

Appendix B-5

PCB Processing Facility Spill Prevention Control and Countermeasures Plan



US Ecology Nevada

**US ECOLOGY NEVADA, INC.
BEATTY, NEVADA
EPA ID#: NVT 330 010 000**

**PCB PROCESSING FACILITY
SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN**

April 2010

**US ECOLOGY NEVADA, INC.
PCB PROCESSING FACILITY SPCC PLAN**

SPCC Plan Certification Sheet

Facility Name:

US Ecology Nevada, Inc. PCB Processing Facility, Beatty, Nevada

Facility Location:

US Ecology Nevada, Inc.
US 95, 12 miles South of Beatty
Beatty, Nevada 89003

Owner Mailing Address:

US Ecology Nevada, Inc.
P.O. Box 578
Beatty, Nevada 89003

Designated Person Responsible for Spill Prevention:

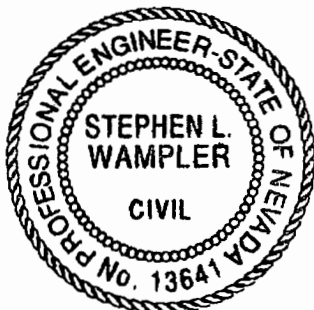
Environmental, Health and Safety Manager

Facility Manager

Name: Scott Wisniewski
Address: US 95, 12 miles South of Beatty
Office Phone: 800-239-3943
Emergency Phone: 775-553-2203

Bob Marchand
US 95, 12 miles South of Beatty
800-239-3943
702-280-2596

Certification: I hereby certify that I have examined the facility and being familiar with the provisions of 40 CFR, Part 112 attest that this SPCC Plan, dated April 2010, has been prepared in accordance with good engineering practices. Any modifications to this plan should be reviewed by a professional engineer, and this title sheet updated to reflect the modifications.



Name Stephen L. Wampler

Date: 19 April 2010

Registration # 13641 / Nevada

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Purpose

This SPCC Plan has been prepared in accordance with 40 CFR 112 as required by 40 CFR 761.65(c)(7)(ii) and establishes the facility procedure methods and equipment necessary to prevent the discharge of PCB-contaminated liquids and oil from the US Ecology Nevada, Inc. PCB processing facility.

Introduction

US Ecology Nevada, Inc. operates a PCB processing facility located on US Highway 95, 12 miles south of Beatty, Nevada. Facility operations consist of draining transformers and other electrical equipment of PCB oil and, if required, flushing the equipment with approved solvents, thereby reducing the PCB concentration within the equipment to levels mandated by Federal law as acceptable for disposal. The Facility also receives drummed PCB-contaminated solids that are stored prior to disposal.

PCB-contaminated liquids are stored inside the fully enclosed PCB Containment Building (PCB Building) or within the uncovered PCB Holding Storage Tank Area (PCB Tank Area) for transportation off-site to an approved destruction facility. All electrical transformers and other equipment upon being drained and/or flushed is disposed on-site or sent to an approved off-site disposal or destruction facility.

The PCB processing facility consists of 1 building and associated outside tank storage area. All operational areas are contained within the facility chain-link security fence. All PCB liquids are handled and stored within this controlled area.

The person responsible for PCB processing facility operation, including spill prevention and response, is the Facility Manager (FM).

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Personnel Training

The FM or his designee will ensure that all operational personnel are properly trained. Training shall include, but not be limited to the following:

- Operation and maintenance of all equipment associated with PCB operations.
- Location and operation sequence of all waste feed and flushate feed systems.
- Proper use of respiratory and personnel protective equipment.
- A review of contamination control and decontamination procedures.
- A review of proper spill control and response measures as related to this SPCC Plan.

An annual safety meeting on the requirements of the SPCC Plan will be conducted with facility personnel and documented per the Facility Training Plan.

The FM or his designee will ensure that no employee is allowed to take part in PCB operations unsupervised without having the above training.

The FM or his designee will ensure that no employee is allowed to take part in PCB operation without proper respiratory and personal protective equipment.

At all times, personnel will take full precautionary measures to minimize contact with PCB materials.

Process Area Entry and Egress

Upon arrival at the facility compound, all PCB Building employees will change from their street clothes to their work clothes and safety shoes and proceed to the PCB Building.

Prior to entering the processing area of the PCB Building or PCB Storage Tank Area, all employees will don required respiratory and personal protective equipment.

Prior to egressing the PCB processing area, employees will remove their Tyvek® protection equipment and dispose of them in the designated container. They then will remove their

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chemical gloves and dispose of them in the designated container. Finally they will remove their respiratory protection. They will immediately egress the operational area.

Chemical resistant suits, if not ready for disposal, will remain in the process area for reuse until the end of the service life.

No contaminated equipment will be taken out of the controlled area or outside the building without first being decontaminated. For non-routine entrance and egress of vehicles, plastic sheeting may be used under the direction of the Building Supervisor or his/her designee with concurrence of site management.

Employees will change from their work clothes to their street clothes prior to leaving the facility for the day.

Plan Modifications

This SPCC Plan will be subject to modification whenever there is a change in facility design, construction, operation or maintenance which affects the facility's potential for discharge. Modifications will be under the guidance of the FM or his designee with engineering review and will be implemented no later than 6 months after the review.

A review of this plan for evaluation of effectiveness will be made at a minimum every 5 years. Modifications of the plan based on this evaluation will be implemented within 6 months of the review.

To the extent required by 40 CFR 761.65 and 40 CFR 112, SPCC Plan modifications will be evaluated and certified by a Professional Engineer registered in the State of Nevada.

Facility Drainage/Containment/Storage

The land on which the facility is constructed is located in the Amargosa Desert with no possibility of drainage to flowing surface-water bodies, navigable or otherwise, except under

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extreme precipitation conditions greatly exceeding the design storm (i.e., 25-year, 24-hour storm).

All PCBs are processed within a fully enclosed and contained area and all outside PCB liquid storage tanks are located within a contained area. PCB operations normally are conducted during daylight hours.

All PCB Articles and Containers are processed within a controlled containment area inside a metal building. PCB Articles and Containers housed within the PCB Tank Area are within a contained area that prevents contact between PCB-contaminated liquids and area surface water. PCB-contaminated liquids are kept separate from the facility surface-water drainage system. The run-off of precipitation from the PCB Building roof and facility grounds drains to areas outside of the PCB containment areas. This run-off water does not come in contact with PCB Articles or Containers.

All containers, piping, and containment system components (tanks, liners, sealants, concrete, etc.) are compatible with the PCB materials and are not degraded by contact with those materials.

PCB Bulk Liquid Storage

The PCB Bulk Liquid Storage Area (PCB Tank Farm) consists of 5 tanks, all horizontally mounted on raised concrete cradles or footings, as shown in the drawings in **Appendix 2**. The tanks are located in a 45-feet by 45-feet containment area with a 1.5-foot high containment wall. The containment area floor and walls are constructed of reinforced concrete. The concrete floor and walls are not penetrated by pipes, conduits, or drains. The concrete floor of the PCB Tank Farm is sloped to a 48-inch by 48-inch by 18-inch deep sump pit. There is no drain or other penetration of the sump pit floor or walls. Liquids collecting in the sump pit will be removed by pumping for proper management.

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All of the containment system components (e.g., tanks, pipes, and concrete and joint sealants) in contact with PCB-contaminated liquids are compatible with the waste that is stored within the PCB Tank Farm and are not degraded by contact with those materials.

The precipitation event considered in the design of the PCB Tank Farm is the 25-year, 24-hour storm. At the facility location, the 25-year, 24-hour storm event is a 2-inch rainfall. This rainfall amount was considered in the design of the PCB Tank Farm containment structure should the design storm occur during a tank failure.

Containment Capacity (as required by 40 CFR 761.65(b)(1)(ii))

Capacities of tanks within the PCB Tank Area:	2 tanks (5,000 gal. each)
	2 tanks (7,500 gal. each)
	1 tank (3,000 gal. each)
Total volume =	28,000 gallons

Containment capacity required is the larger of:

25% of total liquid storage capacity = 25% of 28,000 gallons = 7,000 gallons

200% of liquid storage capacity of largest tank = 2 x 7,500 gallons = 15,000 gallons

Containment capacity required by 40 CFR 761.65(b)(1)(ii) = 15,000 gallons

USEN conservative determination of PCB Tank Farm containment holding capacity

= 15,000 gallons + design storm precipitation

Design Storm precipitation volume = $[2 \text{ in} / 12 \text{ in/ft}] \times 45 \text{ ft} \times 45 \text{ ft} \times 7.48 \text{ gal/cu ft} = 2,524.5 \text{ gals}$

Minimum containment capacity required = 17,524.5 gallons

Containment capacity available = 45 ft wide by 45 ft long by 1.5 ft deep
= 3,038 cu ft x 7.48 gal/cu ft
= 22,720.5 gallons*

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- * Actual total capacity is somewhat greater since containment depth at low point (sump pit) actually is 23 inches.

22,721 gallons > 17,582 gallons, liquid holding capacity satisfies 40 CFR 761.65(b)(1)(ii)

Excess capacity is $22,721 - 17,525$ gallons = 5,196 gallons

5,196 gallons is equivalent to 4.1 inches of freeboard above the design liquid height

The PCB bulk storage tanks are equipped with visible liquid level gauges that are integrated into an audible alarm system inside of the process building to indicate when tanks are approaching maximum holding capacity. The alarms are tested every 2 months.

All storage tanks, including the vacuum tank, are equipped with manual cut-off valves at the tank intakes.

PCB Storage Area

The process and storage area inside the PCB Building is positioned over a liner system that, from bottom to top, consists of a minimum of 6-inches of clean sand cushion, 2 30-mil HDPE liners separated by 6 inches of clean sand, a protective 125-mil polyester filter fabric layer, and a final 1.0-foot thick sand layer.

The floor of the PCB Building contains no drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to escape. The epoxy-coated, non-porous concrete floor contains continuous 6-inch high curbing to prevent PCB-laden liquids from escaping. The following calculations document that the liquid holding capacity of the PCB Building floor and curbing.

Building berm containment capacity:

Capacity required is the larger of: 1) 25% of total liquid holding capacity of PCB Articles and Containers housed or temporarily storage inside the PCB Building, or 2) 200% of the liquid holding capacity of the largest PCB tank or container housed or stored inside the PCB Building.

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$$\begin{aligned}\text{Capacity available:} &= 48 \text{ ft wide} \times 100 \text{ ft long} \times 0.5 \text{ ft high containment curb} \\ &= 2,400 \text{ cu. ft.} \times 7.48 \text{ gal/cu. ft.} \\ &= 17,952 \text{ gal}\end{aligned}$$

There are no large tanks or containers permanently or temporarily housed in the PCB Building. Therefore, the containment volume defines the maximum total capacity of PCB liquid containers that can be stored in the building. Based on the containment capacity of 17,952 gallons, the allowable total liquid storage capacity in all containers containing PCB is 4 times 17,952 gallons, or 71,808 gallons liquids. USEN will operate the PCB processing and storage area in a manner such that the total liquid holding capacity of PCB Articles and Containers permanently or temporarily housed inside the PCB Building never exceeds a maximum volume of 71,808 gallons.

The PCB Building contains 5 drain and flush stations, each equipped with separate segregated piping (see **Figure 1**). There is a vacuum line for draining and 1 feed line for the addition of flushing liquid. The PCB liquid flows first to the vacuum tank and then is pumped to 1 of the 4 temporary storage tanks. The flush line flows directly from the diesel storage tank to the station. There is no possibility of cross-over contamination between PCB liquids and clean flushate.

Each PCB drain and flush station is equipped with high pressure, oil resistant vacuum hose with cam lock quick disconnects for draining. Valves/lines are closed/capped when not in use for extended periods of time. The stingers are made of PVC to allow quick length modifications. The lines that contain PCBs are located out of the way of traffic patterns to prevent possible damage by vehicles.

Manual cut-off valves are located at the stinger/hose connection, hose/mainline connection, inlet to the vacuum tank and at all inlets to the 4 storage tanks.

All of the containment system components (e.g., tanks, pipes, concrete sealant, and HDPE liners) are compatible with the waste that is stored within the PCB Building.

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All small incidental spills that occur during draining, and flushing operations will be cleaned up at the end of each operating day. All small spills will be cleaned up with “floor-dri” material and placed in a drum for subsequent disposal. Collection of incidental spill material will be performed with shovels, brooms, and spill pillows or other absorbent material. Spill kits are maintained within the PCB Building and available for use by PCB operations personnel.

In the event that a larger spill occurs within the PCB Building, all feed lines to the storage tanks will be closed, if required, and all processing operations will cease. Immediate clean-up measures will be conducted under the supervision of the FM or his designee. The FM or his designee will ensure that all personnel involved in any spill clean-up procedures are properly outfitted with the necessary personal protective equipment.

The spilled liquid will be bermed and confined to as small an area as possible prior to clean-up. As much of the liquid as practical will be removed in liquid form and placed in the appropriate PCB tanks. Solidification will be performed on only the liquid volume that cannot be practically transferred into the tanks.

If the spill or leak involves a PCB bulk storage tank, or associated piping, the feedline cut-off will be isolated, and the tank or line will be immediately patched and emptied until permanent corrective action can be completed.

If the volume of standing liquid is too great for drumming, a contractor will be summoned to remove the liquid for approved off-site processing.

The FM or his designee will continually monitor the incident by observation for signs of further release.

When the spill has been stabilized, the FM or his designee will immediately notify all other site management who will ensure that the appropriate state and federal authorities are contacted.

When remedial clean-up operations are completed, all contaminated materials and equipment that are not suitable for decontamination will be placed in DOT-approved containers for disposal.

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Equipment that is suitable for decontamination will be decontaminated in accordance with standard facility procedures before being released for reuse.

PCB Storage

All storage holding tanks are equipped with liquid level gauges, and audible maximum gallonage alarms.

Prior to the initiation of the draining and flushing operation, the liquid levels of the storage tanks will be checked for sufficient available volume.

All PCB Articles and Containers placed in storage for disposal will be marked with the date the items were first placed into storage.

No PCB will be stored for more than 1 year under any circumstances.

An annual tank thickness test will be performed on all outside PCB storage holding tanks

PCB Tank Truck Loading

All loading of PCB-contaminated liquids for off-site disposal or destruction will be done on the PCB Tank Truck Loading Pad (Truck Pad). The Truck Pad is a 12-feet wide by 56-feet long reinforced concrete pad. All portions of the Truck Pad are sloped to drain to a 48-inch by 48-inch by 18-inch deep sump pit. There is no drain or other penetration of the sump pit floor or walls. Liquids collecting in the sump pit as a result of drips or spills occurring during tanker truck loading operations, or from precipitation, will be transferred by pump to the appropriate PCB liquid holding tank for appropriate management.

The Truck Pad is designed for loading tanker trucks up to 10,000 gallons in capacity. The Truck Pad and sump pit provide a liquid holding capacity of about 1,175 gallons. For the purposes of spill prevention, the loading of tanker trucks will be under the direction of the PCB building supervisor or designee. Since the truck unloading operation always will be conducted and monitored by trained US Ecology operations personnel, the pad will be expected to contain only

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incidental drips and spills. In the event of larger spillage, tanker loading operations will be terminated immediately by the operator(s) present. Also, loading operations will be conducted during daylight hours and not during significant rainfall events. Since the Truck Pad will be intended to contain only minor drips and spills, the 1,175 gallon holding capacity is judged to be sufficient.

The Truck Pad and sump pit are designed to contain the water volume that would be collected during the design storm (25-year, 24-hour storm). The 2-inch design storm would generate approximately 840 gallons of water.

All tanker trucks receiving PCB waste at the facility will meet applicable DOT requirements.

When tank trucks are positioned for loading they will be barricaded to prevent departure before complete disconnect of transfer lines. Facility personnel will be present during transfer operations. Transfer lines will be capped, and appropriate valves secured after the transfer has been completed.

All small incidental spills which may occur during tank truck loading will be immediately cleaned-up and placed in appropriate DOT approved containers.

All large spills of PCB will be addressed according to Section 3.2 of the Facility Contingency Plan and remediated per the requirements of 40 CFR 761.125

Security

The facility is fully enclosed by a 6-feet high chain-link fence that surrounds the entire US Ecology facility. All gates are closed and locked during non-operational hours.

Inspection and Recordkeeping

The processing area, all PCB Articles and Containers in storage and all storage tanks will be inspected biweekly (every 2 weeks). See example Biweekly Inspection Form (**Appendix 1**).

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This form will be maintained in a binder for recordkeeping reference by the Facility Manager or his designee. All inspection items which are found to be deficient will have corrective action taken immediately and this action will be so noted on the inspection form.

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FIGURE 1

PCB BUILDING AND DRAIN AND FLUSH STATION LAYOUT

April 2010

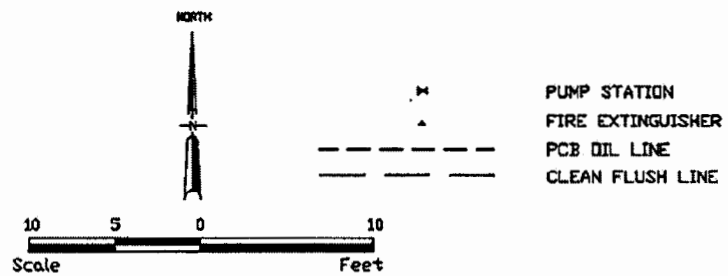


FIGURE 1
PCB BUILDING AND DRAIN AND
FLUSH STATION LAYOUT

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APPENDIX 1

BIWEEKLY PCB BUILDING INSPECTION REPORT

April 2010

US ECOLOGY NEVADA, INC.

BIWEEKLY PCB BUILDING INSPECTION REPORT

DATE: _____

TIME: _____

INSPECTOR: _____

INSPECTED ITEMS		SATISFACTORY	
A.	PCB PROCESSING AND STORAGE	YES	NO
1	Audible alarms (in working order)		
2	Storage tanks (corrosion, erosion, or leaks)		
3	Valves, lines, and fittings (corrosion, erosion, or leaks)		
4	PCB processing/storage area (Signs of spills, leaks, or deteriorated/damaged containers)		
5	All PCB items, articles, and containers in storage are properly labeled and identified		
6	All PCB containers in storage are within seven months of their accumulation start date		
B.	RCRA STORAGE		
1	RCRA container storage (signs of leaks, spills, or damaged/deteriorated containers, open containers in storage)		
2	All RCRA waste in storage is compatible with stored PCB waste		
3	All RCRA containers in storage are properly labeled, marked, and identified		
4	All RCRA containers in storage are within seven months of their accumulation start date		
C.	GENERAL		
1	General housekeeping (trash, debris, etc.)		
2	Run-on/run-off controls (sloughing or erosion of berms)		
3	Concrete flooring and containment for expansion cracks, corrosion, and other signs of deterioration		
4	All required safety equipment present in proper working condition and properly stored		
5	All RCRA/PCB containers palletized and stored with a minimum three-foot wide aisle space		
6	Emergency shower/eyewash functional		

Any items which have been determined as "Unsatisfactory" shall be noted in the remarks section with an explanation and corrective action to be taken.

***Remarks/Corrective Action:**

* If corrective action is taken, include action taken, date completed and name of individual taking the action.

Reviewed By: _____

Date: _____

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APPENDIX 2

PCB STORAGE TANK AREA DESIGN DRAWINGS

April 2010

GENERAL STRUCTURAL NOTES

GENERAL:

- STRUCTURAL DESIGN IS BASED ON THE 2008 INTERNATIONAL BUILDING CODE (2008 I.B.C.)
- THE FOLLOWING SPECIFICATIONS WERE REFERENCED FOR THE DEVELOPMENT OF THESE DRAWINGS:
2.1. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-08)
- ELEVATIONS SHOWN ON CONCRETE OR STEEL MEMBERS ARE TO THE TOP OF THE MEMBER, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL BRACE AND SHORE NEW AND EXISTING STRUCTURES AS REQUIRED TO PREVENT DAMAGE OR COLLAPSE DUE TO WIND, EARTH, CONSTRUCTION OR OTHER LOADS.
- SECTION MARKS ARE SHOWN ONLY ONCE ALONG EACH STRUCTURAL ELEMENT UNLESS SPECIFICALLY EXCEPTED. THE SECTION MARK APPLIES TO THE TOTAL LENGTH OF THAT LINE AND ANY OTHER LINES OR ELEMENTS OF SYMMETRICAL OR SIMILAR POSITION.
- ALL EXISTING UTILITY LOCATIONS SHALL BE VERIFIED WITH AVAILABLE CIVIL, UTILITY, MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS, AND UTILITY ENTITIES PRIOR TO CONSTRUCTION.
- ANY CHANGES IN THE DESIGN REQUESTED BY THE CONTRACTOR AND REQUIRING EVALUATION BY THE DESIGN ENGINEER OF RECORD, SHALL BE SUBJECT TO AN ADDITIONAL REVIEW FEE, PAID TO THE DESIGNER AND CHARGED AT THE RATE OF \$105.00 PER HOUR.
- ANY MODIFICATION OR ALTERATION OF THESE CONSTRUCTION DOCUMENTS OR CHANGES IN CONSTRUCTION FROM THE INTENT OF THESE DOCUMENTS BY THE CONTRACTOR WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER SHALL REMOVE ALL PROFESSIONAL RESPONSIBILITY AND LIABILITY ON THE PART OF THE ENGINEER.

DESIGN CRITERIA:

THE STRUCTURAL DESIGN WAS BASED ON THE DESIGN CRITERIA:

- BUILDING CODE: 2008 INTERNATIONAL BUILDING CODE
- BUILDING OCCUPANCY CATEGORY: II
- FLOOR LIVE LOAD: 100 PSF
- ROOF DEAD LOAD: N/A
- ROOF LIVE LOAD: N/A
- GROUND SNOW LOAD, p_g : 30 PSF
 - SNOW LOAD IMPORTANCE FACTOR, I_s : 1.0
 - SNOW EXPOSURE FACTOR, C_e : 1.0
 - THERMAL COEFFICIENT, C_t : 1.0
- WIND LOAD
 - BASIC WIND SPEED (3-SECOND GUST): 90 MPH
 - WIND IMPORTANCE FACTOR, I_w : 1.0
 - WIND EXPOSURE: C
 - PRESSURES PER ASCE 7-05
- SEISMIC LOAD:
 - SEISMIC DESIGN CATEGORY: B
 - SITE CLASS: D (ASSUMED)
 - LATITUDE: 36.7692
 - LONGITUDE: -118.6987
 - R_{SD} : 0.597
 - R_{SD} : 0.358
- MECHANICAL UNITS: N/A
- SPECIAL LOADS: HS-20 TRUCK

REINFORCED CONCRETE:

- ALL CONCRETE SHALL BE IN ACCORDANCE WITH THE "AMERICAN CONCRETE INSTITUTE BUILDING CODE" (ACI 318) AND WITH "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301) LATEST EDITIONS.
- USE OF EXTENDED SET ADMIXTURES FOR LONG HAUL DURATIONS PER ACI EDUCATION BULLETIN E4-03.
- ALL NORMAL WEIGHT CONCRETE (145 PCF) SHALL OBTAIN THE FOLLOWING MINIMUM 28 DAY COMPRESSIVE STRENGTHS (PSI):
SLABS ON GRADE: 4,500 PSI
FOOTINGS & GRADE BEAM: 4,800 PSI
- ALL CONCRETE SUBJECT TO EXTERIOR EXPOSURE SHALL BE AIR ENTRAINED AS RECOMMENDED BY ACI 318.
- PORTLAND CEMENT SHALL BE TYPE V, MAXIMUM W/C RATIO = .45.
- ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS SHALL COMPLY WITH THE CURRENT ACI "MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 318) AND THE CURRENT EDITION OF THE CRI "MANUAL OF STANDARD PRACTICE".
- MINIMUM CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING:
7.1. CONCRETE PLACED AGAINST EARTH: 3"
7.2. CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 AND LARGER BARS: 2"
#8 BAR, W61 OR D31 WIRE, AND SMALLER: 1-1/2"
7.3. NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS (INTERIOR FACES): 3/4"
BEAMS, COLUMNS (TO TIES OR STRUTS): 1-1/2"
REINFORCING BARS SHALL CONFORM TO ASTM A-615, GRADE 60, EXCEPT #3 BARS MAY BE GRADE 40.
- ALL BARS IN CONCRETE WALLS SHALL BE CONTINUOUS AROUND CORNERS OR CORNER BARS OF EQUAL SIZE AND SPACING SHALL BE PROVIDED. TOP MAIN BARS IN BEAMS AND GRADE WALLS SHALL BE SPLICED AT MIDSPAN UNLESS NOTED OTHERWISE. BOTTOM MAIN BARS SHALL BE SPLICED (12" MIN) AT SUPPORTS.
- LAP LENGTHS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 & THE CURRENT EDITION OF THE CRI "MANUAL OF STANDARD PRACTICE FOR CONDITIONS PRESENT".

REINFORCED CONCRETE:

- THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPICE LENGTH FOR BLACK REINFORCING BARS PLACED IN ACCORDANCE WITH THE PROVISIONS FOUND IN ACI-318. THESE SPICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER.

CLASS B SPICE LENGTHS			
BAR SIZE	#4	#5	#6
SPICE LENGTH FOR 4,800 PSI CONCRETE	2'-6"	3'-4"	4'-0"

- ALL EXPOSED EDGES OF BEAMS, COLUMNS, WALLS, ETC., SHALL HAVE A 3/4" X 45° CHAMFER.
- LOCATE CONSTRUCTION JOINTS IN FOUNDATION WALLS AND GRADE BEAMS AT THIRD POINTS BETWEEN POINTS OF BEARING UNLESS OTHERWISE DETAILED, AND PROVIDE 2 X 4 SHEAR KEYS FOR 15% MINIMUM OF CONTACT AREA, AT GRADE BEAMS ONLY.
- ALL TOOLED OR SAWN JOINTS SHALL BE FILLED WITH A NON-TRACKING, SEALANT TYPE DESIGNATED BY OWNER WHERE CONCRETE FLOOR IS EXPOSED.
- ALL REINFORCING SHOWN BUT NOT OTHERWISE CALLED OUT SHALL BE #5 MINIMUM.
- PROVIDE (2) #5 ADDITIONAL REINFORCEMENT AROUND EACH SIDE OF EACH OPENING. EXTEND REINFORCEMENT 2'-0" MINIMUM BEYOND EACH FACE OF OPENING.
- TEST CYLINDERS SHALL BE MADE AND TESTED AS OUTLINED IN CHAPTER 16 OF ACI-301.
- PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCEMENT AT POSITIONS SHOWN ON THE PLANS AND DETAILS. PLASTIC COATED ACCESSORIES SHALL BE USED IN ALL EXPOSED CONCRETE WORK.
- THE GENERAL CONTRACTOR SHALL CHECK WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND THE SUB-CONTRACTORS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, INSERTS, SLAB DEPRESSIONS AND OTHER ITEMS RELATED TO THE CONCRETE WORK AND SHALL ASSUME RESPONSIBILITY FOR THEIR PROPER LOCATION.
- ALL POST-INSTALLED ANCHORS IN CONCRETE SHALL CONFORM TO AND FOLLOW THE GUIDELINES SET FORTH IN ICCES REPORT EBR-1771, DATED MARCH 1, 2007. ALL EPOXY ANCHORS SHALL CONFORM TO AND FOLLOW THE GUIDELINES SET FORTH IN ICCES REPORT EBR-1771, DATED MARCH 1, 2007.
- CONCRETE SURFACES WILL BE SEALED WITH COROPOLY POLYAMIDE EPOXY (101 LINE) OR EQUIVALENT SELECTED OR APPROVED BY OWNER.

FOUNDATION AND SOILS:

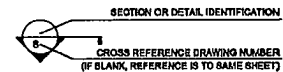
GEOTECHNICAL REPORT INFORMATION:

SOIL REPORT BY: NO SOILS REPORT RECEIVED FOR PROJECT
REPORT NUMBER:
DATE:

- SHALLOW SPREAD FOOTINGS SHALL BEAR ON COMPACTED FILL BELOW FINISH GRADE AS NOTED ON THE PLANS. SOILS SHALL BE COMPACTED TO 95% STANDARD PROCTOR TEST.
- ALLOWABLE BEARING PRESSURE = 2,800 PSF (ASSUMED)
- NOTE - FOR FOUNDATIONS ADJACENT TO RETENTION AREAS OR PLANTERS, PROVIDE MIN. 8" OF ADDITIONAL EMBEDEDMENT.
- ALL EARTHWORK, FOOTING DEPTHS, AND EXCAVATIONS FOR FOUNDATIONS SHALL BE INSPECTED BY SOILS ENGINEER LICENSED IN THE STATE OF NEVADA TO VERIFY ASSUMED ALLOWABLE SOIL BEARING AND LOW SETTLEMENT AND SWELL POTENTIAL, AND TO MAKE ANY ADDITIONAL RECOMMENDATIONS.
- CONTRACTOR MUST BE AWARE OF HIGH MOISTURE CONTENT & EXPANSIVE SOILS WHEN PERFORMING OVEREXCAVATION.
- ANY FILL REQUIRED BELOW SLABS ON GRADE OR FOOTINGS SHALL BE COMPACTED.
- ALL EXTERIOR FOOTINGS SHALL EXTEND BELOW THE MAXIMUM ANTICIPATED DEPTH OF FROST.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OR ENGINEER OF RECORD IMMEDIATELY IN THE EVENT THAT THE SOILS CONDITIONS ENCOUNTERED VARY FROM THOSE SHOWN ON THE BORING LOGS.
- ALL FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY A SOILS TESTING LABORATORY PRIOR TO PLACEMENT OF CONCRETE.

SPECIAL INSPECTIONS:

- SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 1704 OF THE 2008 I.B.C. AND THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS DURING CONSTRUCTION ON THE TYPES OF WORK LISTED UNDER SECTION 1704. THE FOLLOWING AREAS OF WORK REQUIRE SPECIAL INSPECTIONS IN ACCORDANCE WITH THE LISTED 2008 I.B.C. SECTIONS/LOCATIONS:
1.1. SOILS - SECTION 1704.7
1.2. CONCRETE AND REINFORCEMENT - SECTION 1704.4



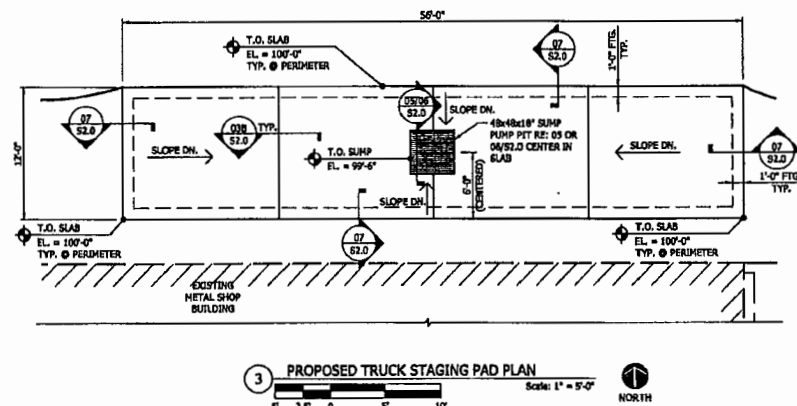
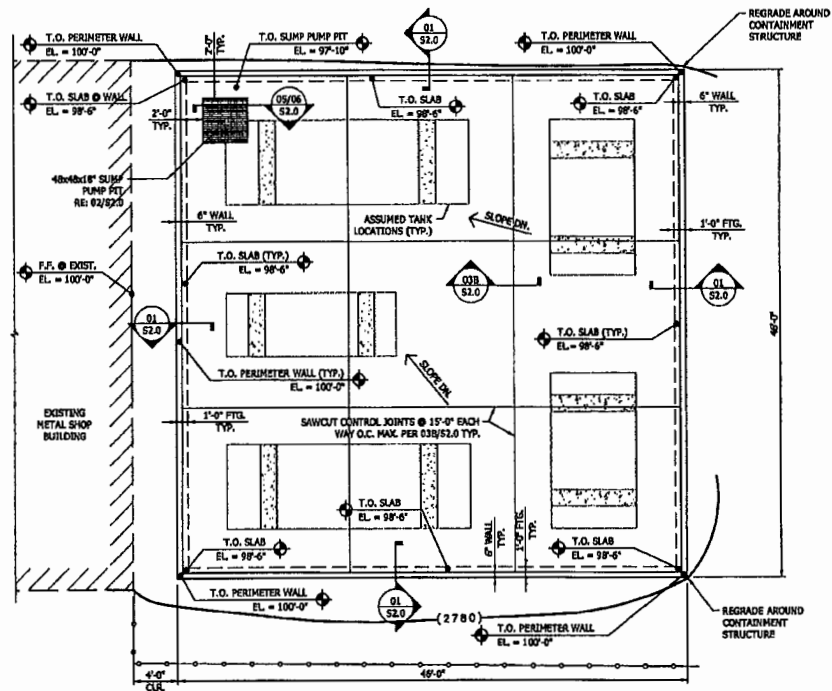
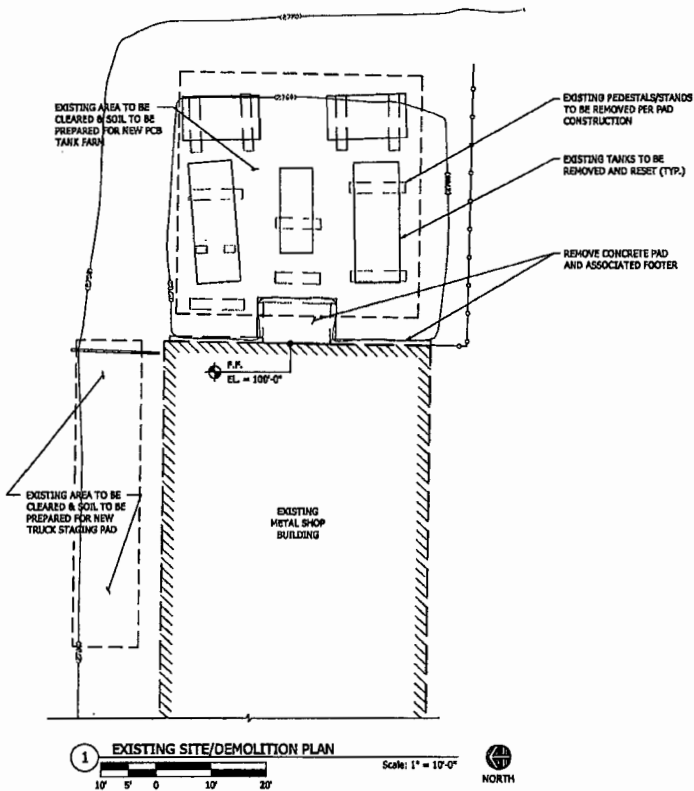
REVISION	DATE	BY	NO.

LONGO, INC.
 CONSULTING ENGINEERS
 1700 W. HAWLEY BLVD. SUITE 100
 LAS VEGAS, NEVADA 89102-1000
 Project No. 10115
 Drawn By: J. Gomez
 Checked By: J. Gomez
 Approved By: J. Gomez

PCB TANK FARM CONTAMINANT STRUCTURE & TRUCK STAGING PAD DESIGN
 CLIENT: US ECOLOGY, INC.
 SITE: NEVADA
 ADDRESS: P.O. BOX 578, BEAUTY, NV 89003

GENERAL STRUCTURAL NOTES
 Sheet No. **80.0**
 DRAWER NO. -
 01 OF 3

Drawing Name: A:\2010\101115- PCB Tank Farm Foundation\Drawings\101115- EXISTING-PROPOSED PCB TANK FARM SITE PLAN.dwg -- Current Date: 04/08/2010 -- 11:15am By: daniel Lusk Date: 08/04/2010 -- 11:03am



KEY	DATE	REVISION
1		
2		
3		

LOCO INC.	1000 INDUSTRIAL AVENUE CARSON, CALIFORNIA 90745 (562) 594-1000
Drawn By: E. Gomez	Date: 04-08-2010
Checked By: D. Ewell	Project No. P10115
Approved By: J. J. Jones	

EXISTING/PROPOSED PCB TANK FARM SITE PLAN	US ECOLOGY, INC.	P.O. BOX 576, BEATTY, NV 89003
Sheet No. 81.0		
Drawn No. -		
02 OF 3		

