
10:05	South	↓ / ↓ ↓	0.004	0.284	0.042	NO
11:20	North	↓ / ↓ ↓	0.008	0.101	0.028	NO
11:25	South	↓ / ↓ ↓	0.007	0.087	0.021	NO
12:20	North	↓ / ↓ ↓	0.003	0.030	0.012	NO
12:25	South	↓ / ↓ ↓	0.007	0.040	0.016	NO
13:25	North	↓ / ↓ ↓	0.005	0.088	0.031	NO
13:30	South	↓ / ↓ ↓	0.003	0.062	0.025	NO
14:20	Northwest	↓ / ↓ ↓	0.011	0.051	0.018	NO
14:25	Southeast	↓ / ↓ ↓	0.008	0.038	0.016	NO
15:30	Northwest	↓ / ↓ ↓	0.005	0.048	0.023	NO
15:35	Southeast	↓ / ↓ ↓	0.002	0.022	0.010	NO
16:30	North	↓ / ↓ ↓	0.004	0.040	0.017	NO
16:35	South	↓ / ↓ ↓	0.006	0.071	0.027	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** May 29, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 7:00 | **Departure:** 16:50

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM Rainy cool / PM Dry cool lightwind

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
14:00	Northwest	Grading / Gravel delivery	0.009	0.045	0.018	NO
14:05	Southeast	↓ / ↓ ↓	0.003	0.132	0.042	NO
15:10	Northwest	| / | |	0.006	0.109	0.038	NO
15:15	Southeast	↓ / ↓ ↓	0.004	0.090	0.024	NO
16:20	North	| / | |	0.008	0.348	0.043	NO
16:25	South	↓ / ↓ ↓	0.007	1.070	0.075	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

1) No dust monitoring in AM due to steady rain in early morning

2) Hard rain at about 16:35 for half hour. No dust monitoring after hard rain

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** May 30, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 7:00 | **Departure:** 17:00
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: Mild, light clouds, light wind

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
7:20	North	Site Prep	0.003	0.020	0.013	NO
7:25	South	↓ ↓	0.004	0.031	0.012	NO
8:30	North	Gravel delivery / Grading	0.006	0.086	0.038	NO
8:35	South	↓ ↓ / ↓	0.011	0.125	0.043	NO
9:25	North	Gravel delivery / Watering	0.007	0.103	0.034	NO
9:30	South	↓ ↓ / ↓	0.008	0.150	0.069	NO
10:35	Northwest	Gravel delivery / Grading	0.003	0.024	0.006	NO
10:40	Southeast	↓ ↓ / ↓	0.002	0.151	0.009	NO
11:25	Northwest	↓ ↓ / ↓	0.006	0.084	0.028	NO
11:30	Southeast	↓ ↓ / ↓	0.004	0.191	0.050	NO
12:25	Northwest	↓ ↓ / ↓	0.006	0.107	0.041	NO
12:30	Southeast	↓ ↓ / ↓	0.007	0.098	0.033	NO
13:35	Northwest	↓ ↓ / ↓	0.005	0.159	0.049	NO
13:40	Southeast	↓ ↓ / ↓	0.004	0.111	0.038	NO
14:50	Northwest	↓ ↓ / ↓	0.004	2.780	0.029	NO
14:55	Southeast	↓ ↓ / ↓	0.008	1.040	0.035	NO
16:05	Northwest	↓ ↓ / ↓	0.003	1.250	0.039	NO
16:10	Southeast	↓ ↓ / ↓	0.005	0.810	0.078	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** May 31, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 7:00 | **Departure:** 17:00

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: Sunny, clear, 60-70s

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
7:30	North	Site Prep / Grading	0.002	0.029	0.011	NO
7:35	South	↓ ↓ / ↓	0.003	0.035	0.015	NO
8:40	North	Gravel delivery / Grading	0.004	0.419	0.049	NO
8:45	South	↓ ↓ / ↓	0.003	0.102	0.023	NO
9:50	North	↓ ↓ / ↓	0.005	0.136	0.031	NO
9:55	South	↓ ↓ / ↓	0.002	0.078	0.027	NO
11:00	North	↓ ↓ / ↓	0.003	0.093	0.028	NO
11:05	South	↓ ↓ / ↓	0.006	0.068	0.034	NO
12:00	North	↓ ↓ / ↓	0.008	0.162	0.053	NO
12:05	South	↓ ↓ / ↓	0.004	0.105	0.047	NO
13:00	North	↓ ↓ / ↓	0.003	0.944	0.033	NO
13:05	South	↓ ↓ / ↓	0.004	0.201	0.023	NO
14:10	North	↓ ↓ / ↓	0.004	1.580	0.036	NO
14:15	South	↓ ↓ / ↓	0.006	0.483	0.029	NO
15:10	North	↓ ↓ / ↓	0.005	0.206	0.044	NO
15:15	South	↓ ↓ / ↓	0.007	0.163	0.037	NO
16:20	North	↓ ↓ / ↓	0.006	0.810	0.061	N
16:25	South	↓ ↓ / ↓	0.008	1.680	0.218	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec
Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** June 3, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 8:00 AM | **Departure:** 17:00
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: AM - sunny / clear

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
8:20	Northwest	Material Delivery / Grading	0.003	0.121	0.029	NO
8:25	Southeast	↓ ↓ / ↓	0.004	0.083	0.022	NO
9:20	Northwest	↓ ↓ / ↓	0.008	0.805	0.046	NO
9:25	Southeast	↓ ↓ / ↓	0.004	0.194	0.038	NO
10:30	North	↓ ↓ / ↓	0.005	0.224	0.032	NO
10:35	South	↓ ↓ / ↓	0.011	0.898	0.067	NO
11:30	North	↓ ↓ / ↓	0.008	0.123	0.051	NO
11:35	South	↓ ↓ / ↓	0.010	0.467	0.083	NO
12:40	North	↓ ↓ / ↓	0.006	0.087	0.026	NO
12:45	South	↓ ↓ / ↓	0.007	0.095	0.023	NO
13:40	North	↓ ↓ / ↓	0.007	3.870	0.213	NO
13:45	South	↓ ↓ / ↓	0.003	0.809	0.069	NO
14:35	North	↓ ↓ / ↓	0.005	3.190	0.298	NO
14:40	South	↓ ↓ / ↓	0.006	0.834	0.114	NO
16:00	North	↓ ↓ / ↓	0.009	0.640	0.092	NO
16:05	South	↓ ↓ / ↓	0.014	0.379	0.071	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

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Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 4, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 7:00 AM | **Departure:** 17:15

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM - sunny clear warm / PM - Sunny Hot

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
7:30	North	Material Delivery / Grading	0.004	0.178	0.035	NO
7:35	South	↓ ↓ / ↓	0.002	0.089	0.021	NO
8:35	North	↓ ↓ / ↓	0.007	0.331	0.043	NO
8:40	South	↓ ↓ / ↓	0.005	0.102	0.030	NO
9:30	North	↓ ↓ / ↓	0.006	0.294	0.044	NO
9:35	South	↓ ↓ / ↓	0.006	0.082	0.020	NO
10:40	North	↓ ↓ / ↓	0.008	0.380	0.103	NO
10:45	South	↓ ↓ / ↓	0.004	0.133	0.044	NO
11:40	North	↓ ↓ / ↓	0.009	0.442	0.110	NO
11:45	South	↓ ↓ / ↓	0.005	0.107	0.033	NO
12:55	North	↓ ↓ / ↓	0.006	0.565	0.129	NO
13:00	South	↓ ↓ / ↓	0.006	0.081	0.025	NO
14:05	North	↓ ↓ / ↓	0.006	0.276	0.036	NO
14:10	South	↓ ↓ / ↓	0.004	0.141	0.031	NO
15:15	North	↓ ↓ / ↓	0.008	0.250	0.091	NO
15:20	South	↓ ↓ / ↓	0.005	0.097	0.029	NO
16:20	North	↓ ↓ / ↓	0.007	0.068	0.014	NO
16:25	South	↓ ↓ / ↓	0.004	0.051	0.011	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 5th 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 7:00 | **Departure:** 17:05

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: Clear sunny -AM / PM - Sunny hot

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
7:40	North	Material Delivery / Grading	0.008	0.198	0.033	NO
7:45	South	↓ ↓ / ↓	0.004	0.072	0.018	NO
8:50	North	↓ ↓ / ↓	0.002	0.471	0.047	NO
8:55	South	↓ ↓ / ↓	0.008	0.113	0.021	NO
10:00	North	↓ ↓ /	0.006	0.041	0.019	NO
10:05	South	↓ ↓ / ↓	0.003	0.030	0.012	NO
11:00	North	↓ ↓ / ↓	0.011	0.163	0.037	NO
11:05	South	↓ ↓ / ↓	0.009	0.035	0.016	NO
12:15	North	↓ ↓ / ↓	0.013	0.834	0.136	NO
12:20	South	↓ ↓ / ↓	0.007	0.085	0.029	NO
13:20	North	↓ ↓ / ↓	0.010	0.223	0.063	NO
13:25	South	↓ ↓ / ↓	0.007	0.017	0.011	NO
14:30	North	↓ ↓ / ↓	0.009	0.099	0.038	NO
14:35	South	↓ ↓ / ↓	0.005	0.078	0.020	NO
15:30	North	↓ ↓ / ↓	0.012	0.051	0.019	NO
15:35	South	↓ ↓ / ↓	0.006	0.038	0.014	NO
16:30	North	↓ ↓ / ↓	0.011	0.090	0.030	NO
16:35	South	↓ ↓ / ↓	0.003	0.036	0.016	NO

NOTES: **Date Instrument Calibrated:** February 2013 **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 6, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 7:00 | **Departure:** 16:40

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM - Sunny warm / PM - Sunny Hot

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
8:00	North	Grading / Mater. Delivery	0.026	0.048	0.035	NO
8:05	South	↓ / ↓ ↓	0.012	0.071	0.038	NO
9:10	North	↓ / ↓ ↓	0.014	0.117	0.043	NO
9:15	South	↓ / ↓ ↓	0.016	0.093	0.030	NO
10:10	North	↓ / ↓ ↓	0.011	0.105	0.038	NO
10:15	South	↓ / ↓ ↓	0.008	0.132	0.033	NO
11:20	North	↓ / ↓ ↓	0.004	0.352	0.071	NO
11:25	South	↓ / ↓ ↓	0.005	0.141	0.049	NO
12:25	North	↓ / ↓ ↓	0.007	0.135	0.043	NO
12:30	South	↓ / ↓ ↓	0.015	0.548	0.088	NO
13:35	North	↓ / ↓ ↓	0.008	0.078	0.025	NO
13:40	South	↓ / ↓ ↓	0.009	0.098	0.029	NO
14:35	North	↓ / ↓ ↓	0.009	0.029	0.012	NO
14:40	South	↓ / ↓ ↓	0.003	0.021	0.011	NO
16:00	North	↓ / ↓ ↓	0.007	0.045	0.016	NO
16:05	South	↓ / ↓ ↓	0.011	0.082	0.029	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

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Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 7, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 6:45 AM | **Departure:** 18:00

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM- Clear and warm / PM - Hot late wind

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
7:20	North	Site Prep work	0.003	0.019	0.008	NO
7:25	South	↓ ↓ ↓	0.003	0.023	0.011	NO
8:40	North	Material Delivery	0.004	0.031	0.010	NO
8:45	South	↓ ↓	0.005	0.025	0.009	NO
9:35	North		0.003	0.018	0.006	NO
9:40	South	↓ ↓	0.004	0.026	0.012	NO
11:00	North		0.006	0.088	0.029	NO
11:05	South	↓ ↓	0.009	0.098	0.031	NO
12:10	North		0.011	0.119	0.039	NO
12:15	South	↓ ↓	0.008	0.083	0.025	NO
13:30	North		0.003	0.062	0.019	NO
13:35	South	↓ ↓	0.007	0.083	0.022	NO
14:30	North		0.010	0.101	0.040	NO
14:35	South	↓ ↓	0.005	0.061	0.029	NO
15:40	North	Off loading GCL	0.013	0.322	0.067	NO
15:45	South	↓ ↓ ↓	0.007	0.116	0.046	NO
16:45	North	Filling sand bags	0.011	0.034	0.021	NO
16:50	South	↓ ↓ ↓	0.008	0.031	0.016	NO
17:35	North		0.009	0.191	0.049	NO
17:40	South	↓ ↓ ↓	0.010	0.234	0.053	NO

NOTES: **Date Instrument Calibrated:** February 2013 **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec
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Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** June 8, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 6:00 AM | **Departure:** 18:00
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: AM - Clear warm / PM - Sunny hot

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:40	North	Site Prep	0.008	0.029	0.012	NO
6:45	South	↓ ↓	0.009	0.035	0.018	NO
7:45	North	Rolling out GCL Rolls	0.012	0.056	0.031	NO
7:50	South	↓ ↓ ↓ ↓	0.010	0.042	0.019	NO
9:00	North	↓ ↓ ↓ ↓	0.009	1.340	0.083	NO
9:05	South	↓ ↓ ↓ ↓	0.016	1.050	0.098	NO
10:10	North	↓ ↓ ↓ ↓	0.011	0.211	0.045	NO
10:15	South	↓ ↓ ↓ ↓	0.006	0.143	0.030	NO
11:30	North	Rolling Geos / Sand Grader	0.008	0.083	0.049	NO
11:35	South	↓ ↓ / ↓ ↓	0.009	0.052	0.023	NO
12:40	North	↓ ↓ / ↓	0.016	0.140	0.047	NO
12:45	South	↓ ↓ / ↓ ↓	0.005	0.073	0.036	NO
14:00	North	↓ / ↓ ↓	0.004	0.060	0.022	NO
14:05	South	↓ ↓ / ↓ ↓	0.009	0.099	0.025	NO
15:20	North	↓ ↓ / ↓ ↓	0.007	0.122	0.019	NO
15:25	South	↓ ↓ / ↓ ↓	0.006	0.101	0.023	NO
16:30	North	↓ ↓ / ↓ ↓	0.005	0.074	0.016	NO
16:35	South	↓ ↓ / ↓ ↓	0.008	0.113	0.026	NO
17:30	North	Testing Geomembrane	0.009	0.247	0.087	NO
17:35	South	↓ ↓	0.004	0.132	0.047	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** June 9, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 6:00 AM | **Departure:** 18:00
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: AM - Sunny clear warm / PM Hot clear

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:45	North	Site Prep / Grading Sand	0.007	0.042	0.018	NO
6:50	South	" " / " "	0.008	0.023	0.013	NO
8:00	North	Liner work / Sand / TP layer	0.014	0.035	0.021	NO
8:05	South	" " / " "	0.010	0.028	0.016	NO
9:15	North	" " / " "	0.007	0.541	0.053	NO
9:20	South	" " / " "	0.006	0.249	0.041	NO
10:15	North	" " /	0.009	0.056	0.022	NO
10:20	South	" " / " "	0.005	0.044	0.016	NO
11:30	North	" " /	0.007	0.085	0.029	NO
11:35	South	" " / " "	0.004	0.120	0.035	NO
12:40	North	" " /	0.008	0.189	0.015	NO
12:45	South	" " / " "	0.012	0.370	0.069	NO
13:50	North	" " / " "	0.007	0.223	0.025	NO
13:55	South	" " / " "	0.006	0.173	0.051	NO
15:00	North	Sand / Topsoil Grading	0.007	0.098	0.033	NO
15:05	South	" / " "	0.009	0.579	0.088	NO
16:10	North	" / " "	0.005	0.086	0.023	NO
16:15	South	" / " "	0.008	0.135	0.041	NO
17:20	North	/ "	0.011	0.482	0.080	NO
17:25	South	/ " "	0.009	0.349	0.068	NO

NOTES: **Date Instrument Calibrated:** February 2013 **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec
Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** June 10, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 6:00 AM | **Departure:** 18:45
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: AM - Clear warm / PM - Clear Hot wind

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:50	North	Grading / Material Moving	0.003	0.063	0.021	NO
6:55	South	↓ / ↓ ↓	0.007	0.089	0.028	NO
8:00	North	Liner work / Grading Work	0.008	0.153	0.040	NO
8:05	South	↓ / ↓	0.005	0.246	0.053	NO
9:10	North	↓ / ↓	0.006	0.301	0.061	NO
9:15	South	↓ / ↓	0.009	0.812	0.103	NO
10:30	North	↓ / ↓	0.011	0.350	0.061	NO
10:35	South	↓ / ↓	0.006	0.120	0.029	NO
11:25	North	↓ / ↓	0.008	0.091	0.024	NO
11:30	South	↓ / ↓	0.014	0.445	0.098	NO
12:30	North	Grading Work	0.009	0.163	0.040	NO
12:35	South	↓ ↓	0.006	0.078	0.026	NO
13:40	North	↓ ↓	0.008	0.155	0.038	NO
13:45	South	↓ ↓	0.009	0.230	0.045	NO
12:40	North	↓ ↓	0.013	0.365	0.061	NO
14:45	South	↓ ↓	0.011	0.205	0.049	NO
15:40	North	↓ ↓ / Liner Work	0.015	0.385	0.082	NO
15:45	South	↓ ↓ / ↓ ↓	0.008	0.179	0.061	NO
16:40	North	Liner Work	0.004	0.039	0.016	NO
16:45	South	↓ ↓	0.005	0.033	0.014	NO
17:50	North	↓ ↓	0.006	0.047	0.013	NO
17:55	South	↓ ↓	0.003	0.040	0.015	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and Infrastructure, Inc.
7376 SW Durham Road
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Phone: 503-639-3400
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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** June 11, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 6:00 AM | **Departure:** 18:30
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: AM- Cloudy windy warm | PM- Clear Windy

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:45	North	Grading Sand / TS	0.007	0.198	0.062	NO
6:50	South	" / "	0.005	0.241	0.078	NO
7:50	North	Liner Work / Grading	0.009	0.431	0.099	NO
7:55	South	" / "	0.012	0.509	0.108	NO
9:00	North	" / "	0.015	0.732	0.135	NO
9:05	South	" / "	0.010	0.527	0.101	NO
10:10	North	" / "	0.012	0.683	0.137	NO
10:15	South	" / "	0.009	0.470	0.091	NO
11:20	North	" / "	0.019	0.289	0.083	NO
11:25	South	" / "	0.016	0.401	0.098	NO
12:45	North	" / "	0.011	0.334	0.113	NO
12:50	South	" / "	0.014	0.384	0.068	NO
14:00	North	" / "	0.021	0.511	0.121	NO
14:05	South	" / "	0.007	0.438	0.094	NO
15:00	North	" / "	0.008	0.422	0.088	NO
15:05	South	" / "	0.005	0.370	0.069	NO
16:10	North	" / "	0.013	0.410	0.128	NO
16:15	South	" / "	0.012	0.512	0.135	NO
17:10	North	Grading Clean-up	0.010	0.098	0.035	NO
17:15	South	"	0.008	0.124	0.045	NO
18:20	North	"	0.010	0.168	0.053	NO
18:25	South	"	0.013	0.090	0.041	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec
Environment and Infrastructure, Inc.
7376 SW Durham Road
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PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project
Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1
Project No: 4-61M-10705-1 P-02 | **Date:** June 12, 2013
Site Location: Pasco, Washington | **Page:** 1 of 1
Arrival: 6:00 | **Departure:** 18:00
AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: AM - Clear/warm / PM - Clear warm light wind

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:30	North	Grading Sand / Rock	0.005	0.201	0.048	NO
6:40	South	↓ / ↓	0.010	0.113	0.036	NO
8:00	North	Grading Sand / Rock Del.	0.031	0.182	0.038	NO
8:15	South	↓ / ↓	0.021	0.168	0.048	NO
10:05	North	↓ / ↓	0.013	0.170	0.051	NO
10:10	South	↓ / ↓	0.010	0.158	0.041	NO
12:30	North	↓ / ↓	0.012	0.205	0.047	NO
12:35	South	↓ / ↓	0.009	0.149	0.039	NO
13:50	North	↓ / ↓	0.018	0.160	0.052	NO
14:00	South	↓ / ↓	0.015	0.289	0.061	NO
15:00	North	↓ / ↓	0.016	0.231	0.068	NO
15:05	South	↓ / ↓	0.019	0.186	0.057	NO
16:00	North	↓ / ↓	0.020	0.129	0.036	NO
16:10	South	↓ / ↓	0.011	0.133	0.040	NO
18:05	North	↓ / ↓	0.006	0.115	0.031	NO
17:10	South	↓ / ↓	0.009	0.122	0.039	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

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Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 13, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 6:00 AM | **Departure:** 18:00

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM - Clear, warm | PM.

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:30	North	Site work Prep	0.004	0.035	0.012	NO
6:35	South	↓ ↓ ↓	0.006	0.028	0.010	NO
7:45	North	Grading / Material Move	0.008	0.102	0.031	NO
7:50	South	↓ / ↓ ↓	0.007	0.088	0.028	NO
9:00	North	| / | |	0.010	0.090	0.029	NO
9:05	South	↓ / ↓ ↓	0.011	0.063	0.022	NO
11:05	North	| / | |	0.004	0.060	0.024	NO
11:15	South	↓ / ↓ ↓	0.007	0.084	0.040	NO
12:30	North	| /	0.008	0.096	0.038	NO
12:35	South	↓ / ↓ ↓	0.013	0.115	0.051	NO
13:50	North	| / |	0.010	0.103	0.047	NO
13:55	South	↓ / ↓ ↓	0.003	0.068	0.025	NO
15:00	North	| / |	0.007	0.052	0.018	NO
15:05	South	↓ / ↓ ↓	0.006	0.061	0.029	NO
16:30	North	| / | |	0.009	0.073	0.030	NO
16:35	South	↓ / | |	0.011	0.098	0.034	NO
17:40	North	| / |	0.005	0.092	0.027	NO
17:45	South	↓ / ↓ ↓	0.007	0.085	0.036	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No:	4-61M-10705-1 P-02	**Date:**	June 14, 2013
Site Location:	Pasco, Washington	**Page:**	1 of 1
Arrival:	5:00	**Departure:**	12:35
AMEC Field Rep. (Initial):	PDS	**AMEC Project Manager (Initials):**	SG
Average Daily Weather Conditions:	AM - Clear, warm, windy		

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
5:30	North	Prep for Work	0.003	0.020	0.011	NO
5:35	South	↓ ↓	0.005	0.022	0.010	NO
6:50	North	Grading Site	0.011	0.125	0.051	NO
6:55	South	↓ ↓	0.010	0.103	0.041	NO
8:10	North	↓ ↓	0.009	0.098	0.043	NO
8:15	South	↓ ↓	0.011	0.085	0.036	NO
9:30	North	↓ ↓	0.006	0.066	0.028	NO
9:35	South	↓ ↓	0.008	0.072	0.031	NO
10:45	North	↓ ↓	0.008	0.054	0.019	NO
10:50	South	↓ ↓	0.005	0.083	0.035	NO
12:00	North	↓ ↓	0.009	0.091	0.031	NO
12:05	South	↓ ↓	0.005	0.090	0.034	NO

NOTES: **Date Instrument Calibrated:** February 2013 **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 17, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 8:00AM | **Departure:** 18:20

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM - Clear, warm wind | PM - Clear Hot

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
8:40	North	Fence Work / Rock Work	0.005	0.068	0.028	NO
8:45	South	↓ / ↓	0.007	0.071	0.034	NO
9:45	North	↓ / ↓	0.008	0.059	0.024	NO
9:50	South	↓ / ↓	0.009	0.069	0.029	NO
11:00	North	↓ /	0.005	0.088	0.041	NO
11:05	South	↓ / ↓	0.009	0.092	0.037	NO
12:15	North	↓ / ↓	0.011	0.090	0.040	NO
12:20	South	↓ / ↓	0.006	0.072	0.036	NO
13:30	North	↓ / ↓	0.013	0.067	0.029	NO
13:35	South	↓ / ↓	0.004	0.098	0.043	NO
15:00	North	↓ / ↓	0.009	0.073	0.032	NO
15:05	South	↓ / ↓	0.012	0.087	0.028	NO
16:15	North	↓ / ↓	0.010	0.092	0.040	NO
16:20	South	↓ / ↓	0.009	0.067	0.024	NO
17:30	North	/ ↓	0.005	0.041	0.016	NO
17:35	South	↓ / ↓	0.006	0.037	0.014	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

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Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 18, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 6:00 AM | **Departure:** 18:45

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM - Cloudy cool / PM - cloudy warm

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
6:20	North	Site Prep	0.007	0.041	0.019	NO
6:30	South	↓	0.008	0.045	0.016	NO
7:50	North	Finish Grading / Fencing	0.004	0.078	0.029	NO
8:00	South	↓ / ↓	0.005	0.102	0.040	NO
9:30	North	↓ / ↓	0.006	0.111	0.039	NO
9:35	South	↓ / ↓	0.008	0.069	0.026	NO
10:50	North	↓ /	0.009	0.099	0.031	NO
10:55	South	↓ / ↓	0.005	0.048	0.016	NO
12:20	North	↓ / ↓	0.005	0.066	0.021	NO
12:25	South	↓ / ↓	0.006	0.152	0.043	NO
14:00	North	↓ / ↓	0.009	0.168	0.051	NO
14:05	South	↓ / ↓	0.011	0.190	0.058	NO
16:00	North	↓ / ↓	0.012	0.185	0.054	NO
16:05	South	↓ / ↓	0.003	0.048	0.013	NO
17:30	North	↓	0.004	0.040	0.012	NO
17:40	South	↓	0.005	0.060	0.015	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

DAILY DUST MONITORING REPORT

amec

Environment and Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 19, 2013

Site Location: Pasco, Washington | **Page:** 1 of

Arrival: 7:00 AM | **Departure:** 18:55

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM - Damp, cloudy, cool | PM - Cloudy cool light rain

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
		No Monitoring Due to Rain During Day				

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:**

1) Rained night before so no dust monitoring in AM.

2) Light rain in late afternoon

DAILY DUST MONITORING REPORT

amec

Environment and
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

PROJECT NAME: Pasco Landfill Cap Project - Cap Construction Project

Monitoring Equipment: DustTrak Model 8520 - Unit TSI-1

Project No: 4-61M-10705-1 P-02 | **Date:** June 20, 2013

Site Location: Pasco, Washington | **Page:** 1 of 1

Arrival: 7:55 AM | **Departure:** 16:15

AMEC Field Rep. (Initial): PDS | **AMEC Project Manager (Initials):** SG

Average Daily Weather Conditions: AM - Cloudy/cool/windy | PM - Cloudy, cool, some rain

Time	Location at Site	Current Activity	Reading (mg/m^3) Minimum	Maximum	Average	Exceedance (YES / NO)
8:30	North	Fencing install	0.010	0.198	0.052	NO
8:35	South	↓ ↓	0.014	0.254	0.068	NO
9:40	North	↓ ↓	0.012	0.861	0.112	NO
9:45	South	↓ ↓	0.009	0.662	0.089	NO
10:55	North	↓ ↓ / Irrigation Install	0.011	0.751	0.103	NO
11:00	South	↓ ↓ / ↓	0.004	0.343	0.066	NO
12:00	North	↓ ↓ / ↓	0.012	0.178	0.047	NO
12:05	South	↓ ↓ / ↓	0.007	0.209	0.051	NO
13:30	North	↓ ↓ / ↓	0.007	0.189	0.060	NO
13:35	South	↓ ↓ / ↓	0.006	0.152	0.055	NO
14:20	North	↓ ↓ / ↓	0.003	0.068	0.020	NO
14:25	South	↓ ↓ / ↓	0.009	0.079	0.029	NO
15:50	North	↓ ↓ / ↓	0.007	0.062	0.023	NO
15:55	South	↓ ↓ / ↓	0.005	0.059	0.025	NO

NOTES: **Date Instrument Calibrated:** February 2013 | **Total Exceedances:** 0

APPENDIX G

Structural Fill Analytical Report

DRAFT

Date of Report: 05/20/13
Date Received: 05/15/13
Project: Pasco 13-038, F&BI 305281
Date Extracted: 05/16/13
Date Analyzed: 05/16/13

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (Limit 48-168)
Stock-1 305281-01	ND	ND	ND	101
Stock-2 305281-02	ND	ND	ND	98
Method Blank 03-916 MB	ND	ND	ND	100

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Analysis For Total Metals By EPA Method 200.8

Client ID:	Stock-1	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	305281-01
Date Analyzed:	05/17/13	Data File:	305281-01.061
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	90	60	125
Indium	75	60	125
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	1.97
Arsenic	3.24
Selenium	<1
Silver	<1
Cadmium	<1
Barium	80.3
Lead	3.15

Analysis For Total Metals By EPA Method 200.8

Client ID:	Stock-2	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	305281-02
Date Analyzed:	05/17/13	Data File:	305281-02.062
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	79	60	125
Holmium	93	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	1.67
Arsenic	3.20
Selenium	<1
Silver	<1
Cadmium	<1
Barium	79.4
Lead	3.16

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/16/13	Lab ID:	I3-262 mb
Date Analyzed:	05/17/13	Data File:	I3-262 mb.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Indium	92	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Arsenic	<1
Selenium	<1
Silver	<1
Cadmium	<1
Barium	<1
Lead	<1

Date of Report: 05/20/13
Date Received: 05/15/13
Project: Pasco 13-038, F&BI 305281
Date Extracted: 05/17/13
Date Analyzed: 05/17/13

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL MERCURY
USING EPA METHOD 1631E

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Total Mercury
Stock-1 305281-01	<0.1
Stock-2 305281-02	<0.1
Method Blank	<0.1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Stock-1	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	305281-01
Date Analyzed:	05/17/13	Data File:	051710.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	59	116
Toluene-d8	94	51	121
4-Bromofluorobenzene	97	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Stock-2	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	305281-02
Date Analyzed:	05/17/13	Data File:	051712.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	59	116
Toluene-d8	94	51	121
4-Bromofluorobenzene	96	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	03-0896 mb
Date Analyzed:	05/17/13	Data File:	051709.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	59	116
Toluene-d8	94	51	121
4-Bromofluorobenzene	95	32	146

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Stock-1	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	305281-01 1/5
Date Analyzed:	05/17/13	Data File:	051708.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	94	56	115
Phenol-d6	92	54	113
Nitrobenzene-d5	101	31	164
2-Fluorobiphenyl	102	47	133
2,4,6-Tribromophenol	109	35	141
Terphenyl-d14	117	64	125

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.3	3-Nitroaniline	<3
Bis(2-chloroethyl) ether	<0.03	Acenaphthene	<0.03
2-Chlorophenol	<0.3	2,4-Dinitrophenol	<0.9
1,3-Dichlorobenzene	<0.03	Dibenzofuran	<0.03
1,4-Dichlorobenzene	<0.03	2,4-Dinitrotoluene	<0.03
1,2-Dichlorobenzene	<0.03	4-Nitrophenol	<0.9
Benzyl alcohol	<0.3	Diethyl phthalate	<0.03
Bis(2-chloroisopropyl) ether	<0.03	Fluorene	<0.03
2-Methylphenol	<0.3	4-Chlorophenyl phenyl ether	<0.03
Hexachloroethane	<0.03	N-Nitrosodiphenylamine	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitroaniline	<3
3-Methylphenol + 4-Methylphenol	<0.6	4,6-Dinitro-2-methylphenol	<0.9
Nitrobenzene	<0.03	4-Bromophenyl phenyl ether	<0.03
Isophorone	<0.03	Hexachlorobenzene	<0.03
2-Nitrophenol	<0.3	Pentachlorophenol	<0.3
2,4-Dimethylphenol	<0.3	Phenanthrene	<0.03
Benzoic acid	<1.5	Anthracene	<0.03
Bis(2-chloroethoxy)methane	<0.03	Carbazole	<0.03
2,4-Dichlorophenol	<0.3	Di-n-butyl phthalate	<0.03
1,2,4-Trichlorobenzene	<0.03	Fluoranthene	<0.03
Naphthalene	<0.03	Pyrene	<0.03
Hexachlorobutadiene	<0.03	Benzyl butyl phthalate	<0.03
4-Chloroaniline	<3	Benz(a)anthracene	<0.03
4-Chloro-3-methylphenol	<0.3	Chrysene	<0.03
2-Methylnaphthalene	<0.03	Bis(2-ethylhexyl) phthalate	<0.48
Hexachlorocyclopentadiene	<0.09	Di-n-octyl phthalate	<0.03
2,4,6-Trichlorophenol	<0.3	Benzo(a)pyrene	<0.03
2,4,5-Trichlorophenol	<0.3	Benzo(b)fluoranthene	<0.03
2-Chloronaphthalene	<0.03	Benzo(k)fluoranthene	<0.03
2-Nitroaniline	<0.03	Indeno(1,2,3-cd)pyrene	<0.03
Dimethyl phthalate	<0.03	Dibenz(a,h)anthracene	<0.03
Acenaphthylene	<0.03	Benzo(g,h,i)perylene	<0.03
2,6-Dinitrotoluene	<0.03		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Stock-2	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	305281-02 1/5
Date Analyzed:	05/17/13	Data File:	051710.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	92	56	115
Phenol-d6	91	54	113
Nitrobenzene-d5	101	31	164
2-Fluorobiphenyl	99	47	133
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Benzyl alcohol	<0.3	Diethyl phthalate	<0.03
Bis(2-chloroisopropyl) ether	<0.03	Fluorene	<0.03
2-Methylphenol	<0.3	4-Chlorophenyl phenyl ether	<0.03
Hexachloroethane	<0.03	N-Nitrosodiphenylamine	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitroaniline	<3
3-Methylphenol + 4-Methylphenol	<0.6	4,6-Dinitro-2-methylphenol	<0.9
Nitrobenzene	<0.03	4-Bromophenyl phenyl ether	<0.03
Isophorone	<0.03	Hexachlorobenzene	<0.03
2-Nitrophenol	<0.3	Pentachlorophenol	<0.3
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2,4,5-Trichlorophenol	<0.3	Benzo(b)fluoranthene	<0.03
2-Chloronaphthalene	<0.03	Benzo(k)fluoranthene	<0.03
2-Nitroaniline	<0.03	Indeno(1,2,3-cd)pyrene	<0.03
Dimethyl phthalate	<0.03	Dibenz(a,h)anthracene	<0.03
Acenaphthylene	<0.03	Benzo(g,h,i)perylene	<0.03
2,6-Dinitrotoluene	<0.03		

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Method Blank	Client:	Anderson Environmental
Date Received:	05/15/13	Project:	Pasco 13-038, F&BI 305281
Date Extracted:	05/17/13	Lab ID:	03-0921 mb2 1/5
Date Analyzed:	05/17/13	Data File:	051707.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	99	56	115
Phenol-d6	97	54	113
Nitrobenzene-d5	106	31	164
2-Fluorobiphenyl	107	47	133
2,4,6-Tribromophenol	116	35	141
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Benzyl alcohol	<0.3	Diethyl phthalate	<0.03
Bis(2-chloroisopropyl) ether	<0.03	Fluorene	<0.03
2-Methylphenol	<0.3	4-Chlorophenyl phenyl ether	<0.03
Hexachloroethane	<0.03	N-Nitrosodiphenylamine	<0.03
N-Nitroso-di-n-propylamine	<0.03	4-Nitroaniline	<3
3-Methylphenol + 4-Methylphenol	<0.6	4,6-Dinitro-2-methylphenol	<0.9
Nitrobenzene	<0.03	4-Bromophenyl phenyl ether	<0.03
Isophorone	<0.03	Hexachlorobenzene	<0.03
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Naphthalene	<0.03	Pyrene	<0.03
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4-Chloroaniline	<3	Benz(a)anthracene	<0.03
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2-Methylnaphthalene	<0.03	Bis(2-ethylhexyl) phthalate	<0.48
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2,4,5-Trichlorophenol	<0.3	Benzo(b)fluoranthene	<0.03
2-Chloronaphthalene	<0.03	Benzo(k)fluoranthene	<0.03
2-Nitroaniline	<0.03	Indeno(1,2,3-cd)pyrene	<0.03
Dimethyl phthalate	<0.03	Dibenz(a,h)anthracene	<0.03
Acenaphthylene	<0.03	Benzo(g,h,i)perylene	<0.03
2,6-Dinitrotoluene	<0.03		

SAMPLE CHAIN OF CUSTODY

305281

ME 05-15-13

E02

Send Report To

Company AEC

Address 705 Colombo

City, State, ZIP Kelso, WA 98626

Phone #(360)577-9194 Fax # 577-9198

SAMPLERS *(signature)*

PROJECT NAME/NO. PASCO

PO # 13-038

REMARKS
Run Quantification if Detects in HCID

Page # 1 of 1

TURNAROUND TIME
- ☐ Standard (2 Weeks)
- ☒ RUSH

Rush charges authorized by: CH

SAMPLE DISPOSAL
- ☒ Dispose after 30 days
- ☐ Return samples
- ☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED: TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HCID	VOCs	RCRA 8	SVOCs			Notes
STOCK-1	01	5/13/13	1000	Soil	1							X	★	★	★			★-per CH
STOCK-2	02	"	1010	Soil	1							X	★	★	★			5/16/13 MG

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	CRAIG HULTGREN	AEC	5/14/13	1100
Received by:	DAVID	F+BE	5-15-13	10:00
Relinquished by:				
Received by:		Samples received at 7 °C		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

APPENDIX H

Cap Monitoring & Maintenance Plan

REVISED FINAL CAP MONITORING AND MAINTENANCE PLAN FOR THE PASCO LANDFILL ZONE B CAP

Pasco Landfill

Pasco, Washington

Prepared for:

Washington Department of Ecology

Eastern Regional Office
4601 N. Monroe Street
Spokane, Washington 99205-1295

Submitted on behalf of:

Bayer CropScience

2 T.W. Alexander Drive
PO Box 12014
Research Triangle Park, NC 27709

Prepared by:

AMEC Environment & Infrastructure, Inc.

7376 SW Durham Road
Portland, Oregon 97224
(503) 639-3400

December 2013

Project No. 4-61M-107051/Phase 2

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ATTACHMENTS

CAP MONITORING AND MAINTENANCE PLAN FOR THE PASCO LANDFILL ZONE B CAP

Pasco, Washington

1.0 INTRODUCTION

On behalf of Bayer CropScience (BCS), AMEC Environment & Infrastructure Inc. (AMEC) has prepared this revised final Cap Monitoring and Maintenance Plan (CMMP) for the Pasco Landfill Zone B cover system (Cap). In spring 2013, the Cap was installed to reduce the threat that residual chemical constituents in soil beneath and adjacent to the former drum repository area may pose to human health or the environment by fulfilling the following objectives:

1. Providing a physical surface barrier between soil within cell B and potential human or ecological receptors (minimization of risk by elimination of the "direct contact" exposure pathway);
2. Reducing stormwater infiltration into cell B and, thereby, reducing the potential for mobilization of residual chemical constituents; and
3. Providing engineering and institutional controls to limit access to Zone B.

2.0 PURPOSE

The purpose of this document is to establish a monitoring and maintenance program to monitor and provide for the long-term performance of the Cap. An important design criterion was reducing long-term maintenance. Even with this intent, there are a few critical components that require monitoring and may require short-term maintenance. Therefore, this program distinguishes between short-term and long-term monitoring and maintenance requirements. Additionally, this document distinguishes between scheduled maintenance (tasks performed at regular intervals), non-regularly scheduled maintenance (tasks that are periodically required but not needed regularly), and unscheduled maintenance (such as emergency repair). This planned monitoring and maintenance program describes the means and methods to ensure that the Cap elements continue to function properly, with scheduled and non-regularly scheduled maintenance tasks that will reduce the need for unscheduled maintenance.

3.0 CAP CONSTRUCTION

The Cap was constructed between May 20 and June 20, 2013, by AMEC and Anderson Environmental Contracting (AEC, Kelso, Washington). The Cap was designed and installed in

accordance with Resource Conservation and Recovery Act (RCRA) Subtitle C cap requirements. See the Cap Construction Report (CCR) for Cap design and installation detail. This CMMP is Appendix H of the CCR. The Cap is composed of the following components, layered from the top to the base of the new Cap.

1. Topsoil / Vegetation Layer – The top 2 vertical feet of the Cap consist of a Topsoil Layer indicative of the native organic bearing soils of the region and were imported to the site to ensure the successful establishment of native vegetation and grasses. The Topsoil Layer covers the entire Cap with the 2-feet thickness and tapers out to the edges where the erosion protection rock is installed beyond the Cap. Wildlands provided the hydroseeding equipment and mix that was applied to the entire Cap and some surrounding areas (infiltration basin and surrounding work areas). Irrigation support was provided during summer 2013 to aid in the grass establishment and growth.
2. Orange Construction Fencing – An orange construction fencing (OCF) visual barrier was installed below the Topsoil layer to provide an initial visual indicator that this area should not be excavated. This 4-feet-high fencing material, rolled out on its side, provides complete coverage of the Cap, and extends out to the edge of liner.
3. GeoFabric – A standard geosynthetic GeoFabric was installed below the OCF to allow water to pass into the sand layer below while keeping the fines in the overlying Topsoil layer. The GeoFabric material covers the entire Cap out to the edge of the liner.
4. Sand Layer – A 1-foot vertical layer of concrete sand (typical silica sand passing about 85% through a No. 8 sieve and passing about 3% through a No. 50 sieve) was installed below the GeoFabric layer to provide a permeable drainage layer between the Topsoil layer and the impermeable Geomembrane. The Sand Layer extends throughout the Cap at the minimum thickness of 1-foot vertical, and tapers out across the area between the edge of the Cap and edge of the liner.
5. Geomembrane – The impermeable component of the Cap is the Geomembrane, which is another geosynthetic material. The Geomembrane consists of panels of HDPE 40-mil Microspike/Smooth (top side textured) rolls of 23 feet wide by 760 feet long. All of the panels were fusion-welded together in accordance with manufacturer specifications, producing double seams around all of the connecting panels. All of these seams were pressure tested at static pressures at 30 pounds per square inch (psi) and found to hold the pressure for a minimum period of 5 minutes. The geomembrane was installed over the entire Cap and out to the edges of the liner area (to the outer edge of the erosion protection rock). The Geomembrane was extended this far to provide additional protection over the Cap to mitigate lateral spreading of infiltrating precipitation.

6. Geosynthetic Clay Liner – The Geomembrane was placed onto a layer of geosynthetic clay liner (GCL). The GCL layer consisted of Cetco LO-Bentomat DN (double non-woven) granular clay liner, with each roll being 150 feet long by 15 feet wide. Numerous rolls of GCL were rolled out over the entire Cap and edge of liner area, and all rolls were overlapped (a minimum overlap of 6-inches) to ensure complete coverage in accordance with manufacturer requirements. All overlapping seams were dressed with additional bentonite chips between the rolls and heat treated to fuse the rolls together.
7. Structural Layer – The largest layer/component installed in the new Cap was the structural fill material. This material consists of a ¾-inch minus clean crushed rock type material. The EPA requires a minimum of 1-foot vertical thickness of this material under the geomembrane and GCL layers. In order to develop the required grade and accommodate this minimum thickness throughout the Cap, several areas required several more feet of structural fill. During placement of the structural fill, the contractor wetted and compacted it to maintain dust control and achieve the desired compaction density. All field-density testing results were above the minimum compaction density of 90% of the proctor sample for this material, and thus determined to be adequate. The structural fill was designed to extend only out to the edge of the Cap and not to the edge of the liner extension.
8. Original Cap / Cover Area – Prior to the installation of the current Cap, a portion of the Site was covered with a 12-mil high-density polyethylene (HDPE) liner. This area consisted of the original Zone B Drum Cell. During subsequent explorations, a large shallow excavation area was produced and the excavated materials were placed in the center of this area on the south end of the Zone B Drum Cell. This entire excavation area and stockpile, located in the center of the excavation and along the southern edge of the original HDPE liner, were covered with a set of poly covers with a variable thickness of approximately 6 mil. Sandbags were placed on this poly cover and original HDPE liner to prevent wind damage and hold them in place. AMEC provided routine inspections and repairs of these covers, as necessary. In order to minimize any contact between the material under the liner and poly covers, AMEC's design required that all of these liners and covers remain in place and be covered with the structure fill materials. This material and grade are below the structural fill material layer.

Please review to the Cap As-Built drawings (Appendix A of CCR) for the surveyed final layout of the constructed Cap. No drainage piping or leachate collection system was installed in this Cap.

4.0 MAINTENANCE ISSUES

Due to the predominantly static nature of this landfill Cap and the lack of a leachate collection system, typical of many caps, the maintenance issues are relatively confined to the following natural and anthropogenic origins:

1. Natural – Damage or wear to the Cap can occur from the following natural impacts:
    a. Wind / Rain Erosion – The surface of the Cap is critical to maintain since it normally suffers the greatest impacts of weathering and the sun. Erosion and degradation can wear down the Cap surface if proper maintenance is not conducted. Erosion can lead to thinning of the slopes, potential slides on steep slopes, and silting in drainage areas.
    b. Vegetation Degradation – Vegetation is important in maintaining the surface of the Cap and protecting it from erosion. Drought conditions, disease, or animal damage are potential impacts that can damage or degrade the vegetation cover on the Cap.
    c. Burrowing Animals – The primary barrier the Cap provides over the soils is the geomembrane layer. Despite the several feet of topsoil, sand layers, geofabric, and OCF materials overlying the geomembrane, it is possible that burrowing animals could dig down to the geomembrane and breach it.
    d. Material Wear – If the surface layer is degraded and the underlying materials are exposed, it is possible that they could suffer permanent damage or wear from ultraviolet (UV) exposure (geosynthetics) and erosion (sand layer blown or washed away). The perimeter fencing will also degrade over time due to weathering and wind damage, and will need repairs or replacement at a future time.
    e. Earthquake – If an earthquake, slide, or other geotechnical event occurs that significantly moves or damages the Cap by differential movement of the Cap layers or geosynthetics, and causes a breach or other significant structural damage to the Cap system, repairs will be required.
2. Anthropogenic – Damage or wear to the Cap can be caused by people via the following:
    a. Vandalism – Vandalism to the perimeter fencing or rough driving on the surface of the Cap can degrade or damage the Cap and require repairs.
    b. Road Wear – The Cap was designed with a perimeter protection rock drainage around the Cap that was engineered to serve as an access roadway, with entry and exit points at the north and south ends of the Cap.

Additional events or interactions at the site may adversely impact the Cap, but were not considered significant enough to list as a viable concern. The prescribed monitoring and maintenance program described below will result in minimization of risk to the Cap.

5.0 MONITORING AND MAINTENANCE

The following sections provide guidance for the personnel responsible for monitoring and maintaining the Cap and the Zone B Site.

Field personnel will gather and convey information regarding the current site conditions and functionality of the Cap components to engineering staff and management for evaluation. Monitoring tasks include, but may not be limited to:

- Visual observations, with written records logged in field notebooks or on specific forms;
- Photo-documentation with a still camera or video recorder; and
- Conducting a performance topographic survey of the site, by a licensed surveyor, to confirm current grade/condition of the Cap.

The Cap monitoring is intended to occur at regular intervals; however, the frequency may be varied to adapt to unexpected conditions or significant changes.

Regularly scheduled maintenance tasks are to provide for the continued performance and function of the Cap design, and non-regularly scheduled maintenance tasks are to restore the Cap function to its designed purpose.

5.1 MONITORING PLAN

The Cap components to be monitored are described in this section. The monitoring frequency of the Cap components is provided in Table 1. Results of the monitoring events will be recorded on Monitoring and Maintenance Forms (Attachment 1), and will be included in quarterly Monitoring and Maintenance Reports (described in Section 6).

Table 1: Monitoring Frequency

Cap Component	Quarterly[1]	As Needed
Cap Surface	X	
Cap Surface Survey		X
Erosion Protection Rock	X	
Drainage System	X	
Fence and Gates	X	

Notes:

[1] Short-term monitoring frequency for the first 2 years after installation. After two years, inspections will occur on a semiannual basis.

5.1.1 Cap Surface Monitoring

Routine monitoring of the Cap surface and surrounding area provides information regarding the overall performance of Cap components. Key times for monitoring are after the last frost in spring and in early fall. Monitoring events at these times offer a good opportunity to observe vegetation and erosion conditions and to implement repairs, if necessary.

Cap monitoring observations are to be recorded on the Monitoring and Maintenance Form in Attachment 1. Visual monitoring is to be performed in a manner that allows for observation of the entire Cap. A serpentine walkover pattern, with no greater than 10 feet between passes, across the surface is recommended. Monitoring staff are to look for the following indications that the integrity and function of the Cap may be compromised:

- Poor health of the vegetation, or significant changes (absence or large die-off) in the vegetation coverage;
- Subsidence, surface grade (soil tensile) “cracking”, or changes to final grading;
- The presence or evidence of standing water or ice on the surface of the Cap;
- Erosion of, or rill development in, topsoil on the Cap;
- Erosion of the surrounding property that affects, or may eventually affect the Cap;
- Soil sliding or sloughing into the perimeter rock layer; and
- Holes, mounds, or other evidence of burrowing animals.

Growth density of native vegetation (grasses) varies. Assessment of the general health of the vegetation must take this into consideration. Comparison of the density to local native density may be an indicator of the relative health of the vegetation. Excessive or lagging grass growth and/or

the presence of new types of plants (i.e., shrubs, vines, trees, brush, etc.) must be reported. Tumbleweed density will be monitored, and control measures such as physical removal will be required if levels increase and threaten establishment or continued growth of the desired native grasses and forbs. In order to make a reasonable comparison with prior visual monitoring events, the monitoring staff shall take, at a minimum, digital photographs of the Cap from all four sides from a distance sufficient to show the entire Cap and fenced area. Prior monitoring event photographs shall be chronologically ordered in a report binder. The report binder shall consistently be used in the field to allow for a uniform comparison of past Cap conditions with the current conditions.

Subsidence is an important issue for the integrity of the Cap; therefore, monitoring staff are to perform visual observations quarterly for the first 2 years after installation. This short-term frequency will allow for the timely correction of issues prior to the emergence of problems. Monitoring staff are to pay special attention to the condition of the grades, the formation of depressions, and to the presence or evidence of pooled water or ice, which may indicate an area of subsidence. As with the other information gathered during monitoring events, evidence of subsidence is to be documented for inclusion in quarterly Monitoring and Maintenance Reports. Additionally, timely notification of the engineering staff or management is to be made if there is confirmed or suspected subsidence. Visual evidence of subsidence, depression, or rise in the Cap grade shall be documented with digital photographs. The photographs shall be taken up close and from a distance (and annotated) in order to show the location of the issue. The approximate dimensions of the subsidence, depression, or rise (length, width, depth) shall be measured and recorded in the field.

When monitoring the Cap surface for evidence of erosion, special attention is to be given in areas where water may converge or concentrate and at points along slopes where runoff water volume or velocity may increase. Soil accumulation in the Erosion Protection Rock along the perimeter may be an indication of erosion by water or by wind. The type of erosion and its severity may be evaluated by the type of material (i.e., gravel, sand, silt, clay) and the depositional pattern. Therefore, observation of soil deposition within the Erosion Protection Rock should be photo-documented (with location information), and drawn/diagrammed in the monitoring event binder with a written description.

Burrowing animals may cause damage to the Cap by burrowing through the geotextile fabric, the geomembrane, and the GCL layers. Burrowing may also initiate surface or subsurface erosion by water or wind. Monitoring staff are to be aware of, and able to identify, burrows and signs of burrowing animals. Timely notification of the engineering staff or management is to be made if

evidence of burrowing is observed. If evidence of burrowing animals is observed, proper steps need to be taken to alleviate the presence of these animals.

5.1.2 Cap Surface Surveys

A baseline survey was conducted at the completion of the Cap installation. Future surveys will be conducted at the discretion of the project manager and Washington Department of Ecology (Ecology) if future evidence of potential subsidence or Cap deformation is observed. The surveyor utilized the two existing survey monuments as survey base-points, and designated a set of ten points to represent a series of points that can be used for comparison in future surveys. The surveyor will be required to prepare a table after each survey, which will allow comparison of the data obtained to previous survey data, and to provide for a drawing of the area with contour lines at 1-foot intervals. The resulting data and drawings are to be included in the quarterly Monitoring and Maintenance Report, if applicable.

5.1.3 Drainage System Monitoring

An important component of the Cap system is the sand drainage layer. The function of the sand drainage layer is to remove water that infiltrates through the overlying soil cover. The drainage layer is made of a 1-foot thick layer of sand, abutted at the Cap edges by drainage channels containing crushed rock. The drainage system outlet is to be monitored for damage due to animals, and evidence of localized erosion patterns.

A visual inspection of the infiltration pond shall also be conducted during site visits to ensure that any significant sediment deposition or excessive vegetation growth has occurred. If either of these issues is identified, remedial efforts will be implemented to keep the infiltration basin open and properly graded to accept runoff.

5.1.4 Monitoring of the Perimeter Fence and Gates

The fence and gates will be monitored quarterly for the first two years, and biannually thereafter. Deficiencies to be noted during the fence monitoring include, but are not limited to:

- Inoperative gates or gate locks,
- Rust and deterioration of the fence,
- Breaks in or damage to the chain link,
- Loose or missing barbed wire,
- Frost jacking or heaving of fence posts,

- Vandalism or cuts in the fencing or posts,
- Holes, burrowing or tunneling in the soil directly below the fence, and
- Lack of warning signs, or imminent failure of sign components.

5.2 MAINTENANCE

The following sections present recommended procedures for coordinating and performing non-regularly scheduled and unscheduled maintenance. Regularly scheduled maintenance should not be needed. Maintenance will be coordinated by the Owner or the Owner's representative and should not be initiated without written approval

5.2.1 Non-Regularly Scheduled Maintenance

Vegetation is initially expected to require non-regularly scheduled maintenance. Short-term irrigation was conducted during the 2013 summer season after hydroseeding to promote growth of the vegetative cover. To promote adequate establishment of the vegetation cover, isolated reseeding during the first 2 or 3 years of growth may be required, and areas may need to be reseeded or repaired due to damage from natural events. If vegetation is observed within the infiltration basin, action may need to be taken to remove the vegetation. Approach or service roads that afford access to Zone B may need occasional maintenance. Initiation of all maintenance should be through observations made during the monitoring process, and coordination of the activity should be accomplished with input from management.

5.2.2 Unscheduled Maintenance

To limit unscheduled maintenance, strategy planning and contingency planning is appropriate. The cost of a necessary repair can often be reduced through early problem identification, and the timely notification of management. A detailed list of seed mix specifications, top soil specifications, piping supplies and geosynthetics (geotextile, geomembrane, and GCL materials), and supplier contact information, is included as an attachment to this CMMP, and should be kept with the field monitoring binder to expedite acquisition of these materials. Any maintenance activities required based on inspections must be reported to Ecology before or as soon as practicable after the maintenance activity is completed.

Evidence of poor growth of native grasses and forbs may require additional maintenance including spot reseeding, application of fertilizer, or watering under prolonged drought conditions during the first 2 to 3 years after cap construction. Tumbleweed and other invasive non-native species may require control measures until native grasses are sufficiently established to inhibit their growth. Need for control measures will be considered after spring inspections, and physical removal will be

performed if non-native species threaten establishment or continued growth of intended species on the vegetated layer of the cap. It is currently anticipated that one round of tumbleweed removal will be conducted in spring 2014, and tumbleweed density will be monitored during routine quarterly inspections starting after the removal.

6.0 REPORTING AND RECORDS MANAGEMENT

Reporting requirements for this CMMP include an annual report submitted to the Ecology. This report is described later in this section. Anomalies or nonroutine required maintenance activities must be reported to BCS and Ecology as soon as practicable after being noted.

6.1 MONITORING AND MAINTENANCE REPORTS

Based on the monitoring frequency provided in Table 1 (quarterly for the first 2 years, and semiannually thereafter), the monitoring event personnel will complete Monitoring and Maintenance Reports (Attachment 1) documenting the results of the monitoring events as prescribed in this plan, and the status of any maintenance performed during the reporting period. The reports will be submitted to BCS. BCS, the engineering staff, and management will evaluate the monitoring event reports and produce a maintenance schedule for coordination of the maintenance and repairs. Monitoring reports and associated documentation (photographs, vendor receipts, costs, emails, etc.) shall be placed in a monitoring event binder in chronological order.

6.2 REGULATORY REPORTING REQUIREMENTS

Reports for submittal to Ecology will include copies of completed monitoring reports, the photographic log, a brief summary of the condition of the Cap components, and a description of any repairs performed. The reports shall be submitted to Ecology in late September on an annual basis with a brief summary letter.

6.3 RECORDS MANAGEMENT

Copies of the following documents will accompany monitoring personnel during site visits:

- A copy of this document;
- Prior photographs (for site visual comparisons);
- As-built construction plans and final photographs; and
- Prior field monitoring reports/forms.

Documentation for operations and maintenance will consist of routine field forms, photographic logs, maintenance and repair reports, regulatory correspondence, and all associated documents concerning repairs or work at the site. Details that need to be included in the routine forms are listed below:

1. Field Reports – The field reports will be the standard baseline inspection work at the site and will be conducted on a quarterly basis for the first two years after cap construction, and on a semiannual basis thereafter. The field reports will document, at a minimum, the following information:
    a. Date, time (arrival and departure), name(s) of field personnel, company name.
    b. A map of the entire Cap area with perimeter fence so maintenance/repair issues can be identified and noted on the map.
    c. Section for listing any signs of visible wear or damage on the Cap, including vegetation die off, erosion, damage, etc.
    d. Section listing the elevation points on the Cap and along the perimeter fencing (datum points) and the measured current elevations. This data can be compared to past data to determine if settling is occurring and where if any.
    e. Section detailing any observations concerning burrowing animals – location on the site, potentially type of animal, size of damage, and extent of damage at each location.
    f. A general notes section to provide the field personnel a location to discuss any other topics or issues identified during the visit that are not covered on any of the standard field forms.
    g. Fence Inspection – the field personnel will inspect the entire perimeter fence, gates, and barbed wire for maintenance issues or repair. Any issues observed will be located and marked on the field form map and a description of each location prepared. The description should include the nature of the issue, extent, and recommended remedy. Photographs of each issue should be taken to show the damage and location of the damage.
    h. Roadway Inspection – the field personnel will inspect the access roadway, site loop road, interior access road, Cap perimeter road, and Cap access points. The field report should include a section that documents any erosion, damage, or degradation of the roadways with the location, nature, and extent of the issue. Photographic documentation should be used to show the extent of the issue and its location. The report should also include a recommendation for remedy and next course of action.

2. Emergency Repairs – Documentation of any emergency repair should always be conducted in a proper fashion in a safe manner. All repairs will be documented in the same manner as detailed in the Maintenance and Repair Log below (6).
3. Photograph Log – A photograph log should be maintained in chronological order with photographs and descriptions/notes of each. Each visit should include at a minimum four pictures taken at the same location to use as a consistent basis for site comparison. If repair or maintenance issues are observed, clear digital photographs of each issue should be taken to document the issue. The photograph log should be kept in a binder and electronically in PDF and jpg file formats with the inspection date on the file name.
4. Maintenance and Repair Log – A maintenance and repair log should be kept to chronologically document the ongoing and past repairs and work conducted at the Cap. Each event should be documented daily to include the following details:
    a. Date, time of work (arrival and departure), inspection personnel, vendor, or contractor name, and size of crew.
    b. Record of health and safety meeting/plan and any safety incidents during the work.
    c. Description of work conducted during the day including materials and equipment used and the location of the work.
    d. Any testing results of the maintenance or repair work.
    e. Any changes to the work scope due to unforeseen conditions and how the change was approved and implemented.
    f. Any other additional information that is pertinent to the work and requires documentation, including photo-documentation.
5. Regulatory Correspondence – A binder of regulatory correspondence should be kept to chronologically record all interactions with the regulatory agency to help provide information on the ongoing perspective of the regulatory agency (Ecology, EPA, etc….as necessary). These include letters, faxes, emails, and telephone logs. All of these documents should also be scanned to PDF and electronically kept with filenames that include the correspondence date.

This documentation is intended to be a minimum requirement to properly keep track of the activities, inspections, observations, and repairs implemented at the Site.

LIMITATIONS

This plan was prepared exclusively for Bayer CropScience by AMEC Environment & Infrastructure, Inc. (AMEC). This Cap Monitoring and Maintenance Plan is intended to be used by Bayer CropScience for Zone B of the Pasco Landfill in Pasco, Washington only, subject to the terms and conditions of its contract with AMEC. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

ATTACHMENT 1

Cap Monitoring and Maintenance Forms

Cap Monitoring Form

SITE NAME:	Pasco Landfill Zone B Cap		
SITE LOCATION:	Pasco, Washington		
Project No:	4-61M-10705-1 P-02		
Site Location:	Pasco Landfill, Wash.	**Date:**	
Arrival:		**Departure:**	
AMEC Field Rep. (name):		**AMEC Project Manager (Initials):**	SG
Weather Conditions:			

Environment &
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

COVER SYSTEM

Evidence of:	***Yes***	***No***	***If yes, describe evidence and needed maintenance or repair, and take photos (log on Page 3):***
Erosion			
Settlement			
Depressions			
Rises			
Rills			
Rutting			
Potholes			
Standing Water			
Ice			
Surface Cracks			
Other			

Comments:

Cap Monitoring Form

SITE NAME: Pasco Landfill Zone B Cap

SITE SECURITY / ACCESS

Evidence of:	*Yes*	*No*	*If yes, describe evidence and needed maintenance or repair, and take photos (log on Page 3):*
Inoperative Gates/Locks			
Damage/Rust/Deterioration to Chain-link Fence or Barbed Wire			
Frost-Jacking or Heaving of Fence Posts			
Vandalism to Fence or Posts			
Penetrations or Tunneling Below Fence			
Human Encroachment (trash, fire pits, tire/footprints, etc)			
Missing or Damaged Site Signage			
Deterioration of or Damage to Road			
Other			

Comments:

OTHER

Evidence of:	*Yes*	*No*	*If yes, describe evidence and needed maintenance or repair, and take photos (log on Page 3):*
Erosion or Other Activity on Surrounding Properties that may Affect Cap Function or Stormwater Infiltration			
Vegetation Growth in Infiltration Basin			
Damage to Approach or Service Road			
Other			

Comments:

Cap Monitoring Form

SITE NAME: Pasco Landfill Zone B Cap

PHOTOGRAPH LOG

Photo No.	*Description*
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

CAP MAINTENANCE / REPAIR LOG

Environment &
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

SITE NAME:	Pasco Landfill Zone B Cap	
SITE LOCATION:	Pasco, Washington	
Project No:	4-61M-10705-1 P-02	**Date:**
Site Location:	Pasco Landfill, Wash.	**Page:** 1 of 2
Arrival:		**Departure:**
AMEC Field Rep. (Initial):		**AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions:	AM -	PM -

Description of Maintenance / Repair Task:

FIELD REPORT NOTES

Time:	Field Notes:

CAP MAINTENANCE / REPAIR LOG

Environment &
Infrastructure, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone: 503-639-3400
Fax: 503-620-7892

SITE NAME: Pasco Landfill Zone B Cap	
SITE LOCATION: Pasco, Washington	
Project No: 4-61M-10705-1 P-02	**Date:**
Site Location: Pasco Landfill, Wash.	**Page:** 2 of 2
Arrival:	**Departure:**
AMEC Field Rep. (Initial):	**AMEC Project Manager (Initials):** SG
Average Daily Weather Conditions: AM -	PM -

Equipment Used	**Material Information**

Testing / Results

Changes/Deviations to Work Plan

1)

Approver Name: **Approver Signature**

2)

Approver Name: **Approver Signature**

Health and Safety

Near Misses	
Accidents	
Action	

Health and Safety Tailgate

Hazards Identified:	**Hazard Mitigation**
1)	1)
2)	2)
3)	3)
4)	**4)**

Time	**Company**	**Name**	**Signature**