NM1 - __50___

PART 36 PERMIT APPLICATION

Dated

November 2009

Received

Nov. 18, 2009

RECEIVED
2009 NOV 18 PM 2 01

RECEIVED
2009 NOV 18 PM 2 00

INDUSTRIAL ECOSYSTEMS
PERMIT APPLICATION
FOR
BLANCO LAND FARM

SAN JUAN COUNTY
NEW MEXICO

NOVEMBER 2009

PREPARED BY:
CHENEY ▲ WALTERS ▲ ECHOLS, INC.
909 WEST APACHE
FARMINGTON, NM 87401

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PRINCIPAL OFFICERS/OWNERS/MANAGEMENT

President/Treasurer:

John J. Kiely
401 S. LaSalle, Suite 606
Chicago, IL 60605

Vice President/Assistant Secretary:

Jeff Mohajir
1900 Shawnee Mission Parkway
Mission Woods, KS 66205

Secretary:

John P. Crowe
1015 W. 54th Street
Kansas City, MO 64112

Owner 25% or more:

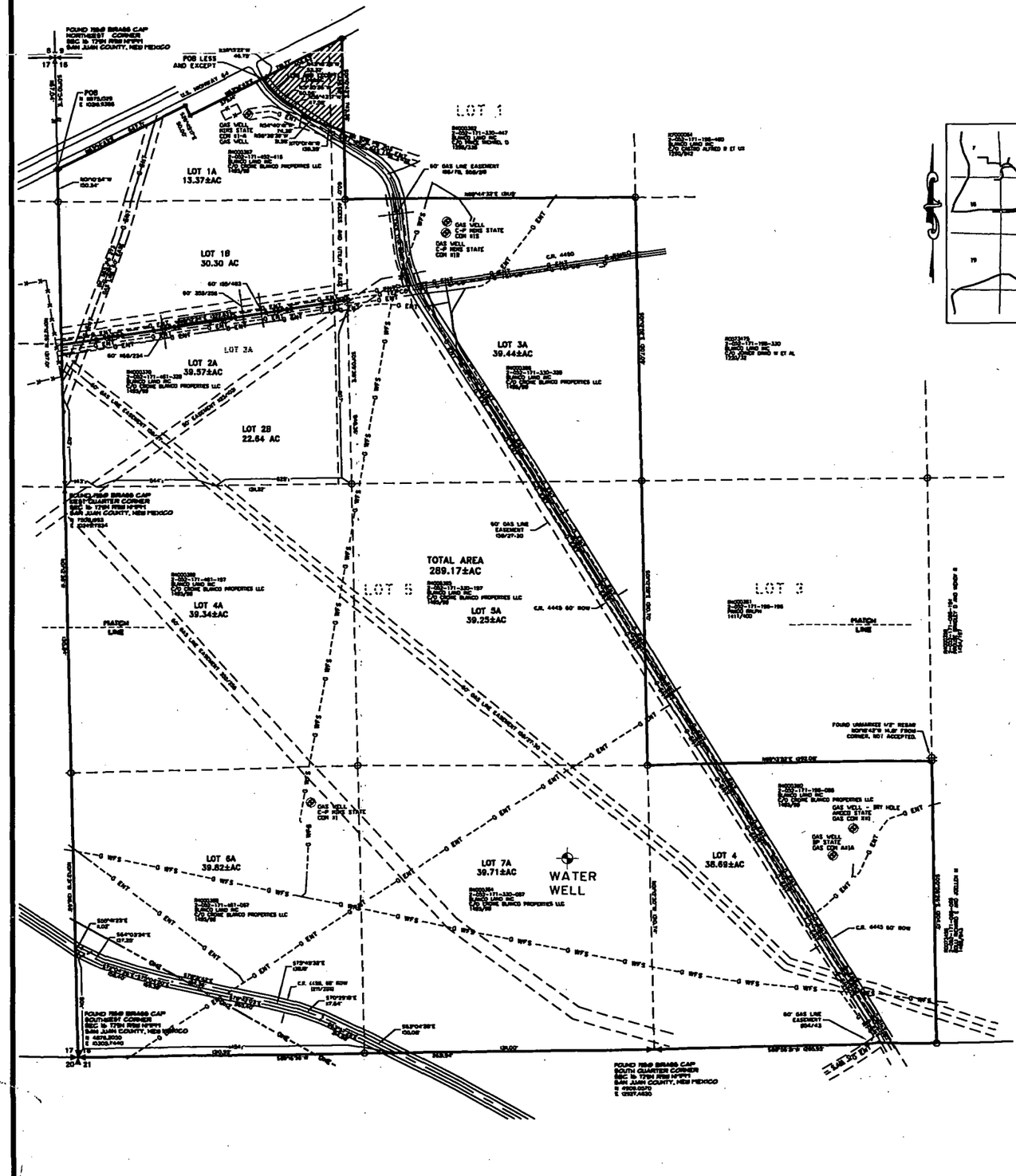
John P. Crowe

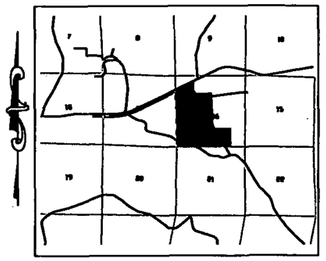
Individual(s) Primary Responsible for Management of Facility:

Terry Lattin
49 CR 3150
Aztec, NM 87410

BOUNDARY SURVEY PLAT

of Lot 4 of the Blanco Land Subdivision No.1
as recorded in Book 1309, page 455
and Lots 1A thru 7A of the Blanco Land Subdivision No.2
as recorded in Book 1322, page 798
and lying in the
W1/2 and the SW1/4 SW1/4 of Section 16, T29N R09W, N.M.P.M.
San Juan County, New Mexico
For: Industrial Ecosystems, Inc.





LEGEND

——G WFS—— : WILLIAMS FIELD SERVICES GAS LINE
——G ENT—— : ENTERPRISE GAS LINE
——G TEPCO—— : TEPCO GAS LINE
: SECTION CORNER AS NOTED
: QUARTER CORNER AS NOTED
: SET 1/2" REBAR W/CAP LS 9509
: FOUND REBAR W/SURVEY CAP 9884 UNLESS NOTED OTHERWISE
: HWY SURV BRASS CAP S/S HOR

DESCRIPTION

A tract of land being Lot 4 of the Blanco Land Subdivision No.1 as recorded in Book 1309, page 455, and Lots 1A through 7A of Blanco Land Subdivision No. 2 as recorded in Book 1322, page 798, also lying in the West Half (W1/2) and the Southwest Quarter of the Southwest Quarter (SW1/4 SW1/4) of Section 16, T29N, R09W, N.M.P.M., San Juan County, New Mexico, being more particularly described as follows:

COMMENCING at the Northwest Corner of the above said Section 16;

THENCE: S0°00'34"E and along the west line of said Section 16 for a distance of 857.04 feet to a point of intersection with the South right-of-way line of U.S. Highway 64 and the Northwest Corner of the above said Lot 1A and the Point of Beginning of said tract;

THENCE: N30°10'53"E(N.T.) and along the north line of the above said Lot 1A and the south line of U.S. Highway 64 the following courses and distances and N52°44'32"E for a distance of 1412.71 feet;

THENCE: S39°56'03"E for a distance of 50.00 feet;

THENCE: N52°44'32"E for a distance of 719.77 feet to the Northeast Corner of the above said Lot 1A;

LEAVING said right-of-way line and along said east line of said Lot 1A and S0°00'43"E for a distance of 743.25 feet to a found rebar with survey cap, LS 9884 at the Southeast Corner of the above said Lot 1A and the Northeast Corner of the above said Lot 2A;

THENCE: S89°57'39"E and along the north line of said Lot 2A for a distance of 1313.00 feet to a found rebar with survey cap marked LS 9884 at the Northeast Corner of said Lot 2A and the Northwest Corner of said Lot 2B;

THENCE: S0°07'05"E and along the west line of said Lot 2B for a distance of 1307.05 feet to a found rebar with survey cap marked LS 9884 at the Southwest Corner of said Lot 2B and the Northwest Corner of the above said Lot 2A;

THENCE: S0°07'05"E and along the west line of said Lot 2A for a distance of 1310.70 feet to a found rebar with survey cap marked LS 9884 the Southwest Corner of the above said Lot 2A and the Northwest Corner of said Lot 4;

THENCE: N89°57'39"E and along the north line of said Lot 4 for a distance of 1315.00 feet to a found rebar with survey cap marked LS 9884 at the Northeast Corner of said Lot 4;

THENCE: S0°07'05"E and along the east line of said Lot 4 for a distance of 1304.8 feet to a found rebar with survey cap marked LS 9884 and a point on the south line of the above said Section 16 and the Southeast Corner of said Lot 4;

THENCE: S89°57'39"W and along the south line of said Lot 4 and the south line of said Section 16 for a distance of 2628.66 feet to the South Quarter Corner of the above said Section 16, a 1600 BLM brass cap monument;

CONTINUING along the south line of said Section 16 and the south line of Lot 7A and Lot 6A and S89°56'26"W for a distance of 2628.64 feet to the Southwest Corner of said Lot 6A and the Southeast Corner of said Section 17, a 1600 BLM brass cap monument;

THENCE: N0°04'32"W and along the west line of said Lot 6A and the west line of said Section 16 for a distance of 1315.63 feet to a found rebar with survey cap marked LS 9884, Northwest Corner of said Lot 6A and the Southeast Corner of said Lot 5A;

THENCE: CONTINUING along and west line of said Section 16 and the west line of Lot 5A and N0°04'32"W for a distance of 1315.63 feet to the West Quarter Corner of the above said Section 16 and the Northwest Corner of said Lot 5A and the Southeast Corner of said Lot 4A;

THENCE: CONTINUING along and west line of said Section 16 and the west line of Lot 4A and N0°04'32"W for a distance of 1315.63 feet to a found rebar with survey cap marked LS 9884, Northwest Corner of said Lot 4A and the Southeast Corner of said Lot 3A;

THENCE: N0°04'32"W and along the west line of said Section 16 and the west line of said Lot 3A for a distance of 1317.00 feet to a found rebar with survey cap marked LS 9884 at the Northwest Corner of said Lot 3A;

THENCE: CONTINUING along and west line of said Section 16 and the west line of said Lot 1A and N0°04'32"W for a distance of 1307.34 feet and back to the point of beginning of said tract.

Said tract contains 289.17 acres, more or less, and is subject to any and all easements of record or in existence.

LESS AND EXCEPT

A tract of land lying in the Northwest Quarter of the Northwest Quarter (NW1/4 NW1/4) of Section 16, T29N, R09W, N.M.P.M., San Juan County, New Mexico, also lying in Lot 1A of the Blanco Land Subdivision No. 2 as recorded in Book 1322, page 798, and being more particularly described as follows:

COMMENCING at the Northwest Corner of the above said Section 16;

THENCE: S0°00'34"E and along the west line of said Section 16 for a distance of 857.04 feet to a point of intersection with the South right-of-way line of U.S. Highway 64 and the Northwest Corner of the above said Lot 1A and the Point of Beginning of said tract;

THENCE: N30°10'53"E(N.T.) and along the north line of the above said Lot 1A and the south line of U.S. Highway 64 the following courses and distances and N52°44'32"E for a distance of 1412.71 feet;

THENCE: S39°56'03"E for a distance of 50.00 feet;

THENCE: N52°44'32"E for a distance of 319.64 feet to the Point of Beginning of said tract;

THENCE: CONTINUING along said line and N52°44'32"E for a distance of 400.13 feet to the Northeast Corner of the above said Lot 1A;

THENCE: S0°00'43"E and along the east line of said Lot 1A for a distance of 1310.70 feet;

THENCE: LEAVING said line and S89°09'49"W for a distance of 139.56 feet;

THENCE: N39°31'09"W for a distance of 31.58 feet;

THENCE: N39°43'16"W for a distance of 74.39 feet;

THENCE: N39°43'17"W for a distance of 47.58 feet;

THENCE: N0°30'09"E for a distance of 60.56 feet;

THENCE: N39°43'16"W for a distance of 1.00 feet;

THENCE: N39°15'35"W for a distance of 45.75 feet and back to said north right-of-way line and the Point of Beginning.

Said tract of land containing 2.04 acres, more or less for a net acreage of 287.13 acres, more or less.

CERTIFICATE:

I, George T. Walters, a New Mexico Professional Surveyor certify that I conducted and am responsible for this Boundary Survey Plat, and this Boundary Survey is true and correct to the best of my knowledge and belief, and that this Boundary Survey Plat meets the minimum standards for Surveying in New Mexico.

I further certify that this is a boundary survey of the tract and is not a land division or subdivision as defined in the New Mexico Subdivision Act.

George T. Walters — Date
Professional Land Surveyor No. 9509
State of New Mexico

REFERENCE LIST:
BEARINGS IS ACCORDING TO THE SAN JUAN COUNTY ASSESSORS OFFICE.
(1) REAL ESTATE CONTRACT IN FAVOR OF SRE PROPERTIES, LLC IN BK 1309 PG 500.
(2) REAL ESTATE CONTRACT IN FAVOR OF SRE PROPERTIES, LLC IN BK 1322 PG 795.
(3) QUIT CLAIM DEED IN FAVOR OF BLANCO LAND, INC. IN BK 1309 PG 455.
(4) PERMIT FOR RIGHT OF WAY AND EASEMENT IN FAVOR OF EL PASO NATURAL GAS COMPANY IN BK 69 PG 483.
(5) PERMIT FOR RIGHT OF WAY AND EASEMENT IN FAVOR OF EL PASO NATURAL GAS COMPANY IN BK 69 PG 485.
(6) PERMIT FOR RIGHT OF WAY AND EASEMENT IN FAVOR OF EL PASO NATURAL GAS COMPANY IN BK 302 PG 1004.
(7) PERMIT FOR RIGHT OF WAY AND EASEMENT IN FAVOR OF EL PASO NATURAL GAS COMPANY IN BK 368 PG 272.
(8) RIGHT OF WAY GRANT IN FAVOR OF SOUTHERN UNION GATHERING COMPANY IN BK 1099 PG 1002.
(9) RIGHT OF WAY AND EASEMENT IN FAVOR OF MERIDIAN OIL GATHERING, INC. IN BK 1223 PG 1126.
(10) RIGHT OF WAY AND EASEMENT IN FAVOR OF EL PASO NATURAL GAS COMPANY IN BK 1868 PG 1264.
(11) BLANCO LAND SUBDIVISION NO.1 RECORDED IN BK 1309 PG 455.
(12) BLANCO LAND SUBDIVISION NO.2 RECORDED IN BK 1322 PG 798.

BASIS OF BEARING: THE BASIS OF BEARING FOR THIS SURVEY IS THE BLANCO LAND SUBDIVISION.

DATE	REVISION	BY

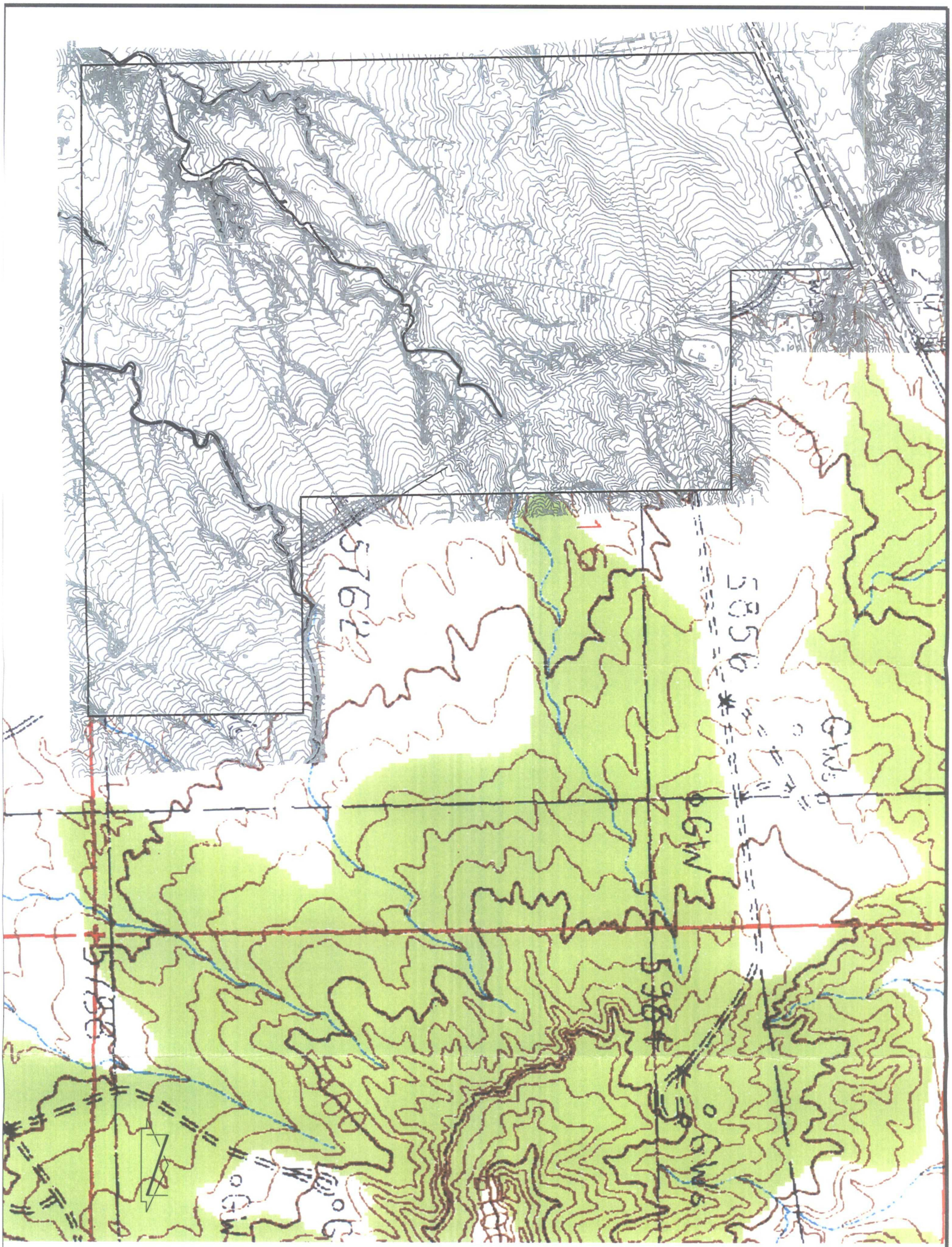
PRINTED: October 21, 2009
FILE: V:\Survey\jobs\09467\W\09467\09467.dwg

CHERRY · WALTERS · ECHOLS, Inc.
ENGINEERS · SURVEYORS
800 W. APACHE · FARMINGTON, NEW MEXICO 87401 · (505)327-4263

GEORGE T. WALTERS
NEW MEXICO
9509
REGISTERED PROFESSIONAL SURVEYOR

BOUNDARY SURVEY
BLANCO LAND FARM
INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

DATE:10/16/2009
DRAWN BY: KKN
PROJ. 09467
SCALE:NTS
FILE:GTW09467
SHEET 1 OF 11



DATE:10/14/2009
DRAWN BY: KCH
PROJ. 09467
SCALE: NTS
FILE: 09467DRN2
SHEET 2 OF 11

ON-SITE OFF-SITE TOPOGRAPHY
BLANCO LAND FARM

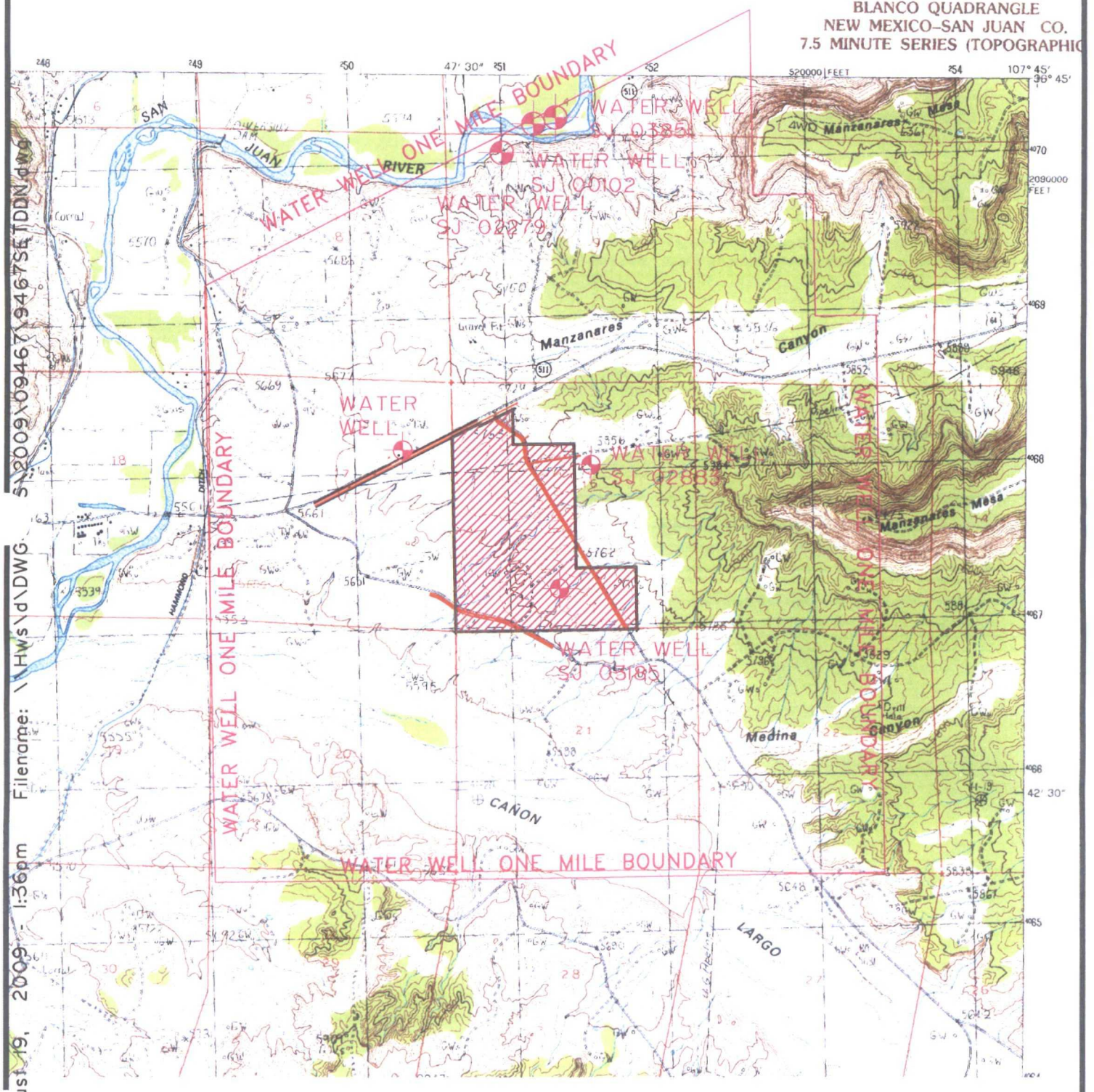
INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

CHENEY · WALTERS · ECHOLS INC.
ENGINEERS · SURVEYORS

DATE	REVISION	BY

PRINTED: October 21, 2009
FILE: \\Hws\d\DWG-HWS\2009\09467\09467drn2.dwg

WATER WELL LOCATIONS
WITHIN 1 MILE OF
INDUSTRIAL ECOSYSTEMS, BLANCO NM
IN SECTION 16, T29N R09W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO

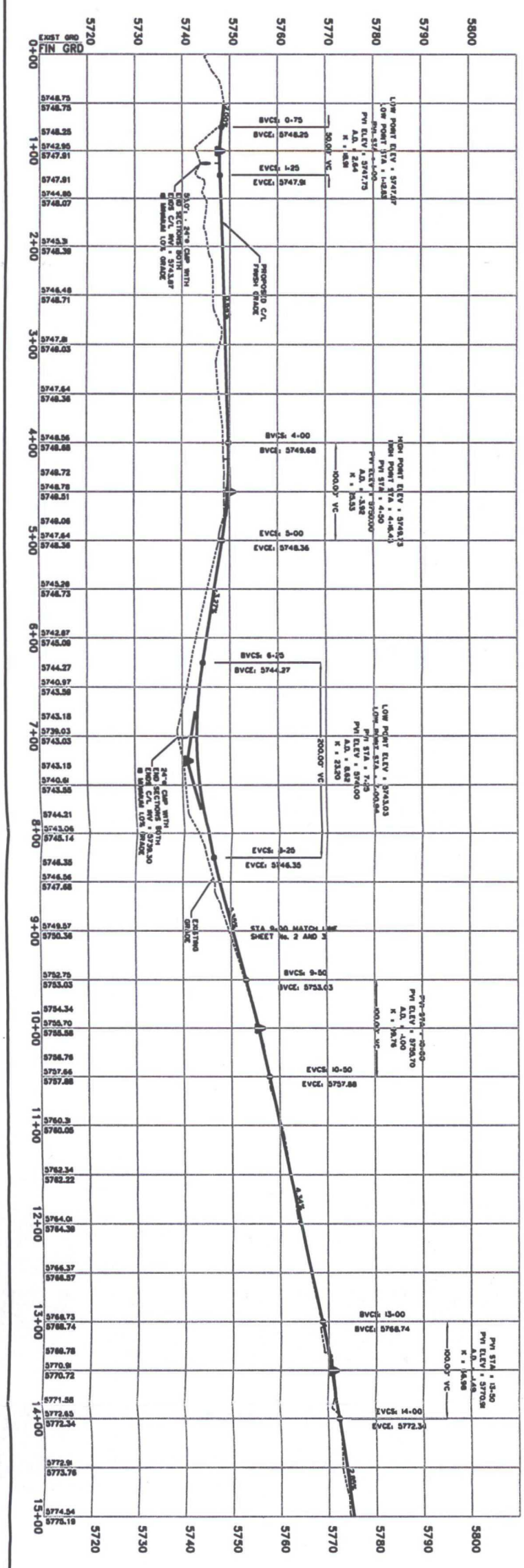


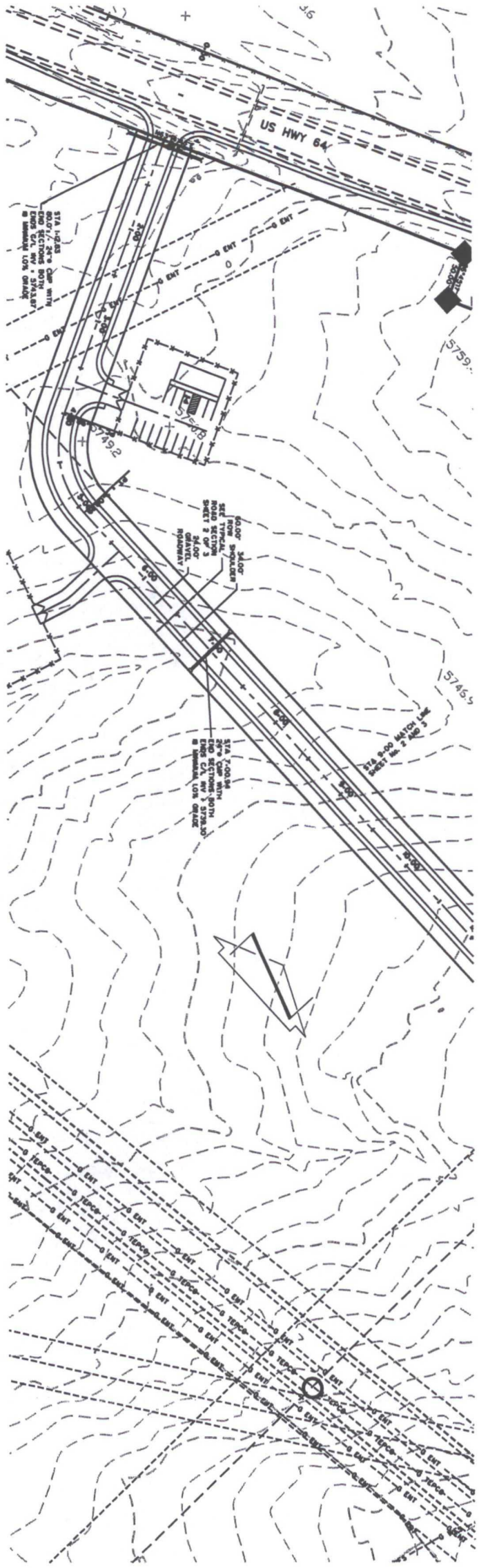
3000 1500 0 3000

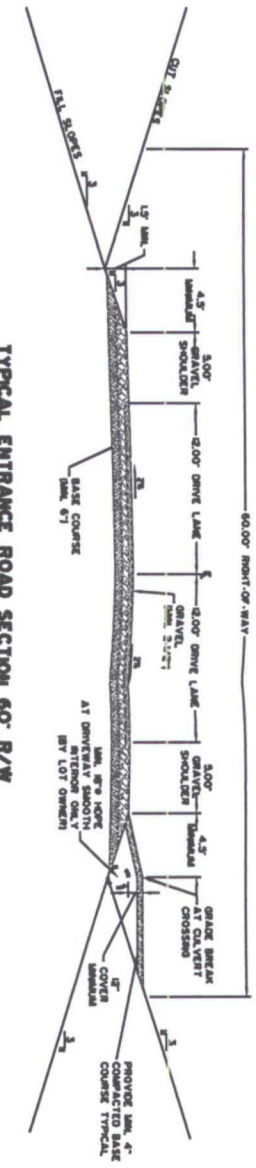
SCALE: 1"=3000'

CHENEY·WALTERS·ECHOLS INC.
ENGINEERS · SURVEYORS
909 W. APACHE · FARMINGTON, NEW MEXICO 87401 · (505)327-3303

FILE: 09467
REVISION DATE: 8/19/2009







TYPICAL ENTRANCE ROAD SECTION 60' R/W
SCALE: 1" = 5'

PLAN AND PROFILE
ENTRANCE ROAD

INDUSTRIAL ECOSYSTEMS, BLANCO LANDFARM
BLANCO, NEW MEXICO

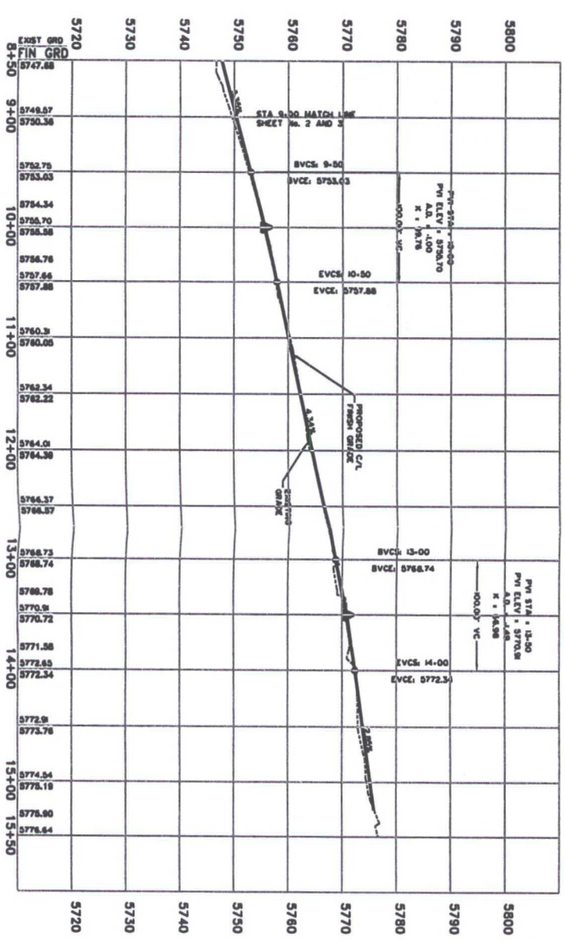
DATE: 10/14/2009
DRAWN BY: HWS
PROJ. 09467
SCALE: NTS
FILE: 94675ET
SHEET 8 OF 11

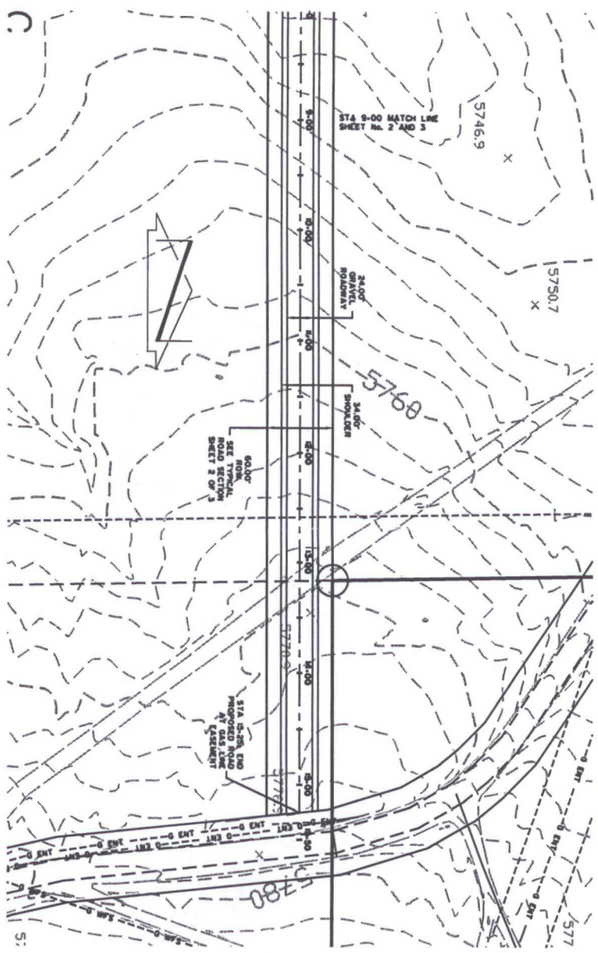
NEW MEXICO NO. 3634 EDWARD P. CHENEY

CHENEY · WALTERS · ECHOLS INC.
ENGINEERS · SURVEYORS
909 W. APACHE · FARMINGTON, NEW MEXICO 87401 · (505)327-3303

DATE	REVISION	BY

PRINTED: October 21, 2009
FILE: \\Hws\d\DWG-HWS\2009\09467\94675ET.dwg





DATE:10/14/2009 DRAWN BY: HWS PROJ. 09467 SCALE:NTS FILE:9467SET SHEET 9 OF 11	PLAN AND PROFILE ENTRANCE ROAD INDUSTRIAL ECOSYSTEMS, BLANCO LANDFARM BLANCO, NEW MEXICO	NO. 3634	CHEREY·WALTERS·ECHOLS, INC. ENGINEERS ▲ SURVEYORS 900 W. APACHE · FARMINGTON, NEW MEXICO 87401 · (505)327-3303	DATE	REVISION / BY
					PRINTED: October 21, 2009 FILE: \\Hws\d\DWG-HWS\2009\09467\9467SET.dwg

"We're People Helping People"

Guardian

ABSTRACT & TITLE CO., INC.

MICHAEL L. SMITH, President

221 N. Auburn • Farmington, New Mexico 87401

(505) 325-2895 • FAX (505) 327-1585

09467

July 21, 2009

Cheney-Walters-Echols
909 W. apache
Farmington, NM 87401

ATTN: George T. Walters, P.S.

RE: Adjacent Landowner List Within 1 Mile Of Perimeter Of The Property
Crowe Blanco Properties, LLC
Blanco Land Subdivision No. 1
Lot 4
Blanco Land Subdivision No. 2
Lots 1A, 2A, 3A, 4A, 5A, 6A and 7A
Guardian File 0946267

Gentlemen:

Referring to the captioned matter, we enclose a list of the owners and their addresses pursuant to the San Juan County Records, excluding roadways and alleys. Since the width of the roads is unknown, all roadways were measured 100' feet wide. We certify the attached list to be completed and accurate as to such owners and their addresses according to the records of the San Juan County Clerk through July 20, 2009 at 5:00 p.m.

We trust this information will be sufficient for your purpose. Our invoice number 13225R is also enclosed. If you have any question concerning this matter, please do not hesitate to contact us.

Sincerely,

Cheryl Hewitt

CH/s

Enclosures

WARRANTY DEED

SNM Properties, LLC, a New Mexico Limited Liability Company, for consideration paid, grant to Crowe Blanco Properties, LLC, a New Mexico Limited Liability Company whose address is, 4050 Pennsylvania Ave., Ste. 215, Kansas City, MO 64111, the following described real estate in SAN JUAN County, New Mexico:

Lot Four (4) of the BLANCO LAND SUBDIVISION NO. 1, San Juan County, New Mexico, as shown on the Plat of said Subdivision filed for record September 26, 2000 in Book 1309, page 455, records of said County.

AND

Lot(s) One A (1A), Two A (2A), Three A (3A), Four A (4A), Five A (5A), Six A (6A) of the BLANCO LAND SUBDIVISION NO. 2, San Juan County, New Mexico, as shown on the Plat of said Subdivision filed for record May 30, 2001 in Book 1322, page 796, records of said County.

Subject to patent reservations, restrictions, and easements of record and taxes for the year 2009 and subsequent years.

with warranty covenants.

WITNESS our hands and seals this 11th day of June, 2009.

SNM Properties, LLC
By: Brad Magee, Managing Member

200908593 06/12/2009 11:43 AM
1 of 1 B1495 P99 R $39.00
San Juan County, NM DEBBIE HOLMES
AR

SAN JUAN COUNTY COUNTY CLERK STATE OF NEW MEXICO

Individual Capacity:

State of New Mexico)
) SS.
County of San Juan)

This instrument was acknowledged before me on the 11th day of June, 2009, by Brad Magee, Managing Member of and on behalf of SNM Properties, LLC, a New Mexico Limited Liability Company.

My commission expires: March 18, 2010

Notary Public

(Seal)

GREG F. NOEFER NOTARY PUBLIC STATE OF NEW MEXICO

WARRANTY DEED

Brad D. Magee and Marcia A. Magee, husband and wife, for consideration paid, grant to Crowe Blanco Properties, LLC, a New Mexico Limited Liability Company whose address is 4050 Pennsylvania Ave., Suite 215, Kansas City, MO 64111, the following described real estate in SAN JUAN County, New Mexico:

Lot Seven A (7A) of the BLANCO LAND SUBDIVISION NO. 2, San Juan County, New Mexico, as shown on the Plat of said Subdivision filed for record May 30, 2001 in Book 1322, page 796, records of said County.

Subject to patent reservations, restrictions, and easements of record and taxes for the year 2009 and subsequent years.

with warranty covenants.

WITNESS our hands and seals this 11th day of June, 2009.

Brad D. Magee

Marcia A. Magee

200908592 06/12/2009 11:43 AM
1 of 1 B1495 P98 R $9.00
San Juan County, NM DEBBIE HOLMES

SAN JUAN COUNTY COUNTY CLERK STATE OF NEW MEXICO

AR

Individual Capacity:

State of New Mexico)
) SS.
County of San Juan)

This instrument was acknowledged before me on the 11th day of June, 2009, by Brad D. Magee and Marcia A. Magee, husband and wife.

My commission expires: March 18, 2010

Notary Public

(Seal)

GREGORY JOSEPH NOTARY PUBLIC STATE OF NEW MEXICO

GUARDIAN ABSTRACT & TITLE CO., INC.
221 NORTH AUBURN
FARMINGTON, NEW MEXICO 87401

PROPERTY OWNERS WITHIN 1 MILE, EXCLUDING ROADWAYS AND ALLEYS OF THE FOLLOWING DESCRIBED PROPERTY: ***Blanco Land Subdivision No. 1, Lot 4, and Blanco Land Subdivision No. 2, Lots 1A, 2A, 3A, 4A, 5A, 6A and 7A.***

OWNER: Crowe Blanco Properties, LLC
4050 Pennsylvania Ave., Ste. 215
Kansas City, MO 64111
1495/98 and 1495/99

ADJOINING OWNER	ADDRESS	LEGAL DESCRIPTION
Chavez, Dennis O. and Maria Emma, Living Trust 1236/424, 1236/426, 1491/672 1328/175, 1328/176	288 Road 4800 Bloomfield, NM 87413-9203	T29N, R9W, Sec. 18 Pt. NE1/4NE1/4 T29N, R9W, Sec. 9 Pt. NE1/4NW1/4
Yeager, James G. and Beatrice V. 1154/947	P.O. Box 611 Blanco, NM 87412-7412	T29N, R9W, Sec. 18 Pt. NE1/4NE1/4
Sieg, Susan K. 1164/202	P.O. Box 480 Blanco, NM 87412-7412	T29N, R9W, Sec, 18 Pt. NE1/4NE1/4
Martinez, Theresa R. 1451/444, 1469/755	2108 Surrey Rd. Sacramento, CA 95815-3409	T29N, R9W, Sec. 7 Pt. SE1/4SE1/4
Holcomb, William and Sharron 1392/247	P.O. Box 2058 Farmington, NM 87499-7499	T29N, R9W, Sec. 7 Pt. SE1/4SE1/4
Travis, David Z. and Sally A. 1292/369, 1293/34	P.O. Box 607 Blanco, NM 87412-7412	T29N, R9W, Sec. 7 Pt. SE1/4SE1/4
Hircock, Eric and Virginia Nickels 1316/839, 1318/347	P.O. Box 613 Blanco, NM 87412-0613	T29N, R9W, Sec. 7 Pt. SE1/4SE1/4

Hawthorne, Doris E. 1452/739	P.O. Box 305 Blanco, NM 87412-7412	T29N, R9W, Sec. 7 Pt. NE1/4SE1/4 T29N, R9W, Sec. 8 Pt. NW1/4SW1/4
Valencia, Johnny 1130/610	P.O. Box 475 Blanco, NM 87412-0475	T29N, R9W, Sec. 8 Pt. NW1/4SW1/4
Atencio, Esther 1065/124	P.O. Box 1295 Aztec, NM 87410-1295	T29N, R9W, Sec. 8 Pt. NE1/4SW1/4
Martinez, Debbie 1211/349	P.O. Box 402 Blanco, NM 87412-0402	T29N, R9W, Sec. 8 Pt. NW1/4SW1/4
Chavez, Mary Rodriquez, Frances J. 1243/214, 1477/973	P.O. Box 392 Blanco, NM 87412-0392	T29N, R9W, Sec. 8 Pt. NW1/4SW1/4
Montoya, Joe 1452/1027	HC 71 Box 15 Dulce, NM 87528-7528	T29N, R9W, Sec. 8 Pt. SW1/4
Valencia, Seledonio and Orie (Oralia) 1054/425, 1233/668	P.O. Box 233 Bloomfield, NM 87413-0233	T29N, R9W, Sec. 8 Pt. SW1/4
Hood, John N. and Julie A. 1371/55	P.O. Box 482 Blanco, NM 87412-7412	T29N, R9W, Sec. 8 Pt. NE1/4SW1/4
Wood, Annette 1211/998	4708 Sundance Tr. NW Albuquerque, NM 87420-7420	T29N, R9W, Sec. 8 Pt. NE1/4SW1/4
Chavez, Koggie 1211/655	8841 Grove St. Westminster, CO 80030-3328	T29N, R9W, Sec. 8 Pt. NE1/4SW1/4
New Mexico State Game Commission 1078/472	P.O. Box 25112 Santa Fe, NM 87504-7504	T29N, R9W, Sec. 8 NW1/4NE1/4

Archuleta, Milton J. and Lucy, Trustees 1060/205	330 Road 4599 Blanco, NM 87412-9730	T29N, R9W, Sec. 8 NE1/4NE1/4
Gurule, Cristobal S. and Carlota F. 1495/57	ATTN: Michael Gurule P.O. Box 393 Blanco, NM 87412-7412	T29N, R9W, Sec. 9 Pt. NW1/4NW1/4
Jeter, Larry A. and Patricia D. 1417/928	P.O. Box 506 Blanco, NM 87412-7412	T29N, R9W, Sec. 9 Pt. NE1/4NW1/4
Witcombe, Lisa Murray, Billy Jack 1474/965	P.O. Box 6393 Farmington, NM 87499-7499	T29N, R9W, Sec. 9 Pt. NE1/4NW1/4
Farmington Investment Co. Hutton, Katherine K. Porter, Kathryn, Custodian 863/412, 763/57, 1204/1066	P.O. Box 229 Farmington, NM 87499-0229	T29N, R9W, Sec. 9 NE1/4NW1/4
Bolack, Tommy 1478/732	3901 Bloomfield Hwy Farmington, NM 87401-7401	Michael E. Atchison Subdivision No. 1 Lot 1, 2, 4, 5 T29N, R9W, Sec. 16 Pt. NE1/4NW1/4
Atchison, Michael E. 1486/964	P.O. Box 537 Blanco, NM 87412-7412	Michael E. Atchison Subdivision No. 1 Lot 3
Price, Michael D. 1298/336	P.O. Box 5 Flora Vista, NM 87415-7415	Blanco Land Subdivision No. 1 Lot 1
Castro, Alfred R. and Elvera 1290/842	P.O. Box 571 Blanco, NM 87412-7412	T29N, R9W, Sec. 16 NW1/4NE1/4
Adams, William J. and Sondra A. 1278/14	P.O. Box 28093 Santa Fe, NM 87592-8093	T29N, R9W, Sec. 16 NE1/4NE1/4

Joiner, David W. and Nancy S. Waggoner, Jeff W. and Deena A. 1220/32	P.O. Box 570 Blanco, NM 87412-0570	T29N, R9W, Sec. 16 SW1/4NE1/4
Prado, Ralph 1404/863, 1411/400	6784 US 64 Bloomfield, NM 87413-7413	T29N, R9W, Sec. 16 SE1/4NE1/4
Prado, Ralph 1411/400	1624 US 64 Bloomfield, NM 87413-7413	Blanco Land Subdivision No. 1 Lot 3
Prouse, Bradley D. and Wendy R. 1454/197	23259 CR G2 Cortez, CO 81321-1321	Blanco Land Subdivision No. 1 Lot 2
Bolli, Richard E. and Joellen M. 1469/943	P.O. Box 579 Blanco, NM 87412-0579	T29N, R9W, Sec. 16 SE1/4SE1/4
El Paso Field Services Company 1296/5, 1305/176	ATTN: Enterprise Property Tax P.O. Box 4018 Houston, TX 77210-4324	T29N, R9W, Sec. 17 Pt. SE1/4NE1/4
San Juan County 1116/693	100 S. Oliver Dr. Aztec, NM 87410-2400	T29N, R9W, Sec. 17 Pt. NW1/4NW1/4
Baca, Larry R. and Nora J. 1425/808	P.O. Box 617 Blanco, NM 87412-7412	T29N, R9W, Sec. 18 Pt. SE1/4SE1/4
Baca, Patricia J. Baca, Larry R. and Nora J. 1427/248	2503 Schofield Ln. Farmington, NM 87401-7401	T29N, R9W, Sec. 18 Pt. SE1/4SE1/4
Chavez, Jose F. and Loyola E., Revocable Living Trust 1273/134	3409 Northridge Court Farmington, NM 87401-7401	T29N, R9W, Sec. 18 Pt. SE1/4SE1/4
Baca, Larry R. and Nora J. 1425/809	P.O. Box 617 Blanco, NM 87412-7412	T29N, R9W, Sec. 18 Pt. SE1/4SE1/4

Arrighetti, Richard F. and Tina M. 1318/765	1200 Florida NE Albuquerque, NM 87110-7110	T29N, R9W, Sec. 18 Pt. NE1/4SE1/4
Naranjo, Victor R. and Michelle F. 1318/764	P.O. Box 553 Blanco, NM 87412-7412	T29N, R9W, Sec. 18 Pt. NE1/4SE1/4
Valencia, Ernest D. 1160/250, 1238/311	P.O. Box 347 Blanco, NM 87412-0461	T29N, R9W, Sec. 18 Pt. NE1/4SE1/4 Pt. SE1/4NE1/4
Valencia, Ernest D. 1442/562	P.O. Box 347 Blanco, NM 87412-7412	T29N, R9W, Sec. 18 Pt. NE1/4SE1/4
United States Of America (Federal Lands)	1235 La Plata Hwy Farmington, NM 87401 (Per Phone Book)	T29N, R9W, Sec. 17 SW1/4, SE1/4, Pt. NW1/4, Pt. NE1/4 T29N, R9W, Sec. 8 S1/2SW1/4, SE1/4, SE1/4NW1/4, S1/2NE1/4 T29N, R9W, Sec. 9 S1/2NW1/4, Pt. NE1/4, SW1/4, SE1/4 T29N, R9W, Sec. 10 NW1/4, SW1/4, SE1/4 T29N, R9W, Sec. 15 ALL T29N, R9W, Sec. 22 ALL T29N, R9W, Sec. 21 ALL T29N, R9W, Sec. 27 NW1/4 T29N, R9W, Sec. 28 NE1/4, NW1/4 T29N, R9W, Sec. 29 NE1/4 T29N, R9W, Sec. 20 ALL T29N, R9W, Sec. 19 NE1/4

Facility Description

The facility consists of 291 +- acres.

The facility perimeter is contained with four foot field fence topped with barbed wire.

A perimeter berm will serve as the outer boundary of cells developed within the facility.

Entrance/exit from the facility will be gained through gates which will remain locked when the facility is not in operation. Only authorized personnel will be given access to gate keys.

The office will be located at the entrance of the facility to monitor all incoming and outgoing traffic.

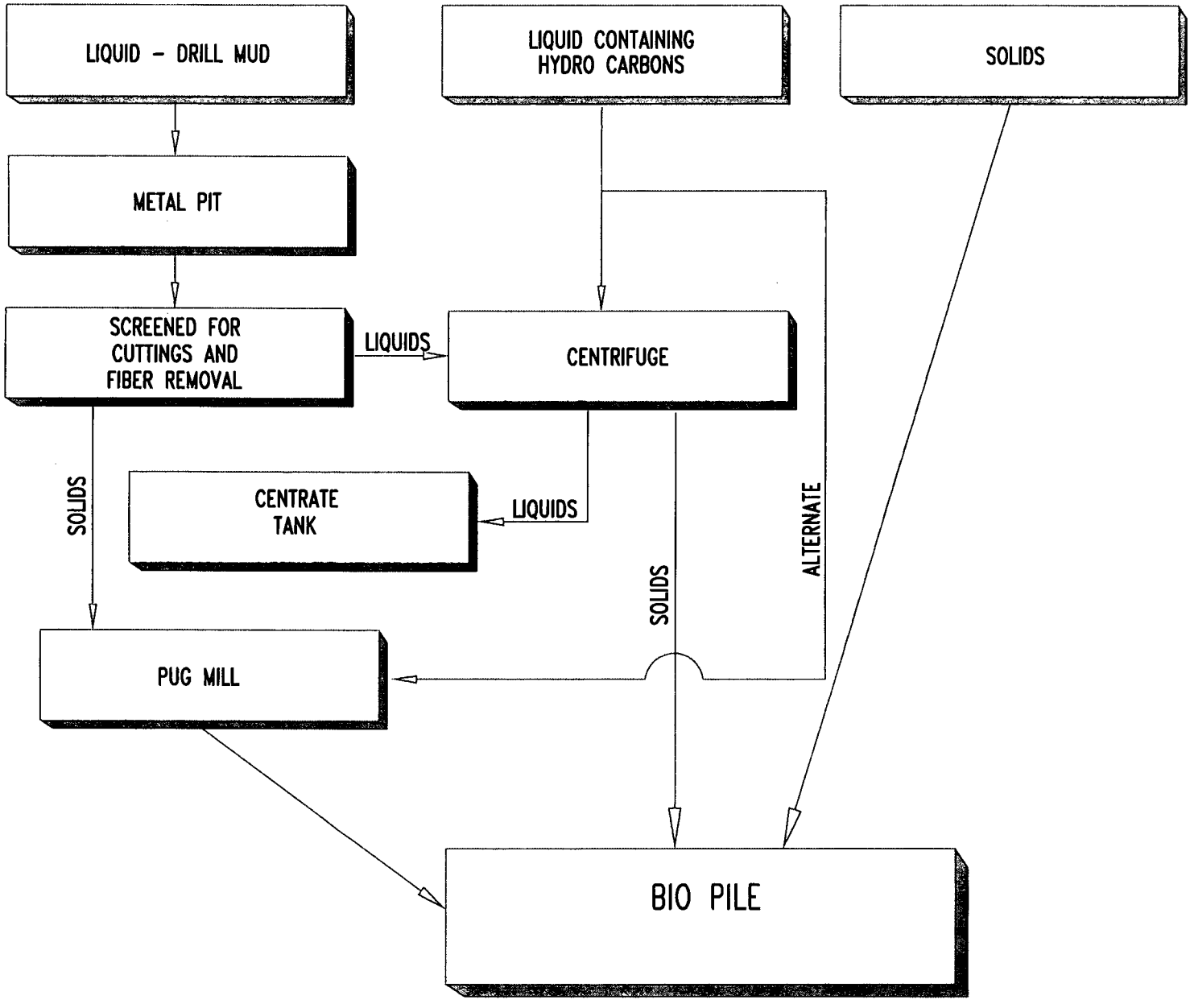
Interior roads will be developed within the facility to provide access for personnel and transporters.

The "tank battery" area will be contained within a 6 foot chain-link fence to prevent unauthorized access. The area will be lined and will also be bermed to contain 1⅓ the volume of the largest tank or all interconnected tanks and above ground metal pits.

The existing pipelines located on the project site are shown on the boundary survey map (see Section 2, Plat and Topographic Map).

REMEDIATION PROCEDURE

FLOW CHART



CHENEY · WALTERS · ECHOLS INC
ENGINEERS · SURVEYORS
909 W. APACHE · FARMINGTON, NEW MEXICO 87401 · (505)327-3303

ISSUE DATE: 11/09/2009
PRINTED: November 09, 2009
FILE: \\Hws\d\DWG-HWS\2009\09467\09467PREMEDIA

EQUIPMENT SPECIFICATIONS

Shaker Pits - Shaker Pits shall be 45ft. length, 8'6" wide 10ft. high, 14" floor (v-bottom), 1/4" steel walls, one man-way on lower rear side wall, ladder and platform on front of tank. Two (2) chemtronic 4ft. x 8ft. shale shakers mounted on top. (60 mesh screens0

Slurry Holding Pit - Slurry Holding Pits shall be 45ft. length, 8' 6" wide 10ft. high, 1/4" floor (v-bottom), 1/4" corrugated walls, one man-way on lower rear side wall, ladder and platform on front of tank. Gorman Rupp 6" pump for transferring slurry to centrifuge or storage tanks.

Centrifuge - The Centrifuge shall be Hutchinson-Hayes Model 1448 14" diameter 48" length normal centrifufal force 2118 G's at 3250 RPM, Maximum 3180 G's at 4000 RPM. The basic purpose of centrifuge is to separate the liquid and solids from the feed slurry ie: drill mud, drill cuttings, tank bottoms. A stainless steel rotating bowl, driven by a 50 H.P. electric motor is used to centrifuge the slurry: this is to sling the solids against the inside wall surface while a stainless steel screw conveyor (faced with hard tiles) gathers and conveys these solids to a central discharge area. The conveyor is driven at a slightly slower RPM thru a planetary gear reducer. The liquids migrate to the front end of the machine and are dispelled thru four (4) adjustable plate dam openings, to a central discharge area then pumped to a liquid storage tank to be disposed of.

Storage Tanks - Storage Tanks shall be standard, 400 barrel, oil field tanks (12' diameter x 20' tall).

Centrate Tank - The Centrate Tank shall be a 20' diameter x 16' tall steel tank of approximately 900 barrels.

Fresh Water Tank - The Fresh Water Tank shall be a 12' diameter x 20' tall 400 barrel tank.

BIO-PILES

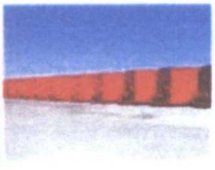
Bio-Piles shall be approximately 12-15' wide and no more than 12' tall. Manure shall be mixed with the material to be remediated at a ratio or 1 part manure to 5 parts of contaminated material. The Bio-Pile shall reach an initial temperature of 120°F and maintained at a temperature of 10°F-15°F above ambient until remidiation is complete.

Email This
Add To Trailers of Interest
Print This

2008 TIGER 500 BBL

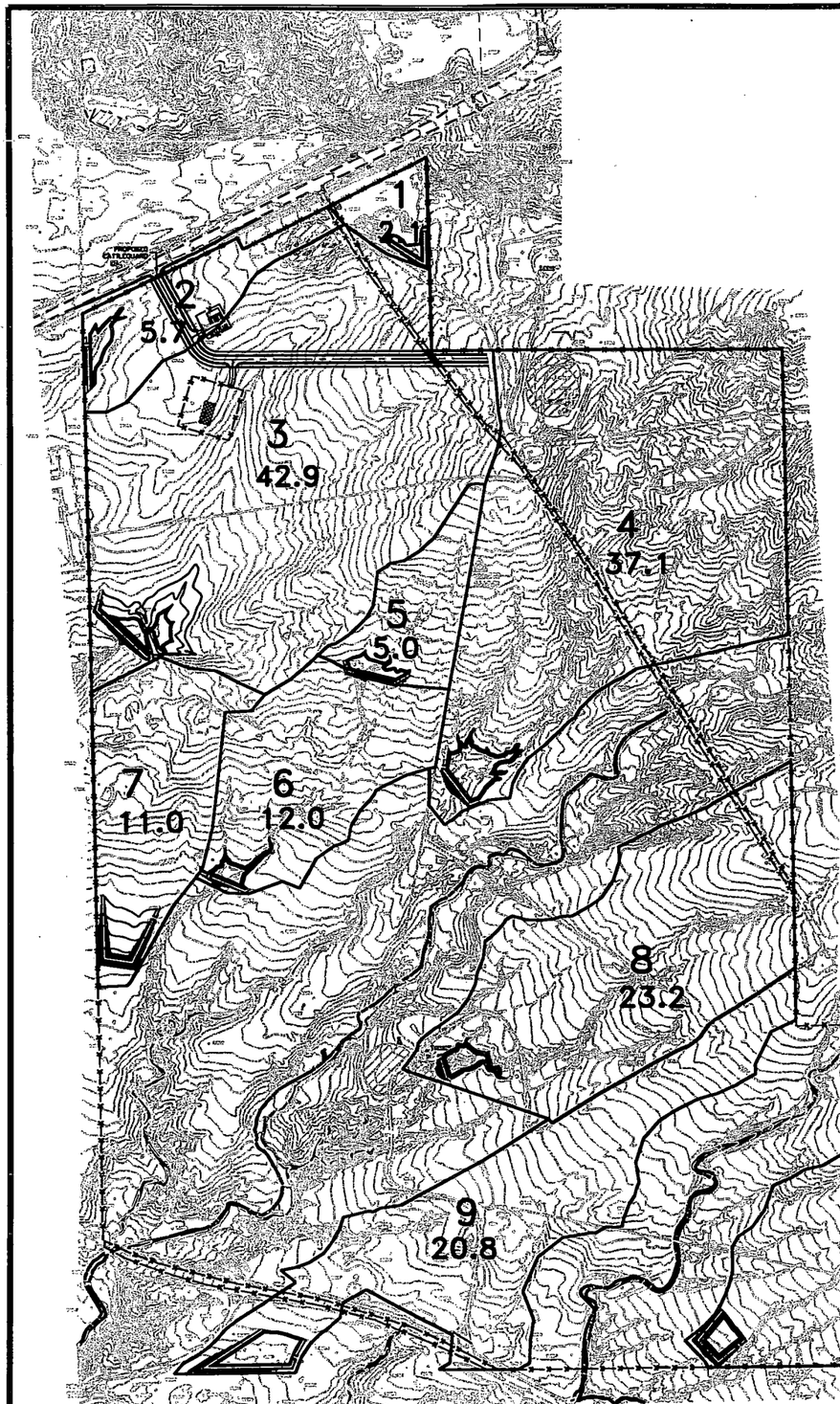
Reset Special ZOOM Features





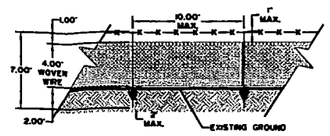

Specifications

Quantity	1
Year	2008
Manufacturer	TIGER
Model	500 BBL
Price	Call
Location	Abilene, Texas
Condition	New
Composition	Steel

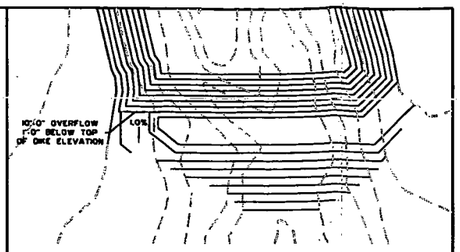


NOTE:

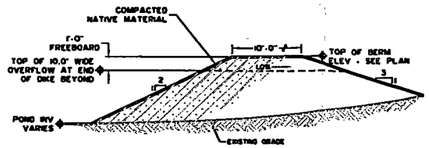
1. USE 7.0' STEEL TEE POST DRIVE 18" TO 24" IN GROUND MAXIMUM 10' APART.
2. USE 4.0' HIGH WOVEN STEEL WIRE FIELD FENCE TIED TO TEE POST AT TOP, BOTTOM AND MIDDLE OF FENCE.
3. INSTALL 1 (ONE) STRAND TWISTED HEAVY GAGE BARBED WIRE TIED AT EACH TEE POST WITHIN 1' OF POST TOP.



1/00 WOVEN FENCE AND TEE POST DETAIL
SCALE: 1" = 5'

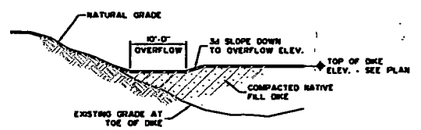


1/4 TYPICAL OVERFLOW PLAN
SCALE: 1" = 20'



NOTES:
1. DESIGN STORM FOR POND SIZING: 25 YEAR, 1 HOUR
2. MINIMUM DEPTH OF FREEBOARD: 1 FOOT

1/4 TYPICAL RETENTION POND SLOPE DETAIL
SCALE: 1/4" = 1'-0"



NOTE:
OVERFLOW MAY BE PLACED AT EITHER END OF THE RETENTION DIKE - SEE PLAN FOR SUGGESTED LOCATION.

C/4 DIKE OVERFLOW DETAIL
SCALE: 1" = 10'

NOTES:
THE DIKES WERE DESIGNED TO RETAIN THE 25 YEAR 1 HOUR STORM.
EACH DIKE HAS 1 FOOT OF FREEBOARD AT THE SPILLWAY OVERFLOW SECTION.
BERMS AND V-DITCHES THAT PROTECT WATERWAYS WILL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR REMEDIATION OF SOILS.
DIKES WILL BE CONSTRUCTED WHEN THE CELLS THAT CONTRIBUTE STORMWATER RUNOFF TO THAT DIKE BECOME ACTIVE.
GATES WILL BE INSTALLED AS NEEDED.
EARTHWORK: PLACE AND COMPACT FILL IN HORIZONTAL LIFTS, USING EQUIPMENT AND PROCEDURES THAT WILL PRODUCE RECOMMENDED DENSITIES THROUGHOUT THE LIFT.
FILL LIFTS SHALL NOT EXCEED 8 INCHES.
MATERIAL SHALL HAVE A MINIMUM OF 95% COMPACTION.

BY | DATE | REVISION

PRINTED: November 09, 2009
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CHERRY WALTERS-EVANS
ENGINEERS · SURVEYORS
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NO. 3634

RETENTION DIKES
BLANCO LAND FARM

INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

DATE:11/09/2009
DRAWN BY: KKN
PROJ. 09467
SCALE:NTS
FILE:09467RN2
SHEET
5
11

OPERATIONAL PLAN

Introduction

This purpose of this Waste Acceptance and Operational Management Plan is to establish the minimum requirements and procedures for acceptance, management, treatment, bioremediation and final disposal of oilfield waste. These procedures comply with the applicable requirements contained pursuant to 19.15.36.13, 19.15.36.15, and 19.15.36.17 NMAC.

This plan includes test methods, details of planned waste sampling and analysis, description of waste shipment screening/verification and operational processes.

Supervisors and employees involved in the handling of oilfield waste shall comply with these procedures. Responsible supervisor(s) and employee(s) shall make frequent inspections and collect and maintain all data as outlined under the provisions of the permit.

1. WASTE (19.15.36.13.F)

Prior to accepting RCRA Exempt or Non-Exempt Oilfield Waste from a generator, the generator must comply with the applicable requirements of this plan.

Only Non-Hazardous, RCRA Exempt and Non-Exempt waste will be accepted at the facility. These materials are wastes generated from oil and gas exploration and production operations and are usually the by-product of "down-hole" operations.

Exempt waste is prohibited from being mixed with Non-Exempt waste.

1.1 Exempt Oilfield Waste (19.15.36.13.F.1)

Exempt Oilfield Waste destined for disposal at the facility will be identified by the generator using acceptable knowledge and all applicable test and analytical methods required by NMOCD.

Exempt waste is generated by various producers from a variety of sites and by various specific processes and activities. Examples of the major types of operations that generate exempt waste include:

1. Production of Hydrocarbon Stained Soils and Gravels – Production of hydrocarbon stained soils or gravels includes spillage, line failure, leaking vessels or valves, and the reclamation of production pits.
2. Production of tank bottom sludge – Production of tank bottom sludge includes cleaning of oil storage tanks, the pigging of transmission lines, and the maintenance and reclamation of settling ponds.
3. Production and/or drilling fluids-Production of drilling fluids includes drill mud and cuttings from drilling and completion operations.
4. Production of high TDS liquids – Production of high TDS liquids includes tank cleaning operations, drilling operations, backwashing filters and lines, and drilling mud pit reclamation.

1.2 Non-Exempt, Non-Hazardous Oilfield Waste (19.15.36.13.F.2)

Non-Hazardous, Non-Exempt Oilfield Waste will be identified by the generator using acceptable knowledge and all applicable test and analytical methods required by NMOCD. Additional documentation and/or testing will be required to determine the waste to be Non-Hazardous.

Non-Exempt, Non-Hazardous Waste is designated and stored separately from Exempt Oilfield Waste. Non-Hazardous/Non-Exempt waste and/or Non-Hazardous/Non-Exempt Waste mixed with Exempt waste require additional documentation/testing in order to be accepted into the facility.

1.3 Emergency Non-oilfield Waste (19.15.36.13.F.3)

The facility may accept non-hazardous, non-oilfield waste in an emergency and only if ordered by the department of public safety.

1.4 Waste Characterization

Characterization requirements for individual shipments of Exempt Oilfield Waste are specified on a waste stream basis. A waste stream is defined as waste material generated from a single site and a single process or an activity that is similar in material, physical form, and constituents. Exempt Oilfield Waste is initially categorized into four category groups that are related to the physical form of the waste.

1. Hydrocarbon stained soil and ravel
2. Tank Sludge, Tank Bottoms, Tank Cleaning Residue
3. Drilling fluids
4. Debris Waste

1.5 Prohibited Waste:

The following waste PROHIBITED from being disposed of at the facility:

1. Hazardous Waste
2. RCRA regulated materials
3. Waste containing NORM

2. WASTE ACCEPTANCE (19.15.36.13.A.2, 19.15.36.13.E, and 19.15.36.15.A.)

A completed C-138 form shall be submitted to the facility prior to the shipment arriving or must accompany the shipment. Waste will NOT be accepted prior to receipt of the completed C-138 which has been executed by the generator.

Once the waste has arrived at the gate, prior to acceptance, facility personnel will ensure:

- through visual examination and review of the C-138, that the waste holds **NO** unacceptable waste;
- through H2S ambient monitoring, that *liquid* waste does not contain unacceptable levels of Hydrogen Sulfide;
- through visual examination and review of the C-138, that tank bottoms do not contain economically recoverable petroleum hydrocarbons (19.15.36.15.A);
- through "paint filter" testing, prior to placing waste in a biopile/landfarm cell, the waste is sufficiently free of liquid content (19.15.36.13.E & 19.15.36.15.A);
- through "chloride content sampling", waste does not have a chloride concentration exceeding 1000 mg/kg (19.15.36.13.A.2 & 19.15.36.15.A) *Facility is located where ground water is 100' or more below the lowest elevation.

Anytime the facility requests additional information concerning a waste shipment, the generator will provide the necessary analysis and other supporting documentation to verify the contents of the shipment in question.

2.1 Denied/Rejected Waste

Shipments of waste which do not meet the acceptance criteria shall be Denied/Rejected at the gate. The generator of the waste will be notified immediately that the waste had been denied/rejected and given the specifics as to why it has been denied/rejected. Copies of the C-138 indicating the waste has been Denied/Rejected will be kept on file.

3. FORMS

The following forms, specific to landfarms, will be utilized by the facility as required.

3.1 Form C-138 (19.15.36.13.F.1 and 19.15.36.13.F.2)

All material, exempt and non-exempt, arriving at the facility must be accompanied by a "C-138-Request for Approval to Accept Solid Waste" (Exhibit A). The facility shall be responsible for the procurement and review of the C-138 and characterization information to verify compliance with the NMOCD permit.

C-138 forms are a permit requirement and must contain the following:

1. Generator name and address
2. Originating Site
3. Location of Material (Address or ULSTR)
4. Source and Description of Waste
    - Waste status: **EXEMPT** or **NON-EXEMPT** as defined by the 1988 RCRA act.
    - Hazardous waste is PROHIBITED and will NOT be accepted into the facility.

    The following documentation must also accompany the C-138 form for Non-Exempt waste:
    - Pertinent MSDS information; and/or
    - RCRA Hazardous Waste Analysis; and/or
    - Process Knowledge; and/or
    - Other information that may be needed to define waste material

5. A. Generator representative signature - certifying the waste conforms with RCRA and US Environmental Protection Agency's regulatory determination that the waste is RCRA Exempt or RCRA Non-Hazardous, Non-Exempt waste.
   B. Representative/Agent signature – certifying the waste samples have been subjected to the paint filter and chloride content tests and that said samples have been found to conform to specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. (Results are attached to the C-138)
6. Transporter of the waste
7. Name, Permit #, Address, Method of Treatment/Disposal, Acceptance Status: Approved or Denied (must be maintained as permanent record), and
8. Authorization from facility personnel to dispose of the waste

C-138 forms can be accepted on a monthly, weekly, or per load basis.

3.2 Form C-133 (19.15.36.13.D)

A division approved C-133 "Authorization to Move Produced Water" (EXHIBIT B) shall accompany the transporter of the waste. Copies can be kept on file for future reference.

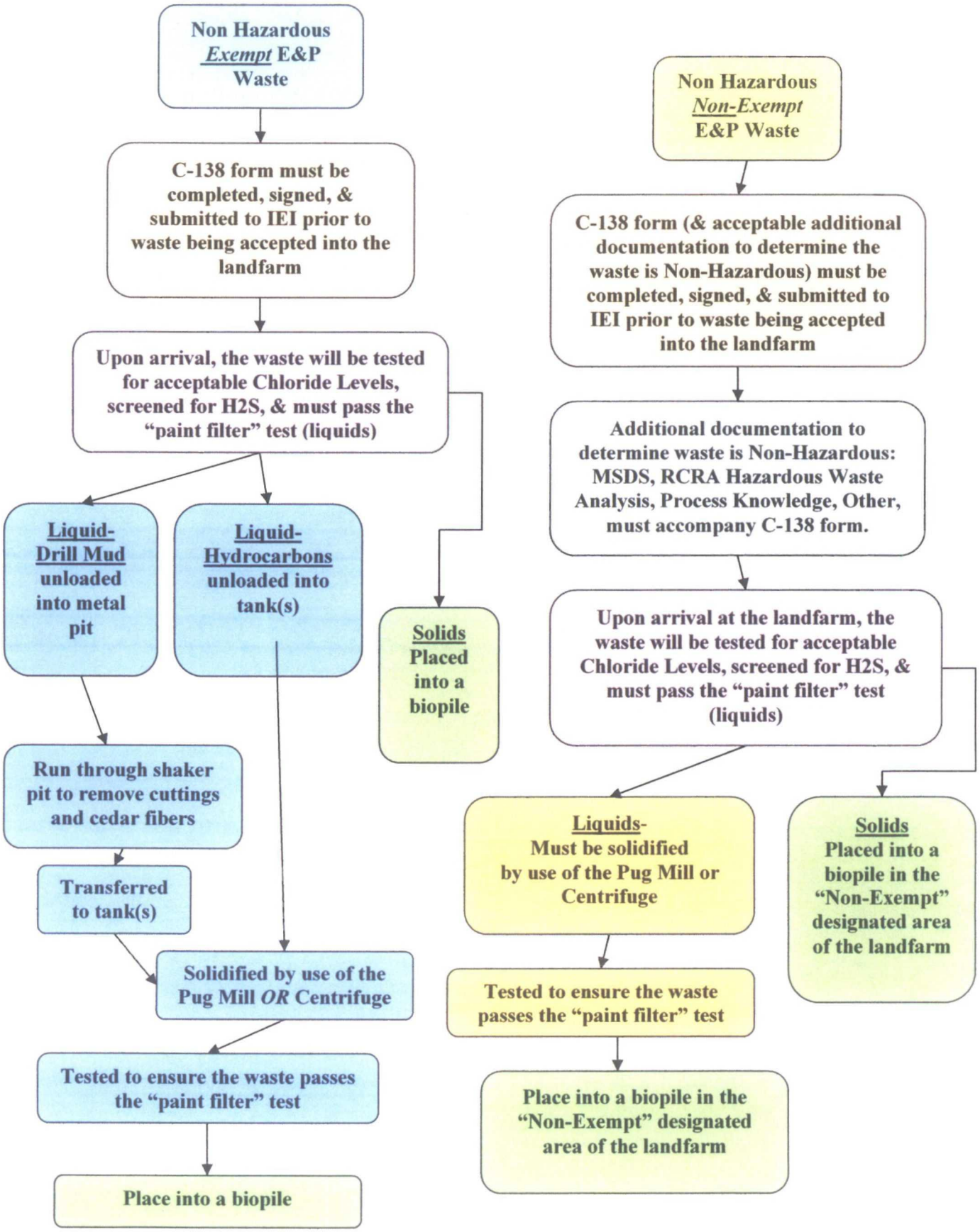
Form C-133 must contain the following:

1. Transporter name, address and phone number
2. State Corporation Commission Permit Number
3. Signature of authorized agent/responsible party
4. State approval Officer and title

4. DISPOSAL (19.15.36.13.H)

Disposal at the facility will only occur when an employee/attendant is on duty. The facility will be secured to prevent unauthorized disposal.

4.1 Flowchart for Waste Acceptance/Disposal:



4.2 Migratory Bird Protection (19.15.36.13.I)

To protect migratory birds, tanks exceeding 8' in diameter and/or exposed pits and ponds shall be screened/netted or covered.

5.0 TREATMENT/BIOREMEDIATION (19.15.36.15.C)

Within 72 hours of receipt, waste shall be placed into a biopile or shall be spread and disked in 8" or less lifts or approximately 1000 cy per acre per 8" lift" as per 19.15.36.15.C.4 NMAC.

Alternative landfarm treatment procedures may be used if demonstration can be made that they provide equivalent protection of fresh water, public health/safety and the environment, with prior division approval (19.15.36.15.C.10).

5.1 Solid Waste

Upon meeting waste acceptance criteria, solid waste material is:

1. Placed into a "under construction" biopile/lift. The "under construction" phase is completed upon generator notification that all materials associated with the "C-138" have been delivered;
2. Waste specific to each biopile/lift is recorded by use of the "Biopile Records" form which contains the following information: Generator of Material, Origin of Material, Type and Volume of Waste, Transported By/Truck #, Date Received;
3. During the "construction" phase, the remediation process is started by adding manure, organic waste or chemical enhancers to accelerate the decomposition of hydrocarbons. Division approval will be obtained prior to applying microbes to soils (19.15.36.C.7);
4. Once the biopile/lift is completed and no other waste will be added, a location and number is assigned. Biopile/Lift numbers are assigned in consecutive order and numbers are never reused;
5. Soils will be monitored weekly for temperatures and additional remediation materials may be added to maintain and control decomposition of hydrocarbons;
6. Soils will be disked bi-weekly and turned monthly (19.15.36.15.C.5);
7. Moisture will be added to the soils to enhance the bioremediation process and to help control fugitive dust emissions (19.15.36.15.C.6);
8. Soil samples are taken at regular intervals and tested by independent laboratories. A "Chain of Custody" form accompanies all lab samples. Laboratory results are used to determine if further remediation is required and results are kept on file.

5.2 Liquid Waste

Upon meeting waste acceptance criteria, liquid waste material is:

1. Offloaded into the concrete impoundment or tanks;
2. Liquids are processed to separate water from solids;
3. The liquid waste is solidified by mixing with solid clean material, (usually reclaimed, State approved, soils);
4. During the mixing process, the remediation process is started by adding manure, organic waste or chemical enhancers to accelerate the decomposition of hydrocarbons. Division approval will be obtained prior to applying microbes to soils (19.15.36.c.7);
5. After the waste has been solidified, to pass the paint filter test, it is then placed into a "under construction" biopile/lift. The "under construction" phase is completed upon generator notification that all materials associated with the "C-138" have been delivered; and
6. Steps 4 through 8 above (Solid Waste)

5.3 Non-Exempt Waste

Non-exempt waste usually consists of material NOT generated by down hole operations. Non-exempt wastes are closely regulated under the RCRA act and, therefore, are more stringently controlled than exempt wastes. A section of the facility is strictly designated for the storage and bioremediation of "Non-Exempt" waste. This area is segregated and bermed in a manner that limits the probability of cross contamination with other waste streams.

Upon meeting waste acceptance criteria, "Non-Exempt" waste material is:

1. Placed into a biopile/lift, in the "Non-Exempt" designated area of the facility and assigned a number. Biopile/Lift numbers are assigned in consecutive order and numbers are never reused;
2. Waste specific to each biopile/lift is recorded by use of the "Biopile Records" form which contains the following information: Generator of Material, Origin of Material, Type and Volume of Waste, Transported By/Truck #, Date Received;
3. The remediation process is started by adding manure, organic waste or chemical enhancers to accelerate the decomposition of hydrocarbons. Division approval will be obtained prior to applying microbes to soils (19.15.36.C.7);
4. Bio-piles/lifts will be monitored weekly for temperatures and additional remediation materials may be added to maintain and control decomposition of hydrocarbons;
5. Soil samples are taken at regular intervals and tested by independent laboratories. A "Chain of Custody" form accompanies all lab samples. Laboratory results are used to determine if further remediation is required and results are kept on file.

5.4 Produced Water

Water separated during the treatment phase is tested for PH, TDS, H2S and Chloride content, upon meeting the acceptable criteria, may be reused/recycled on the facility for dust control. Water not meeting acceptable criteria is transported and disposed of at an NMOCD approved facility for deep well injection. A form C-133 showing State approval must accompany produced water sent off-site.

6.0 BACKGROUND TESTING (19.15.36.15.B)

To establish background soil concentrations for the facility, prior to beginning operations, background sampling shall be collected and analyzed as follows:

- Soils samples shall be taken from at least 6" below the original ground surface;
- 12 composite soil samples (at a minimum) shall be collected, each sample shall consist of 16 discrete samples;
- Samples will be tested for:
  - TPH (EPA 418.1);
  - BTEX (EPA SW-846 8021B or 8260B);
  - Chloride (EPA 300.0);
  - Constituents of Subsections A & B of 20.6.2.3103 NMAC

7.0 MONITORING (19.15.36.15.D & 19.15.36.15.E)

Waste streams are strictly monitored and controlled from entry into the facility through the remediation process to state approval for final disposition.

7.1 Treatment Zone Monitoring (19.15.36.15.D)

Treatment zone monitoring shall be completed semi-annually. A minimum of one composite soil sample, consisting of four discrete samples will be collected and analyzed.

Waste shall be placed into a biopile or shall be spread and disked in 8" or less lifts or approximately 1000 cy per acre per 8" lift" as per 19.15.36.15.C.4 NMAC. Prior to adding additional biopiles/lifts, treatment zone monitoring will be conducted to ensure soils meet the following criteria:

- TPH concentrations (EPA SW-846 8015M or EPA 418.1) do not exceed 2500 mg/kg *and*
- Chloride concentrations (EPA 300.0) do not exceed 1000 mg/kg (groundwater is 100' or more below the lowest elevation).

The maximum thickness of treated soils shall not exceed 2' or approximately 3000 cy per acre. Upon reaching the maximum thickness, additional oilfield waste will not be placed in the landfarm cell until contaminated soils have been treated to the standards specified in 19.15.36.15.F NMAC or the contaminated soils have been removed to a division-approved SWMF.

7.2 Vadose Zone Monitoring (19.15.36.15.E)

Vadose zone sampling will be obtained from the ground below landfarm cell treatment areas to monitor any release of contaminated waste into the vadose zone.

Vadose zone monitoring records shall be maintained at the facility office or facility records storage and made available for division inspection upon request.

SEMI-ANNUAL MONITORING

Semi-annual vadose zone sampling will be performed to monitor the ground below the landfarm cell treatment areas. TPH (EPA SW-846 8015M or 418.1), BTEX (EPA SW-846 8021B or 8260B) & Chloride (EPA 300.0) levels shall be analyzed and results shall be compared to the higher of the PQL or background soil concentrations to determine whether a release has occurred.

Sampling of the vadose zone shall meet the following criteria:

- Samples will be obtained from soils between 3' – 4' feet below the original ground surface; *and*
- A minimum of four, randomly selected, independent samples shall be collected and analyzed.

FIVE YEAR MONITORING

Vadose zone sampling will be performed to monitor the ground below the landfarm cell treatment areas. The constituents of Subsections A & B of 20.6.2.3103 NMAC shall be analyzed and results shall be compared to the higher of the PQL or background soil concentrations to determine whether a release has occurred.

RELEASE RESPONSE

In the event that sampling results show concentrations of TPH, BTEX, or Chloride levels exceeding the higher of the PQL or background concentrations, the following actions shall be taken:

- NMOCD shall be notified;
- Four additional randomly selected, independent samples, shall be immediately collected and analyzed for TPH, BTEX, Chlorides and the constituents listed in Subsections A & B of 20.6.2.3103 NMAC.

The re-sampling results along with a response action plan shall be submitted to NMOCD for approval within 45 days of the initial notification of a release. The response action plan shall address changes of the facility's operation to prevent further releases, and if necessary, a plan for remediating the existing contaminated soils.

8.0 TREATMENT ZONE CLOSURE STANDARDS (19.15.36.15.F)

Once a landfarm cell has been filled to the maximum thickness of 2' or approximately 3000 cy per acre, treatment shall continue until contaminated soils have been remediated to the higher of the background concentrations or upon meeting closure performance standards.

Closure performance standards are met by collecting and analyzing a minimum of one composite soil sample, consisting of four discrete samples to meet the following criteria:

- Benzene (EPA SW-846 8021B or 8260B) shall not exceed 0.2 mg/kg;
- BTEX (EPA SW-846 8021 B or 8260B) shall not exceed 50 mg/kg;
- Combined fractions of DRO & GRO (EPA SW-846 8015M) shall not exceed 500 mg/kg;
- TPH (EPA SW-846 method 8021B or 8260B) shall not exceed 50 mg/kg;
- Chloride (DPA 300.0) shall not exceed 1000 mg/kg (where groundwater is more than 100' or more below the lowest elevation); *and*
- The concentration of constituents listed in Subsections A & B of 20.6.2.3103 NMAC (EPA SW-846 6010B or 6020) shall not exceed the PQL or background concentrations. If exceeded, a site specific risk assessment shall be performed and shall propose closure standards based upon individual site conditions that protect fresh water, public health/safety and the environment. The assessment will be subject to division approval or waste shall be removed pursuant to 19.15.36.15.G.2. NMAC.

9.0 FINAL DISPOSITION OF TREATED SOILS (19.15.36.15.G)

Upon achieving treatment zone closure performance standards, treated soils will be left in place or, with division approval, will be reused or disposed of accordingly.

Failure to meet closure performance standards within five (5) years, or as extended by NMOCD, shall require the removal of the contaminated soils from the landfarm cell to be disposed of at a division-permitted landfill, or reuse or recycle it in a manner approved by the division as set forth in 19.15.36.15.H. Alternative soil closure method(s) may be submitted to the division for approval as specified in 19.15.36.15.G.4 NMAC.

10. OPERATIONAL (19.15.36.15.C)

10.1 Facility Identification (19.15.36.13.J)

Signage will be posted outside of the facility entrance and will comply with the following requirements:

- Readable from a distance of 50';
- Will provide the facility Name and Permit Number;
- Will provide the facility's location by Unit Letter, Section, Township, Range (ULSTR); *and*
- Will provide Emergency Contact Name(s) and Number(s)

10.2 Facility Requirements (19.15.36.13.B & 19.15.36.13.C)

As per SWMF requirements, the landfarm will not be:

- within 200' of a watercourse, lakebed, sinkhole or playa lake (arroyos will be bermed and contaminated waste will not be placed within 200')
- Located within an existing wellhead protection area or 100 year floodplain;
- Located within, or within 500' of a wetland;
- Located within the area overlying a subsurface mine;
- Located within 500' from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application;
- Located within an unstable area; *and*
- More than 500 acres.

10.3 Berms (19.15.36.15.1)

Landfarm cells shall be bermed to prevent rainwater run-on/off.

10.4 Freestanding Liquids (19.15.36.15.C.8)

Freestanding liquids will be removed from the facility within 24 hours. This will be accomplished by use of water or king vacuum trucks.

10.5 Placement of Contaminated Waste (19.15.36.15.2 & 19.15.36.15.3)

Contaminated waste will not be placed within 100' of the facility's boundaries or within 20' of a pipeline crossing the facility.

10.6 Spill Reporting (19.15.36.13.K)

The facility will comply with spill reporting and corrective action provisions of 19.15.30 NMAC or 19.15.29 NMAC as outlined in the company Spill Prevention Control & Contingency Plan.

10.7 Monthly Inspections & Maintenance Activities (19.15.36.13.L)

The facility will comply with inspection and maintenance plan provisions of 19.15.36.13.L.3 NMAC. Refer to the company Routine Inspection & Maintenance Activities plan.

10.8 Run On/Off Water Control (19.15.36.13.M)

The facility will comply with provisions of 19.15.36.13.M to control run-on and run-off water. Refer to the company Stormwater Pollution Prevention Plan (SWPPP).

10.9 Contingency Plans (19.15.3.11 & 19.15.36.13.N)

The facility will comply with provision of 19.15.36.13.N to have contingency plan(s) in place. Refer to the company Contingency Plan & H2S Contingency Plan.

10.10 Training Program (19.15.36.13.P)

All key personnel will receive annual training related to:

- General Operations;
- Permit Conditions;
- Emergencies;
- Proper sampling methods;
- Identification of Exempt and Non-Hazardous, Non-Exempt Waste

Training records shall be maintained at the facility office or facility records storage for no less than five (5) years and made available for division inspection upon request.

11.0 RECORDS MANAGEMENT (19.15.36.13.G)

Data obtained through the plan implementation will be used to ensure the facility meets the conditions of the permit and to ensure that all waste is properly managed.

Records related to waste acceptance, sampling, material tracking, biopile temperature testing, waste status, generator, location of origin, volume/type of waste, date of disposal, trucking company, waste storage location and other applicable records will be maintained at the facility.

Said data/records will be maintained at the facility office or facility records storage and made available for division inspection upon request. Data/records shall be maintained at the facility office or facility records storage for no less than five (5) years after the closure of the facility.

11.1 Forms (19.15.36.13.G & 19.15.36.15.C.9)

In order to comply with requirements set forth in 19.15.36, the following forms will be utilized and maintained at the facility office or facility records storage:

- C-138 Request for Approval to Accept Solid Waste (Exhibit A);
- C-133 Authorization to Move Produced Water (Exhibit B);
- Material Entry Record –Short Form (Exhibit C) – Long Form (Exhibit D)
- Biopile Record (Exhibit E)
- Biopile Temperature Maintenance Record (Exhibit F)

11.2 Material Entry Record (19.15.36.13.G)

The Material Entry Record contains the following information:

- Date
- Generator
- Company Representative & Phone Number
- Origin of Material
- Transporting Company
- Driver's Name
- Truck Number
- Pile Number
- Type of Waste
- Amount of Waste
- Exempt or Non-Exempt Waste
- Test results for H2S, Chlorides, PH, TDS, Paint Filter
- If the load is DENIED/REJECTED
- Driver(s) Signature(s)
- Facility Attendant Signature

11.3 Biopile Record (19.15.36.15.C.9)

The Biopile Record contains the following information:

- Name/Description of Biopile (i.e., Conoco – Drill Mud, Community – Liquids, BP – Dirt)
- Date Biopile Created
- Pile #
- Cell #
- Generator
- Origin of Material
- Transported By/Truck #
- Quantity Received
- Date Received
- Comments

11.4 Biopile Temperature & Maintenance Record (19.15.36.15.C.9)

The Biopile Temperature & Maintenance Record contains the following information:

- Page #
- Pile #
- Cell #
- Date Pile Created/Pile Number Placed on Pile
- Name/Description of Biopile (i.e., Conoco–Drill Mud, Community–Liquid, BP-Dirt)
- Weekly Pile Temperature Date
- Monthly Pile "Turned" Date

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

EXHIBIT (A)

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

2. Originating Site:

3. Location of Material (Street Address, City, State or ULSTR):

4. Source and Description of Waste:

Estimated Volume _____ yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, _____, representative or authorized agent for _____ do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that
Representative/Agent Signature
representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter:

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility: #

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☒ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

EXHIBIT (B)

Submit a single copy to
Santa Fe Office

State of New Mexico
Energy Minerals and Natural Resources

Form C-133
Revised May 27, 2007

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

AUTHORIZATION TO MOVE PRODUCED WATER

Transporter Name_____

Address _____ Office Location (If different) _____

_____ _____

_____ _____

Phone Numbers(s)_____

State Corporation Commission Permit No._____

**Please attach a copy of the New Mexico Public Regulation Commission (PRC) Warrant for Transportation Services, if a corporation name or LLC has not been established with the PRC or a partnership has not been established with the New Mexico Secretary of State Office. In accordance with Section 51 of 19.6.2 NMAC, "the division may deny approval of a form C-133 if:*

(1) the applicant is a corporation or limited liability company, and is not registered with the public regulation commission to do business in New Mexico;

(2) the applicant is a limited partnership, and is not registered with the New Mexico secretary of state to do business in New Mexico;

(3) the applicant does not possess a carrier permit under the single state registration system the public regulation commission administers, if it is required to have such a permit under applicable statutes or rules; or

(4) the applicant or an officer, director or partner in the applicant, or a person with an interest in the applicant exceeding 25 percent, is or was within the past five years an officer, director, partner or person with an interest exceeding 25 percent in another entity that possesses or has possessed an approved form C-133 that has been cancelled or suspended, has a history of violating division rules or other state or federal environmental laws; is subject to a commission or division order, issued after notice and hearing, finding such entity to be in violation of an order requiring corrective action; or has a penalty assessment for violation of division or commission rules or orders that is unpaid more than 70 days after issuance of the order assessing the penalty."

NOTE: It is the responsibility of each holder of an approved Form C-133 to familiarize its personnel with the content of Sections 51 and 52 of 19.15.2 NMAC and to assure operations in compliance therewith. Failure to move and dispose of produced water in accordance with Sections 51 and 52 of 19.15.2 NMAC are cause for cancellation of Form C-133 and the authority to move produced water.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signature_____ Date_____

Printed Name_____ Title_____

E-mail Address_____

(This space for State Use)

Approved by_____ Title_____

Date_____

EXHIBIT (C)

Industrial Ecosystems Inc.
Blanco Landfarm

Material Entry Record

Date:_____

Company Representatives Name:_____

Generator of Material:_____

Phone Number:_____

Origin of Material (Location):_____

Paykey / Purchase Order Number:_____

Material Transported by:_____

H2S Gas ☐ **Non-Detect** ☐ **Detect: Level** ____

Driver's Name: _____

Driver's Cell #: _____

_____ Chlorides _____ PH _____ **TDS**

Truck Number:_____

Pile Number:_____

Paint Filter Test: ☐ **Passed** ☐ **Failed**

☐ Logged in Corresponding BioPile Sheet

☐ Pit ☐ Tanks

☐ DENIED / REJECTED

T f Material

Soil		Tank Bottom Sludge	
Gravel		Tank Cleaning Residue	
Solidified Liquid		Charcoal Filter Media	
Other _____		Washout by: _____	

Amount of Material

	Load #1	Load #2	Load #3	Load #4	Load #5	Load #6	Load #7	Load #8	Load #9	Load #10
Cubic Yards										
Barrels										

Status

Exempt	XXX
Non Exempt	

I certify that the quantity and type of waste is that listed above. To the best of my knowledge, no other quantities or types of wastes have been added or removed.

D. signature:_____

Attendant's signature:_____

**Attach copy of test results to C-138/COW*

EXHIBIT (D)

NO. _____

Industrial Ecosytems Inc
Blanco Landfarm
Material Entry Record (Long Form)

COMPANY NAME:_____ COMPANY REP._____

PHONE #_____

ORIGIN OF MATERIAL(LOCATION):_____ PAYKEY/P.O# _____

NOTES:_____ H2S GAS ☐ NON DETECT ☐ DETECT

_____ Chlorides _____ PH _____ TDS

Paint Filter Test: ☐ Passed ☐ Failed

☐ Pit ☐ Tanks

Date	Time	Transported by	Truck#	Yards	Barrels	Driver's Name (Print)	Driver's Signature	Checked in by

EXHIBI

BIOPILE RECORDS

Name/Description of Pile : _____

DATE BIOPILE CREATED:_____

PILE#:_____

CELL#: _____

Generator of Material	Origin of Material	Transported By/ Truck #	Quantity Received	Date Received	Comments

Industrial Ecosystems Inc.

2009 BIOPILE TEMPERATURE & MAINTENANCE RECORDS

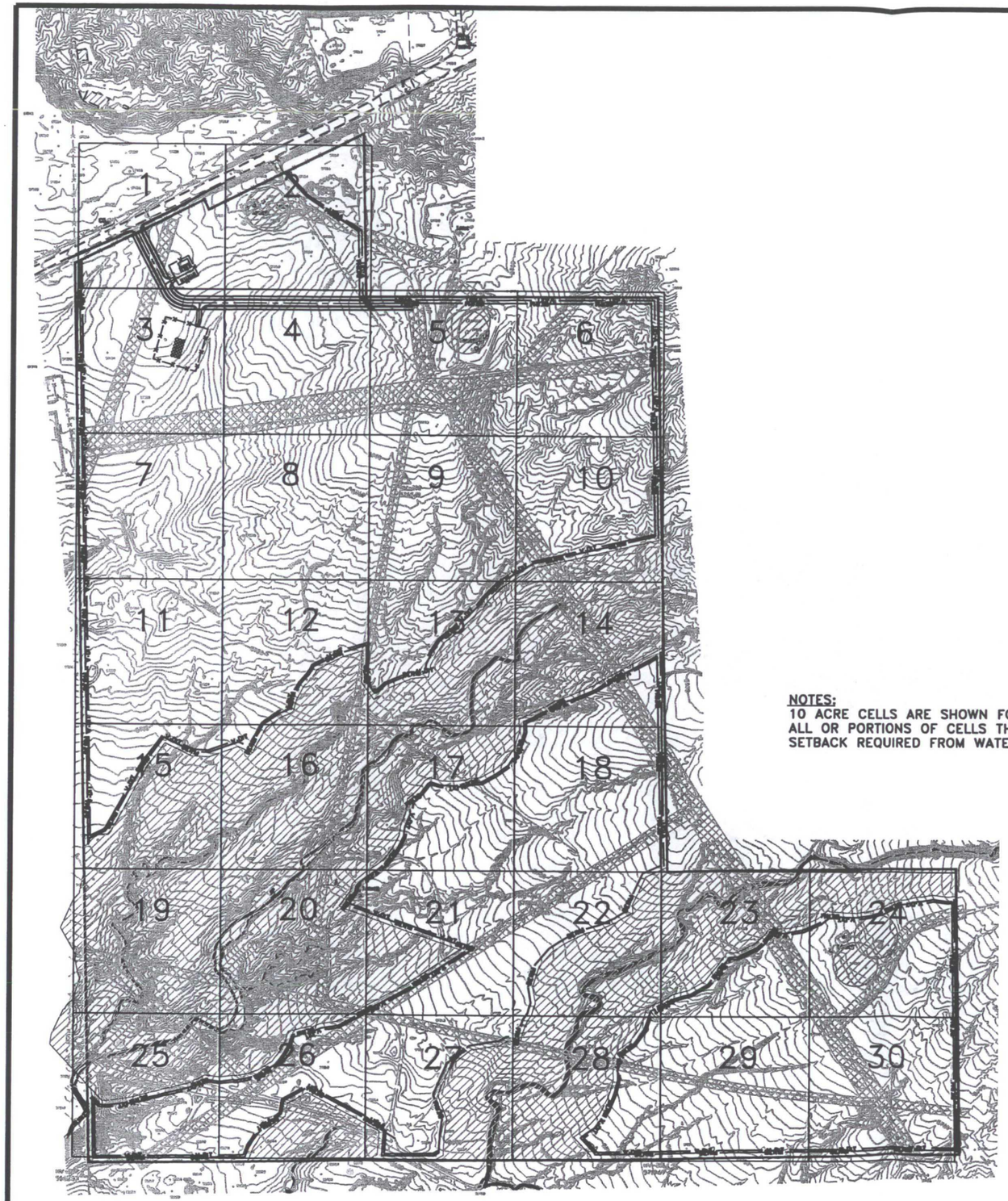
Page #: _____ **Pile #:** _____ **Cell #:** _____

Date Pile Created/Pile Number Placed on Pile: _____

Name/Description of Material: _____

Date	Pile Temp	Date Turned
01/07/09		
01/14/09		
01/21/09		
01/28/09		
02/04/09		
02/11/09		
02/18/09		
02/25/09		
03/04/09		
03/11/09		
03/18/09		
03/25/09		
04/01/09		
04/08/09		
04/15/09		
04/22/09		
04/29/09		
05/06/09		
05/13/09		
05/20/09		
05/27/09		
06/03/09		
06/10/09		
06/17/09		
06/24/09		
07/01/09		

Date	Pile Temp	Date Turned
07/08/09		
07/15/09		
07/22/09		
07/29/09		
08/05/09		
08/12/09		
08/19/09		
08/26/09		
09/02/09		
09/03/08		
09/16/09		
09/23/09		
09/30/09		
10/07/09		
10/14/09		
10/21/09		
10/28/09		
11/04/09		
11/11/09		
11/18/09		
11/15/09		
12/02/09		
12/09/09		
12/16/09		
12/23/09		
12/30/09		



NOTES:
10 ACRE CELLS ARE SHOWN FOR REFERENCE AND ENUMERATION.
ALL OR PORTIONS OF CELLS THAT OCCUR WITHIN THE 200 FOOT SETBACK REQUIRED FROM WATERWAYS MAY BE UNUSABLE.

CHEREY·WALTERS·ECHOLS
ENGINEERS ▲ SURVEYORS
606 W. APACHE · FARMINGTON, NEW MEXICO 87401 · (505)327-3365

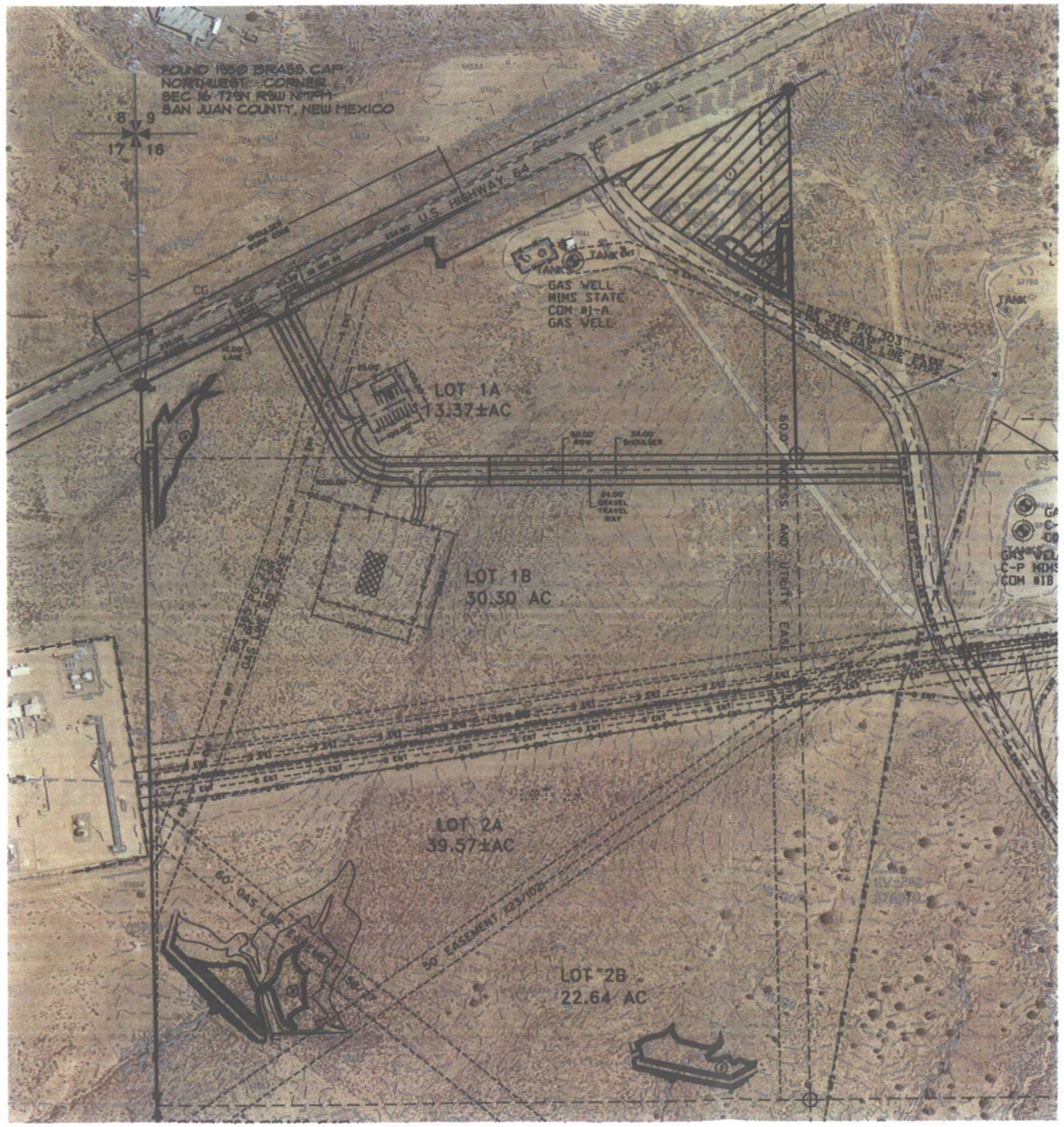
DATE | REVISION | BY

PRINTED: November 06, 2009
FILE: I:\Jobs\JOBS\2009\09467\09467fr2.dwg

NO. 3634
REGISTERED
NEW MEXICO
LAND SURVEYOR

10 ACRE CELLS
BLANCO LAND FARM
INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

DATE:11/09/2009
DRAWN BY: KKN
PROJ. 09467
SCALE:NTS
FILE:09467DRW2
SHEET
06
11



AREA SET ASIDE FOR WATER

KEYED NOTES:

1. THE AREA SET ASIDE FOR WATER SHALL BE EXCLUDED FROM ANY CONSTRUCTION.
2. STORMWATER RETENTION POND DIKES TYPICAL. SEE DRAINAGE SET FOR SPECIFICATIONS.

BY | DATE | REVISION

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CREEL-WALTERS-ADAMS, P.C.
ENGINEERS · SURVEYORS
800 N. AIRPORT · FARMINGTON, NEW MEXICO 87401 · (505)327-2333

NO. 3434
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEW MEXICO

SITE PLAN
BLANCO LANDFARM
INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

DATE:11/09/2009
DRAWN BY: HWS
PROJ. 09467
SCALE:NTS
FILE:9467SET
SHEET
7
OF
11

IEI Blanco

Routine Inspection & Maintenance Activities

(19.15.36.13.L. NMAC)

Primary inspection and maintenance activities include general facility, stormwater containment, berm integrity, unloading/mixing and tank battery areas.

Routine maintenance activities, and the frequency conducted, are shown in Table 1.

Table 1
Routine Maintenance Activities

No.	Maintenance Task	Frequency of Task
1	General Security (Facility & Vehicles/Equipment)	Daily
2	Trash & Debris	Weekly
3	Condition of Gate(s)	Daily
4	Condition of Fencing	Weekly
5	Freestanding Liquids	Daily
6	Condition of Stormwater Containment Pond(s) (19.15.36.13.L..3. NMAC)	(Per SWPPP) Bi-Weekly and/or within 24 hours of the end of a storm event (0.5" or greater)
7	Dust Control / Moisture Received	Daily
8	Condition of Berms (19.15.36.13.L..3. NMAC)	(Per SWPPP) Bi-Weekly and/or within 24 hours of the end of a storm event (0.5" or greater) or after a major windstorm.
9	Unloading/Mixing Area (Metal Pits/Pugmill/Centrifuge)	Daily
10	Condition of Tank Battery Area	Daily

Inspections
The attached Inspection and Maintenance Checklist shall be used to conduct inspections, as specified in Table 1, to identify needed maintenance and to record maintenance that is conducted.

IEI Blanco
Inspection and Maintenance Checklist

Week of/Date of Inspection: _____ Type of Inspection: ☐ Daily/Weekly ☐ Bi-Weekly

☐ After heavy rainfall/runoff ☐ After major windstorm

Inspector(s): _____ ☐ Other: _____

Defect	Conditions When Maintenance Is Needed	Maintenance Needed? (Y/N)	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
General Security and Housekeeping (Daily/Weekly)				
Facility & Vehicles/ Equipment	• Evidence the Facility was illegally entered after hours or evidence the vehicles/equipment were tampered with • Evidence of oils, gasoline, or other contaminants on ground	____ Mon ____ Tue ____ Wed ____ Thu ____ Fri		• Facility, Vehicles and Equipment are in the same condition as they were the previous day. If not, authorities have been notified. • No visible grease, oil, gasoline, or other contaminants present on the ground in the vehicle/equipment parking area(s).
Trash & Debris	Trash and debris accumulated on the facility			Trash and debris will be cleared from site and disposed of properly.
Gates and Fencing (Daily/Weekly)				
Gate(s) - missing or broken parts	Any defect or damage to the gate which would allow easy entry to the facility	____ Mon ____ Tue ____ Wed ____ Thu ____ Fri		Gate(s) are repaired to proper working condition.
Fence	Any defect or damage to the fence which would allow easy entry to the facility			Fencing is repaired to design specification.
Freestanding Liquids (Daily)				
Freestanding Liquids	Freestanding liquids on the facility	____ Mon ____ Tue ____ Wed ____ Thu ____ Fri		Freestanding liquids must be removed within 24 hours.

Defect	Conditions When Maintenance Is Needed	Maintenance Needed? (Y/N)	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Stormwater Containment (Bi-Weekly and/or within 24 hours of the end of a storm event 0.5" or greater)				
Containment Ponds	Stormwater runoff not directed or contained as needed			Monitor and restore the integrity of the containment area(s) and the flow of the storm water runoff.
Moisture/Dust Control (DailyWeekly)				
Blowing Dust Has the facility received moisture w/in the last 48 hours?	During drier months when natural precipitation is not frequent and has not been received w/in the prior 48 hours Specify: □ Rain □ Snow □ Ice	____ Mon ____ Tue ____ Wed ____ Thu ____ Fri		Moisture will be added (sprayed with water truck) to the unpaved roadways to reduce the potential of fugitive dust emissions. Biopiles will be trenched with water to enhance the bioremediation process.
Berms (Bi-Weekly and/or within 24 hours of the end of a storm event 0.5" or greater major windstorm greater)				
Settlement	Berm settlement or berm integrity has been compromised			Berm is built back to the design elevation and specifications.
Erosion	Eroded over 2" deep where cause of damage is still present or potential for continued erosion			Cause of erosion is managed appropriately. Side slopes or berms are restored to design specifications, as needed.
Unloading/Mixing Area(s) - Metal Pits/Pugmill/Centrifuge (Daily/Weekly)				
Metal Pits	Visible leaks or cracks in the walls or floor	____ Mon ____ Tue ____ Wed ____ Thu ____ Fri		Waste is not accepted into the tank(s) until it has been cleaned and repaired.
Spills	Stained soil below or around the metal tank(s)	____ Mon ____ Tue ____ Wed ____ Thu ____ Fri		Stained soil is cleaned from the area.

Defect	Conditions When Maintenance Is Needed	Maintenance Needed? (Y/N)	Comments (Describe maintenance completed and if any needed maintenance was not conducted, note when it will be done.)	Results Expected When Maintenance Is Performed
Tank Battery (Daily/Weekly)				
Liner	Liner is visible and has tears or holes in it	____ Mon		Liner repaired or replaced & is fully covered.
		____ Tue		
		____ Wed		
		____ Thu		
		____ Fri		
Spills	• Any visible leaks on or around the supply pump(s) • Any Stained soil around the tank(s) or hoses/pipes	____ Mon		• Stains are cleaned from the area. • Hoses/Pipes are checked for leaks and to ensure proper attachment/connection
		____ Tue		
		____ Wed		
		____ Thu		
		____ Fri		

Inspector(s) Signature(s): _____

_____

H2S / CONTINGENCY PLAN

(19.15.3.11 & 19.15.36.13.N)

Company Name: Industrial Ecosystems Incorporated

Building Name: Main Office / Land Farm / Tank Battery

Building Address: # 49 CR 3150

Emergency Coordinator: Rodney L. Williams

Emergency Coordinator Phone Number: (505) 860 -4068

Designated Meeting Site(s) are:

1. Main entrance to property

Plan prepared by: Rodney L. Williams

Date: June 26, 2009

Emergency Numbers

(Please keep posted)

Fire **9-911**
Medical **9-911**
Sherriff's Office / Police **9-911**

Industrial Ecosystems Incorporated:

Main Office: (505) 632-1782

Contact: Marcella Marquez

HSE Department: (505) 860 – 4068

Contact: Rodney Williams

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Section II: General Guidelines

Section III: Responsibilities of Primary Emergency Coordinator

Section IV: Alerting Building / Landfarm Occupants of possible H2S presence/release

Section V: Evacuation Procedures for Building Occupants and Land Farm

Section VI: Disabled Occupants

Section VII: Accountability Procedures for Emergency Evacuation

Section VIII: Rescue and Medical

Section IX: Resource and Responsibilities List

Section X: Operations Shutdown

Section XI: Training and Communication

Section XII: Plan Amendments

SECTION I: PURPOSE AND OBJECTIVES

Potential emergencies at the Industrial Ecosystems Property (IEI) (Main office, Land Farm, and Tank Battery) such as a H2S release and all other emergencies require employees to evacuate the building or land farm immediately. An H2S / Contingency Plan (H2S CP) and adequate occupant familiarity with the buildings and land farm minimize threats to life and property. This plan applies to all emergencies where employees may need to evacuate for personal safety.

This H2S CP is intended to communicate the policies and procedures for employees to follow in an emergency situation. This written plan will be made available to employees and their designated representatives, local police, fire and medical facilities by the Primary Emergency Coordinator for the IEI properties (19.15.36.13.N.2 & 19.15.36.13.N.7).

Under this plan, employees will be informed of:

- The plan's purpose,
- Preferred means of reporting a H2S release,
- Emergency escape procedures and route assignments,
- Procedures to be followed by employees who remain to control plant operations before they evacuate,
- Procedures to account for all employees after emergency evacuation has been completed,
- Rescue and medical duties for those employees who perform them,
- The alarm system.

Rodney L. Williams is the Primary Emergency Coordinator for this facility and has overall responsibility for the preparation and implementation of this plan.

Steve Abeyta is the Alternate Emergency Coordinator.

Clyde Tafoya is the Alternate Emergency Coordinator.

Richard Chavez is the Alternate Emergency Coordinator.

The Primary Emergency Coordinator will review and update the plan as necessary. Copies of this plan will be maintained in the Safety department office.

SECTION II: GENERAL GUIDELINES

The following guidelines apply to this H2S CP:

1. All personnel must be trained in safe evacuation procedures. Refresher training is required whenever the employee's responsibilities or designated actions under the plan change, and whenever the plan itself is changed.
2. The training may include use of workplace maps which clearly show the emergency escape routes included in the H2S CP. Maps should be posted at all times in main work areas to provide guidance in an emergency.
3. No employee is permitted to re-enter the work area until advised by Emergency personnel.

SECTION III: RESPONSIBILITIES OF PRIMARY EMERGENCY COORDINATOR AND/OR ALTERNATE EMERGENCY COORDINATOR(S)

The Emergency Coordinator(s) are responsible for:

1. Obtaining and posting work areas and route evacuation maps.
2. Overseeing the development, communication, implementation and maintenance of the overall H2S CP.
3. Ensuring the training of building occupants, operations personnel, and notifying all personnel of changes to the plan.
4. Maintaining up to date lists of building occupants, operations personnel, and any other personnel with assigned duties under this plan.
5. In the event of an H2S release or other emergency, the primary emergency coordinator must relay applicable information to emergency personnel, occupants and operations personnel.
6. Familiarizing personnel with emergency procedures.
7. Acting as liaison between management and their work area.
8. Ensuring that occupants have vacated the premises in the event of an evacuation and for checking assigned areas.
9. Knowing where their designated meeting site is and for communicating this information to occupants.
10. Having a list of personnel on the property, so a head count can be made at their designated meeting site.
11. Ensuring that disabled persons and visitors are assisted in evacuating the building.
12. Posting the H2S Contingency Plan in their work areas, communicating plans to occupants, and updating the plan annually.
13. In the event of imminent or actual emergency situation shall immediately activate the facility alarms or communication systems, to notify personnel and visitors (19.15.36.13.N.9.a)
14. In the event of imminent or actual emergency situation shall notify appropriate state and local agencies with designated response roles if their assistance is needed (19.15.36.13.N.9.b).
15. In the event of a release, fire or explosion will immediately identifying the character, exact source, amount and extent of released materials by use of the Daily Tank Battery Reading and associated C-138 forms and will implement the SPCC Plan accordingly (19.15.36.13.N.10)
16. Following an emergency, the Emergency Coordinator will follow the SPCC plan for treating, storing or disposing of related oilfield waste from a release, fire or explosion and ensuring that no oilfield waste, which may be incompatible with the released material, is treated, stored or disposed of until cleanup procedures are complete (19.15.36.13.N.12 & 19.15.36.13.N.13)

SECTION IV: ALERTING BUILDING / LAND FARM OCCUPANTS OF POSSIBLE H2S PRESENCE/RELEASE

Signs and Markers (19.15.11.10):

For each entrance onto the facility signs or markers (conforming to ANSI standards) will be posted to notify the general public of the possible presence of H2S.

Regulatory Threshold (19.15.11.8.B)

It has been determined that H2S concentrations on the facility are below 100 ppm. All trucks entering the facility with liquid waste are screened for H2S upon arrival.

As per 19.15.11 NMAC no further actions are required for concentrations below 100 ppm. Any additional H2S equipment, procedures, and actions (above and beyond the requirements of 19.15.11.8.B) are performed at the company's discretion.

Activation Levels:

Emergency activation level will be set at 100 ppm or higher (19.15.11.8).

In the event of a H2S release (19.15.11.9):

1. The alarm system(s) will activate. The locations of the monitor boxes are noted on the evacuation maps. The alarm alerts building occupants and land farm occupants of the need to evacuate to the designated meeting site.
2. Persons discovering a **H2S release** should notify the Emergency Coordinator with pertinent information of the release location (Tank #) Emergency contact telephone numbers are listed in Section IX of the H2S CP.

General Public Protection from H2S at Tank Battery:

- Tank battery area will be fenced in with locking gates;
- Windsocks will be utilized to determine wind direction;
- Stairs and Ladders will be equipped with safety chains to prevent unauthorized access to the top of tank(s).

SECTION V: GENERAL EVACUATION PROCEDURES FOR BUILDING / LAND FARM OCCUPANTS (19.15.36.13.N.5)

1. When the alarm sounds, all personnel should ensure that nearby personnel are aware of the emergency, quickly shutdown operating equipment and head directly to the designated meeting site. Building occupants need to close doors and exit the building using evacuation routes.
2. All occupants should proceed to their designated meeting site and await further instructions from the Emergency Coordinator.
3. All personnel should know where primary and alternate exits are located, and be familiar with the various evacuation routes available. Floor plans and maps with escape routes, alternate escape routes, exit locations and designated meeting sites are posted in the buildings and work locations.

SECTION VI: DISABLED OCCUPANTS

If a disabled occupant is unable to exit the building unassisted, the Emergency Coordinator must notify the emergency response personnel of the person's location. Transporting of disabled individuals up or down stairwells should be avoided until emergency response personnel have arrived. Unless imminent life-threatening conditions exist in the immediate area occupied by a non-ambulatory or disabled person, relocation of the individual should be limited to a safe area.

SECTION VII: ACCOUNTABILITY PROCEDURES FOR EMERGENCY EVACUATION

Designated Meeting Sites: Groups working together on or in the same area should meet outside the building in the prearranged designated meeting site. A list of the primary and alternate designated meeting sites is posted in the main office and work locations.

Department organization list: A roster of personnel to ensure that everyone has evacuated has been developed by the Emergency Coordinator. The list will be updated whenever there is a personnel change.

The Emergency Coordinator will conduct head counts once evacuation has been completed.

The Emergency Coordinators are to be trained in the complete workplace layout and the various primary and alternate escape routes from the workplace. All trained personnel are made aware of employees with disabilities that may need extra assistance and of hazardous areas to be avoided during emergencies. Before leaving, the Emergency Coordinators are to check rooms and other enclosed spaces in the workplace for other employees who may be trapped or otherwise unable to evacuate the area, and convey this information to emergency personnel. A list of Emergency Coordinators will be located in the main office and at each work location.

Once each evacuated employees have reached their designated meeting site, the Emergency Coordinator will:

1. Assembles his/her group in the designated meeting site.
2. Take a head count of his/her group.
3. Assumes role of department contact to answer questions.
4. Instructs personnel to remain in area until further notice.
5. Reports status to General Manager.
6. Instructs personnel to remain at designated meeting site until further notice.

SECTION VIII: RESCUE AND MEDICAL

In the event of an emergency staff will call 911. The facility is located in a rural area with the local volunteer fire department located approximately 1 ½ miles away.

- The Fire Department, Emergency Medical Technicians (EMT) will conduct all rescue and medical duties.
- Do not move injured personnel. Keep the people lying down, covered and warm.

SECTION IX: RESOURCE AND RESPONSIBILITIES LIST

H2S CP Organization: The following lists includes the names of employees, managers, staff or other personnel and their job titles, job positions and relative H2S CP collateral duties. The purposes served by the lists are:

1. To tell employees who to see for additional information on the H2S CP.
2. To provide emergency response personnel with a list of department personnel which may be needed in order to provide additional information about the H2S release,
3. The lists should be updated by the Primary Emergency Coordinator on an as-needed basis.

Emergency Contact Names and Numbers (19.15.36.13.N.3)

Company Name: Industrial Ecosystems Incorporated

Building Name: Main Office / Land Farm / Tank Battery

Address: # 49 CR 3150

Title: HSE Specialist

Name: Rodney L. Williams

Location: Main Office

Telephone: (505) 860 -4068

Title	Name	Location	Telephone
Primary Emergency Coordinator	Rodney L. Williams	Main Office	(505) 860-4068
Alternate Emergency Coordinator	Clyde Tafoya	Land Farm	(505) 860 -7360
Alternate Emergency Coordinator	Richard Chavez	Land Farm	(505) 860 -1141
Alternate Emergency Coordinator	Steve Abeyta	Main Office	(505) 860 -3801
Management	Terry Lattin	Main Office	(505) 860 -2885
Office Staff	Marcella Marquez	Main Office	(505) 632 -1782

SECTION X: OPERATIONS SHUTDOWN

Operation Shutdown: Critical operations, including equipment that must be shut off and persons designated to complete these actions are identified below. Procedures for rapid shutdown should be predetermined for life safety and loss control purposes, as well as ensuring complete evacuations in a timely manner.

The Operations Shutdown procedures to be followed by those employees who have been assigned to care for essential building operations include:

PERSONNEL ASSIGNED TO OPERATIONS RESPONSIBILITIES

Operation	Required Shutdown	Name	Job Position	Work Area
Trucking	Trucks	Doug Davis	Field Operations Manager	Main Office
Land Farm	Heavy Equipment	Clyde Tafoya	Landfarm Operations Manager	Land Farm
Administration	Main Office	Marcella Marquez	HSE Administrator	Main Office

On-site supervisors will be responsible for monitoring for leaks, pressure build-up, gas generation and ruptured valves (19.15.36.13.N.11).

Persons involved in the Operations Shutdown listed above shall be notified by management of this responsibility in advance, identified in the H2S CP, and will be appropriately trained for the particular situation.

Section XI: Training and Communications

Each occupant should know that evacuation is necessary and what his/her role is in carrying out the plan. Employees should also know what is expected of them during an emergency to assure their safety. Training on the H2S CP content is required annually.

A method of training building occupants in the requirements of the emergency evacuation plan is to give all employees a thorough briefing and demonstration. The HSE department will have all managers and supervisors present this plan to their staff in staff meetings. Annual practice drills are to be implemented and documented by the Primary Emergency Coordinator. The Environmental Health and Safety Department can assist with training, drills and demonstrations (19.15.11.9.d)

Section XII. Plan Amendments (19.15.36.13.N.8 & 19.15.36.13.N.14)

The H2S CP will be amended and/or reviewed as follows:

- On an annual basis;
- The emergency coordinator may amend the plan during an emergency as necessary to protect fresh water, public health, safety or the environment.

The H2S CP will be amended within 5 working days whenever:

- The SWMF permit is revised or modified;
- In the event of emergency failure;
- Change of design, construction, operation or maintenance of the facility which increases the potential for fires, explosions, or a release;
- The list of emergency coordinators or their contact information changes; or
- The list of emergency equipment changes.

HYDROGEN SULFIED CHARACTERISTICS AND EFFECTS (19.15.11.9.b)

Hydrogen Sulfide, Invisible, Flammable, Explosive, Deadly
The above words describe hydrogen sulfide, or as we commonly call it—H2S.
H2S is a by-product of decaying organic matter. Workers in oil & gas operations, mining, sewage, landfills, laboratories and public utilities are the most commonly exposed groups.

Because of the dangers of working with H2S, IEI is required by law to follow certain safety standards and procedures, such as monitoring the air in certain work areas and providing engineering controls. But, and most importantly, you must know how to protect yourself from H2S. If you recognize the hazard and follow specific procedures, you can work around H2S safely.

Recognizing the conditions:

- H2S smells like rotten eggs, but only at low concentrations. **Do not** trust your sense of smell to warn you because:
- Other chemical odors can hide or mask the smell.
- Continued contact with H2S can kill the olfactory ability to detect the smell. Never think that because there is no smell there is no H2S.
- H2S is heavier than air and tends to collect in low-lying areas. Always test before entering any pit, sump or enclosed pump unit.
- H2S is flammable. The paradox is that concentrations that will explode would have killed you anyway. 43,000 to 460,000 PPM.
- Burning H2S emits another dangerous chemical, sulfur dioxide, or SO2. SO2 combined with moisture becomes sulfuric acid that can severely irritate the eyes, nose, throat and respiratory system.
- H2S is soluble in water, oils and most organic liquids. Solubility in liquid is about 1:23% or 12300 PPM. H2S release from liquid is greater as the temperature increases.
- H2S reacts to oxidizers, metals, peroxides and alkalis. It is corrosive to iron and forms "iron oxide scale". So caution should be taken when cleaning vessels or piping that may have been in contact with H2S.

Effects are:

0 to 100 PPM
- Rotten egg smell
- Burning eyes
- Respiratory irritation
- Loss of smell
- Headache
- Dizziness
- Coughing

TOXIC EFFECTS OF HYDROGEN SULFIDE

Hydrogen sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen sulfide is heavier than air (specific gravity = 1.19) and colorless. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. Hydrogen sulfide is a chemical asphyxiate. Toxicity data for hydrogen sulfide and various other gases are compared in table #3.

TOXICITY OF VARIOUS GASES

TABLE #3

COMMON NAME	CHEMICAL FORMULA	SPECIFIC GRAVITY (SG = 1)	THRESHOLD LIMIT (TLV) (1)	HAZARDOUS LIMIT (2)	LETHAL CONCERN (3)
HYDROGEN CYANIDE	HCN	0.94	10 PPM	150 PPM/HR.	300 PPM
HYDROGEN SULFIDE	H2S	1.19	10 PPM	250 PPM/HR.	600 PPM
SULFUR DIOXIDE	S02	2.21	5 PPM	100 PPM	1000 PPM
CHLORINE	CL2	2.45	1 PPM	4 PPM/HR.	1000 PPM
CARBON MONOXIDE	CO	0.97	50 PPM	400 PPM/HR.	1000 PPM
CARBON DIOXIDE	CO2	1.52	5000 PPM	5 %	10 %
METHANE	CH4	0.55	90000 PPM (9%)	COMBUSTIBLE	----------

1. Threshold Limit – concentration at which it is believed that all workers may be exposed to day after day without adverse effects.
2. Hazardous Limit – concentration that may cause death.
3. Lethal Concentration – concentration that will cause death with short-term exposure.

Threshold Limit = 10 PPM – 1972 by the ACGIH (American Conference of Governmental Industrial Hygienists)

100 to 300 PPM
- Drowsiness
- Severe eye and throat irritation
- Possible pulmonary edema (fluid in the lungs)

300 to 600 PPM
- Loss of reasoning
- Unconsciousness

Above 600 PPM will kill you almost immediately.

PEL (Permissible exposure limit).
OSHA defines the PEL as 10 PPM. This is the amount you can safely breathe, based on an 8-hour day.

STEL (short term exposure limit)
OSHA defines STEL for H2S as 15 PPM or the amount you can be exposed to for 15 minutes or less. IEI has procedures to evacuate the area at 10 PPM and to mask at 15 PPM.

Air Monitoring can be accomplished in several ways:
- Personal monitors
- Portable Monitors
- Fixed, full time area monitoring equipment.

Ventilation of H2S areas can be done with natural ventilation or mechanical ventilation.

PPE

- Escape units
- Air-line or supplied-air units
- SCBA

Emergency procedures for eye exposure:

- Flush eyes with clear running water for 15 minutes
- Force your eyelids open if necessary
- Seek medical attention

Emergency procedures for skin exposure:

- Remove contaminated clothing
- Rinse skin thoroughly
- Wash or dispose of contaminated clothing

Toxicity of Hydrogen Sulfide to Humans

H2S %	PPM	0-2 MINUTES	0-15 MINUTES	15-30 MINUTES	30-60 MINUTES	1-4 HOURS	4-8 HOURS	8-40 HOURS
0.005 0.010	50 100			Loss pf sense of smell	Respiratory tract irritation	Irritation of eyes & throat, coughing, labored breathing	Pain in eyes, sleeplessness	Increased symptoms
0.010	100		Loss of sense of smell, coughing	Irritation of eyes, throat, coughing	Labored breathing, sleeplessness, pain in eyes	Sharp pain in eyes, salivation & mucous discharge, coughing	Increased symptoms	Hemorrhage & death
00.20	200	Loss of sense of smell	Irritation of eyes, throat, coughing	Labored breathing, sleeplessness, pain in eyes	Blurred vision, difficult breathing, light shy	Increased symptoms	Hemorrhage & death	
0.025 0.035	250 350	Irritation of eyes, throat, coughing, loss of sense of smell	Painful secretion of tears, weariness	Labored breathing & dull pain in head	Increased pain in eyes, light shy, nasal catarrh, difficult breathing	Hemorrhage & death		
0.035 0.045	350 450	Irritation of eyes, throat, coughing, loss of sense of smell	Irritation of eyes, throat, coughing, Labored breathing	Increased pain in eyes, light shy, nasal catarrh, difficult breathing	Dizziness, weakness, increased irritation	Death		
0.050	500	Pain in eyes, difficulty breathing	Salivation & mucous discharge, severe pain in eyes, weariness	Severe eye pain, sleeplessness, heart palpitations, few cases of death	Dizziness, trembling in extremities, severe eye pain, great weakness & death.			
0.060 0.070 0.080 0.100 0.150	600 700 800 1000 1500	Collapse. Unconsciousnes s. Death.	Collapse. Unconsciousne ss. Death.					

EMERGENCY EQUIPMENT (19.15.36.13.N.4)

(Updated 08/09)

Equipment	Capacity	Location(s)	Capabilities/Description
Telephone System		Office	Provides ability to contact police, fire and medical response teams in the event of an emergency.
Cell Phones			Key personnel are provided with cell phones.
CB Radio(s)		Main office Tank Battery In Heavy Equipment	Provides the ability for office and landfarm personnel as well as truck drivers to communicate on the facility at all times.
Fire Extinguisher(s)	10 lb – ABC type 5 lb-ABC type 20 lb ABC type	Office Heavy Equipment Tank Battery	ABC type universal system effective on paper, wood and electrical fires as well as solvents.
Spill Containment Kits		Office Storage Tank Battery	
Absorbent		Office Storage Tank Battery	Sheets and granular material
Shovels, Rakes, Squeegees, Brooms		Storage Tank Battery	Used to spread and remove absorbents
OSHA CERTIFIED PPE: Gloves Eye Protection Hearing Protection Head Protection		Office	 Cotton, leather, chemical resistant. Safety glasses, goggles, face shields. Ear plugs. Hard Hat.
Eye Wash Stations Safety Shower Units		Office Tank Battery	Personnel exposed to toxic or hazardous commodities should shower or irrigate at these stations as instructed or until emergency medical services arrive.
First Aid Kits		Office Tank Battery	To provide immediate care until medical aid arrives. Meets OSHA standards.
Body Fluid Spill Kit		Office Tank Battery	Provide protection, containment & disposal of bodily fluids.
Self Contained Breathing Apparatus (SCBA)		Office	Designed to provide breathable air in environments with hazardous vapors and/or gases.
Respirators		Office	Designed to protect from inhaling harmful dusts, fumes, vapors, and/or gases.
Safety Harness		Office	Designed for use when working above ground to offer fall protection.
H2S Monitors 4 Way Gas Monitors		Office-Checked out to personnel for use on landfarm/in field	Monitor the environment to alert of toxic vapors and/or gases, combustibles and oxygen hazards.

EMPLOYEE EDUCATION AND TRAINING (19.15.36.13.P)

IEI employees receive Health & Safety training initially upon employment and receive refreshers throughout the year. Employees will also receive specialized training specific to duties and functions of their job and the area they are working in. Training will be provided by a qualified Contractor, HSO, and/or qualified personnel. Documentation/Certification of required training will be maintained in the employee's personnel file.

HAZWOPER/HAZCOM 40 HOUR INITIAL TRAINING, 8 HOUR ANNUAL REFRESHER, SUPERVISOR'S ADDITIONAL 8 HOUR SPECIALIZED TRAINING, CONFINED SPACE, & H2S - Training is provided for all personnel involved with potential hazardous waste sites in compliance with Federal OSHA 29 CFR 1910.120(e) which give personnel a thorough knowledge of hazardous materials, health and safety hazard potentials.

CONFINED SPACE ENTRY - Employees must receive specialized training prior to assignment to a job requiring confined space entry. Refresher training will be completed every three years, or when the need for more frequent refresher training is recognized.

MINING OPERATIONS-employees will participate in required *MSHA TRAINING.*

GENERAL OPERATIONS, PERMIT CONDITIONS/REQUIREMENTS, EMERGENCY SAMPLING METHODS, AND IDENTIFICATION OF RCRA EXEMPT AND NON-EXEMPT WASTE-key employees will be trained annually and/or as needed (permit or personnel changes).

Weekly TAILGATE & SAFETY MEETINGS to address site/daily specific safety matters (e.g. weather, tight locations, heavy traffic, use of fire extinguishers, etc.). Attendance Records will be kept in the Safety Meeting binder.

Training records will be maintained and kept at the main office for a period of 5 years.

CLOSURE AND POST CLOSURE PLAN

The purpose of the closure and post closure plan is to establish the minimum requirements and procedures for closure of the facility and/or cell(s) within the facility.

Industrial Ecosystems, Inc. (IEI) shall notify the division's environmental bureau at least 60 days prior to the cessation of operations at the surface waste management facility (SWMF) and provide a proposed schedule for closure (19.15.36.18.A.1 NMAC 02/14/07). If additional closure requirements are not received from the division within 60 days of notification, IEI will proceed with closure in accordance with the approved closure plan (19.15.36.18.A.3 NMAC 02/14/07).

During closure operations IEI will maintain the SWMF to protect fresh water, public health, safety and the environment (19.15.36.18.A.5 NMAC 02/14/07).

The following minimum standards shall apply to closure and post closure of the entire facility and/or part of the facility (19.15.36.18.D.4 NMAC 02/14/07).

Upon completion of closure, the operator shall re-vegetate the site unless the division has approved an alternative site use plan as provided in 19.15.36.18.G. NMAC 02/14/07. Re-vegetation shall consist of establishment of a vegetative cover equal to 70 percent of the native perennial vegetative cover (19.15.36.18.A.6).

The operator shall ensure that:

- Disking and addition of bioremediation enhancing materials continues until contaminated soils are remediated to the standards provided in 19.15.36.15.F. NMAC 02/14/07, or as otherwise approved by the division;
- Treated soils remediated to the foregoing standards are left in place are re-vegetated in accordance with 19.15.36.18.A.6. NMAC 02/14/07;
- When treated soils remediated to the foregoing standards are removed; the cell(s) will be re-vegetated in accordance with 19.15.36.18.A.6. NMAC 02/14/07;
- Contaminated soils that have not or cannot be remediated to the standards in 19.15.36.15.F. NMAC 02/14/07 are removed to a division-approved SWMF and the landfarm remediation area is re-vegetated in accordance with 19.15.36.18.A.6. NMAC 02/14/07;
- Berms will be removed;
- Buildings, fences, roads (constructed for SWMF purposes) and equipment are removed, the site cleaned-up and tests conducted on the soils for contamination;
- Annual vadose zone and treatment zone sampling reports are submitted to the division's environmental bureau until the division has approved final closure; and
- If choosing to use the methods specified in 19.15.36.15.H. NMAC 02/14/01, that the soil has an ECs of less than or equal to 4.0 mmhos/cm (dS/m) and SAR of less than or equal to 13.0

The post-closure care period for the SWMF shall be three years if the operator has achieved clean closure. During the three year period, IEI or designated responsible entity shall regularly inspect and maintain the re-vegetation. If a release occurs to the vadose zone and/or ground water, IEI or designated responsible entity shall comply with the applicable requirements of 19.15.30 and 19.15.29 NMAC 02/14/07 (19.15.36.18.F NMAC 02/14/07).

If IEI contemplates use of the land for purposes inconsistent with re-vegetation, IEI may, with division approval, implement an alternative surface treatment, provided that the alternative treatment will effectively prevent erosion (19.15.36.18.G. NMAC 02/14/07).

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19 W. APACHE ▲ FARMINGTON, NM 87401
(505) 327-3303 ▲ FAX (505) 327-1471 ▲ www.c-w-e.com

CLOSURE / POST CLOSURE ESTIMATE

TESTING FOR TWO YEARS	
20 Cells x 2 = 40 Tests 40 x $1,200.00	$ 48,000.00
Grading and Shaping Including Dike and Berm Removal 200 Acres 5 Acres/Day = 40 Days x 8 Hours/Day = 240 Hours Equipment @ $300/Hour x 240 Hours	$ 72,000.00
Seeding of 200 Acres @ $2,000/Acres	$ 40,000.00
Tank and Pit Removal 30 @ $200 Each	$ 6,000.00
3 Year Monitoring Quarterly (Post Closure) 12 Quarters @ $300 Each	$ 3,600.00
Contingency (Post Closure)	$ 20,000.00
TOTAL	**$ 243,600.00]**

CONTINGENCY PLAN
(19.15.36.13.N)

INTRODUCTION

The facility functions as a New Mexico Oil Conservation Division (NMOCD) permitted Surface Waste Management Facility (SWMF) specializing in remediating RCRA Exempt Oilfield Waste.

The Contingency Plan describes the actions to be taken by the SWMF personnel in the event of a major spill, fire or other response to incident. It includes information necessary to address response situations efficiently and in such a manner as to prevent or minimize hazards to human health and the environment due to fire, explosion or any other release of contaminants to the air, soil, surface water or groundwater.

The Contingency Plan is to be expeditiously carried out whenever there is a major emergency that could threaten human health or the environment. Implementing the procedures contained in this plan should effectively mitigate such threats.

The Emergency Coordinator, or the Alternate Emergency Coordinator(s), are responsible for implementing the Contingency Plan during an emergency response event; however, employees must also be familiar with the procedures in this plan to ensure that it is properly implemented.

Copies of the plan are maintained at the SWMF office and by the local law enforcement and emergency response departments for use during an emergency.

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Section IV: Waste Descriptions (19.15.36.12.N.6 NMAC)

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Section VI: Implementation

Section VII: Response Procedures (19.15.36.12.N.1 NMAC)

Section VIII: Identification of Waste(s) (19.15.36.12.N.6 NMAC)

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Section XIX: Evacuation Plan (19.15.36.12.N.5 NMAC)

Section XX: Reporting Requirements

Section XXI: Pollution Incident History

Section XXII: Availability and Revision of the Contingency Plan (19.15.36.12.N.7, 19.15.36.12.N.8 & 19.15.36.12.N.14)

SECTION I: PURPOSE AND OBJECTIVES

This Contingency Plan is designed to minimize hazards to human health and the environment from fire, explosions, or any unplanned sudden or non-sudden release of contaminants or oilfield waste to air, soil, surface water or ground water. The plan will demonstrate that facility-specific emergency procedures have been developed and will be implemented immediately whenever an emergency hazardous waste situation occurs at the facility.

SECTION II: GENERAL FACILITY INFORMATION

a. Crowe Blanco
b. Operator: Industrial Ecosystems, Inc. 49 CR 3150 Aztec, NM 87410 (505) 632-1782
c. Physical Address of the facility: (include county, latitude/longitude, and direction if necessary
d. Mailing address:
e. Permit #:
f. Key Contacts:

Title	Name	Telephone
Primary Emergency Coordinator	Rodney L. Williams	(505) 860-4068
Alternate Emergency Coordinator	Clyde Tafoya	(505) 860 -7360
Alternate Emergency Coordinator	Richard Chavez	(505) 860 -1141
Alternate Emergency Coordinator	Steve Abeyta	(505) 860 -3801
Management	Terry Lattin	(505) 860 -2885
Office Staff	Marcella Marquez	(505) 632 -1782

g. Facility Phone #
h. Facility Fax #

SECTION III: DESCRIPTION OF BUSINESS ACTIVITY

The facility is a NMOCD permitted SWMF (landfarm) which provides environmental services to local oilfield companies. The facility accepts Non-Hazardous, Resource Conservation and Recovery Act (RCRA) exempt waste(s) generated from oil and gas exploration and production. The primary intent of the facility is to landfarm / remediate oilfield waste for reuse and recycling.

SECTION IV: WASTE DESCRIPTIONS

Only Non-Hazardous, RCRA exempt and non-exempt (case by case basis) wastes are accepted at the facility. These materials are generated from oil and gas exploration and production (E&P) operations and are usually the by-product of "down-hole" operations.

Waste is delivered in both solid and liquid forms. Solid waste is placed into biopiles and liquid waste is managed in both tanks and pits at the "tank battery" area. The "tank battery" area of the facility is provided with a secondary containment system.

The following provides information and descriptions of the most common waste streams handled at the facility and their associated characteristics and/or constituents:

Waste Characterization

Characterization requirements for individual shipments of waste are specified on a waste stream basis. A waste stream is defined as waste material generated from a single site and a single process or an activity that is similar in material, physical form, and constituents. Exempt Oilfield Waste is initially categorized into four category groups that are related to the physical form of the waste.

1. Hydrocarbon stained soil and gravel
2. Tank Sludge, Tank Bottoms, Tank Cleaning Residue
3. Drilling fluids
4. Debris Waste

Exempt Waste(s)

- Hydrocarbon stained soils and gravels
- Tank bottom sludge
- Drilling fluids
- Drill cuttings
- Well completion, treatment, and stimulation fluids
- Basic sediment, water, and other tank bottoms
- Accumulated materials such as hydrocarbons, solids, sands and emulsion
- Pit sludges
- Gas plant dehydration wastes
- Workover wastes
- Cooling tower blowdown
- Gas plant sweetening waste
- Produced Water
- Spent filters, filter media, and backwash

Non-Exempt

- Unused fracturing fluids
- Gas plant cooling tower cleaning wastes
- Unused and used equipment lubricating oils
- Used hydraulic fluids

On-Site Generated Wastes

As a result of operating the facility, waste material is generated. A review of the several of the most common wastes generated at the facility is provided below:

- Wastes from Tanks and pits-approximately once every two years, it is necessary to remove the tank bottom sediment consisting of free water, residual oilfield wastes, and other materials such as soot and grit. A vacuum truck is used for this purpose.
- Contaminated Gloves, Rags, Paper, Absorbents, etc.-Contaminated gloves, rags, paper, absorbent and other miscellaneous material such as personal protective equipment is generated by the facility as a result of the management of the oilfield wastes.

SECTION V: EMERGENCY COORDINATORS

The emergency coordinator (HSE Specialist) and alternate emergency coordinator(s) are trained to respond in the event of a response situation. The emergency coordinator and/or the alternate emergency coordinators are authorized to commit the facility's resources, equipment and personnel, as necessary, to carry out this Contingency Plan.

At least one emergency coordinator, or an alternate emergency coordinator, is at the facility or on call and capable of reaching the facility in time to effectively respond to potential response situations. Each emergency coordinator and alternate emergency coordinator is familiar with this Contingency Plan, the operations and activities at the facility, the location and characteristics of wastes handled, the location of facility records, the facility layout, and the location and use of response and spill control equipment.

Table A-1 presents the list of Titles, Names, Location, Address, and the office, mobile and home telephone numbers of the Emergency Response Coordinators.

TABLE A-1

EMERGENCY COORDINATORS

Title	Name	Location	Address	Telephone
Primary Emergency Coordinator	Rodney L. Williams	Main Office	2825 Self Lane Farmington, NM 87402	(505) 632-1782 (O) (505) 860-4068 (C) (505) 326-5387 (H)
Alternate Emergency Coordinator	Clyde Tafoya	Land Farm	#14 CR 5221 Bloomfield, NM 87413	(505) 632-1782 (O) (505) 860-7360 (C) (505) 632-2679 (H)
Alternate Emergency Coordinator	Richard Chavez	Land Farm	904 N. Monterey Farmington, NM 87401	(505) 632-1782 (O) (505) 860-1141 (C) (505) 326-1941 (H)
Alternate Emergency Coordinator	Steve Abeyta	Main Office	#28 CR 4906 Bloomfield, NM 87413	(505) 632-1782 (O) (505) 860-3801 (C) (505) 632-8880 (H)

Whenever there is an imminent or actual response situation, notice is given to the emergency coordinator and/or alternate(s). As is discussed in subsequent sections, it is then the responsibility of the emergency coordinator or the alternate emergency coordinator (when the emergency coordinator is not available) to:

- evaluate the situation and decide whether to implement the Contingency Plan;
- activate the internal alarm systems (if required);
- whenever there is a release, fire or explosion identify the character, exact source, amount and extent of any released materials;
- assess possible hazards to human health or the environment;
- if implementation is warranted, supervise the response following the procedures in the Contingency Plan;
- notify outside emergency responders and state and local agencies
- based on the severity of the incident, supervise the evacuation plan, if law enforcement or emergency responders order an evacuation;
- act as liaison between emergency and state agencies and facility personnel;
- supervise cleanup operations following the procedures in the Contingency Plan;
- perform follow-up emergency reporting procedures.

SECTION VI: IMPLEMENTATION

Response situations may occur at any time as a result of natural forces, trespassing, accidents, spills or other situations that disrupt essential operations. The emergency coordinator and alternate(s) must be prepared to respond in a technically-effective and time-efficient manner.

The decision to implement the Contingency Plan depends upon whether an imminent or actual incident such as a fire, explosion or release of contaminants could threaten human health or the environment. The emergency coordinator or alternate(s) decides if the Contingency Plan should be implemented. For general guidance and consideration, the Contingency Plan may be implemented in response to the situations detailed below. The decision to implement the Plan will ultimately rest with the emergency coordinator.

Fire or Explosion:

- Fire that may cause the release of toxic fumes;
- Fire that may spread and ignite waste materials or cause an explosion;
- Fire that may spread off-site or cause personal injury;
- Use of water or chemical fire suppressants that may result in excessive runoff;
- An imminent danger exists that an explosion may occur;
- An explosion has occurred.

Spill or Release:

- Spill of a flammable liquid that presents an imminent danger of an explosion;
- Spill resulting in the release of liquids from a secondary containment system;
- Spill that may cause potential ground water contamination;
- Spill that can not be contained on-site;
- Spill of significant size or danger to threaten human health, contaminate the environment or cause personal injury.

Natural Disasters: (In the event of a flood, the Stormwater Management Plan is implemented.)

- In the event of a flood, the Stormwater Management Plan will be implemented.

Civil Unrest:

- The facility's property has been breached by individual(s) intent on sabotage.

SECTION VII: RESPONSE PROCEDURES

Response Classification

The facility has a classification system that is used to determine the severity of a given situation. Response activities and implementation procedures are dictated by how an event is classified. The emergency coordinator or the alternate emergency coordinator classifies the event based on his or her assessment and judgment.

Events are classified as either incidental situations or major emergencies. An incidental situation encompasses small spills or fires that can be effectively cleaned up or extinguished without outside assistance. Such an event would *not* require implementation of the Contingency Plan. A major emergency addresses any potential spill, fire or explosion involving wastes that could pose a serious threat to human health or the environment and could likely require outside assistance. A major emergency would require implementation of the Contingency Plan.

Incidental Event

An incidental event applies to minor fires or releases involving a waste that can be easily contained and effectively cleaned up and does not impact human health or the environment. A small leak, spill or fire would fall under this classification. The contaminant involved would be identifiable with its hazards known and the necessary emergency equipment available to facility personnel for response. Such an event would present only minimal potential for injury or property damage with essentially no potential for public exposure. The event would be controlled by the facility personnel without outside assistance. Such events do not require implementation of the Contingency Plan. Response actions would be performed by on-site personnel.

Major Emergency

A major emergency warrants full implementation of the Contingency Plan to address emergencies that could seriously threaten human health or the environment. Emergencies in this category would likely require the assistance of outside emergency response organizations.

Examples of major emergencies are:

- Non-containable, quickly-spreading fire or one that could potentially cause an explosion;
- Non-containable release that threatens to enter storm sewers, surface or groundwater;
- release of materials that pose significant hazards to human health or the environment; or
- an explosion.

Spill Reporting

Any release of contaminant to the environment from a tank system must be reported to the NMOCD within 24 hours of its detection (505) 334-6178. Spills or overfills that result in a release that is less 25 gallons of petroleum or any hazardous substances that are less than the reportable quantity shall immediately be cleaned up. NMOCD shall be notified if cleanup cannot be accomplished within 24 hours, or within another reasonable time period which has been established by NMOCD.

SECTION VIII: IDENTIFICATION OF WASTE(S)

Whenever there is a release, fire or explosion, the emergency coordinator must identify the character, source, amount and extent of any released materials and obtain other pertinent information related to the event as expeditiously as possible. Much of this information can be readily obtained from the facility operating logs (i.e. Material Entry Records and Tank Battery logs). These logs provide information on the type and volume of material brought into the facility and in the tanks and pits located at the "tank battery" area. The logs are maintained at the facility and are updated each operating day.

SECTION IX: ASSESSMENT

The emergency coordinator assesses the potential for a release or fire to get beyond the control of facility personnel. The assessment takes into account the magnitude of the event, the proximity to facility boundaries and surrounding neighbors, the potential for fires to spread or contaminant releases to reach groundwater or surface water and the progress being made by facility personnel in controlling the release or fire. The assessment also considers both direct and indirect effects of the release, fire or explosion (e.g., the effects of any toxic, irritating or asphyxiating gases that may be generated, or the effects of any contaminated runoff).

After identifying the nature of the event and the type of contaminants involved by review of the facility operating logs, the emergency coordinator determines the appropriate response. If necessary, the emergency coordinator reviews the North American Emergency Response Guidebook (ERG) for information on specific hazards. This publication lists materials by chemical name as well as by USDOT UN numbers and details the procedures that should be used to respond to an incident involving specific materials.

SECTION X: NOTIFICATION

If the event is classified as incidental, then it is handled by facility personnel.

If the event is a major emergency, the emergency coordinator performs the following:

- implements the Contingency Plan;
- supervises the response following the procedures in the Contingency Plan;
- notifies NMOCD and the National Emergency Response Center, if necessary; and
- notifies appropriate emergency, state and local agencies as detailed below:

Police Department.....if there is imminent danger to human health.
Fire Department.....if there is an uncontrollable fire or spill or potential for toxic fumes.
Hospital.....if there are injuries or missing personnel.
NMOCD.....if the Contingency Plan is implemented.
Cleanup Contractor.....if assistance with cleanup is needed after a release.

Table A-2 presents the emergency agencies with their telephone numbers that may be notified in the event of a major emergency requiring outside assistance.

TABLE A-2

Outside Notification of Major Emergencies

Department or Agency	Phone Number	Initial Criteria for Contact
Emergency Notification Phone Numbers		
Internal: Emergency Response Coordinators: Rodney Williams, HSE Specialist Clyde Tafoya, Facility Operations Mgr. Richard Chavez, Operators Supervisor Steve Abeyta, Operations Supervisor	 (505) 860-4068 (505) 860-7360 (505) 860-1141 (505) 860-3801	Implementation of the Contingency Plan
External: National Response Center 24 hour Emergency Number	 (800) 424-8802	Release of a reportable quantity of contaminants to the environment.
Chemtrec	(800) 262-8200	Hazardous materials & dispatch of HAZMAT response units.
State Patrol	(505) 334-6622 or (505) 325-7547	Notify if there is an imminent danger to human health.
NMOCD	(505) 334-6178	Notify if any spills or releases.
Local Law Enforcement Non-Emergency Dispatch	911 (505) 334-6622	Notify if there is an imminent danger to human health.
Blanco Fire Department	911 or (505) 632-8135	Notify if there is a fire, uncontrolled spill, or other imminent danger.
Emergency Dispatch San Juan Regional Medical Center	911 (505) 609-2000	Notify if there are any injuries.

SECTION XI: Control Procedures

Response actions to be taken in specific situations are described in this Section. Incidents such as a fire, explosion or release of contaminants that could threaten human health or the environment are expeditiously reported to the emergency coordinator who then decides whether or not to implement the Contingency Plan.

Incidental Spills

An incidental spill is defined as a spill that does not impact human health or the environment and that can be completely cleaned up within 24 hours of detection.

Responses to incidental spills do not require implementation of the Contingency Plan. The following actions are taken in response to such a situation. If a spill occurs on the facility within a secondary containment area, actions are taken promptly to remove the spill. Should the spill occur outside a secondary containment area, different actions are taken according to whether the spill is on a paved or unpaved area:

- If the spill is on a paved area, the contaminant will be collected with sorbent materials and/or by use of a king vacuum truck. The inert sorbents are collected and managed appropriately.
- If the spill is on an unpaved area, the contaminant will be collected with sorbent material and/or by use of a king vacuum truck. The sorbent material and any contaminated soil are collected and managed.
- If a spill occurs while disposing of waste at the tank battery area, the response actions described above are followed. Spills inside the tank battery areas are prevented from contaminating the environment by the unit's secondary containment systems.
- Sorbent materials, resulting from cleanup actions will be collected and disposed of off-site at a properly permitted waste treatment or disposal facility. Contaminated soils containing recovered oilfield waste will be collected and treated on the facility.

The individual reporting a spill to NMOCD should be prepared to give his name, position, company name, address, telephone number, time and date. He should also describe the extent of injuries, material spilled, source and, if possible, an estimate of the amount, extent of any contamination and the containment status. More detailed reporting requirements are contained in Section XX.

Cleanup of incidental releases is overseen by the emergency coordinator. At the conclusion of the cleanup efforts, the emergency coordinator visually inspects the spill area to assess whether the on-site response actions were successful in preventing impact to the environment.

Major Spills

Any spill that cannot be completely remedied using the methods described above is a major spill. A major spill is usually the result of a vehicular accident, tank overfilling, equipment failure, inability to identify the contaminant released, and release of materials that pose significant health hazards, explosion or a fire. Spilled material, which escapes collection, could potentially contaminate soil, surface water, groundwater, sanitary sewer systems and storm sewer systems. If a major spill occurs, personnel must notify the emergency coordinator as soon as practicable. Under the direction of the emergency coordinator and after identifying and assessing the situation, emergency response to this type of spill should be as follows:

- put on protective equipment including the appropriate respiratory protection equipment (when required) following the instructions of the ERG;
- assist any injured people;
- stop or slow the flow of material (i.e., defensive actions), if possible without being exposed;
- retain, contain, isolate, or slow the flow of the material if it cannot be stopped;
- contact local law enforcement, emergency response personnel, NMOCD, and if necessary the National Response Center;
- prevent further migration of leaks or spills to soils or surface water;
- remove and dispose of and/or treat any visible contamination of soil or surface water;

If the facility stops operation in response to a major emergency, the emergency coordinator will monitor for leaks, pressure buildup gas generation or equipment ruptures as appropriate. Major emergencies are promptly reported by the emergency coordinator(s).

The individual reporting such an event should be prepared to give his name, position, company name, address, telephone number, time and date. He should also describe the extent of injuries, material spilled, source and, if possible, an estimate of the amount, extent of any contamination, the containment status, and specify any equipment needed. More detailed reporting requirements are contained in Section XX.

Aggressive remedial actions are expeditiously employed to minimize any impacts associated with a major emergency. Final response actions are implemented following consultation with NMOCD, if requested.

Contaminated material, resulting from cleanup actions for major spills are disposed of off-site at a properly permitted waste treatment or disposal facility. Contaminated soils containing recovered oilfield waste will be collected and treated on the facility.

Fires and Explosions

If a small fire occurs, personnel must act quickly with a fire extinguisher to put out the fire before it spreads without undue threat to personal safety. Such a fire would be defined as incidental and would not require implementation of the Contingency Plan.

If a fire cannot be extinguished immediately or an explosion occurs, implementation of the Contingency Plan is required. The fire department is promptly notified and the facility may be evacuated.

It should be noted that facility personnel should only respond to incidental fires; that is, those fires which can immediately be extinguished using a fire extinguisher. Any fire that cannot be brought under control immediately, or has the potential to become uncontrollable warrants implementation of the Contingency Plan. The emergency coordinator determines if evacuation of the facility is warranted. Should such action be taken, the emergency coordinator:

- activates the internal facility communication systems to notify facility personnel for evacuation;
- notifies the NMOCD, and the National Response Center, if necessary; and
- notifies appropriate emergency, state and local agencies deemed necessary, such as law enforcement and emergency response departments;
- Sorbent materials will be collected and containerized for proper management and disposed of at the local landfill. Contaminated soils containing recovered oilfield waste will be collected and treated on the facility.
-

Upon review of the fire or explosion incident, police and fire officials may initiate evacuation proceedings of the neighboring properties (based on guidance detailed in the ERG).

Any fire or response actions undertaken by off-site emergency response personnel are required to wear the appropriate personal protective equipment.

The emergency coordinator reporting a fire or explosion should be prepared to give his name, position, company name, address, telephone number, time and date. He should also describe the type of incident, extent of injuries, material, source and, if possible, an estimate of the amount, extent of any contamination, the containment status, and specify any equipment needed. More detailed reporting requirements are contained in Section XX.

Contaminated material, resulting from cleanup actions for fires or explosions will be disposed of off-site at a properly permitted waste treatment or disposal facility.

SECTION XII: PREVENTION OF RECURRENCE OR SPREAD

Quick response to a fire, explosion or release is the primary method by which recurrence or spread of fires, explosions or releases can be prevented. Specific actions to prevent the recurrence or spread of fires, explosions or releases include determining the source or cause of the incident; ceasing operations and turning off feed lines, auxiliary fuel lines and power supply to the affected area; cleaning up debris

from the situations and maintaining good housekeeping; containing and collecting released waste; recovering and isolating affected containers; ensuring that a fire is completely extinguished; and decontaminating the affected area/equipment.

Examples of further measures to prevent the recurrence or spread of fires, explosions or releases include:

- prohibiting smoking except in designated areas; and
- protecting the waste management/storage areas from open flames, cutting and welding activities, hot surfaces and frictional heat.

If a leak was due to a release from a primary tank system into the secondary containment system, the source of the leak will be repaired before returning the system to service.

If the source of the leak is from a component not in secondary containment, facility personnel will provide secondary containment for that component before it is returned to service unless it is above ground and may be readily inspected.

SECTION XIII: INCOMPATIBLE WASTE(S)

No wastes that are incompatible with spilled or released material may be received by the facility until the emergency coordinator determines that the hazards posed by the response event have been fully remedied. The emergency coordinator will also ensure that no wastes incompatible with the spilled or released material will be stored in the area of the release until it is fully cleaned up.

SECTION XIV: CONTAINER SPILLS AND LEAKAGE

Upon discovery of any spills or leaks, precautions to protect personnel in the immediate area are taken. If necessary, the area is isolated. Responding personnel select and utilize the proper protective equipment and attempt, if feasible, to stop the leak by plugging the hole or by changing the position of the container. Personnel take precautions so as not to drive or walk into or through any vapors or spilled materials. Spills and leakage from containers holding waste are collected and placed into a new container. Damaged containers are placed in salvage containers, relabeled and marked accordingly. Cleanup in the container management areas may include:

- use of sorbent material;
- dry sweeping;
- shoveling;
- pumping;
- damp mopping and wipe down;
- complete washdown; or
- a combination of the above.

Rupture of a container at the facility elicits a response that is proportional to the seriousness of the release. Spilled liquid wastes are stabilized with sorbent material. Solid wastes and sorbent material used to capture spilled residual liquids are properly disposed of.

If a slow container leak is detected, the entire container is packed into an appropriately sized recovery drum, relabeled and marked. The facility inspection procedures assure that adequate spill cleanup equipment is available for spill containment and cleanup.

The specific actions to be taken in response to incidental or major spills or leaks are described in Section XI, respectively.

SECTION XV: PIT/TANK SPILLS AND LEAKAGE

In the event of a release involving any portion of the "tank battery" area, the operator immediately stops the flow of waste into the system and notifies the emergency coordinator. The system is then inspected to determine the cause and extent of the release. Based on this inspection, additional measures may be necessary to prevent further migration of the release. The actions to be taken in response to incidental and major releases are described in Section XI.

A release related to the "tank battery" area would most likely collect into the secondary containment system. Any released material in the secondary containment systems is removed within 24 hours or as expeditiously as possible to prevent harm to human health or the environment. The secondary containment systems prevent migration to soils and surface waters.

If the release was from the pit/tank system, facility personnel will remove as much waste from the pit/tank as is necessary to prevent further releases and to allow inspection of the pit/tank. This will be completed within 24 hours after detection of the leak or as soon as practical upon demonstration that the 24 hour time frame is not feasible.

SECTION XVI: POST-EMERGENCY EQUIPMENT MAINTENANCE

Following its use, non-disposable personal protective and response equipment owned by the facility is decontaminated with a soap and water solution and thoroughly rinsed. The emergency coordinator visually inspects the response equipment after decontamination for residual contamination, damage, excessive wear and proper operation. If equipment shows signs of residual contamination, the emergency coordinator may request that the equipment be decontaminated again or if these procedures fail to decontaminate the particular item, the emergency coordinator may choose to dispose of the item. If an emergency equipment item is damaged and cannot be repaired, the emergency coordinator will instruct personnel to dispose of the item. The emergency coordinator will order replacement equipment as needed and or make arrangements to repair any inoperable equipment as soon as practicable.

SECTION XVII: EMERGENCY EQUIPMENT

Table A-3 presents the list of emergency equipment, capacity, location(s), and capabilities/description of the equipment.

Table A-3

EMERGENCY EQUIPMENT

Equipment	Capacity	Location(s)	Capabilities/Description
Communication Equipment / Personnel Alarms			
Telephone System		Office	Telephones with loudspeaker/paging systems for internal and external communication.
Cell Phones			Key personnel are provided with cell phones.
CB Radio(s)		Main office Tank Battery In Heavy Equipment	Provides the ability for office and landfarm personnel as well as truck drivers to communicate on the facility at all times.
Air Horn		Office Tank Battery	In case of power failure, used to notify facility personnel of an emergency.
Fire Extinguisher(s)	10 lb – ABC type 5 lb-ABC type 20 lb ABC type	Office Heavy Equipment Tank Battery	ABC type universal system effective on paper, wood and electrical fires as well as solvents.
Eye Wash Stations		Office & Tank Battery	Provides quick flushing of eyes that have been exposed to chemicals.
Emergency Shower		Tank Battery	Provides quick washing of personnel who have been exposed to injurious chemicals.
First Aid Kits		Office Tank Battery	To provide immediate care until medical aid arrives. Meets OSHA standards.
Body Fluid Spill Kit		Office Tank Battery	Provide protection, containment & disposal of bodily fluids.
OSHA CERTIFIED PPE: Gloves Eye Protection Hearing Protection Head Protection		Office	 Cotton, leather, chemical resistant. Safety glasses, goggles, face shields. Ear plugs. Hard Hat.
Sorbent Material		Office Storage Tank Battery	Inert sorbent to handle incidental spills.
Spill Cleanup Equipment (Shovels, Rakes, Squeegees, Brooms)		Storage Tank Battery	Spill cleanup equipment to collect spills and spill residues
Respiratory Protection Equipment		Office	Respirators are selected and used on the basis of the hazards to which employees are potentially exposed. Dedicated and properly fit-tested respirators are available for use.
Safety Harness		Office	Designed for use when working above ground to offer fall protection.
H2S Monitors 4 Way Gas Monitors		Office-Checked out to personnel for use on landfarm/in field	Monitor the environment to alert of toxic vapors and/or gases, combustibles and oxygen hazards.

SECTION XVIII: COORDINATION ARRANGEMENTS

Arrangements will be made with the local law enforcement, and local emergency response teams to familiarize them with the layout of the facility, the properties of materials handled and associated hazards, locations where facility personnel normally work, entrances to and roads inside the facility and possible evacuation routes. A copy of the Contingency Plan will be sent to the agencies listed below:

- Police Department;
- Emergency Response Department (local fire and rescue); and
- San Juan Regional Hospital.

SECTION XIX: EVACUATION PLAN

The facility exits are clearly marked and employees are aware of the potential escape routes. Posted in several locations at the facility is a figure showing available exits from the area and the direction to the personnel staging area. A drawing with the emergency evacuation routes for the facility will be attached to this plan.

In the event of a major emergency, the on-site emergency coordinator may signal personnel to evacuate the facility by sounding the alarm and/or air horn and verbally announcing the evacuation over the loudspeaker and/or CB radios.

Personnel evacuate in an orderly fashion to the staging area directly across from the main access gate to the facility. Law enforcement and emergency response teams are informed of the evacuation from a safe, on-site location or from a neighboring area. Everyone remains at the staging area and awaits instructions from law enforcement and emergency response personnel or the on-site emergency coordinator.

If the emergency coordinator believes that a threat to human health or the environment outside the facility exists, s/he notifies the appropriate agencies. The emergency coordinator is available to help the appropriate officials decide if evacuation of the neighboring properties is necessary. These evacuation proceedings are initiated by law enforcement or emergency response personnel.

SECTION XX: REPORTING REQUIREMENTS

In the event of an incidental release, the emergency coordinator notifies the general manager and NMOCD.

For major emergencies, the emergency coordinator(s) will notify the necessary and required parties listed in Table A-2. Any release of contaminants to the environment from a tank system must be reported to the NMOCD within 24 hours of its detection

Facility personnel will verbally report any noncompliance which may endanger health or the environment within 24 hours from the time personnel become aware of the circumstances, including information concerning the release of any contaminants that may cause an endangerment to public drinking water and any information of a release or discharge of contaminants or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility.

A written submission shall also be provided within 5 days of the time facility personnel become aware of the circumstances. This submission will contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

When NMOCD is contacted, the reporting individual is prepared to provide the following information:

- Name and telephone number of notifier;
- Name and address of the facility;
- Time and type of incident;
- Name and quantity of material(s) involved, to the extent known;
- Extent of injuries, if any; and
- The possible hazards to human health or the environment outside the facility.

The emergency coordinator will document the time, date and details of any incident that requires the implementation of the Contingency Plan. Within 10 days of the incident, a written report, detailing the circumstances of any incident that requires the implementation of the Contingency Plan will be submitted.

The report will include:

- Name, address and telephone number of the owner or operator;
- Name, address and telephone number of the facility;
- Date, time and type of incident;
- Name and quantity of material(s) involved;
- Extent of injuries, if any;
- Description of response activities;
- An assessment of actual or potential hazards to human health or the environment;
- The likely route of migration of the release;
- Characteristics of surrounding soil;
- Results of monitoring and sampling;
- Proximity to ground and surface water, and populated areas; and
- Estimated quantity and disposition of recovered materials that result from the incident.

SECTION XXI: POLLUTION INCIDENT HISTORY

There are no records of a major pollution incident having occurred at this facility.

SECTION XXII: AVAILABILITY AND REVISION OF THE CONTINGENCY PLAN

This Contingency Plan is kept at the facility and is updated when there are changes to the facility that may affect the Plan. Copies of this document and revisions are provided to local authorities and organizations listed in Section XVIII. In addition, this Contingency Plan, and revisions to this Contingency Plan, are made available to the manager, supervisors and emergency response personnel as well as employees working at the facility.

The Emergency Coordinator may amend the plan during an emergency, as necessary, to protect fresh water, public health, safety or the environment.

The Contingency Plan will be reviewed and updated, within 5 days, whenever:

- the facility's Permit is revised or modified;
- the list or location of emergency equipment changes;
- the facility changes in its design, construction, operation, maintenance, or other circumstances in a way that increases the potential for fires, explosions, or releases of contaminants, or changes the response necessary in an emergency;
- the names, addresses, or phone numbers of emergency coordinators change; or
- the Contingency Plan fails when implemented in an emergency.

DRAINAGE PLAN

INDUSTRIAL ECOSYSTEMS, INC.
BLANCO LAND FARM

The attached maps, table, and graphs represent the Drainage Plan prepared for the above referenced facility.

The calculations were prepared utilizing SCSTR55 methods and also utilizing the point precipitation frequency estimates from the NOAA Atlas 14 for Bloomfield, NM. Calculations were prepared based on a 25 year 1 hour rain storm. The drawings indicate the location of berms, v-ditches, and dykes designed to protect the major waterways. In addition, the 200' setback was maintained from the major waterways.

In addition to the drainage study, we have included the Construction Storm Water Protection Plan as part of this report and drawings.

CHENEY-WALTERS-ECHOLS, INC.
909 W. APACHE
FARMINGTON, NM 87401
(505) 327-3303

Hydrograph Summary Report

	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Return period (yrs)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	SCS Runoff	4.03	1	40	4,979	25	----	------	------	Basin 1
2	SCS Runoff	9.09	1	44	13,445	25	----	------	------	Basin 2
3	SCS Runoff	53.79	1	50	99,939	25	----	------	------	Basin 3
4	SCS Runoff	53.15	1	46	86,427	25	----	------	------	Basin 4
5	SCS Runoff	10.23	1	38	11,648	25	----	------	------	Basin 5
6	SCS Runoff	21.30	1	41	27,518	25	----	------	------	Basin 6
7	SCS Runoff	22.50	1	38	25,625	25	----	------	------	Basin 7
8	SCS Runoff	36.99	1	44	54,722	25	----	------	------	Basin 8
9	SCS Runoff	25.10	1	51	48,834	25	----	------	------	Basin 9
10	SCS Runoff	46.85	1	41	60,540	25	----	------	------	Basin 10
11	SCS Runoff	18.21	1	38	20,733	25	----	------	------	Basin 11

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Hydrograph Summary Report

Hyd No.	Hydrograph Type (origin)	Peak Flow (cfs)	Time Interval (min)	Time to Peak (min)	Volume (cuft)	Return Period (yrs)	Inflow hyd (s)	Maximum Elevation (ft)	Maximum Storage (cuft)	Hydrograph Description
1	SCS Runoff	4.03	1	40	4,979	25	---	---	7,144	Basin 1
2	SCS Runoff	9.09	1	44	13,445	25	---	---	19,109	Basin 2
3	SCS Runoff	53.79	1	50	99,939	25	---	---	104,473	Basin 3
4	SCS Runoff	53.15	1	46	86,427	25	---	---	111,581	Basin 4
5	SCS Runoff	10.23	1	38	11,648	25	---	---	18,003	Basin 5
6	SCS Runoff	21.3	1	41	27,518	25	---	---	29,420	Basin 6
7	SCS Runoff	22.50	1	38	25,625	25	---	---	32,260	Basin 7
8	SCS Runoff	36.99	1	44	54,722	25	---	---	60,017	Basin 8
9	SCS Runoff	25.10	1	51	48,834	25	---	---	50,414	Basin 9
10	SCS Runoff	46.85	1	41	60,540	25	---	---	66,791	Basin 10
11	SCS Runoff	18.21	1	38	20,733	25	---	---	22,671	Basin 11

Project File: HWS 2009 - 09467drn.xls

Hydrograph Plot

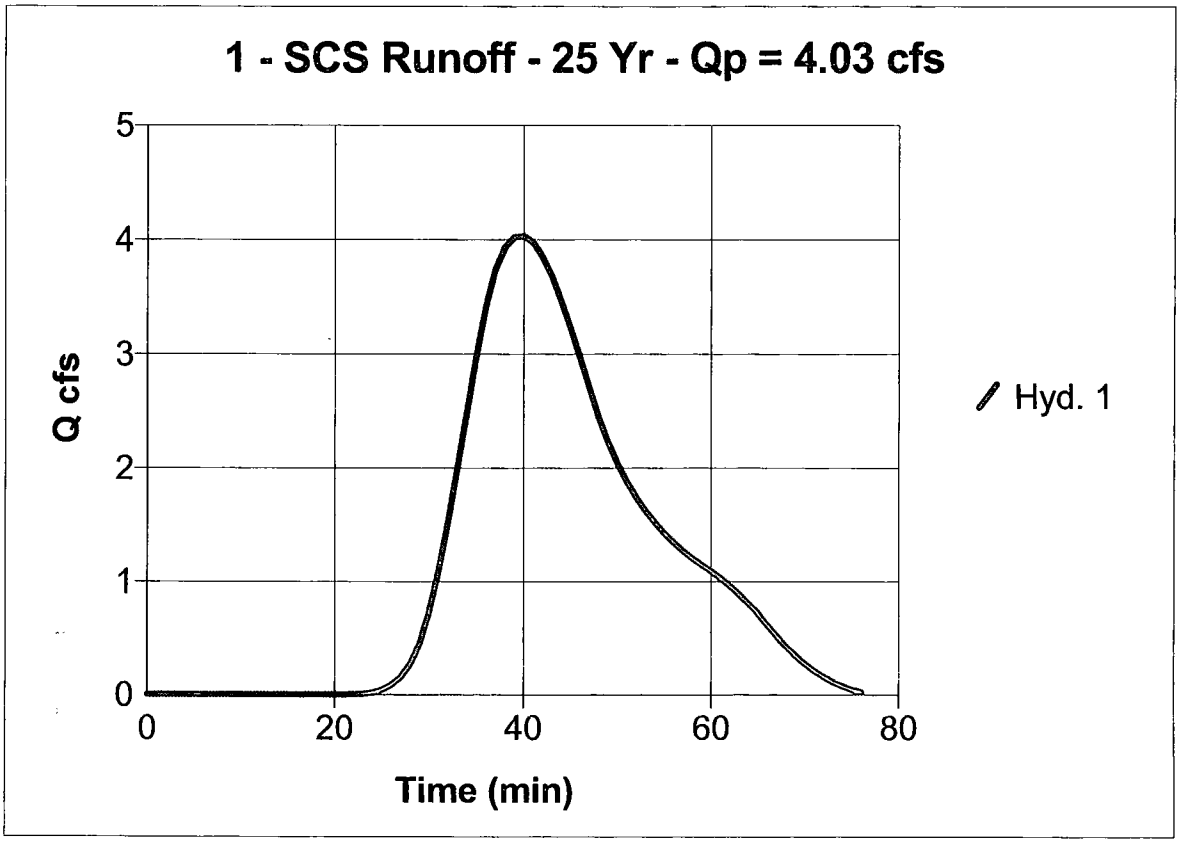
English

Hyd. No. 1

Basin 1

Hydrograph type	= SCS Runoff	Peak discharge	= 4.03 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 2.10 ac	Curve number	= 86
Basin Slope	= 1.0 %	Hydraulic length	= 323 ft
Tc method	= LAG	Time of conc. (Tc)	= 10.5 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 4,979 cuft



Hydrograph Plot

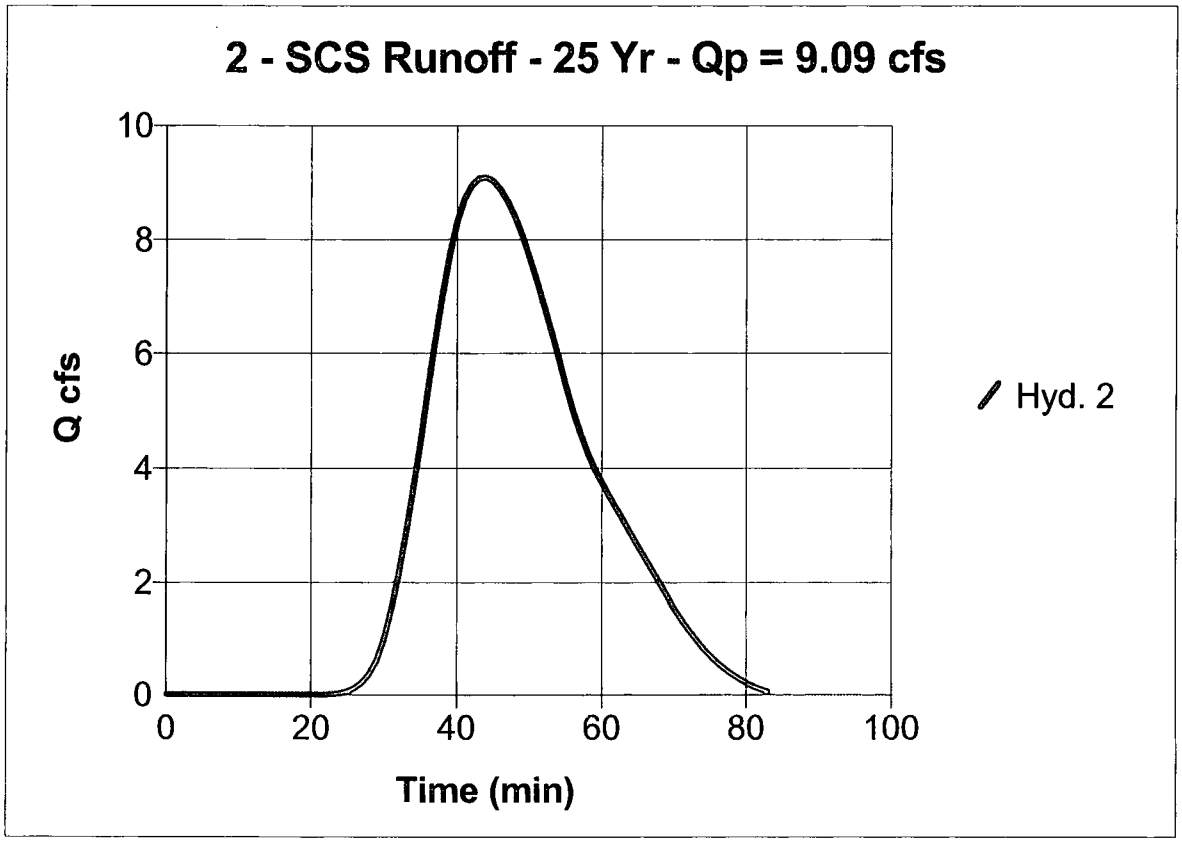
English

Hyd. No. 2

Basin 2

Hydrograph type	= SCS Runoff	Peak discharge	= 9.09 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 5.70 ac	Curve number	= 86
Basin Slope	= 2.8 %	Hydraulic length	= 985 ft
Tc method	= LAG	Time of conc. (Tc)	= 15.3 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 13,445 cuft



Hydrograph Plot

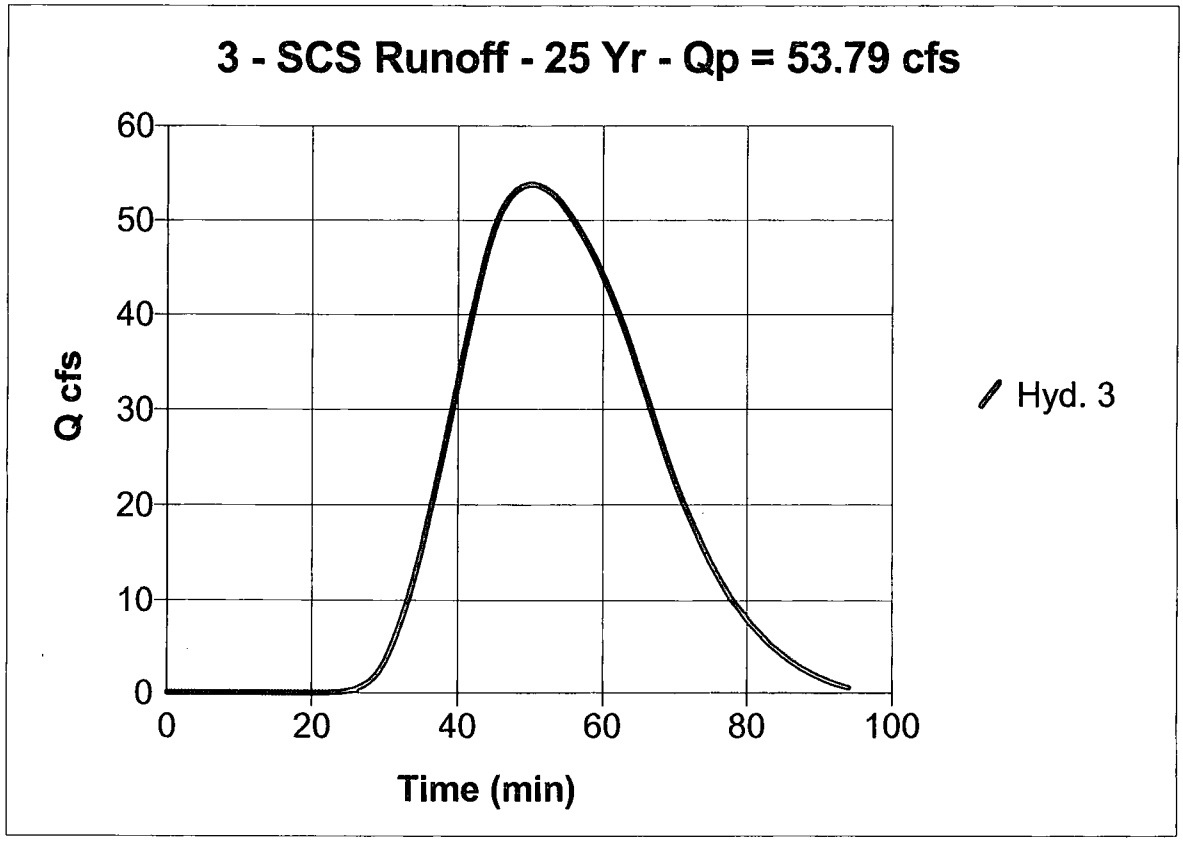
English

Hyd. No. 3

Basin 3

Hydrograph type	= SCS Runoff	Peak discharge	= 53.79 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 42.90 ac	Curve number	= 86
Basin Slope	= 2.4 %	Hydraulic length	= 1608 ft
Tc method	= LAG	Time of conc. (Tc)	= 24.5 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 99,939 cuft



Hydrograph Plot

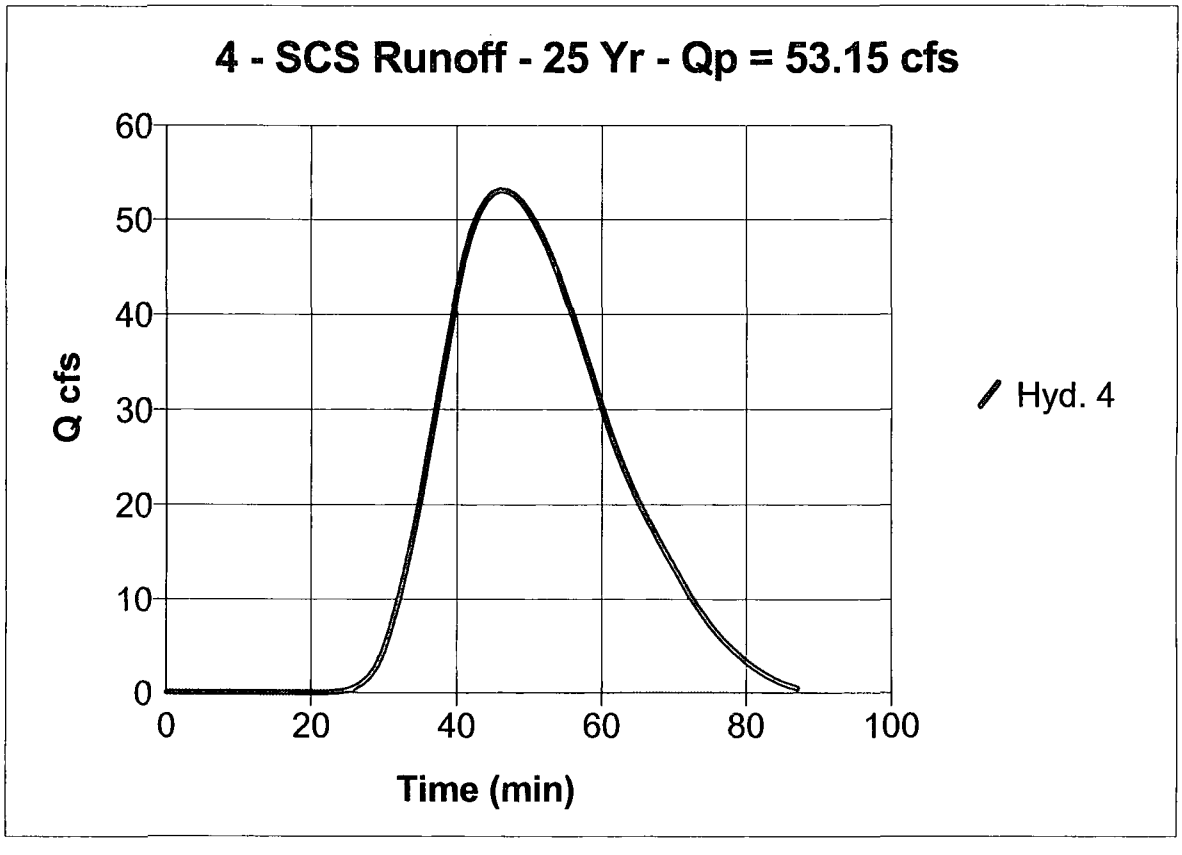
English

Hyd. No. 4

Basin 4

Hydrograph type	= SCS Runoff	Peak discharge	= 53.15 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 37.10 ac	Curve number	= 86
Basin Slope	= 3.9 %	Hydraulic length	= 1673 ft
Tc method	= LAG	Time of conc. (Tc)	= 19.9 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 86,427 cuft



Hydrograph Plot

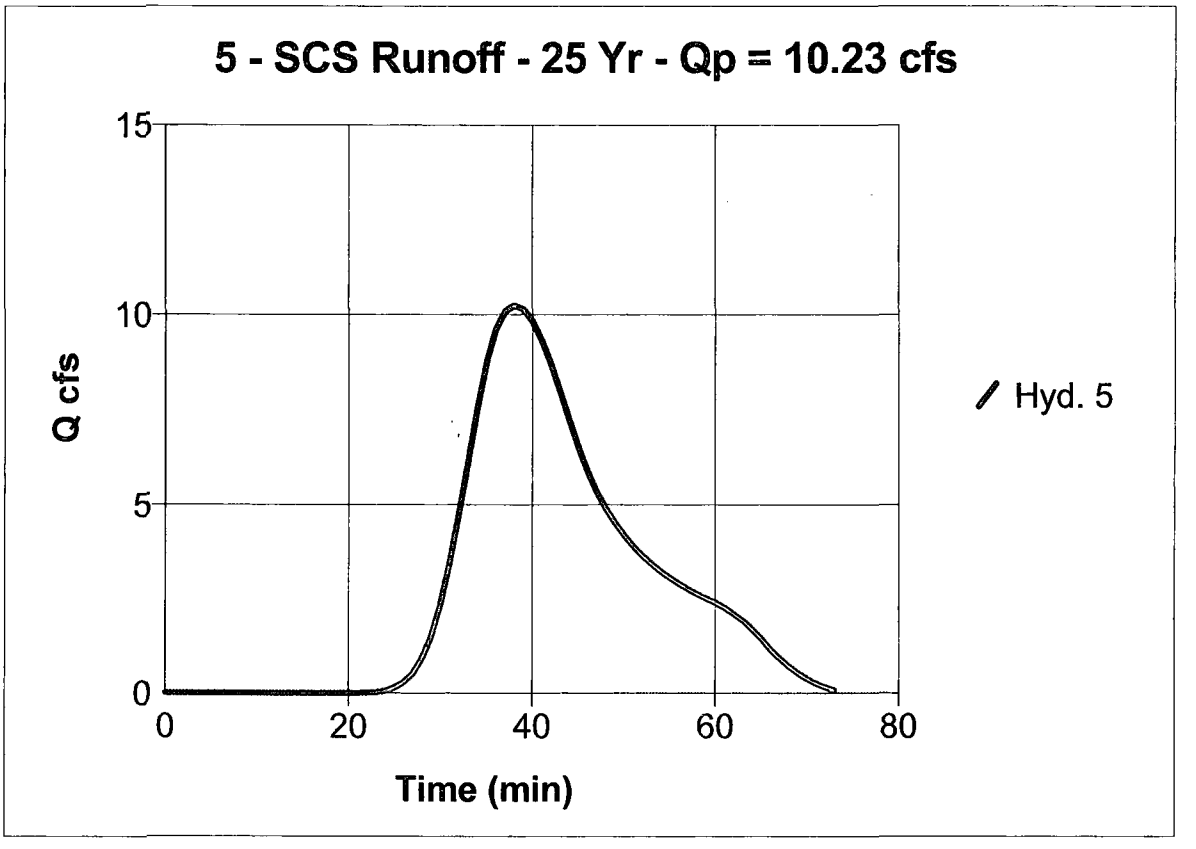
English

Hyd. No. 5

Basin 5

Hydrograph type	= SCS Runoff	Peak discharge	= 10.23 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 5.00 ac	Curve number	= 86
Basin Slope	= 5.1 %	Hydraulic length	= 710 ft
Tc method	= LAG	Time of conc. (Tc)	= 8.7 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 11,648 cuft



Hydrograph Plot

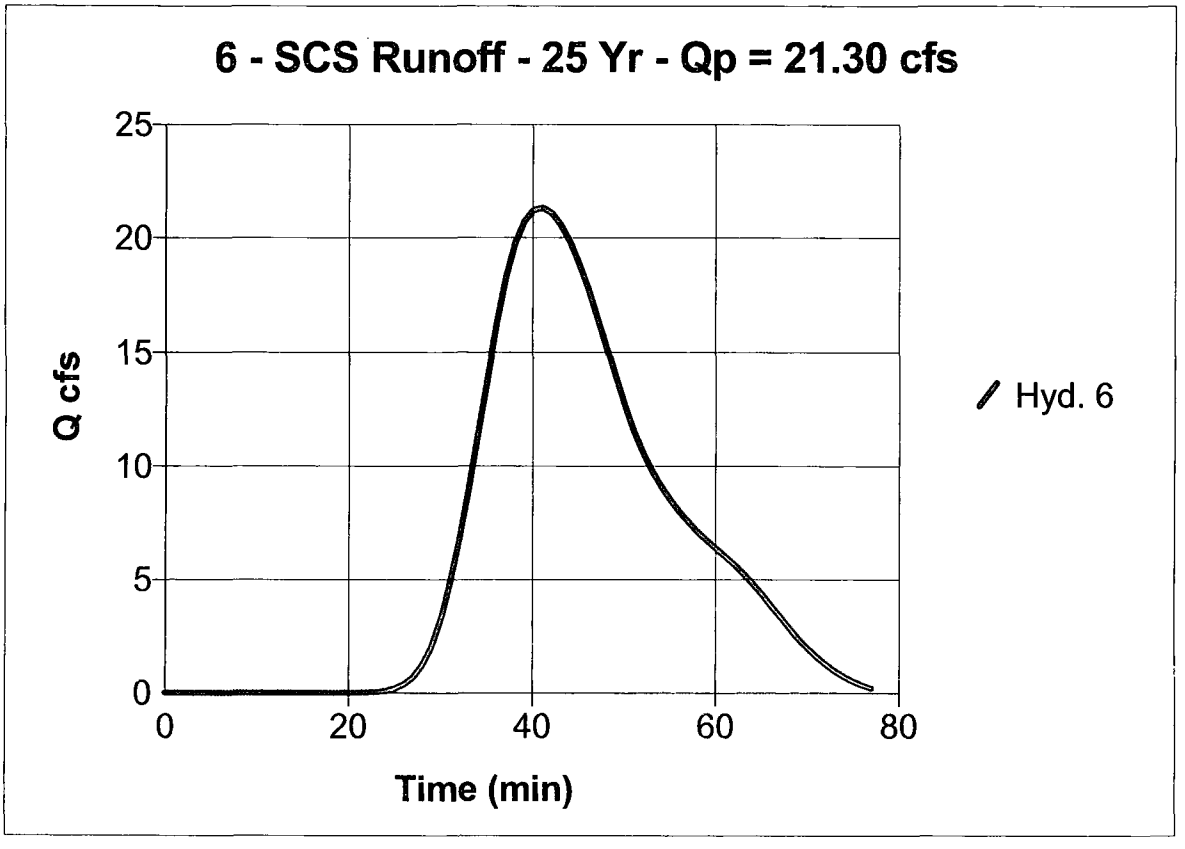
English

Hyd. No. 6

Basin 6

Hydrograph type	= SCS Runoff	Peak discharge	= 21.30 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 12.00 ac	Curve number	= 86
Basin Slope	= 4.2 %	Hydraulic length	= 913 ft
Tc method	= LAG	Time of conc. (Tc)	= 11.8 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 27,518 cuft



Hydrograph Plot

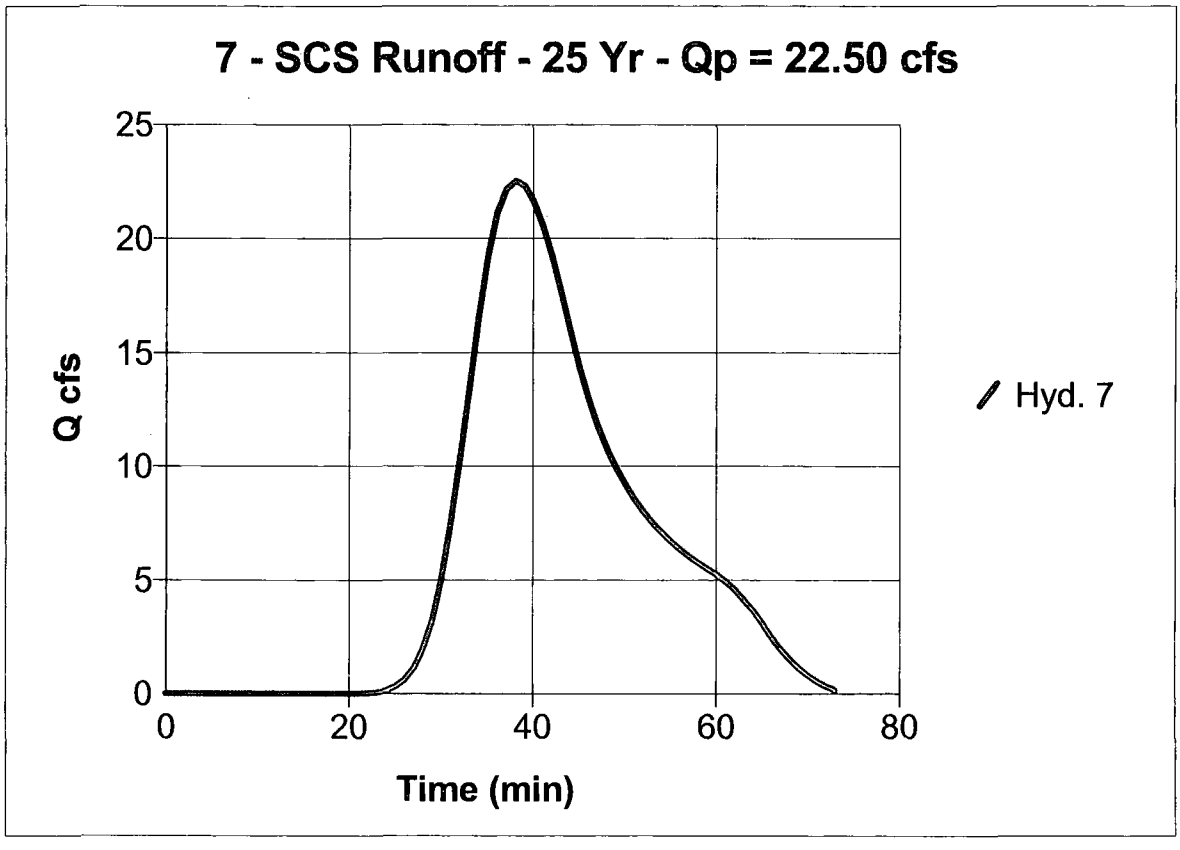
English

Hyd. No. 7

Basin 7

Hydrograph type	= SCS Runoff	Peak discharge	= 22.50 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 11.00 ac	Curve number	= 86
Basin Slope	= 5.2 %	Hydraulic length	= 733 ft
Tc method	= LAG	Time of conc. (Tc)	= 8.9 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 25,625 cuft



Hydrograph Plot

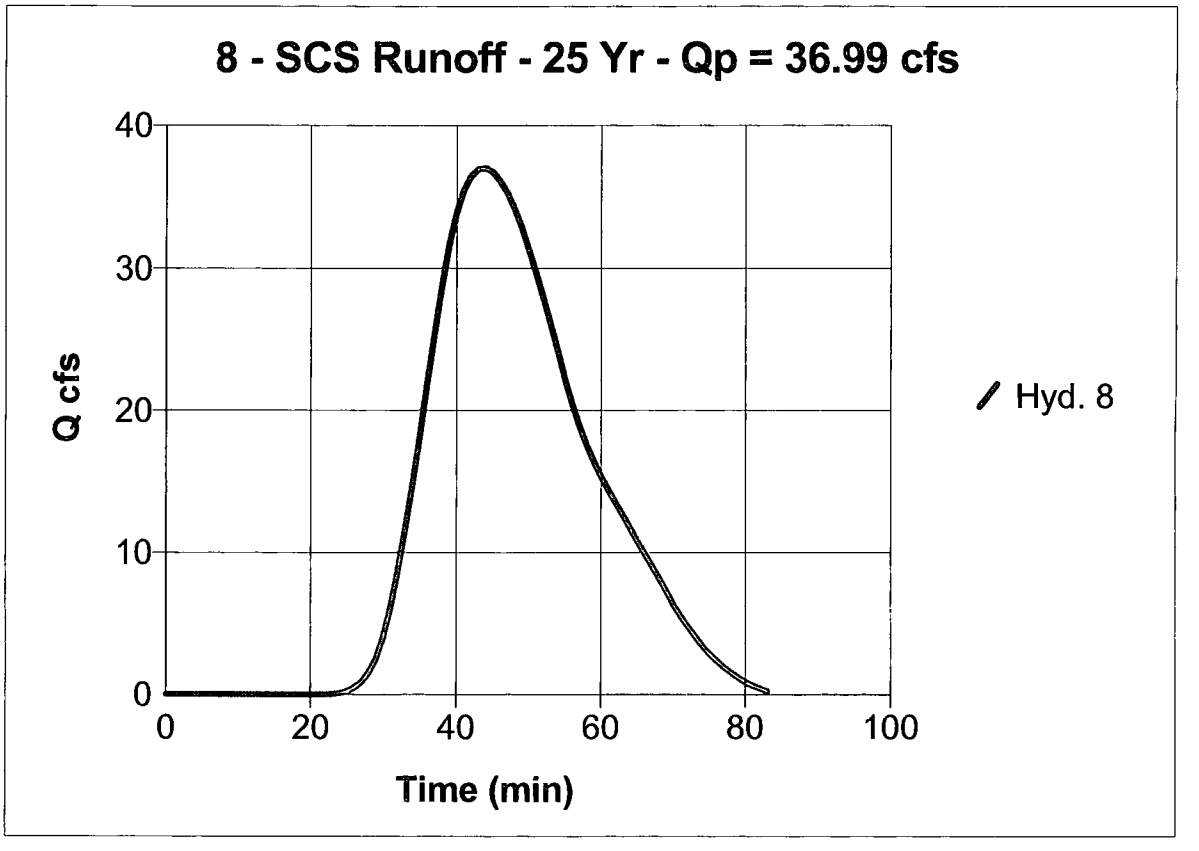
English

Hyd. No. 8

Basin 8

Hydrograph type	= SCS Runoff	Peak discharge	= 36.99 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 23.20 ac	Curve number	= 86
Basin Slope	= 3.9 %	Hydraulic length	= 1326 ft
Tc method	= LAG	Time of conc. (Tc)	= 16.5 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 54,722 cuft



Hydrograph Plot

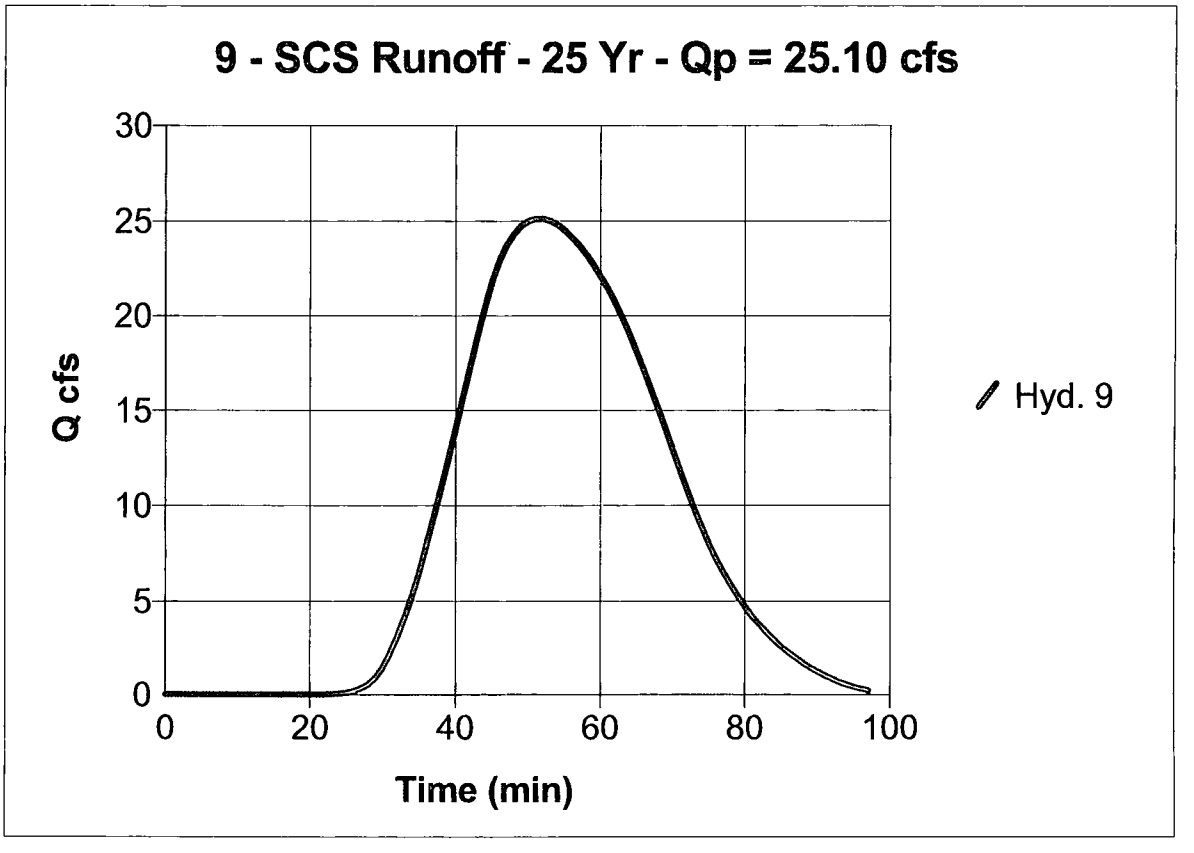
English

Hyd. No. 9

Basin 9

Hydrograph type	= SCS Runoff	Peak discharge	= 25.10 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 20.80 ac	Curve number	= 86
Basin Slope	= 3.6 %	Hydraulic length	= 2288 ft
Tc method	= LAG	Time of conc. (Tc)	= 26.6 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 48,834 cuft



Hydrograph Plot

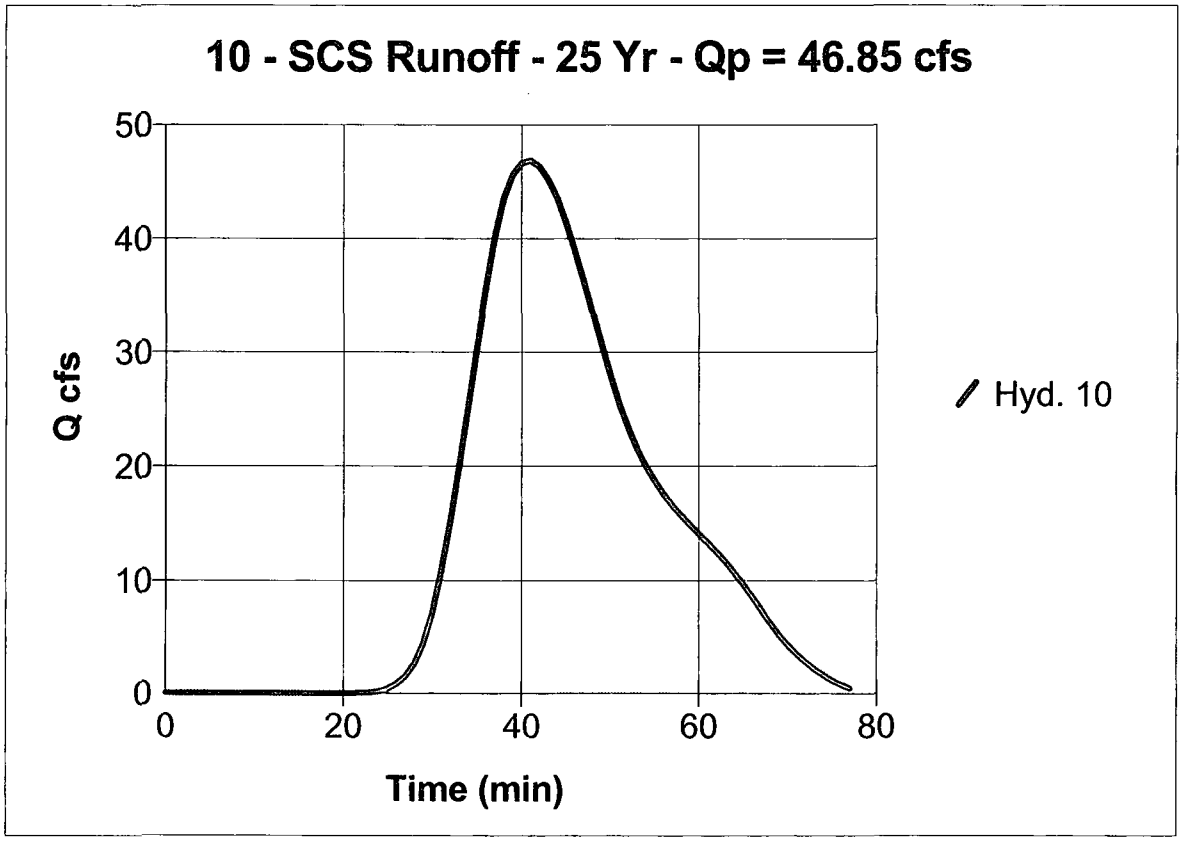
English

Hyd. No. 10

Basin 10

Hydrograph type	= SCS Runoff	Peak discharge	= 46.85 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 26.40 ac	Curve number	= 86
Basin Slope	= 4.4 %	Hydraulic length	= 1085 ft
Tc method	= LAG	Time of conc. (Tc)	= 13.2 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 60,540 cuft



Hydrograph Plot

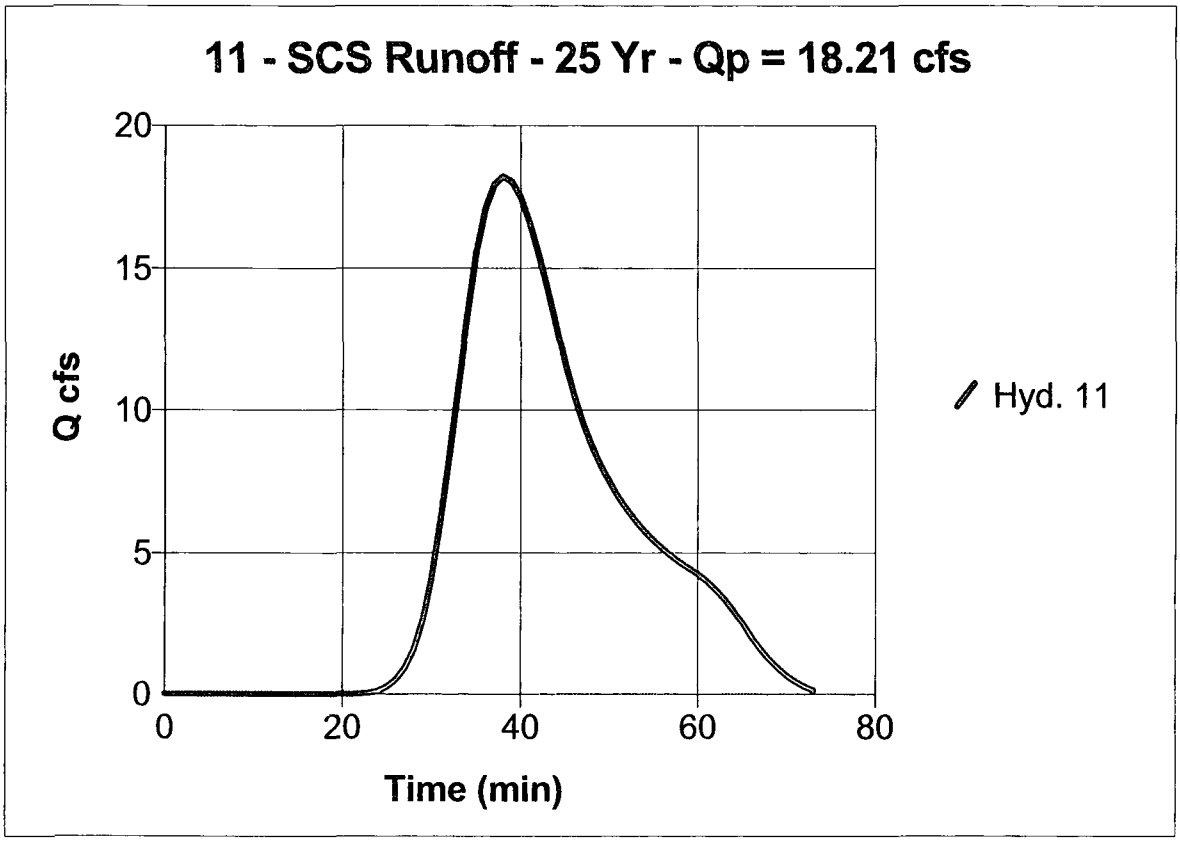
English

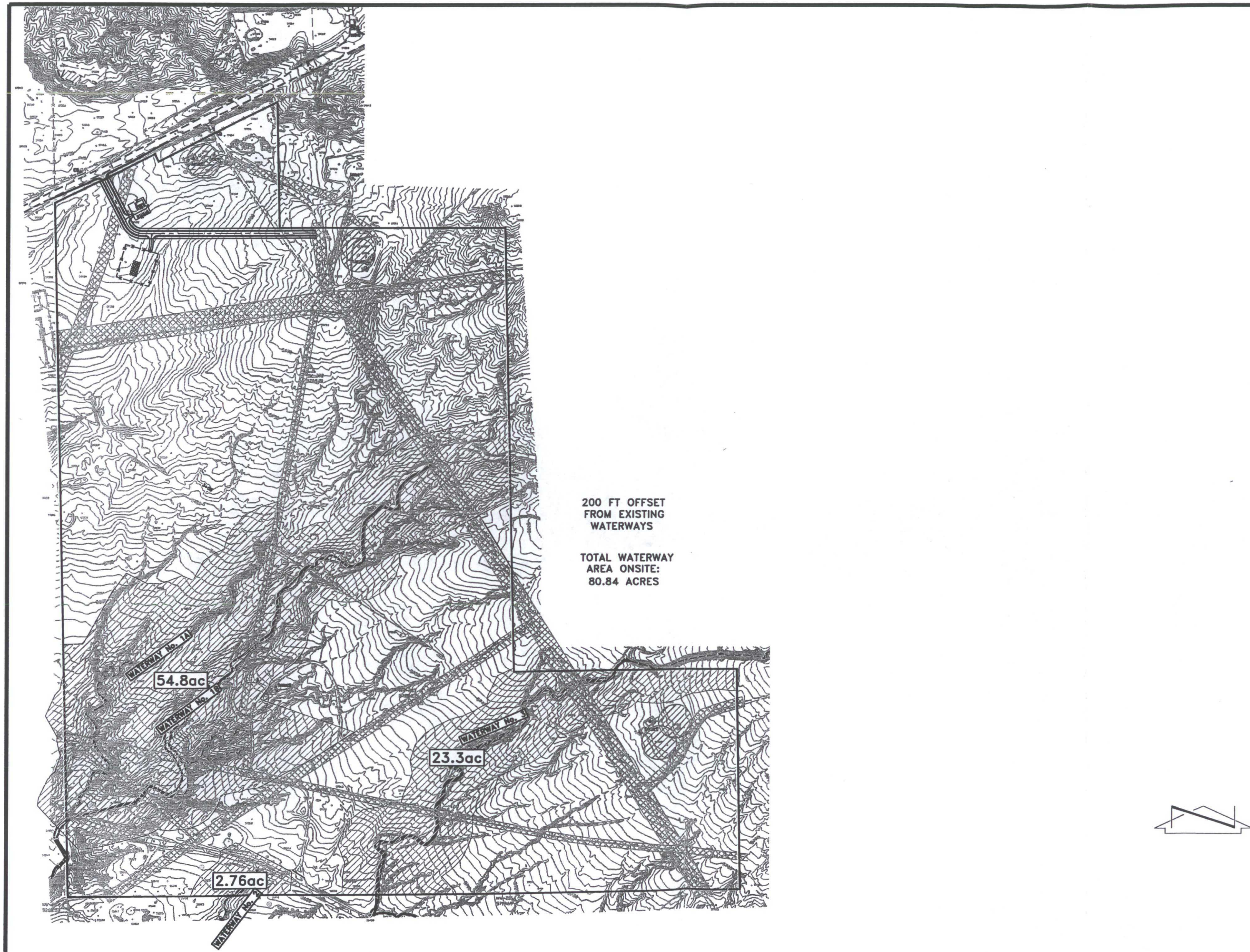
Hyd. No. 11

Basin 11

Hydrograph type	= SCS Runoff	Peak discharge	= 18.21 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Drainage area	= 8.90 ac	Curve number	= 86
Basin Slope	= 3.6 %	Hydraulic length	= 673 ft
Tc method	= LAG	Time of conc. (Tc)	= 10 min
Total precip.	= 1.72 in	Distribution	= Synthetic
Storm duration	= 1 hrs	Shape factor	= 484

Total Volume = 20,733 cuft





WATERWAYS
BLANCO LAND FARM

INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

CHENEY · WALTERS · ECHOLS, INC.
ENGINEERS · SURVEYORS

PRINTED: October 21, 2009

DATE	REVISION	BY

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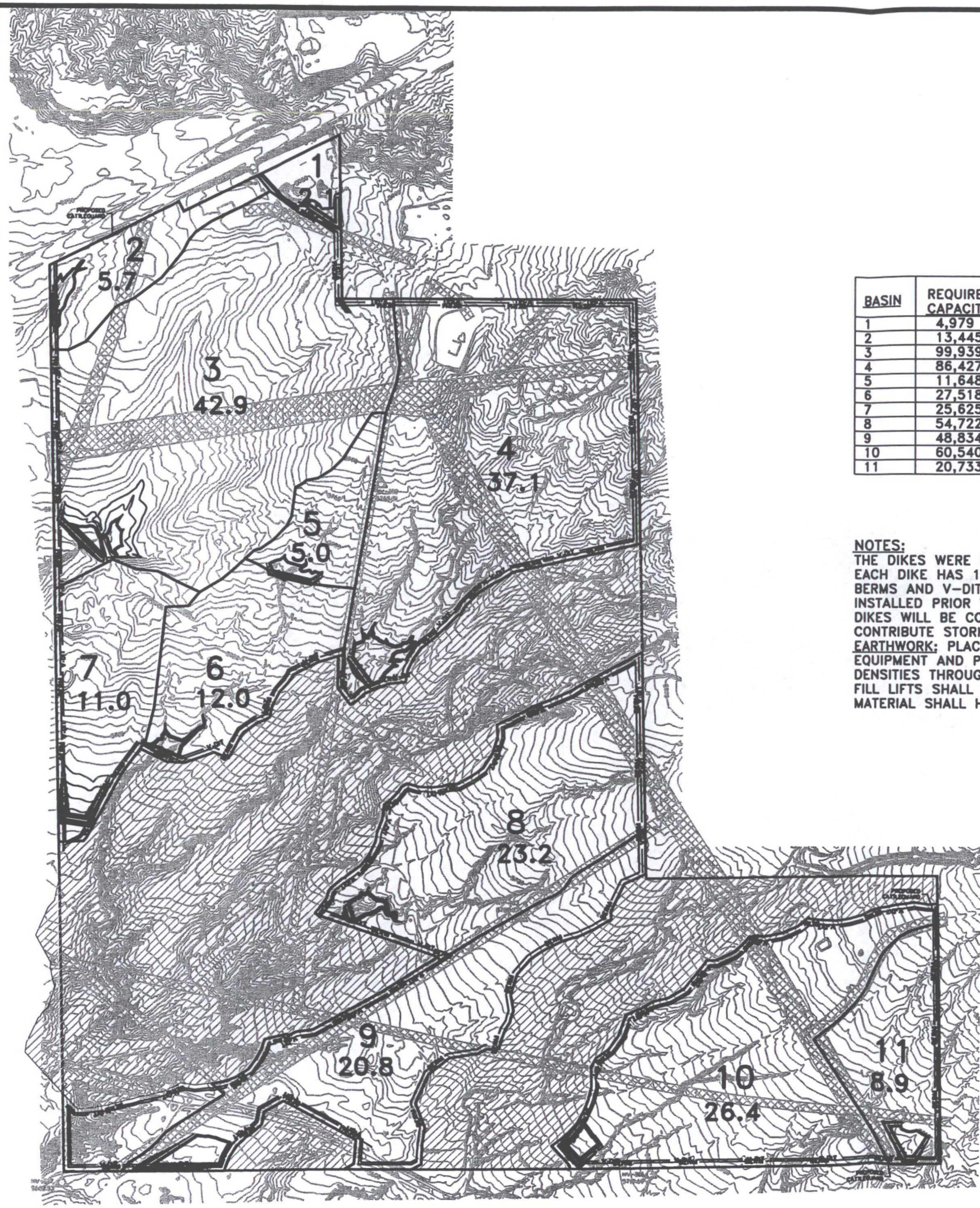

BASIN	REQUIRED CAPACITY	MAXIMUM POND CAPACITY
1	4,979	7,144
2	13,445	19,109
3	99,939	104,473
4	86,427	111,581
5	11,648	18,003
6	27,518	29,420
7	25,625	32,260
8	54,722	60,017
9	48,834	50,414
10	60,540	66,791
11	20,733	22,671

NOTES:
THE DIKES WERE DESIGNED TO RETAIN THE 25 YEAR 1 HOUR STORM.
EACH DIKE HAS 1 FOOT OF FREEBOARD AT THE SPILLWAY OVERFLOW SECTION.
BERMS AND V-DITCHES THAT PROTECT WATERWAYS WILL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR REMEDIATION OF SOILS.
DIKES WILL BE CONSTRUCTED WHEN THE CELLS THAT CONTRIBUTE STORMWATER RUNOFF TO THAT DIKE BECOME ACTIVE.
EARTHWORK: PLACE AND COMPACT FILL IN HORIZONTAL LIFTS, USING EQUIPMENT AND PROCEDURES THAT WILL PRODUCE RECOMMENDED DENSITIES THROUGHOUT THE LIFT.
FILL LIFTS SHALL NOT EXCEED 8 INCHES.
MATERIAL SHALL HAVE A MINIMUM OF 95% COMPACTION.

CHENEY-WALTERS-ECHOLS INC
ENGINEERS · SURVEYORS

DRAINAGE BASINS
BLANCO LAND FARM

INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

DATE:11/09/2009
DRAWN BY: KKN
PROJ. 09467
SCALE:NTS
FILE:09467DRN2
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OF
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BEST MANAGEMENT PRACTICE GUIDELINE (19.15.36.8.14)

1. IEI Blanco Landfarm Environmental Best Practice Guideline

Our environmental best practice guideline is simply undertaking day-to-day landfarming activities in a way that is least likely to harm the environment. That is, the procedures and practices outlined in this document are 'best' for the environment and are preferred to certain existing procedures and practices that may create more waste and/or cause more pollution.

We are committed to ensuring our business activities are conducted in a manner that protects the environment and people who are impacted by our operations while also preserving, conserving and minimizing waste of resources.

We recognize that safe working practices and protection of the environment and those affected by our activities are fundamental to its long-term business success.

The company and its employees shall comply with all applicable health, safety and environmental laws and regulations, and apply responsible standards where laws or regulations do not exist.

This document is for guidance/advice only. Understanding and following this guideline will significantly reduce the risk of employees breaching environmental laws and regulations. The guideline should be followed, unless there is an alternative course of action that achieves the same or better environmental outcomes during landfarming activities.

In summary, this industry environmental best practice guideline:-

- Gives practical guidance on how environmental best practices can be achieved in the landfarming industry
- Should be followed unless there is an alternative course of action that achieves the same or a better environmental outcome.

2. OBLIGATION OF EMPLOYEE(S)

MANAGER/SUPERVISOR RESPONSIBILITIES

Each manager/supervisor is responsible for safety and environmental activities within their area of supervision.

Responsibilities include:

- Setting good examples
- Properly communicating policies
- Enforcing policies
- Promptly correcting substandard conditions
- Reporting and investigating spills

2.1 Obligation of the General Manager

The General Manager is responsible for site planning issues and for demonstrating that environmental best management practices have been incorporated into the development application. Any regulatory requirements placed on the site, such as consent conditions or clean-up, must be brought to the attention of the site manager.

2.2 Obligations of the Facility and Field Supervisors (Operations Supervisor / Landfarm Operations Manager / Field Operations Manager/ Field Supervisor)

The facility and field supervisors have the overall responsibility for facility/site issues, occupational health and safety (OH&S) and environmental management of the facility/site. The facility and field supervisors also have the responsibility to ensure that all workers under their supervision are aware of and are undertaking their duties in compliance with relevant environmental legislation and industry standards.

2.3 Obligations of HSE Coordinator

IEI has responsibility to ensure appropriate training has been provided to the employees and must provide appropriate details and resources to enable them to complete their job duties without causing environmental pollution.

The HSE Coordinator is responsible for holding and documenting appropriate environmental awareness and ongoing training to all employees and subcontractors. Training should cover all aspects of environmental responsibility required of an employee, including spill response procedures, pollution controls, recycling procedures, dust/odor mitigation, and duty to notify.

EMPLOYEE RESPONSIBILITIES

Each employee shall demonstrate positive attitudes toward injury prevention and environmental stewardship.

Responsibilities include:

- Performing their job safely while protecting the environment.
- Understanding safety and environmental policies related to their job duties/tasks.
- Actively participating in safety and environmental training and meetings.
- Immediately reporting unsafe conditions and practices.
- Immediately reporting spills to their supervisor.

2.4 Obligations of the truck driver(s)

The truck driver has responsibility for performing work at the facility and on locations without causing environmental harm through spillage or leakage of oilfield waste.

The driver is responsible for safe and timely work without causing spillage on site or en route. The driver should be made aware of, and should then observe, all environment requirements that apply to a particular site, such as site access, work restrictions and handling requirements.

The driver should understand the importance of appropriate environmental controls and raise any concerns regarding such controls with the Field Operations Manager. All spillages outside the construction site must be thoroughly cleaned up immediately. At no time should any excess or spilled oilfield waste be hosed or washed into the stormwater system.

2.5 Obligations of General Personnel (Equipment Operators, Field Technicians, Centrifuge Operators/Helpers, Laborers)

General personnel have a responsibility to ensure that they perform work in ways that do not cause environmental harm through spillages or leakage of oilfield waste.

It is the responsibility of all personnel to ensure oilfield waste and/or wash out/down residue from their activities does not contaminate drains or waterways. Clean-up of all equipment, including the concrete impoundment, tank battery (lines and hoses) and centrifuges must also be done in a manner that does not contaminate drains or waterways.

Wash-down water produced during clean-up of equipment must be disposed of in a manner that does not and will not contaminate nearby drains, waterways or soil. It is the responsibility of the facility personnel to manage the disposal of excess wash-down water generated during clean-up operations.

The company or business has a duty to provide appropriate on the job training that addresses industry competency standards in environmental awareness to all employees and subcontractors. Training should cover all aspects of environmental responsibility required of a landfarm employee, including spill response procedures, pollution controls, proper clean-up procedures, noise and dust mitigation and duty to notify relevant authorities.

3. BEST PRACTICES

3.1 Acceptance/Disposal of Oilfield Waste

Purpose

Proper management during the handling, acceptance, and disposal of oilfield waste can minimize the risk of detrimental impact on the environment.

Applications

- For facility personnel
- For site managers overseeing landfarm activities

Best Management Practices

- The proper handling/acceptance/disposal of oilfield waste must be ensured to prevent spillage which could potentially contaminate the stormwater system.
- Appropriate spills controls will be in place before disposal begins.
- The site managers will need to be satisfied that all appropriate pollution controls have been placed before disposal occurs.
- Spills and leaks occurring during the disposal process must be cleaned immediately.

Inspection and Maintenance

- Pollution controls should be in place before disposal of oilfield waste. If personnel have any concerns regarding pollution controls, they should be raised with the site manager(s).
- The site manager(s) must maintain vigilance or delegate authority to ensure that pollution control procedures are in place.

3.2 Equipment Maintenance

Purpose

Proper vehicle/equipment maintenance can minimize the risk of any detrimental impact on the environment.

Applications

- For all personnel
- For the company contracted mechanic
- For site managers

Best Management Practices

- When selecting a contracted mechanic, the company will require them to be environmentally conscious.
- Vehicles/equipment and machinery must be regularly serviced and maintained to minimize noise and exhaust emissions and oil and fuel drips.
- The site manager or delegate must be satisfied that all appropriate pollution controls are in place before servicing begins.
- A third party company is utilized to pick up and recycle "used motor oil".
- Where possible, equipment should be set up on site. This reduces the potential of leakages from hoses and fittings that could contaminate the stormwater system.
- Where possible, ensure the servicing of vehicles/equipment occurs at a location where any spillage will not contaminate the stormwater system.
- Vehicles/equipment must be washed in the site wash-down area after all excess material has been removed by hand.
- To minimize the amount of wash-down water generated, excess waste/residue should be removed prior to washing.
- It is the responsibility of all personnel to properly manage the disposal of wash-down water generated during the cleaning process. Options for collection, treatment and disposal of wash-down water should be discussed with the site manager.

Inspection and Maintenance

- Inspect and maintain vehicles/equipment & machinery regularly to minimize leaks and drips.
- Pollution controls should be in place before vehicles/equipment/machinery is serviced. The Landfarm Operations Manager should inspect pollution controls to ensure they are adequate, and should consult with the Operations Supervisor if there are any problems.
- Facility personnel, mechanic and site managers must maintain vigilance during servicing activities to ensure that pollution control procedures are being followed.

4. FUGITIVE DUST & ODOR EMISSIONS

As a landfarm facility, we are responsible for controlling fugitive dust and odor emissions related to landfarm operations.

FUGITIVE DUST EMISSIONS - are a result of the lack of natural precipitation and moisture to unpaved roadways and biopiles on the facility.

ROAD AND YARD DUST

- Minimize fugitive dust emissions due to vehicle travel by:
  - site layout and design
  - Posting vehicle speed limits
- During the drier months, when natural precipitation is not being received regularly, unpaved roadways will be sprayed recycled or fresh water to help control fugitive dust emissions
- Natural vegetation will be allowed to grow to help provide barriers

DUST FROM BIOPILES

- Minimize fugitive dust emissions from biopiles by:
  - Trenching the biopiles, as needed, with water

ODOR EMISSIONS - are a natural result/occurrence associated with the bioremediation process.

ODOR CONTROL

- Minimize nuisance odors by:
  - When feasible, manure, used as part of the bioremediation process, will be stored on areas of the facility furthest from nearby residence(s)
  - Biopiles located nearest to residential areas will be "turned" early in the week between the hours of 8:00 am – 5:00 pm, when neighbors are most likely to be at work
  - Reducing the holding time of waste disposed of in the concrete impoundment; *and*
  - Screening incoming liquid waste for gases. Any loads of wasted detected with unacceptable levels of gases will be rejected for disposal.

5. WASTEWATER AND STORMWATER

Stormwater runoff is another primary pollutant of concern resulting from landfarm operations. Potential wastewater and stormwater pollutants include oilfield waste, aggregate, bioremediation additive mixtures, fuels and lubricants.

6. HANDLING AND DISPOSAL OF RCRA EXEMPT & NON-EXEMPT, NON-HAZARDOUS WASTES

The proper handling and disposal of oilfield waste is critical in assuring the health and safety of the public and protection of the environment. Some important things to remember are:

- Only RCRA exempt, NON-HAZARDOUS waste is accepted for disposal.
- Waste must conform with the chloride content test prior to being accepted for disposal.
- Waste must pass the paint filter test prior to being place into a biopile.
- Never mix EXEMPT and NON-EXEMPT wastes.

7. 1 CONTAINERS

- Maintain containers in good conditions. Prevent leaks, ruptures and the accumulation of rainwater on the top of drums.
- If a container leaks, the material shall be transferred to a new container.
- Keep lids on, and containers closed, when not in use.
- Use funnels when pouring liquids.
- Use containers that are compatible with the waste being stored.
- Do not mix different or incompatible wastes in the same container.

7.2 LABELS

Proper labeling can reduce accidents and ensure proper disposal. Containers shall be labeled as follows:

ORIGINAL CONTAINERS

- Labels must include the chemical or product name and the proper hazard warning to enable the user to immediately understand the material's primary health and/or physical hazard(s).
- A recommended practice is to also include the common name of the material such as paint thinner, window cleaner, etc.
- Employers or employees shall not remove or deface labels on containers of hazardous chemicals.
- Labels will be legible and in English, however, for non-English speaking employees, the information will be relayed to them in their own language.

SECONDARY CONTAINERS

- Labels must include the chemical name and hazard warning.
- A recommended practice is to also include the common name of the material such as paint thinner, window cleaner, etc.

LABELING REQUIREMENTS

- When two or more labels are required, they will be displayed next to each other;
- Labels will be on a background of contrasting color;
- Labels may not be obscured by markings or attachments;
- Labels must be durable, weather resistant, and able to withstand exposure for 30 days without deterioration or discoloration;
- Labels may be printed on or affixed to a tag when package surfaces are such that labels cannot be affixed.

8. STORAGE AREAS

- When possible, storage containers will be stored in a single area; however incompatible materials shall not b stored beside each other. Collection points are allowed or work in progress, but should be moved to the main storage area once the container is filled or not in use.
- Wastes should be stored in a covered area to prevent stormwater runoff and protect the containers from weather exposure.
- Secondary containment should be provided that is able to contain at least 110% of the largest container's capacity in case of leaks, spills or punctures. It should have an impermeable (sealed) surface and should be under cover, preferably indoors.
- Sufficient aisle space between drums shall be allowed to ensure proper inspection for leaks or damage.

9. OPPORTUNITIES

The company and personnel will continually look for additional opportunities to reduce wastes, protect fresh water, public health, safety and the environment.

10. EMPLOYEE EDUCATION

Pollution prevention efforts can only be successful if all employees are committed to protecting the environment and minimizing operational wastes. Regular employee training and meetings will be held to discuss changes and on-going practices and procedures related to the company environmental best practices guidelines.

Employees will be trained to:

a) recognize and minimize environmental hazard's
b) handle / dispose of waste in a manner to protect the environment
c) clean and service vehicles/equipment in a manner to protect the environment
d) prevent pollution and minimize waste
e) deter fugitive dust and odor emissions
f) Implement and practice proper container storage/labeling/disposal techniques
g) Implement and practice proper or new pollution prevention techniques

11. GENERAL SITE OPERATIONS/MAINTENANCE

- Maintain all equipment according to manufacturer's recommendations to prevent leaks.
- Implement procedures to minimize fugitive dust and odor emissions.
- Keep a routine maintenance log on-site of vehicles/equipment.
- Provide integrated quality, safety and environmental management systems for the facility, operations of the facility and waste handling/disposal process.

12. WASTEWATER

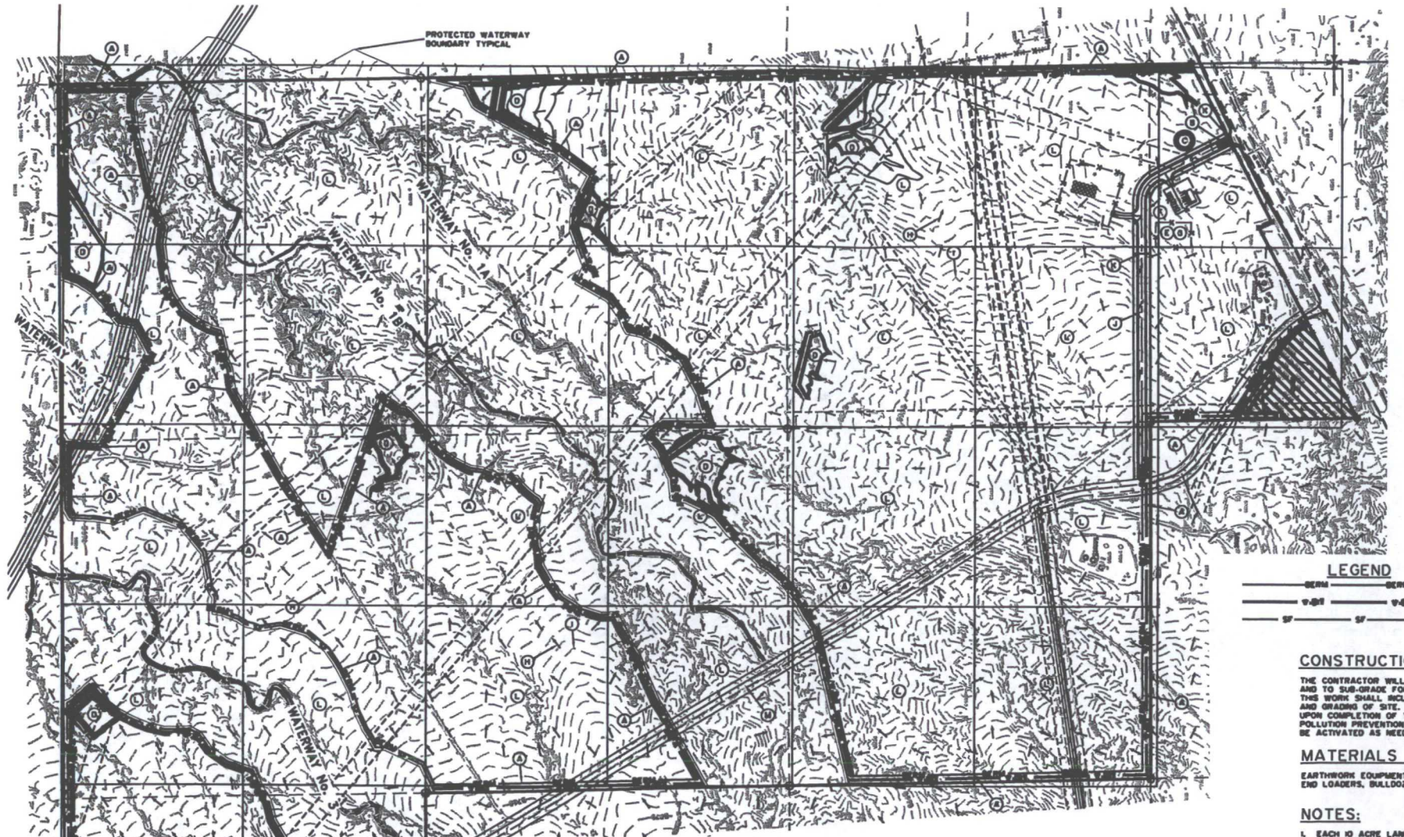
- Re-use wastewater for dust control and suppression (when meets acceptable reuse criteria).
- Divert clean stormwater (e.g. roof run-off) away from contaminated areas and into an approved stormwater discharge system.
- Use liners and berms around disposal areas to capture contaminated stormwater and process wastewater.
- Direct stormwater from the entire site to an on-site settling pond, or series of ponds. This water can be reused in the remediation and/or dust control process when it meets acceptable reuse criteria.
- Protect storm drain inlets from waste runoff.
- Develop a routine yard and equipment maintenance program to considerably reduce the potential for discharge of sediment to your wastewater collection and recycling system.
- Seal aboveground fuel and chemical additive storage areas with liners and berms to contain spills and leaks.

13. GOOD HOUSEKEEPING

One of the easiest and least expensive ways to reduce waste is by keeping the facility clean. Poor housekeeping results in spills and overflows. This may double expenses by paying to replace lost material and also for its treatment and disposal. It can also lead to accidents and working injury.

Good Housekeeping procedures:

- Keep site clean from trash and debris.
- Store tools and equipment properly and in designated places. Tools left out of place may be a hazard.
- Avoid using dirty or greasy tools.
- Store hoses, chains, ropes, electrical cords, tool parts, etc., so they will not become tripping hazards.
- Stack materials in an orderly manner.
- Sweep site regularly to remove dust build-up.
- Repair leaks promptly.
- Clean up all spillages or deposits of materials on ground immediately.
- Use dry clean-up methods whenever practical (sweeping, dust collection vacuum, wiping, etc).
- Keep doorways, emergency exits, stairs and platforms clean and free of obstacles.
- Operations are responsible for housekeeping in their area. Maintenance shall restore the work site to its original condition. A job is not complete until the cleanup is finished.



KEYED NOTES:

(A) TEMPORARY MEASURES - PROTECT RECEIVING WATERS FROM SILT RUNOFF WITH THE CONSTRUCTION OF AN EARTH BERM AND V-DITCH AS NEEDED TO INTERCEPT AND DIRECT STORMWATER RUNOFF TO SETTLING AREAS. SEE DETAIL 1/8 FOR BERM CONSTRUCTION. INSTALL SILT FENCE AS SHOWN. SEE DETAIL 2/8.

(B) PROVIDE A 30' WIDE BY 50' IN LENGTH AREA AS A STABILIZED AREA. THIS AREA SHALL BE EXCAVATED TO 6" BELOW FINISH GRADE OF PROPOSED NEW ROAD, COVERED WITH A GEOGRID FABRIC BY MIRAFI INC. NUMBER MSAG OR EQUAL, 2" AND 3" STONE SHALL BE PLACED ON TOP OF FABRIC TO STABILIZE ACCESS POINT. CONTRACTOR MAY DOCUMENT AND USE ALTERNATIVE FORM OF STABILIZATION.

(C) CONSTRUCT A DEPRESSED AREA OF 6" IN DEPTH APPROXIMATELY 10' IN RADIUS OR A 10' BY 10' SQUARE. LINE DEPRESSION WITH A HEAVY PLASTIC SHEET TO CONTAIN WASTE CONCRETE WASH OUT FROM TRUCKS. REMOVE AS NEEDED TO ENSURE CONTAINMENT OF WASTE FROM COMING INTO CONTACT WITH EXISTING GROUNDS.

(D) CONSTRUCT RETENTION DIKES TO BE USED AS A SETTLING POND FOR SEDIMENT AND TO RECEIVE THE STORMWATER RUNOFF FROM THIS PROJECT. ALL RETENTION DIKES SHALL BE STORMWATER MONITORING POINT. NO CONTAMINATED RUNOFF SHALL LEAVE PROPERTY

(E) FENCE ENCLOSED MATERIAL YARD AND PORTABLE RESTROOM AND TRASH RECEPTICAL LOCATIONS. (ACTUAL LOCATION TO BE DETERMINED DURING CONSTRUCTION)

(F) WASTE CONSTRUCTION AREA (ACTUAL LOCATION TO BE DETERMINED DURING CONSTRUCTION).

(G) SPILL PREVENTION KIT (ACTUAL LOCATION TO BE DETERMINED DURING CONSTRUCTION).

(H) ARROWS INDICATE DIRECTION OF HISTORICAL DRAINAGE FLOW. SEE LEGEND TYPICAL

(I) TOPOGRAPHIC CONTOUR LINES INDICATE SLOPE OF EXISTING GROUND.

(J) PROPOSED GRAVEL ROADWAY.

(K) PROPOSED 24"ø CMP CULVERT.

(L) TYPICAL 10 ACRE LAND CELL.

(M) EXISTING ROAD TO BE USED FOR ACCESS ACROSS THE PROTECTED WATERWAYS.

EPA CONSTRUCTION GENERAL PERMIT

THE DEVELOPER AND EVERY CONTRACTOR DOING WORK WITHIN THIS DEVELOPMENT SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE EPA'S CONSTRUCTION GENERAL PERMIT (CGP), JUNE 30, 2008, AND THE MULTI-SECTOR GENERAL PERMIT (MSGP) DATED SEPTEMBER, 29, 2008 WHICH WILL INCLUDE PREPARING, IMPLEMENTING, AND UPDATING AS NECESSARY A STORMWATER POLLUTION PREVENTION PLAN (SWPPP). CHENEY-WALTERS-ECHOLS, INC. ASSUMES NO RESPONSIBILITY FOR THE COMPLIANCE WITH THESE REGULATIONS.

MATERIALS LIST

1
2
3
4
5
6
7
8
9
10

SUBCONTRACTORS LIST

1
2
3
4
5
6
7
8
9
10

LEGEND

BERM — BERM — EARTH BERM PLACEMENT
V-DIT — V-DIT — V-DITCH AS NEEDED
SF — SF — SF — SILT FENCE PLACEMENT
EXISTING DRAINAGE FLOW DIRECTION

CONSTRUCTION SEQUENCE

THE CONTRACTOR WILL COMPLETE ALL EARTHWORK ON PROPERTY AND TO SUB-GRADE FOR PROPOSED COUNTY ROAD AND ACCESS. THIS WORK SHALL INCLUDE THE ROAD AND BUILDING PADS AND GRADING OF SITE.
UPON COMPLETION OF THE CONSTRUCTION OF THE STORMWATER POLLUTION PREVENTION MEASURES THE 10 ACRE LAND CELLS SHALL BE ACTIVATED AS NEEDED.

MATERIALS STORED ON SITE

EARTHWORK EQUIPMENT INCLUDING TRACK HOES, SCRAPERS, FRONT END LOADERS, BULLDOZERS, ROAD GRADERS AND DUMP TRUCKS.

NOTES:

1. EACH 10 ACRE LAND CELL SHALL BE USED FOR LOADING AND UNLOADING OF MATERIAL AS VOLUME OF RECLAMATION REQUIRES.
2. EACH 10 ACRE LAND CELL SHALL BE USED AS A PROCESS TRANSFER AND STORAGE AREA.
3. SEE THE DRAINAGE PLANS FOR CONSTRUCTION OF THE RETENTION DIKES SPECIFICATIONS.
4. THE TOTAL AREA OF THIS PROJECT SITE IS 289 ACRES. 208 ACRES SHALL BE DISTURBED DURING THE USE OF THIS SITE. THE PROTECTED WATER WAYS SHALL BE 81 ACRES AND NO LAND SHALL BE DISTURBED IN THESE AREAS. ALL PROTECTED WATERWAYS EMPTY INTO LARGO CANYON.
5. THE ONLY ACCESS TO BE USED ACROSS THE PROTECTED WATERWAYS SHALL BE THE EXISTING ROADS AS IDENTIFIED ON THIS PLAN.
6. THE PORTION OF THE 10 ACRE LAND CELLS THAT LIE IN THE PROTECTED WATERWAYS SHALL NOT BE DISTURBED OR USED FOR STORING, LOADING OR UNLOADING AND NO EQUIPMENT SHALL LEAVE THE EXISTING ROADWAYS.
7. THE OPERATOR WILL MONITOR REMEDEATED SOIL PILES AND STORMWATER RUNOFF HELD ON SITE WITHIN THE 10 ACRE LAND CELLS AS REQUIRED BY THE MSGP 2008.

BY	REVISION	DATE

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CHENEY·WALTERS·ECHOLS
ENGINEERS · SURVEYORS
800 W. AVENUE · FARMINGTON, NEW MEXICO 87401 · (505)327-4303

NO. 9834

STORMWATER POLLUTION PREVENTION PLAN
BLANCO LANDFARM

INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO

DATE:10/14/2009
DRAWN BY: HWS
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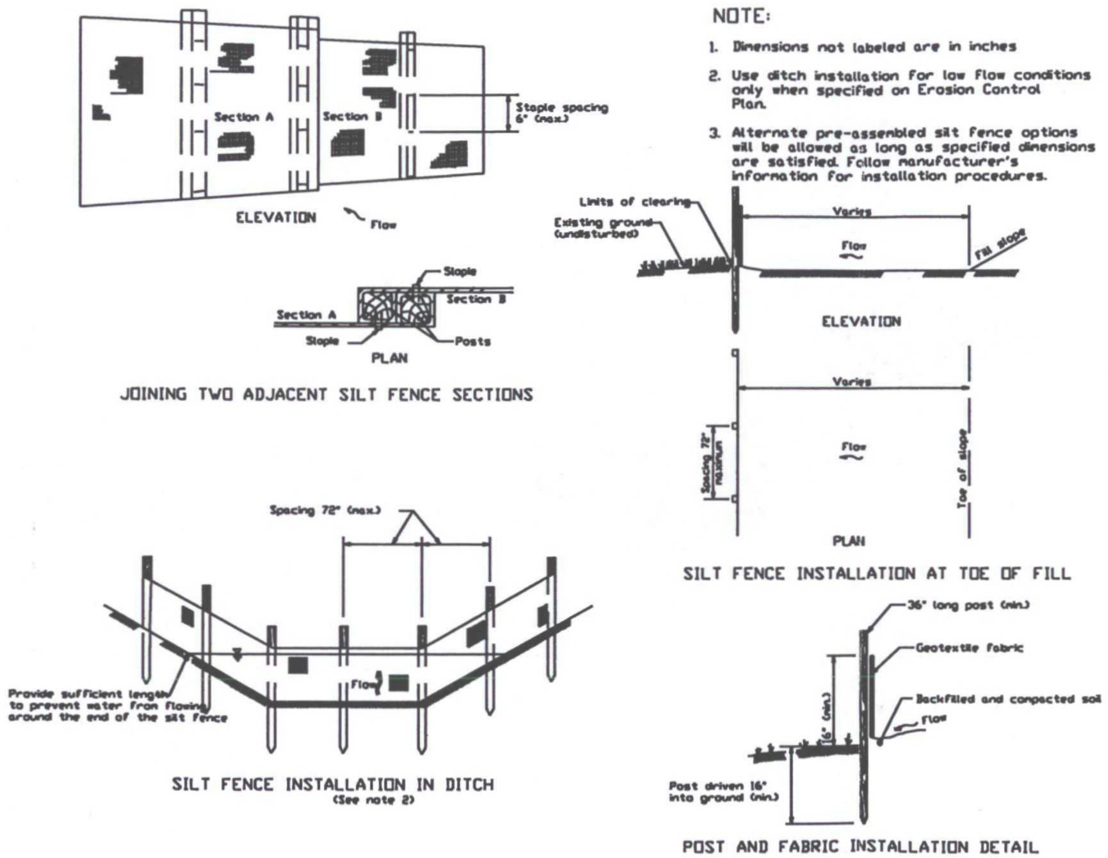

NOTE:

1. Dimensions not labeled are in inches
2. Use ditch installation for low flow conditions only when specified on Erosion Control Plan.
3. Alternate pre-assembled silt fence options will be allowed as long as specified dimensions are satisfied. Follow manufacturer's information for installation procedures.

TYPICAL SILT FENCE INSTALLATION DETAIL
SCALE: N.T.S.

NOTE:

THE USE OF AN EARTH BERM MAY OR MAY NOT REPLACE THE USE OF SILT FENCE PLACEMENTS.

EARTH BERM WITHOUT DITCH
CREATE BERM BY DUMPING MATERIAL ON EXISTING SURFACE TO INTERCEPT RUNOFF WHEN NATURAL GRADES ARE PRESENT TO ENSURE DRAINAGE TO SETTLEMENT AREA.

EARTH BERM WITH DITCH
CREATE BERM BY PLOWING WINROW AND ADDING MATERIAL AS NEEDED TO FINISH BERM IN AREAS THAT WINROW WILL NOT DELIVER ENOUGH MATERIAL TO ENSURE POSITIVE CONTROL BY DITCH TO DIRECT RUNOFF TO SETTLEMENT AREA.

SWPP EARTH BERM DETAIL
SCALE 1" = 5'

DATE | REVISION | BY

CHENEY · WALTERS · ECHOLS, INC.
ENGINEERS · SURVEYORS

STORMWATER POLLUTION PREVENTION PLAN
DETAILS

INDUSTRIAL ECOSYSTEMS, BLANCO LANDFARM
BLANCO, NEW MEXICO

DATE:10/14/2009
DRAWN BY: HWS
PROJ. 09467
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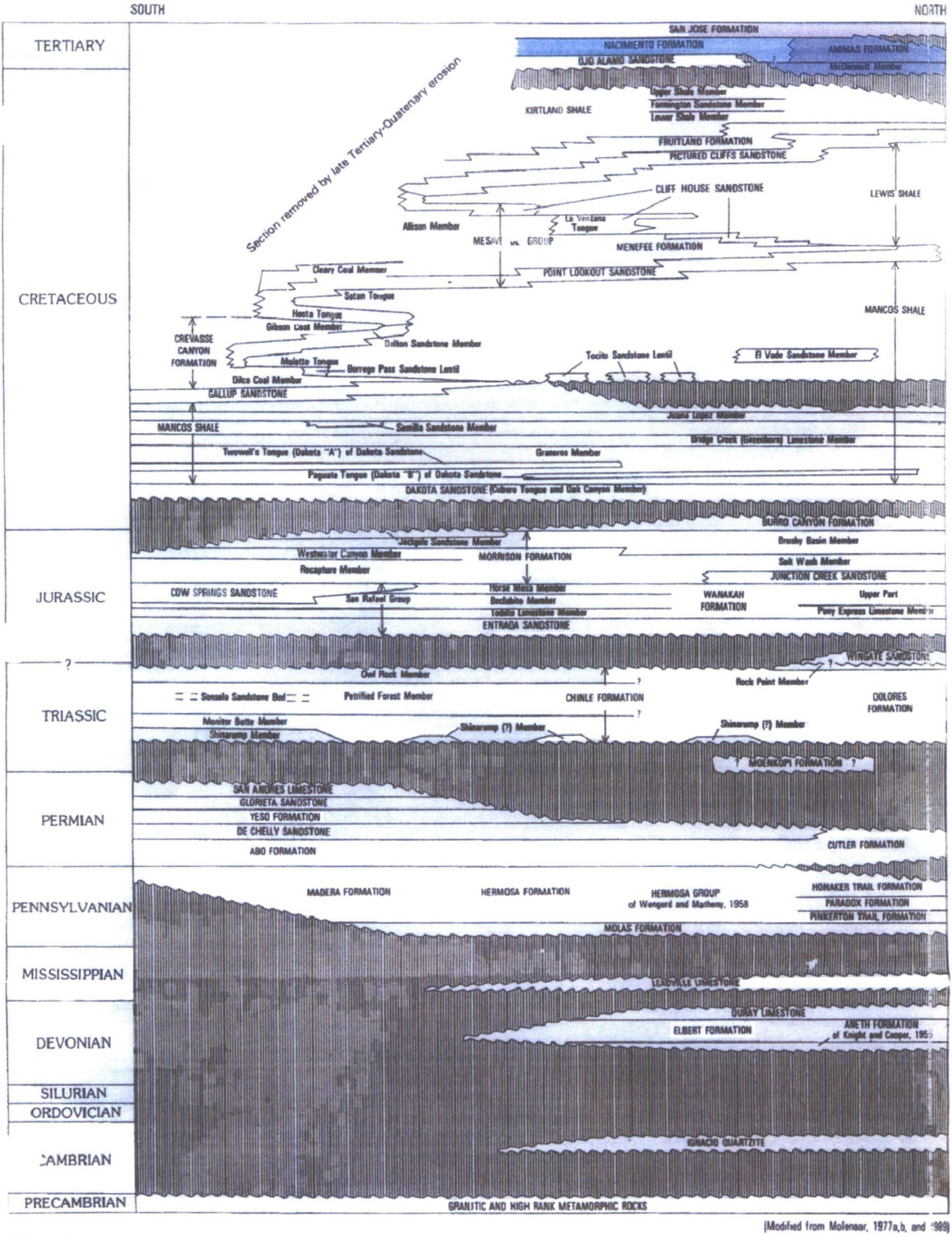
GEOMAT SAMPLE LOCATIONS 96

Geology

Volumes of material have been written about the San Juan Basin of New Mexico resulting from the exploration for, and the development of, oil and natural gas fields since the early 1950's. Four geology guide books have been written and published by the New Mexico Geological Society, as well as many professional publications, bulletins, maps, open files and other works by the United States Geological Survey. The Four Corners Geological Society, the Rocky Mountain Association of Geologists, area geologists, hydrologists and engineers, to name a few, have created this wealth of published information. A bibliography of these works alone would create a large publication. Still, we have questions about many of the formations encountered in drilling. Some of the most difficult are formations deposited during the Tertiary time, (see Figure1.) The project area investigated is located in and on one of these formations. Figure 2 portrays drilling saturation in the San Juan Basin.

Regional Geologic Setting

Levings, and others, 1990, define the San Juan Structural Basin as a northwest – trending asymmetrical structural depression formed during the Laramide Orogeny (Late Cretaceous-early Tertiary time), (See Figures 1 and 3.) Structural boundaries of the basin are well defined in many places; elsewhere, the basin merges gradually into adjacent depression or uplifts (Kelley, 1951, p.124). The structural boundaries, as defined by Kelley, principally consist of large, elongate domal uplifts, low marginal platforms, and abrupt monoclines (see Figure 3.). Faulting is common, especially in the southeastern part of the basin. Maximum structural relief in the basin is about 10,000 feet (Kelley, 1951).



(Modified from Molenaar, 1977a,b, and 1989)

Figure 1.
Time- and rock-stratigraphic framework and nomenclature.

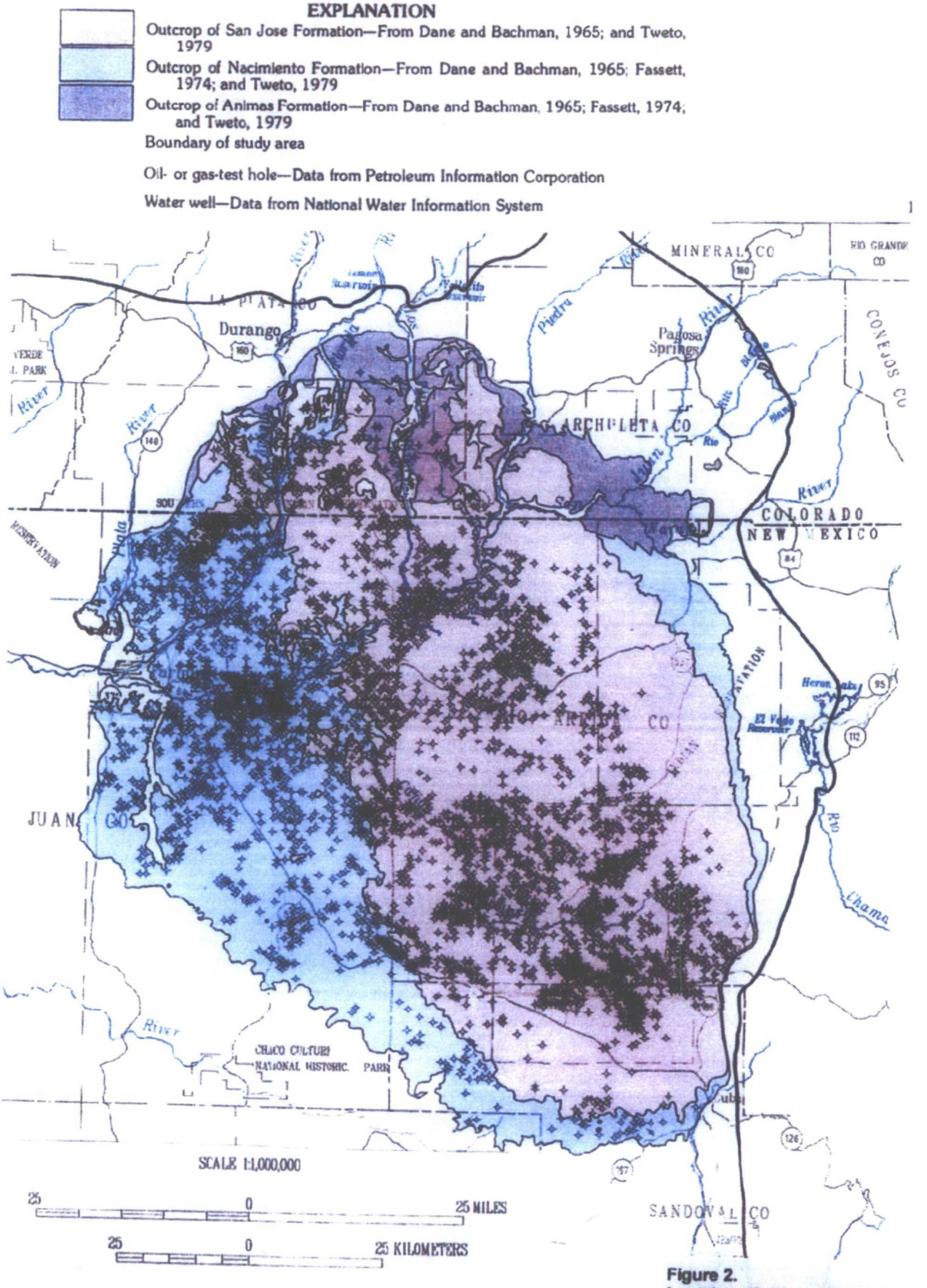


Figure 2.
Location of oil or gas test holes and water wells used to compile thickness and altitude of the bottom of San Jose, Nacimiento, and Animas Formations.

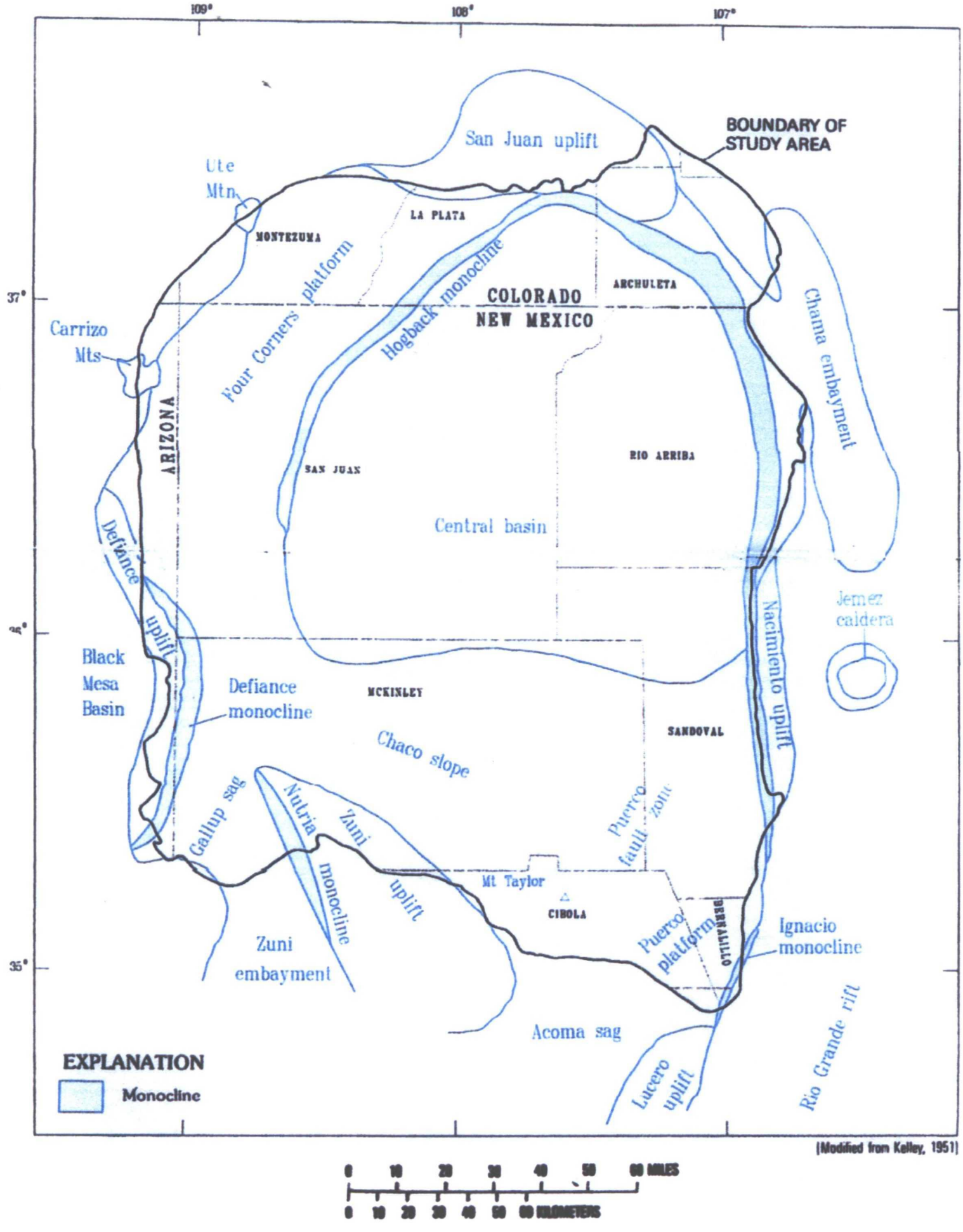


Figure 3.
Structural elements of the San Juan structural basin and adjacent areas.

The San Juan structural basin contains a thick sequence of sedimentary rocks ranging in age from Cambrian through Tertiary, but generally is from Pennsylvanian through Tertiary (see Figure 4.). The maximum thickness of the rock sequence is about 14,000 foot (Fassett & Hinds, 1971). These sedimentary rocks dip basin-ward from the basin margins toward the trough-like structural center or deepest part of the basin. Older sedimentary rocks crop out around the basin margins and are successively overlain by younger rocks toward the center of the structural basin. Volcanic rocks of Tertiary age and various deposits of Quaternary age are also present in the basin. (See Diagram 1.)

Tertiary Stratigraphy

Tertiary deposition started at the close of the Cretaceous period during and after what is known as the Laramide Revolution. The Laramide Revolution was a period of crustal movement in early Tertiary times (dated 60-65 m.y.a.) during which the interior region of North America were folded producing both the Rocky Mountains and the Appalachian Mountains. During these crustal adjustments, the Four Corners Platform, Colorado Plateau, San Juan Basin, Rio Grand Rift and many other minor features along with periodic volcanism were emplaced. Evidence of volcanic activity is evident as Shiprock, Sleeping Ute Mountain, La Plata and San Juan Mountains, and the Silverton Calderas to list a few. During and following these orogenitic processes, considerable erosion and deposition was and still is taking place.

Three formations or units remain that were deposited during Tertiary time in the greater San Juan Basin of New Mexico. From oldest to youngest are the Ojo Alamo Sandstone unit, the Nacimiento Formation and the San Jose Formation. Time-wise, the

EON	ERA	PERIOD	EPOCH	YEARS AGO	AGE	REVOLUTION OR DISTURBANCE
PHANEROZOIC	CENOZOIC	QUATERNARY	HOLOCENE (RECENT)	0–10,000		
			PLEISTOCENE	2 MILLION		CASCADIAN REV.
			PLIOCENE	15 MILLION	AGE OF MAMMALS	
			MIOCENE	30 MILLION		
		TERTIARY	OLIGOCENE	40 MILLION		
			EOCENE	50 MILLION		
			PALEOCENE	65 MILLION		LARAMIDE REV.
	MESOZOIC	CRETACEOUS	UPPER	80 MILLION	AGE OF DINOSAURS	
			LOWER	125 MILLION		NEVADIAN DIST. OR REV
		JURASSIC		160 MILLION		
					AGE OF REPTILES	PALISADE DISTURB.
		TRIASSIC		200 MILLION		APPALACHIAN REV.
	PALEOZOIC	PERMIAN		250 MILLION		
		PENNSYLVANIAN		280 MILLION	CARBONIFEROUS	
		MISSISSIPPIAN		310 MILLION		ACADIAN DISTURB.
		DEVONIAN		350 MILLION	DEVONIAN	
		SILURIAN		410 MILLION	AGE OF INVERTEBRATES	
		ORDOVICIAN		470 MILLION		TACONIAN DISTURB.
		CAMBRIAN		550 MILLION		PSNOKEAN OROGENY
CRYPTOZOIC	PRECAMBRIAN	LATE PRECAMBRIAN (PROTOROZOIC)		1.9 BILLION	SIMPLE LIFE FORMS	KILLARNEY REV.
		EARLY PRECAMBRIAN (ARCHEOZOIC)		3.3 BILLION		ALGOMAN REV.
						LAURENTIAN REV.
	AZOIC		FORMATION OF CORE	4.5 BILLION	?	

Diagram 1.
Geologic Time Chart.

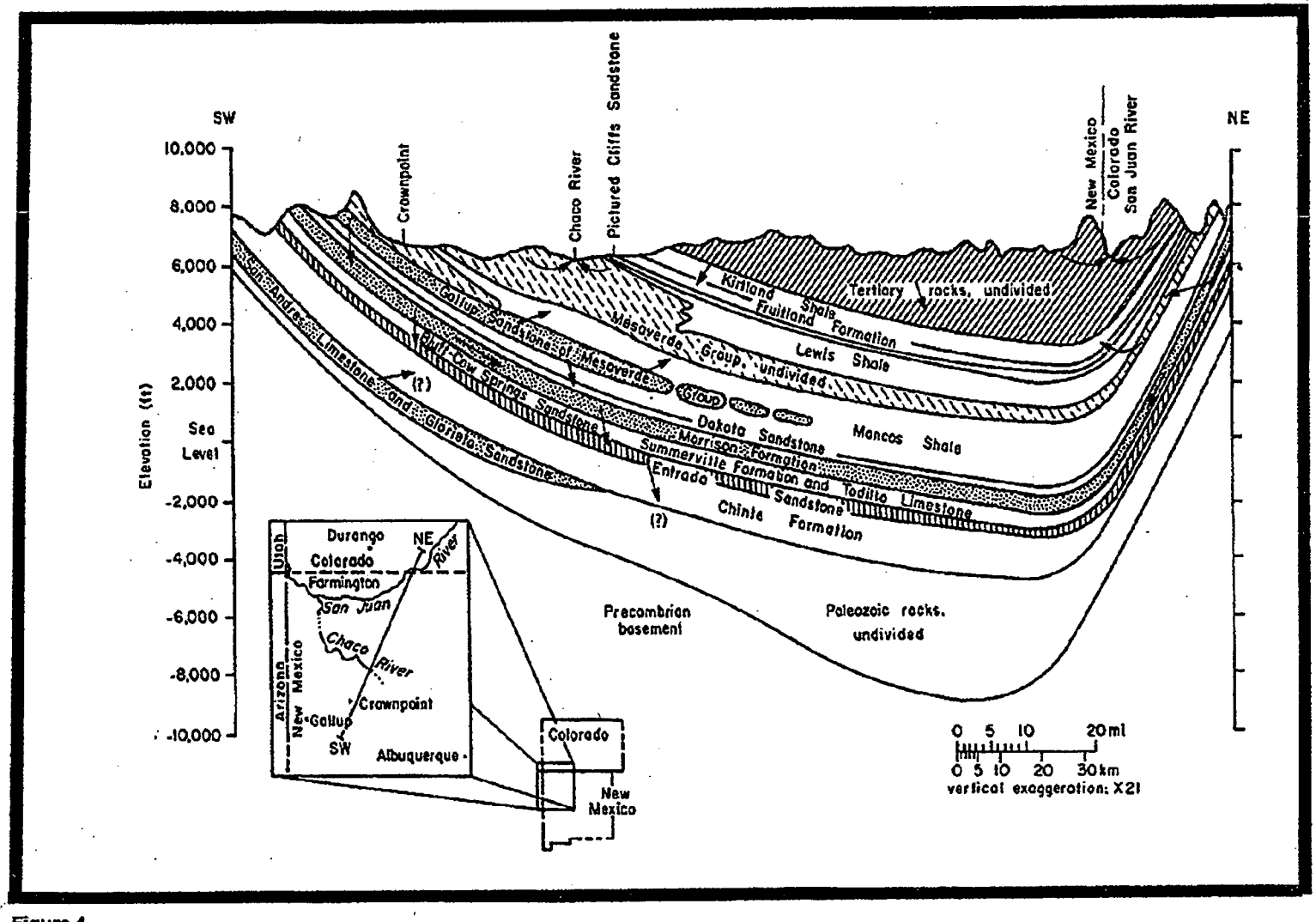


Figure 4.
Generalized hydrologic cross-section of the San Juan Basin, showing major aquifers (stippled), confining beds (blank), and direction of ground water flow (arrows). (after Stone and others, 1983)

Ojo Alamo unit and the Nacimiento Formation are Paleocene in age and the San Jose Formation is Eocene in age (see Figures 1 and 3.)

Where exposed in the Farmington area, the Ojo Alamo shows evidence of both high and moderate stream velocity type deposition, probable braided stream patterns, poorly sorted to well sorted sand and gravel (conglomerate) materials. Interbedded shale is common.

The Nacimiento Formation lies at the surface in a broad belt at the western and southern edges of the central basin and dips beneath the San Jose Formation in the basin center (see Figure 5.). The Nacimiento Formation is made up of nonresistant units and typically erodes to low, rounded hills or forms badlands topography. The Nacimiento Formation occurs only in approximately the southern two-thirds of the basin where it conformably over lies and intertongues with the Ojo Alamo Sandstone (Baltz 1967; Fassett, 1974.) Near the New Mexico – Colorado state line, the Nacimiento Formation grades laterally into the main part of the Animas Formation (Fassett & Hinds, 1979), thus, in this area the two formations occupy the same stratigraphic interval (See Figure 1.).

Nacimiento Deposition

Strata of the Nacimiento Formation were mainly deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973; Fassett, 1974.) In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium to very-coarse grained arkosic sandstone (Fassett, 1974; Stone & others, 1983.) Anderholm (1979) reported local carbonaceous shale and lignite in the unit. Baltz (1967) stated that the percentage of sandstone increases northward.

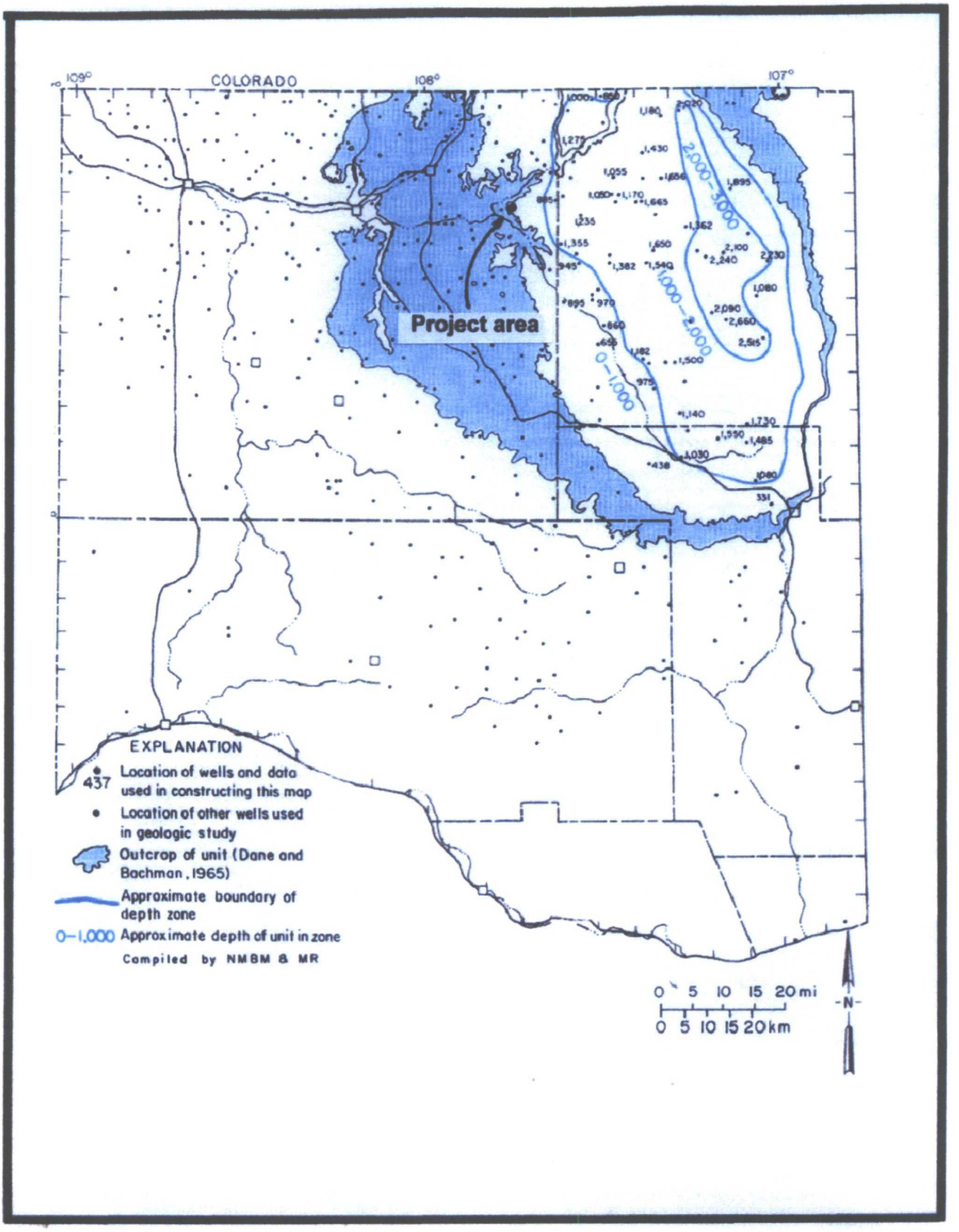


Figure 5.
Elevation of top (structure) of Nacimiento/Animas Formations. (Stone and others, 1963)

Stone and others (1983) indicated that the formation may contain more sandstone than is commonly reported because some investigators assume the slope-forming strata in the unit are shales; whereas, in many places the strata actually are poorly consolidated sandstones.

The total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet (Molenar, 1977). The unit generally thickens from the basin margins toward the basin center (Baltz, 1967; Steven & others, 1974; Stone & others, 1983). The thicknesses of the sandstone deposits within the Nacimiento Formation are much less than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973). (See Figure 6.)

Note, many attempts have been made by geologists and paleontologists to correlate both sandstone and shale types in the Nacimiento Formation with very little to no success. Meandering and braided streams often have more than one source of materials and different kinds of mineral cementation. Porosity and permeability vary. Bogs may have formed in outwash areas creating a host for vegetative growth. The resulting peat deposits are then buried under later deposition creating pressure and high temperatures reducing the plant materials to carbonaceous shale or poor-quality lignite. These local occurrences seldom have continuity.

Simpson (1948a,b) describes the San Jose Formation which overlies the Nacimiento and Animas Formations as occurring in New Mexico and Colorado sections of the San Juan Basin. Its outcrop forms the land surface over much of the central basin area (see Figures 2 and 5.) It overlies the Nacimiento Formation in the area generally south of the state line (Fassett, 1974). The basal contact of the San Jose varies by

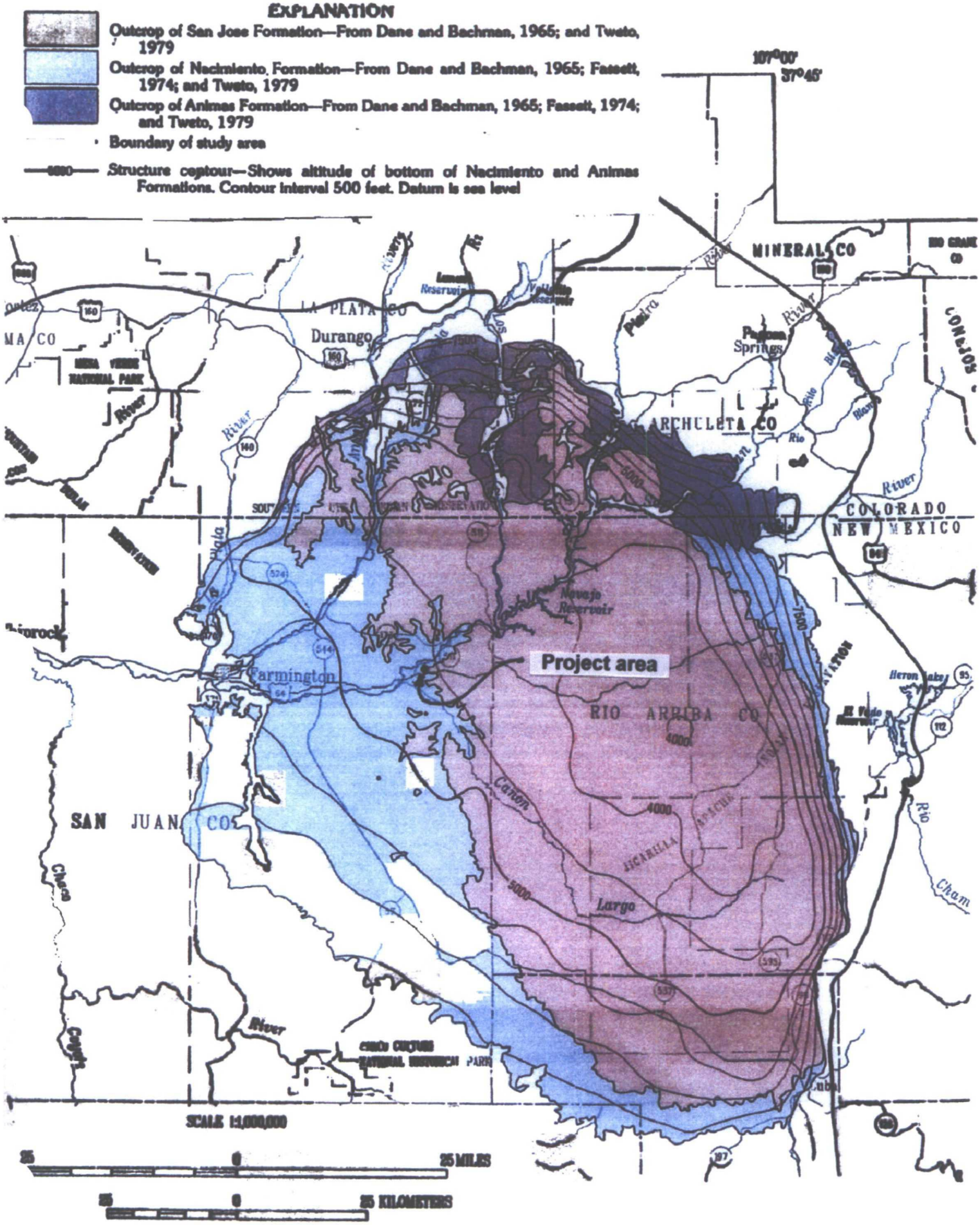


Figure 6.
Approximate altitude and configuration of the bottom of the Nacimiento and Animas Formations. (after Levings and others, 1990)

location in the basin. This contact is a disconformity along the basin margins and an angular unconformity along the Nacimiento uplift in the Cuba area. The contact is conformable in the central basin (Baltz 1967; Fassett, 1974.) (See Figure 7.)

The San Jose Formation was deposited in various fluvial-type environments (Baltz, 1967.) In general, the unit consists of an inter-bedded sequence of sandstone, siltstone and variegated shale. The sandstones are buff to yellow and rusty-colored, cross-bedded very fine to coarse grained arkose, which are locally conglomeratic and contains abundant silicified wood. (Baltz 1967; Fassett, 1974; Anderholm, 1979.)

Baltz (1967) recognized four formal members of the San Jose Formation in the east-central part of the basin. The members and their principal lithology in ascending order are: Cuba Mesa Member sandstone, Regina Member (shale), Llaves Member (sandstone), and Tapicitos Member (shale).

The stratigraphic relationship and subsequent mapability of these members are complicated by extensive intertonguing and pinchouts (Fassett, 1974; Anderholm 1979, Stone & others, 1983), and whether or not the members can be identified throughout the basin has been the subject of some discussion.

The thickness of the San Jose Formation generally increases from west to east. Fassett, (1974) reported a maximum thickness of 2,400 feet in the east-central part of the basin; Stone and others (1983) reported a range from about 200 feet in the west and south to almost 2,700 feet in the center of the structural basin. As indicated in Figure 3, the deepest part of the San Juan structural basin is in the northeast.

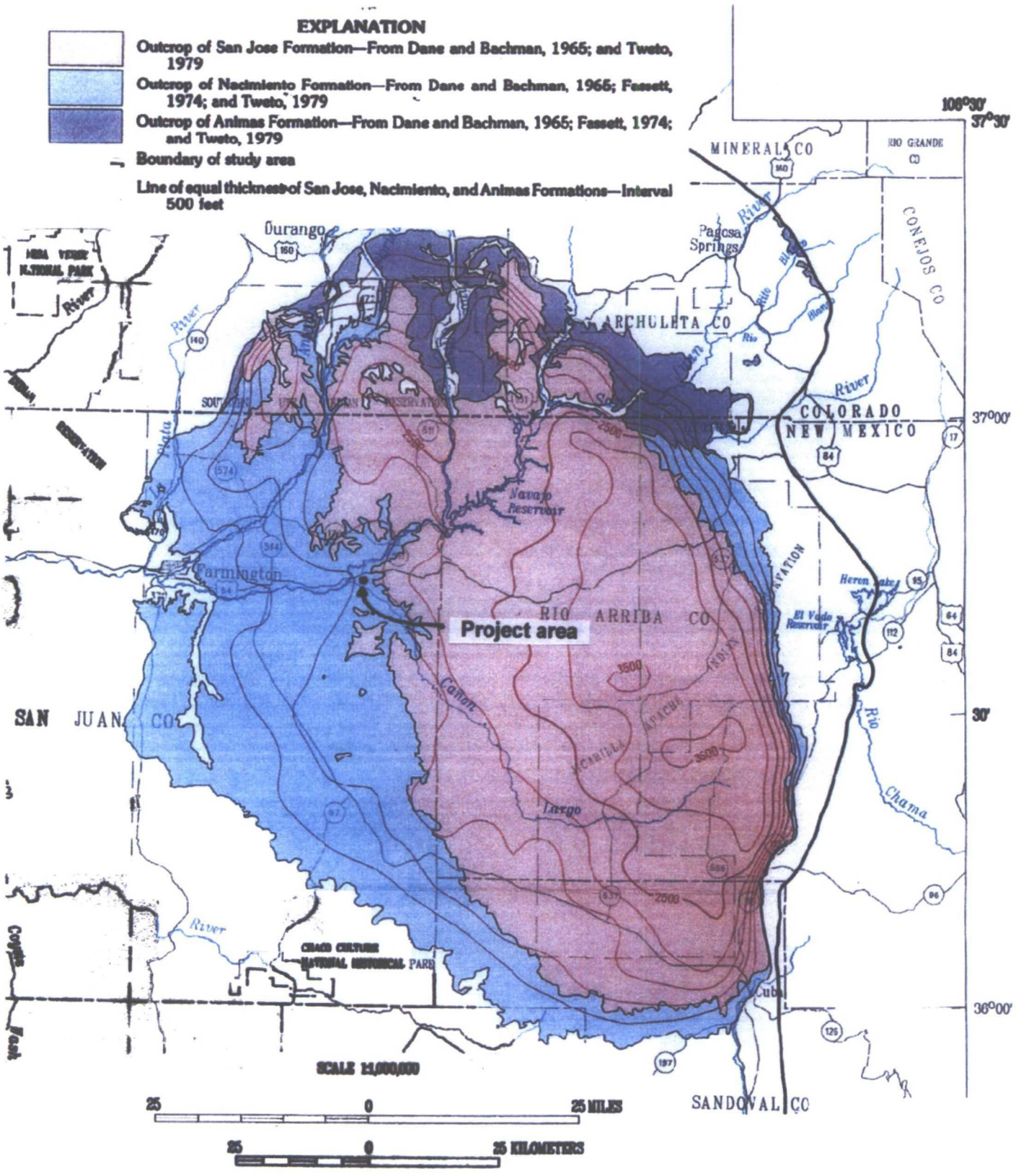


Figure 7.
Approximate thickness of the San Jose, Nacimiento, and Animas Formations.
(after Levings and others, 1990)

Cross-section A – A` Modified

A brief search of the available literature resulted in very little information in the way of cross-sectional material that would be useful in the area of interest. Levings and others (1990) constructed three cross-sections – A-A` from east to west, B-B` from northeast to southwest, and C-C` from north to south -- across the San Juan Basin. (see Figure 8). A portion of Cross-section A-A` parallels U.S. Highway 64 crosses most of San Juan County and a large portion of Rio Arriba County. Part of Cross-section A-A` lies directly north of the project area. This modified diagram begins with Well No. 126 and ends at Well No. 136 (see Figure 9).

As drawn, the Nacimiento Formation crops out somewhere between Well No. 129 and Well No. 130 (see Figure 7.). To the east (on the right side of the section) the Cuba Mesa Member of the San Jose Formation is exposed. Between Wells 133 and 134 the Regina Member of the San Jose is encountered. The location of the project area is indicated by an X on the location map Figure 10

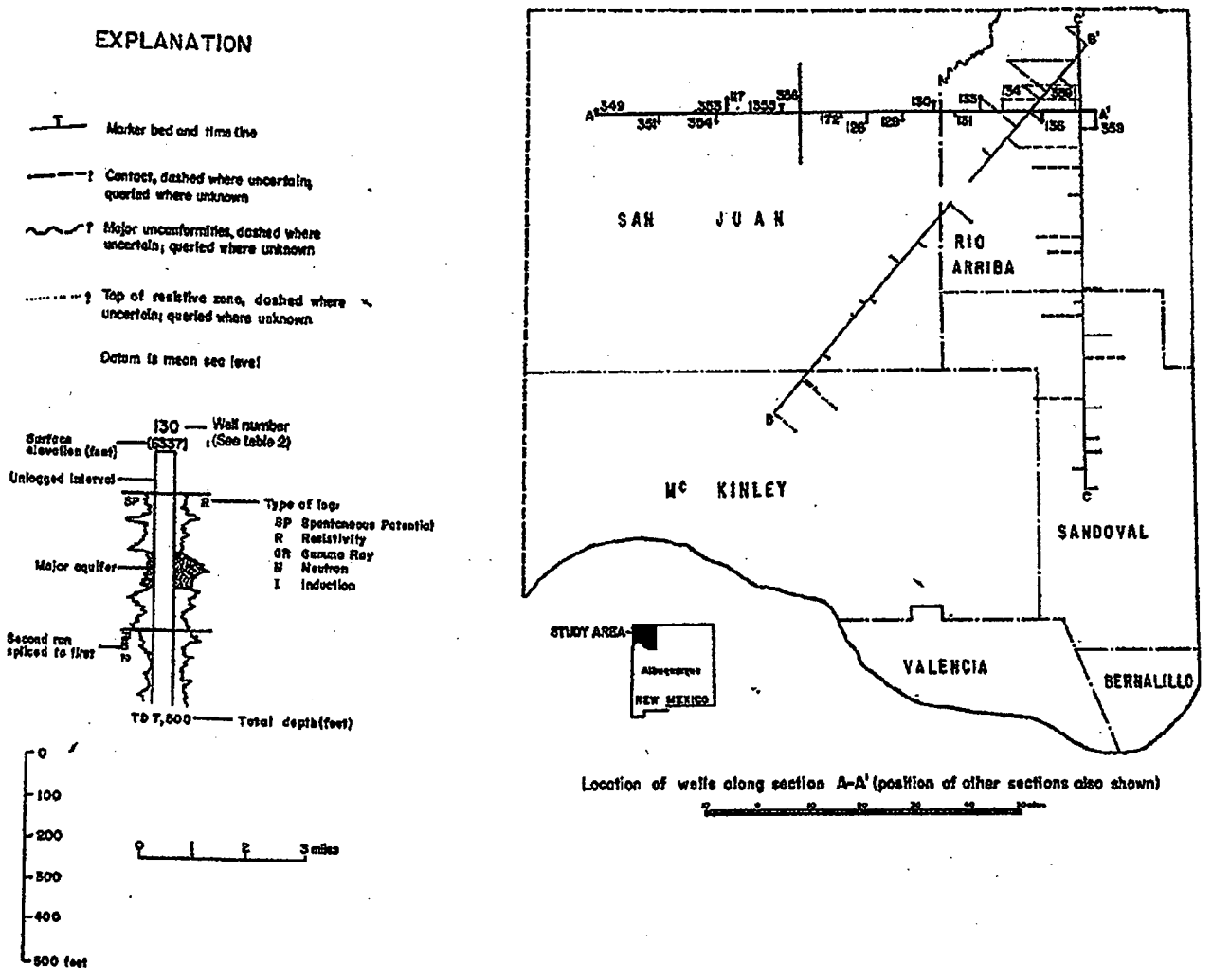
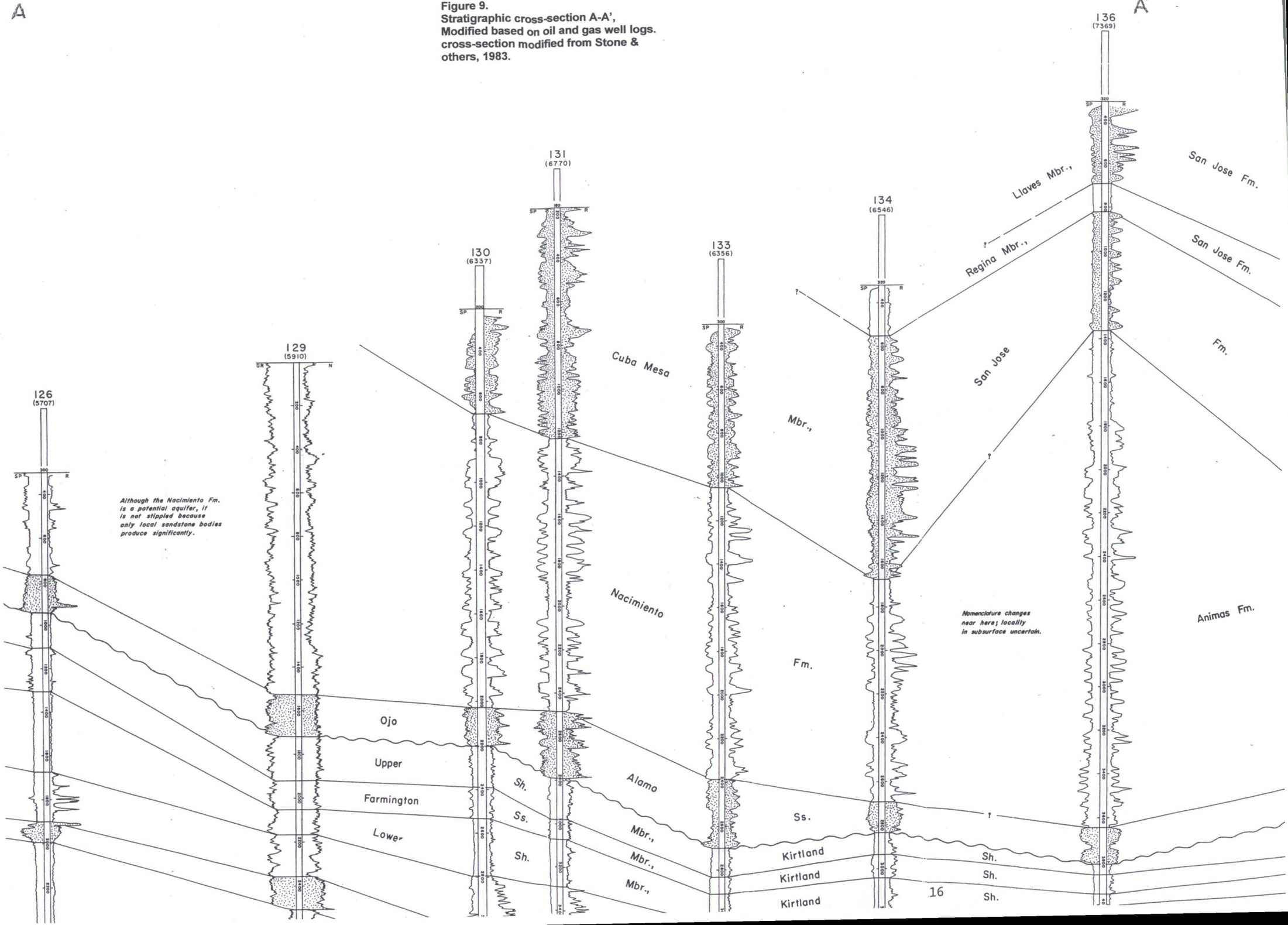


Figure 8.
Index map and legend for cross-section A-A', modified.

A

Figure 9.
Stratigraphic cross-section A-A', Modified based on oil and gas well logs. cross-section modified from Stone & others, 1983.



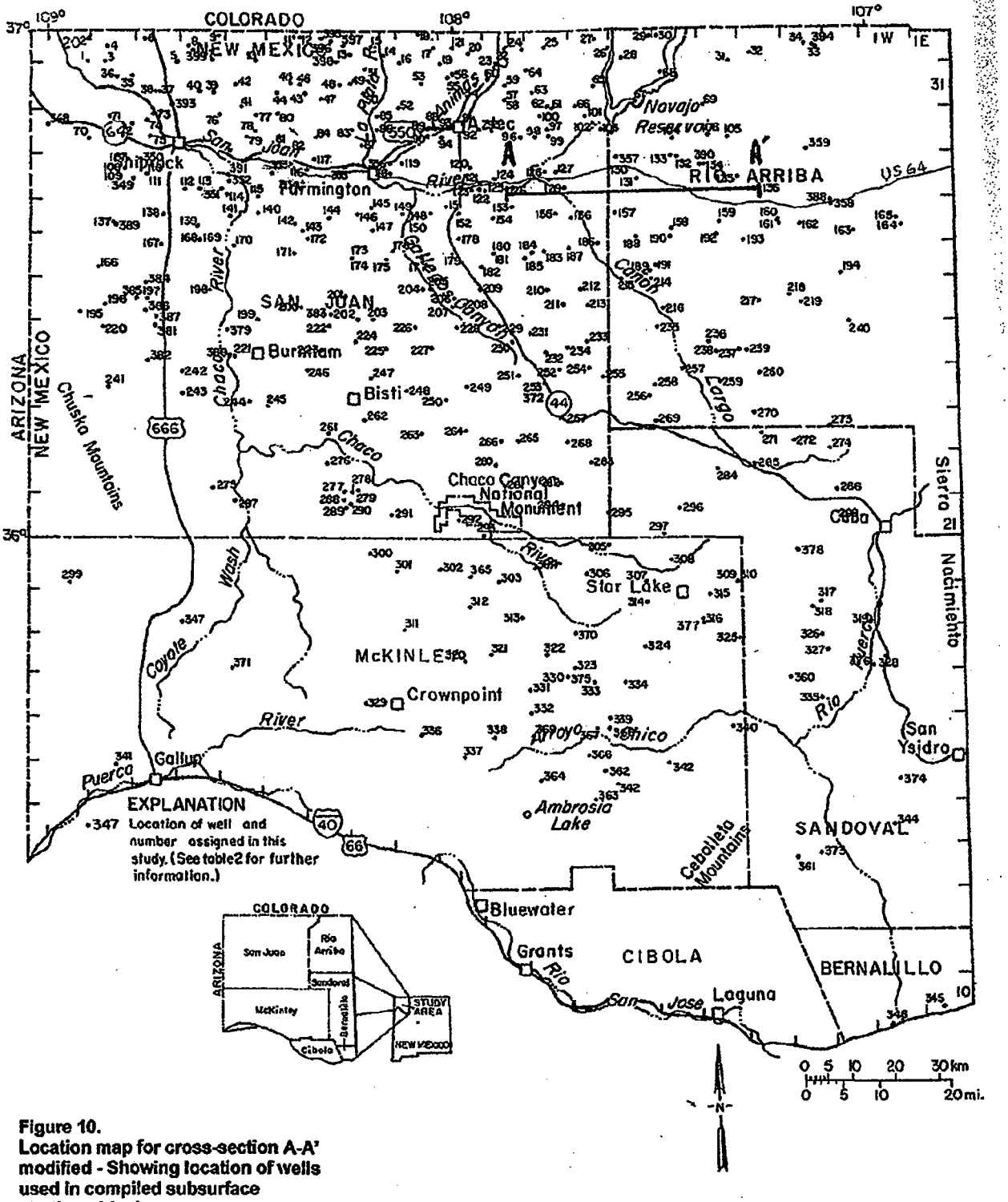


Figure 10.
Location map for cross-section A-A' modified - Showing location of wells used in compiled subsurface stratigraphic data.

Hydrogeology

Hydrogeology may be defined as the science that uses geologic principles to interpret hydrologic phenomena (May, 1976); as such, the term "hydrogeology" is not synonymous with ground-water hydrology. Assess the hydrogeology of an area or aquifer involves delineating the geologic controls of the occurrence, movement, and quality of its ground water.

Background Information

In 1978, the United States Geological Survey began a Regional Aquifer-System Analysis (RASA) Program that was completed in 1995. The San Juan Basin was included in this project. As a result, an exceptional publication dealing with the San Juan Basin was completed. This publication, Atlas HA-720A, by Gary W. Loving, and others was released in 1990. Prior to this publication, in 1983, W. J. Stone and others, from the New Mexico Bureau of Mines and Mineral Resources, and the U.S.G.S, released Hydrologic Report 6 dealing with hydrogeology and water resources of the San Juan Basin, New Mexico. The first cited Atlas is concerned more specifically with the hydrogeology of the San Jose, the Nacimiento and the Animas Formations in the San Juan Basin. In the interest of time, I have drawn heavily on the above cited works, using other references as needed.

Hydrology and Tertiary Sandstones

The following description is taken from Hydrology and Water Resources of San Juan

Basin, New Mexico, (W. J. Stone, F. P. Lyford, P. F. Frenzel, N. H. Mizell, and E. T. Padgett, 1983):

Basic Principles of Ground-water Flow Systems.

A major control on the characteristics of a ground-water-flow system is topography; it determines the location of recharge and discharge areas, the direction of groundwater flow, and the hydraulic gradient. Topography is the result of structural and geomorphic processes acting on the local stratigraphic column. Structure provides the elevation and general configuration of the recharge area: cuesta, fault block. or plateau, for example. Geomorphic processes acting through time determine the extent to which these structural features have been modified by erosion or deposition. The local stratigraphic sequence is of utmost importance; the topographic expression of a block of crystalline rock is markedly different from that of a sequence of alternating marine sandstones and shales.

In the case of sandstone aquifers, like those that prevail in the San Juan Basin, minor controls may also be exerted by the texture, geometry, and orientation of the aquifers, or permeability zones within them. Texture includes both grain size and sorting. These parameters affect the size and degree of interconnection of pores, which in turn influence hydraulic conductivity. Geometry includes the dimensions of the aquifer (thickness, width, and length) and

their interrelationships. Geometry primarily depends on the depositional origin of the aquifer. Channel sandstone bodies are elongate or shoestring in geometry (thickness and width may be similar, but length is much greater than either of these two dimensions). Regressive, coastal-marine-sandstone bodies are prismatic in geometry (width is greater than thickness, but length is is much greater than width). Thickness of such sandstones may diminish seaward. Zones of relatively higher hydraulic conductivity may serve as conduits for greater flow. The orientation of such zones with respect to hydraulic gradient may exert a supplementary influence on flow direction.

In summary, the geologic framework ultimately controls the occurrence of movement, and quality of ground water. Occurrence is controlled by the presence of porous and permeable media. Where ground water is associated with distinct aquifers, occurrence is controlled by the distribution of the aquifers. Location of recharge areas and effectiveness of the recharge process are determined by the structural and geomorphic setting. Direction of the flow is dictated by hydraulic gradient, which is variously influenced by structure, geomorphology, and orientation of permeability zones in the aquifer; the latter is related to the depositional origin of the aquifer. Flow volume is a product of hydraulic conductivity and hydraulic gradient. Conductivity

depends on texture and degree of fracturing; gradient is determined by structure and geomorphology. Grounds-water quality is controlled by abundance and character of soluble materials in the aquifer, geologic conditions suitable for mixing fresh and saline waters from adjacent aquifers, and resident time.

Tertiary sandstones.

The Tertiary sandstone aquifers were deposited in alluvial or fluvial environments. The Ojo Alamo Sandstone as well as the Cuba Mesa and Llaves Members of the San Jose Formation accumulated in broad, wet, alluvial aprons. The Nacimiento and Animas Formations also resulted from stream deposition, but apparently under more humid conditions, as evidenced by the presence of lignite and carbonaceous plant debris in these units.

CONTROLS OF OCCURRENCE – The ground water is associated with alluvial- and fluvial-sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the Ojo Alamo Sandstone, Nacimiento Formation, Animas Formation, and San Jose Formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation.

CONTROLS OF MOVEMENT – Ground-water movement consists of recharge, flow, and discharge. Recharge of the Tertiary

sandstone aquifers is facilitated by their exposure on the flank of the Nacimiento uplift and, at the surface, on the broad plateau that characterizes the central basin. Both of these features receive more precipitation than the surrounding areas because of their higher elevation. Flow direction and discharge areas are controlled mainly by the regional topography and geomorphology. At the local and intermediate scales, ground water moves from upland recharge areas toward discharge areas along floors of the major canyons that deeply incise the Tertiary section of the central basin. These canyons also play a role att the regional level in that they convey this water from the Tertiary aquifers to the San Juan River as subflow through their channel fills. At depths substantially beneath the canyon floor, geomorphology has little effect on ground-water movement. This would be the case for the Nacimiento Formation. The orientations of channel-sandstone bodies in this unit are not well known, but locally orientation may control the direction of ground-water flow in such settings. Based on paleocurrent analyses, Powell (1973) concluded that the source of the Ojo Alamo Sandstone was to the northwest. Distribution and size of gravel in this unit supports such an interpretation. Flow direction in this unit may be influenced locally by the orientation of channels radiating from such a source area.

Flow volume is a product of hydraulic conductivity, hydraulic gradient, and flow area, as described by Darcy's Law. Conductivity of the Tertiary sandstones is determined mainly by their texture (grain size and sorting) and cementation. Gradient is determined by the topography, that is, the difference in elevation of the recharge and discharge areas. Structural effects on ground-water movement appear to be minor for these Tertiary deposits. The swarm of dikes intruding the section near Dulce, NM may provide local barriers to flow.

CONTROLS OF WATER QUALITY – Although some mineral material is undoubtedly dissolved by ground water flowing through the Tertiary sandstone aquifers, most of the dissolved solids are probably derived at the interfaces with adjacent confining shale beds. The more complex the sandstone-shale intertonguing, the more opportunity for this uptake of solids. Mixing of fresh ground water with saline waters from other aquifers may occur in areas of intense fracturing or where head differentials permit interaquifer flow, but these are probably minor sources of salinity for Tertiary deposits.

Soils

Geomorphically, the area of study may be described as a dune field overlying badland topography. The dune material can be described as eolian deposited clayey silts, fine to very fine sand and even finer grained silty-clay loess. In years of above e average precipitation, these dunes may become "frozen" or stabilized long enough for vegetation to take root. Once this occurs, a thin soil zone can develop and the dune is stable. The substratum becomes a host for caliche depositions that further stabilizes the dune. If sufficient moisture is available periodically, weathering and physical breakdown occurs in the underlying bedrock. Most granular materials are poorly sorted, mechanically emplaced, and are poorly cemented. Should this fragile regolith be breached, the wind will start a "blow-out" or bolson and soon the dune will migrate, often times "piling up" on other dunes or dune material. At best, there is very little stability in the material overlying the bedrock. Proof of this is attempting to transverse this area in a two-wheeled drive vehicle.

Following this introduction is an abstract of soil characteristics as defined in the published Soil Survey of San Juan County, New Mexico – Eastern Part, United States Department of Agriculture Soil Conservation Service.

Figure 11 indicates four soil types that may be encountered on the project area. Each of these four soil types have been reviewed and the results outlined. Please note that four of the lesser soil types may have adverse effects on construction. As stated, "the adverse Uffens Soil has limited suitability for ponds or other earthen structures because of high content of sodium." Also, "the Haplargids and Torriorthents have variable properties. If these soils are used for urban development, on-site investigation is needed.

The Blackston Soil is poorly suited to urban development. The main limitation is slope excavation. It can also have unstable walls."

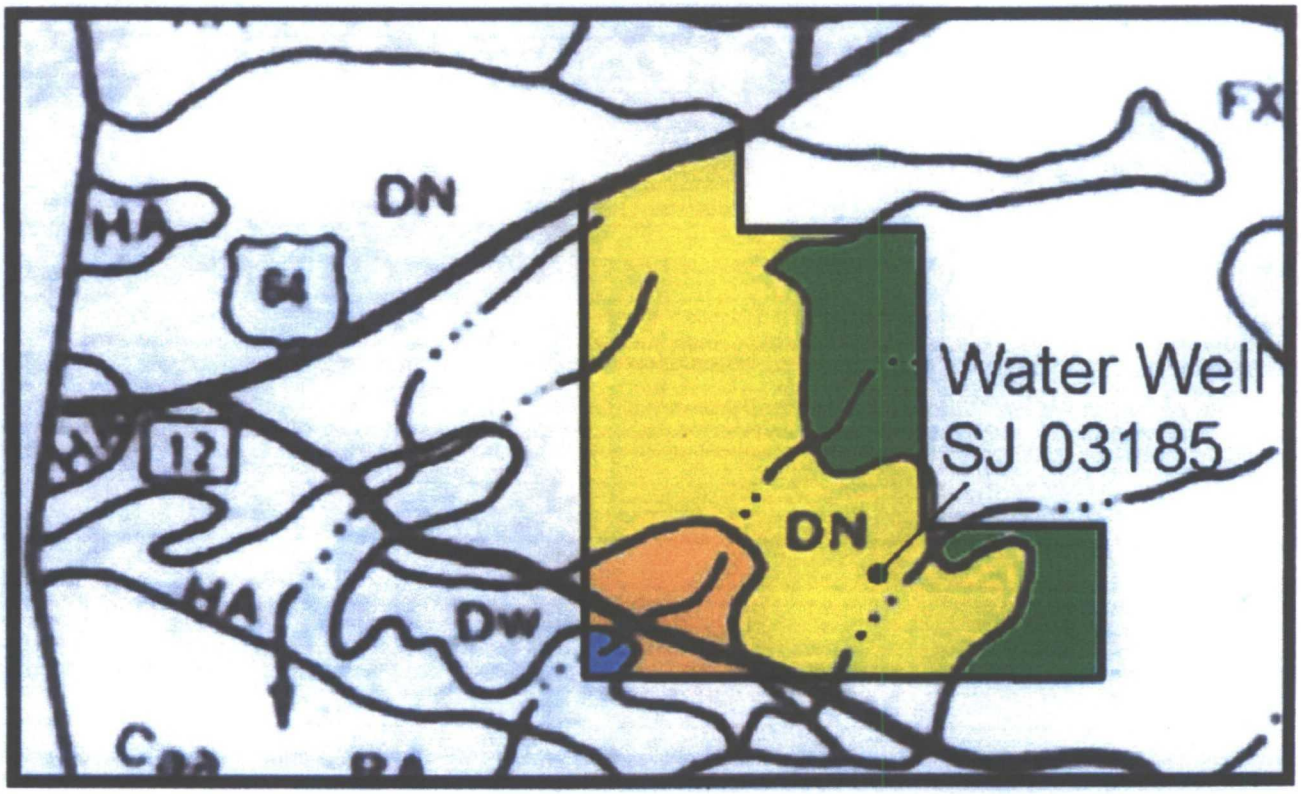


Figure 11. Modified from USDA – SCS Soil Survey of San Juan County, NM – Eastern Part, 1980, Map Sheet Number 10.

DN – Doak-Avalon association, gently sloping.

Description:

1. Unit is on mesas, plateaus, and terraces
2. Slope 0 – 5%
3. Native vegetation is mainly grass
4. Elevation 5600 – 6400 ft.
5. Annual precipitation - approx. 8 inches
6. Average annual temperature – 53 deg. F.
7. Frost free avg. – 150 days
8. 50% Doak loam on 0 to 3% slopes
9. 35% Avalon loam on 3 to 5% slopes

Doak –

1. Soil is deep & well-drained
2. Formed in alluvium derived dominantly from sandstone & shale
3. Surface layer is brown loam about 5 inches thick
   Subsoil is brown & light brown silty clay loam & clay loam about 38 inches thick
4. Substratum to a depth of 69 inches or more is light yellowish brown clay loam

5. Permeability is moderately slow
6. Available water capacity is very high
7. Runoff slow – hazard of water erosion is slight
8. Where it has native vegetation cover, wetting depth is about 16 inches.
9. Shrink-swell is low

Avalon-

1. Deep & well drained
2. Alluvial & eolian materials derived from sandstone & shale
3. Surface layer 4 inches – brown loam
   Subsoil – Brown loam about 10 inches thick
4. Upper 22 inches of substratum – pink-white loam
5. 22-60 inches light-yellowish brown loam
6. Moderate permeability
7. Available water capacity is high
8. Runoff is medium
9. Hazard of water erosion is moderate
10. Hazard of blowing soil is high
11. Soil is slightly saline
12. Shrink-swell is moderate

FX – Fruitland-Persayo-Sheppard complex, hilly.

Description:

1. Unit is on hills, mesas, plateaus, fans, and breaks
2. Slope – 5 to 30%
3. Native vegetation is mainly grass, some pinion & juniper
4. Elevation 4800 – 6400 ft.
5. Annual precipitation - approx. 8 inches
6. Average annual temperature – 53 deg. F.
7. Frost free avg. – 150 days
8. 40% Fruitland sandy loam
9. 30% Persayo clay loam
10. 25% Sheppard loamy fine sand
11. Unit is intricately intermingled and not possible to map separately at the scale used.
12. Includes small areas of Farb soils on hills & breaks with rock outcrops on ridges & hills throughout unit. Roughly 5% of total unit.

Fruitland Soil –

1. Soil is deep and well drained
2. Formed in alluvium derived dominately from sandstone and shale
3. Surface layer is brown sandy loam about 4 inches thick
4. The underlying material to a depth of 60 inches or more is brown fine sandy loam
5. Permeability is moderately rapid
6. Available water capacity is moderate
7. Runoff is medium – hazard of water erosion is moderate
8. Hazard of soil blowing is severe
9. Where soil is covered with native vegetation, the average annual wetting depth is about 24 inches

10. Soil is slightly saline

Persayo Soil –

1. Shallow and well drained
2. Derived from shale
3. Top 2 inches of surface soil is light brownish clay loam
4. Depth of 2 inches to 18 inches is light yellowish brown clay loam
5. Shale parent at 18 inches
6. Permeability is moderately slow
7. Available water capacity is very low
8. Runoff is rapid
9. Water erosion is high
10. Soil blowing is severe
11. In areas covered with native vegetation, wetting depth is 12 inches
12. Soil is slightly saline

Sheppard Soil –

1. Deep and somewhat excessively drained
2. Formed in eolian material derived from mixed sources
3. Top 4 inches is light yellowish brown loamy fine sand
4. Underlying material to a depth of 60 inches or more is light yellowish brown loamy fine sand & fine sand
5. Permeability is rapid
6. Available water capacity is low
7. Runoff is slow
8. Hazard of water erosion is slight
9. Hazard of soil blowing is very severe
10. Native vegetation cover wetting depth is 24 inches

DW – Doak-Uffens complex, 3 to 8 %

Description:

1. Unit is on mesas and plateaus
2. Slope 5 – 8%
3. Native vegetation is mainly grass
4. Elevation 5600 – 6400 ft.
5. Annual precipitation - approx. 8 inches
6. Average annual temperature – 53 deg. F.
7. Frost free avg. – 150 days
8. 40% Doak very fine sandy loam
9. 35% Uffens fine sandy loam
10. Unit is intricately intermingled and not possible to map separately at the scale used.
12. Includes small areas of Shiprock, Monierco, Muff, and Huerfano soils depending on topography and is about 25% of total unit.

Doak –

1. Soil is deep & well-drained
2. Formed in alluvium derived dominantly from sandstone & shale
3. Surface layer is brown very fine sandy loam about 3 inches thick
   Subsoil is yellowish-red clay loam approximately 12 inches thick

4. Substratum to a depth of 60 inches is reddish brown loam
5. Permeability is moderately slow
6. Available water capacity is very high
7. Runoff slow – hazard of water erosion is slight
8. Hazard of soil blowing is severe
9. Where it has native vegetation cover, wetting depth is about 15 inches.
10. Estimated content of exchangeable sodium is 15 to 25%

Uffens Soil –

1. Soil is deep & well-drained
2. Formed in alluvium derived dominantly from shale
3. Surface layer is pale brown fine sandy loam about 4 inches thick
   Subsoil is reddish brown clay loam and sandy clay loam approximately 18 inches thick
4. Substratum to a depth of 60 inches or more is pale yellow sandy clay loam
5. Permeability is moderately slow
6. Available water capacity is low
7. Hazard of water erosion is slight
8. Hazard of soil blowing is severe.
9. Estimated content of exchangeable sodium is 25 to 75%
10. Where it has native vegetation cover, wetting depth is about 14 inches
11. Strongly saline
12. Soil has limited suitability for ponds or other earthen structures because of the high sodium content

HA – Haplargids-Blackston-Torriorthents complex, very steep

Description:

1. Unit is on terraces, mesas and plateaus
2. Slope 8 – 50%
3. Native vegetation is mainly grass
4. Elevation 4800 – 7200 ft.
5. Annual precipitation - approx. 9 inches
6. Average annual temperature – 52 deg. F.
7. Frost free avg. – 140 days
8. 45% Haplargids, 8 – 50% slopes
9. 30% Blackston gravely loam, 8 to 40% slopes
10. 20% Torriorthents, 8 to 50% slopes
10. Unit is intricately intermingled and not possible to map separately at the scale used.
12. Includes areas of rock outcrop on ledges, shelves and breaks and is about 5% of total unit

Haplargids –

1. Soil is shallow to deep
2. Well-drained to excessively drained
3. Formed in alluvium derived from mixed sources
4. Soil type does not have a typical profile
5. One profile commonly observed has a surface layer of light brown cobbly sandy loam about 7 inches thick

6. Subsoil is brown to yellowish brown cobbly sandy clay loam approximately 19 inches thick
7. Substratum to a depth of 60 inches or more is light brown gray, light gray and pale olive cobbly sandy clay loam and loam
8. Permeability is moderately to moderately slow
9. Available water capacity is low to high
10. Hazard of water erosion is slight to severe
11. Hazard of soil blowing is slight
12. Where it has native vegetation cover, wetting depth is about 14 inches

Torriorthents --

1. Soil is deep and well-drained
2. Formed in alluvium derived from mixed sources
3. No simple profile is typical of Torriorthents soils
4. Commonly has a surface layer brown-gray cobbly loam about 3 inches thick
5. Substratum down to a depth of about 15 inches is light brownish gray clay loam
6. Below substratum is shale
7. Permeability is moderately rapid to moderately slow
8. Available water capacity is low to high
9. Hazard of water erosion is slight to severe
10. Hazard of soil blowing is slight
11. Where there is native vegetation cover, wetting depth is 10 to 15 inches

Note, caution:

Haplargids and Torriorthents have variable properties. If these soils are used for urban development, onsite investigation os needed. The Blackston soil is poorly suited to urban development. The main limitation is slope. Excavation can also have unstable walls.

Tertiary Aquifer in the Area of Interest

Considerable treatise was given to Tertiary sandstone aquifers in the section entitled "Basin Principles of Groundwater Flow Systems." Information on aquifers in the area of interest is confined to two wells, one water well and one oil and gas well.

Unfortunately, the State of New Mexico engineer does not, or at least has not in the past, require water well drillers and contractors to submit a drillers log or an electric-log for wells drilled. Apparently all that is required is a location tie to the U.S. Land System, depth of the well, and depth to water. Such is the case with water well SJ-03185 located in the project area. Oil and gas well No. 129 (see Figure 9, Cross-section A-A`, modified), also in the project area, indicates it was collared in the Tertiary Nacimiento Formation. The gamma ray-neutron log data gives evidence of several "thin" sand aquifer possibilities; however, the warranty on the cross-section between wells 126 and 129 states the following:

> Although the Nacimiento Formation is a potential aquifer, it is not stippled because only local sandstone bodies produce significantly (Stone and others, 1983).

Stippling in the underlying Ojo Alamo Sandstone and in the overlying Cuba Mesa Member of the San Jose Formation indicates major aquifers (Figure 9, Cross-section A-A`, modified).

Tertiary Aquifers

T.E. Kelly, 1981, p. 60, in a paper entitled "Hydrology of Strippable Coal Deposits in the San Juan Basin", summarizes the Tertiary aquifers as follows:

> The Tertiary-sandstone aquifers are best developed in the Ojo Alamo Sandstone and the San Jose Formation. Water is also produced from the Nacimiento Formation, but this formation is generally considered to be an inferior water-bearing deposit. The Ojo Alamo Sandstone is composed of buff to brown, medium- and coarse-grained sandstone with interbedded green to gray shale. The sandstone frequently is conglomeratic, and it is poorly to moderately indurated in the subsurface. The San Jose Formation consists of alternating beds of hard and soft, locally conglomeratic sandstone. Some shale and siltstone is locally present. The Nacimiento Formation consists primarily of shale interbedded soft, fine- to medium-grained sandstone which generally thickens northward.

It appears, if a good volume of better quality water is needed or desired in the project area, the Ojo Alamo Sandstone at the base of the Nacimiento Formation would be a good source. The depth of the Ojo Alamo, in the project area, is estimated to be around 1450 feet (see Figure 9, Cross-section A-A`, modified), based on log data of Well No. 129.

Ground Water

Potentiometric Surface

Figure 12, Lovings and others, 1990, is a map portraying the altitude of the potentiometric surface, in feet above sea level, at a given well site. The lower number is the year the measurement was taken. One particular well measured in 1986 at 5643 feet altitude is very near the project area and is in the Nacimiento Formation. To reiterate, the project site appears to be underlain by the upper portion of the Nacimiento Formation.

Water well SJ-03185 was drilled within the confines of the project area. Total depth of the well is 220 feet. Water was encountered at 200 feet and the piezometric surface was at 100 feet. Estimated yield was 10 gpm, possibly with a bailer test. Casing was perforated from 80 to 220 feet. This well was re-entered in August 2009 and was sampled for water quality. The piezometric surface remains at 100 feet.

Another water well, SJ-02883, north of U.S. Highway 64 and the project area, probably at the site of a roadside business, now removed, was drilled in 1998. The well depth is 123 feet and the depth to water is 87 feet. The estimated yield is 4 gpm. The well investigated at this site appears to be equipped with a submersible pump. Copies of these reports are to be found in Appendix A for Points of Diversion numbers SJ-03185 and SJ-02883. These two water wells are the only water wells recorded for Section 16, T. 29 N., R. 9 W., NMPM.

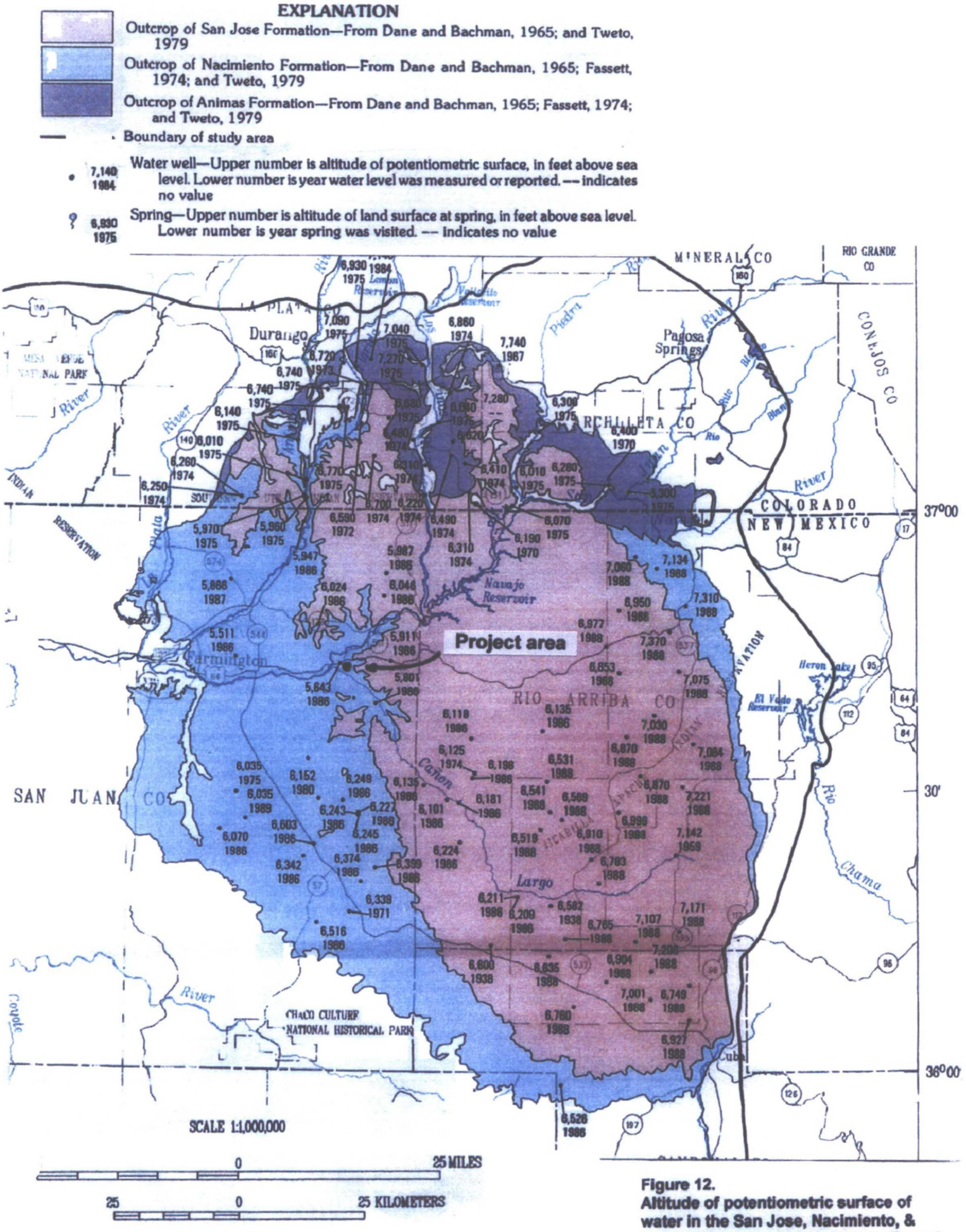


Figure 12.
Altitude of potentiometric surface of water in the San Jose, Nacimiento, & Animas Fms.at selected water wells and a spring. (after Levings & others, 1990)

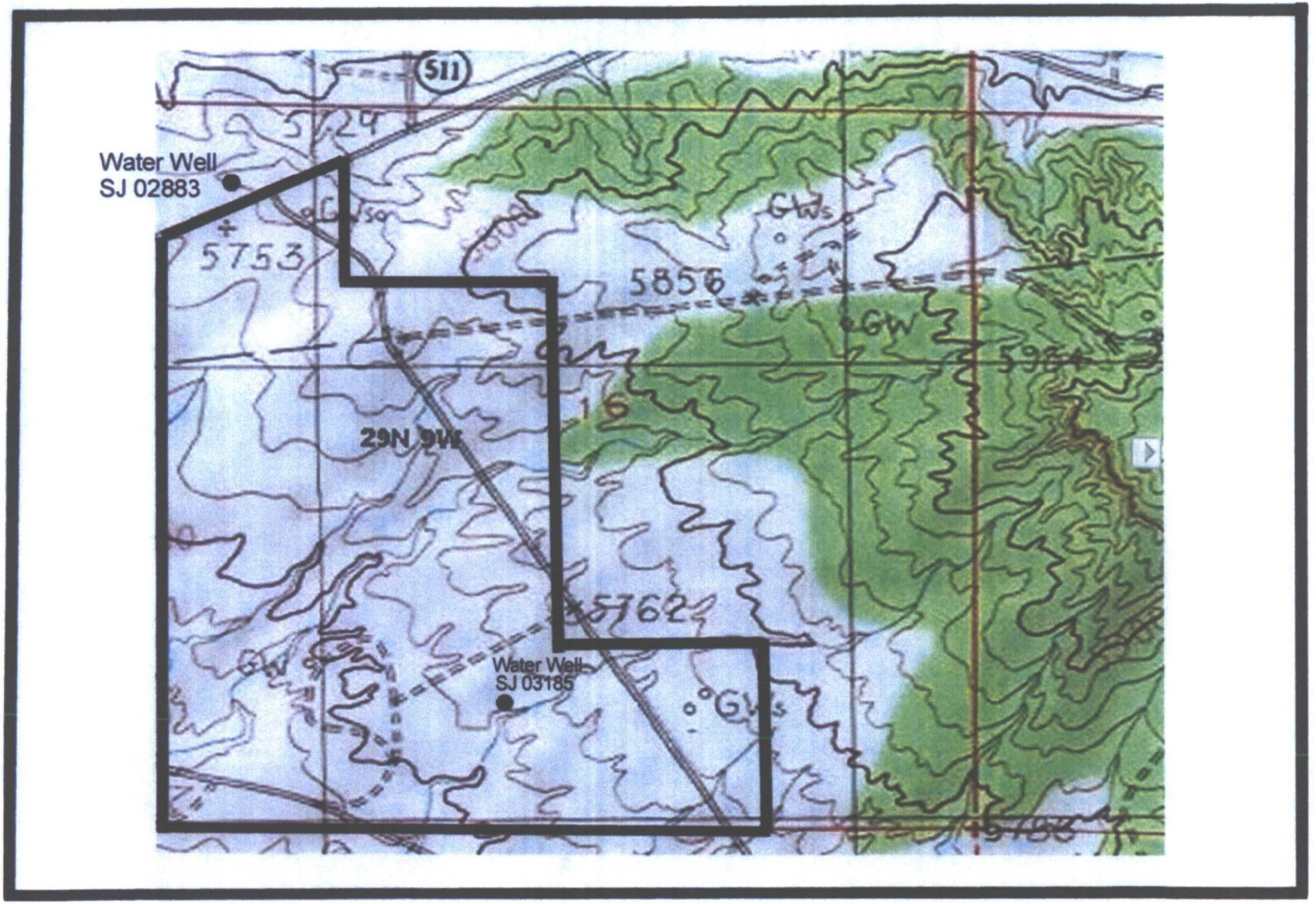


Figure 13.
Area topographic map showing general area of the project and approximate location of water well SJ 03185.

Water Quality

The only water quality information available for this immediate project area is from the analysis of a recent water sample taken from water well SJ 03185. The water source(s) appears to be from a sandy unit in the underlying Upper Nacimiento Formation. The zone of saturation is at a depth of 200 feet and has a hydrostatic head of 100 feet. The bottom of the well is 220 feet and it is unknown if this is the total thickness of the water-bearing zone. Table 1 showing selected properties of and constituents of water taken from the San Jose, Nacimiento, and Animas Formations, indicates results of water samples tested from these three formations. Table 2 includes U.S. EPA Standards of selected primary drinking water standards with Table 3 showing secondary drinking water standards. When comparing laboratory results from the project well, dissolved solids and sulfates alone would probably place this water in the "saline" class and "not fit for human consumption." Figure 14 shows concentrations of dissolved solids in water from selected water wells and one spring in the San Jose, Nacimiento, and Animas Formations. Figure 15 portrays sulfate concentrations in the above mentioned formations.

In Figure 16 the upper number shows discharge in gallons per minute (gpm), the middle number shows specific capacity in gallons per minute per minute per foot per foot of drawdown. The lower number is the year measurements were made.

Table 1. *Selected properties of and constituents in water from the San Jose, Nacimiento, and Animas Formations*

[Dissolved constituents are in milligrams per liter]

Property or constituent	Number of samples	Minimum	Maximum	Median	SJ 03185
Specific conductance (microsiemens per centimeter at 25 degrees Celsius)	220	201	12,700	934	—
pH (standard units)	207	4.6	9.8	7.8	—
Temperature (degrees Celsius)	159	9.5	23.0	13.0	—
Calcium	203	1.7	540	46	68.3
Magnesium	203	0.1	230	7.3	8.7
Sodium	186	1.6	2,200	140	992
Potassium	182	0.2	21	1.2	2.0
Alkalinity, total as calcium carbonate	202	21	1,750	262	190.0
Sulfate	204	2.3	4,300	100	2150
Chloride	209	1.3	4,100	17	19.0
Fluoride	199	0.1	8.8	0.8	1.1
Dissolved solids, sum of constituents	151	114	6,800	563	3320
Nitrate, as nitrogen	29	0.02	5.6	0.07	0.32
Selenium	73	0.001	13	0.02	< 0.20

Table 2. *Selected primary drinking-water standards*

[From U.S. Environmental Protection Agency, (1986a). Constituents are in milligrams per liter]

Constituent	Standard
Fluoride	4
Nitrate (as nitrogen)	10
Selenium	0.01

Table 3. *Selected secondary drinking-water standards*

[From U.S. Environmental Protection Agency, (1986b). Constituents are in milligrams per liter]

Property or constituent	Standard
pH (standard units)	6.5–8.5
Sulfate	250
Chloride	250
Fluoride	2
Dissolved solids	500

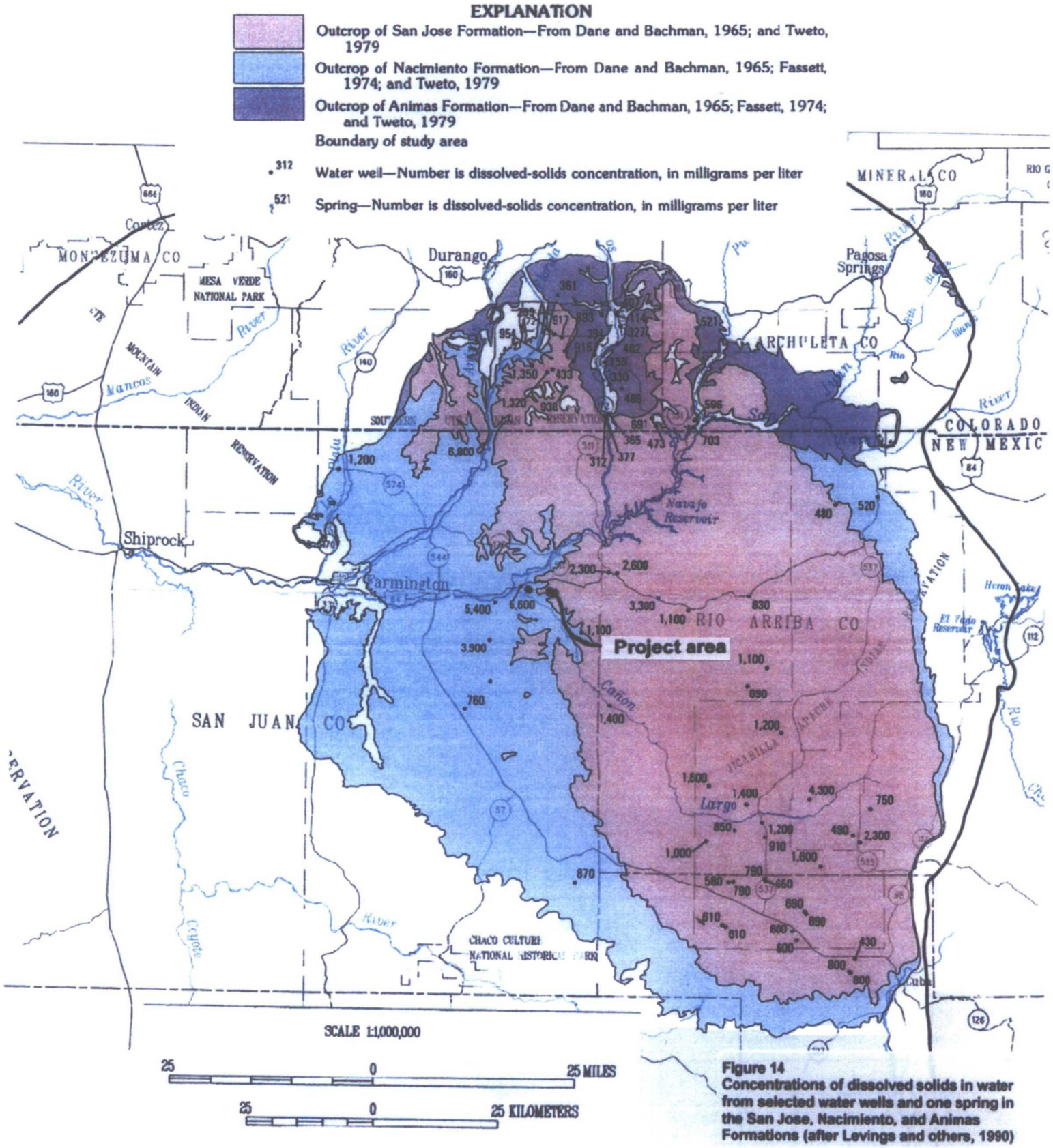


Figure 14
Concentrations of dissolved solids in water from selected water wells and one spring in the San Jose, Nacimiento, and Animas Formations (after Levings and others, 1990)

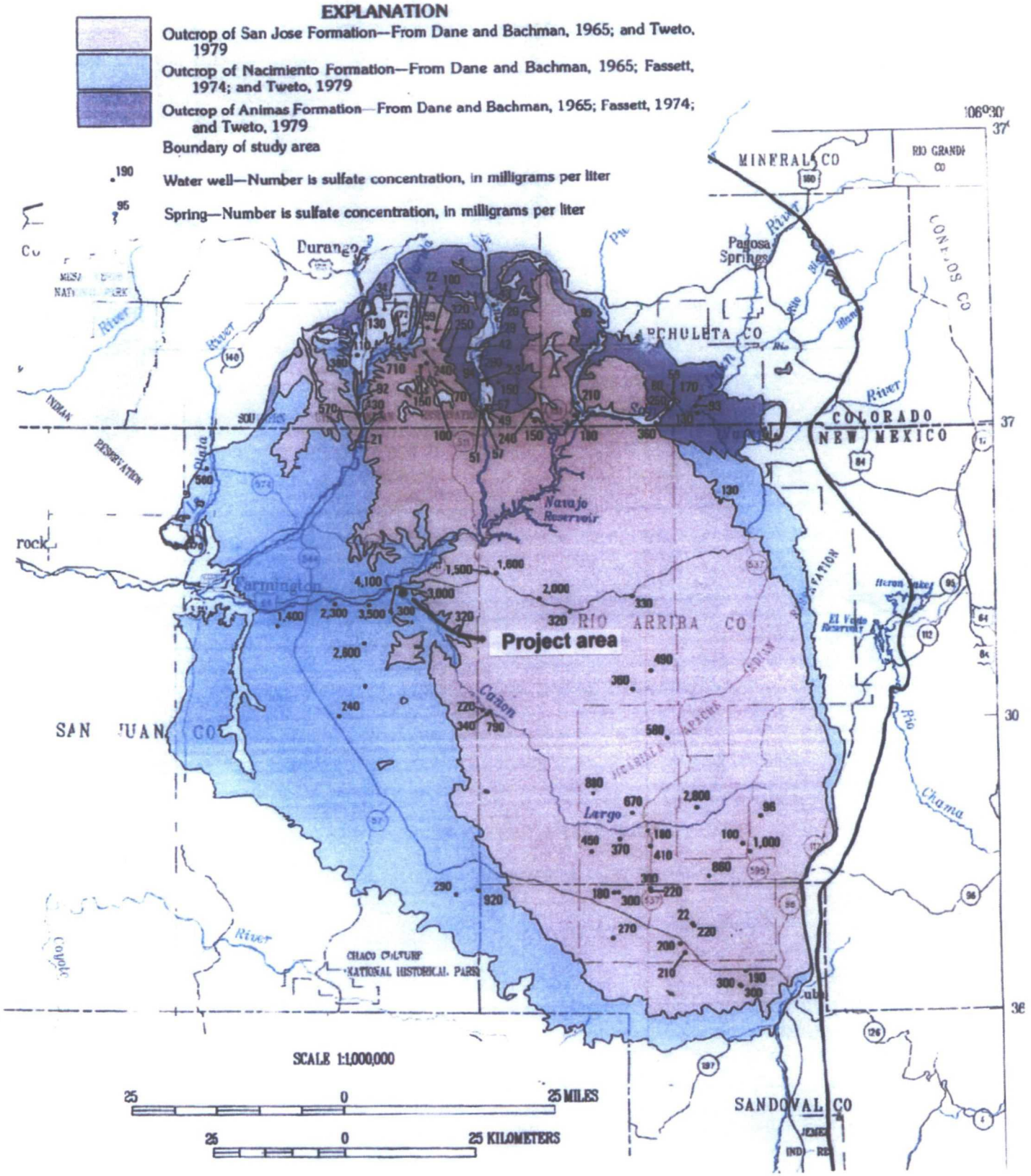


Figure 15.
Concentrations of sulfate in water from selected water wells and one spring in the San Jose, Nacimiento, and Animas Formations. (after Levings & others, 1990)

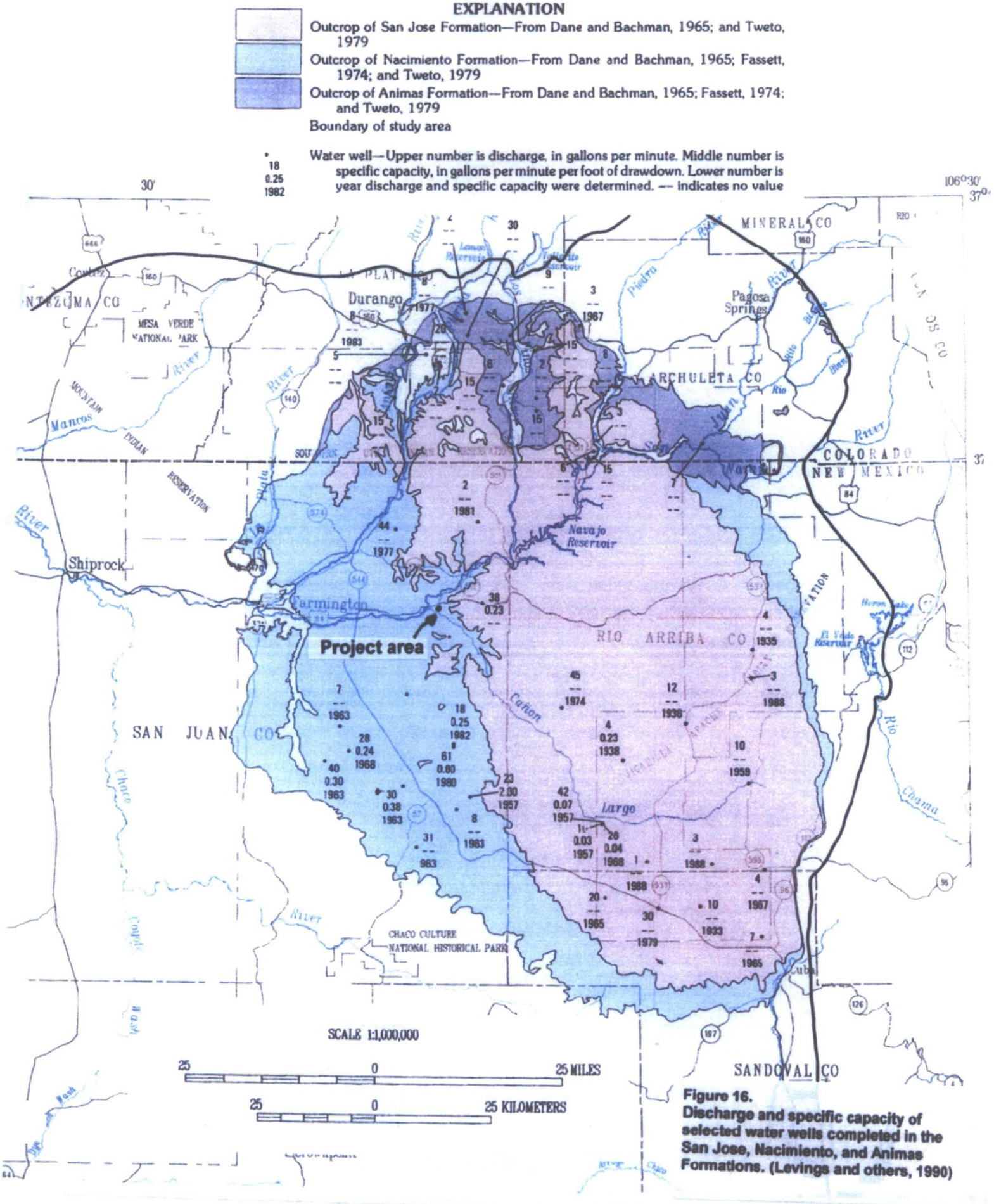


Figure 16.
Discharge and specific capacity of selected water wells completed in the San Jose, Nacimiento, and Animas Formations. (Levings and others, 1990)

Selected References

Anderholm, S. K., 1979, Hydrogeology and water resources of the Cuba quadrangle, Sandoval and Rio Arriba Counties, New Mexico: Socorro, New Mexico Institute of Mining and Technology, unpublished M.S. thesis, 162 p.

Baltz, E. H., Jr., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous and Tertiary rocks, east-central San Juan Basin, New Mexico: U.S. Geological Survey Water-Supply Paper 1576-H, 89 p.

Brimhall, R. M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J. E., ed., Cretaceous and Tertiary rocks of the southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J. E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.

Fassett, J. E., and Hinds, J. S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: U.S. Geological Survey Professional Paper 676, p. 5-16.

Keetch, C. Wesley, Soil Conservation service, 1980, Soil survey of San Juan County, New Mexico – Eastern Part: U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the U.S. Department of the Interior, Bureau of Indian Affairs and Bureau of Reclamation and the New Mexico Agricultural Experimental Station.

Kelley, V. C., 1951, Tectonics of the San Juan Basin, in Guidebook of the south and west sides of the San Juan Basin, New Mexico, Colorado, Arizona, and Utah: U.S.

Geological Survey Hydrologic Investigations Atlas 720-C, 2 sheets. U.S. Department of the Interior.

Kelly, T. E., 1981, Hydrology of strippable coal deposits in the San Juan Basin, in Environmental Geology and Hydrology in New Mexico. Steven G Wells and Wayne Lambert, eds., 1981: New Mexico Geological Society Special Publication, No. 10.

Levings, Gary W.; Craigg, Steven D.; Dam, William, L.; Kernodle, John Michael, and Thorn, Conde R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan Structural Basin, New Mexico, Colorado, Arizona, and Utah; U.S. Geological Survey Hydrologic Investigations Atlas 720-A. Department of the Interior,

May, J. P., 1976, Geohydrology/hydrogeology: Letter to the editor, Geotimes, vol.21, no.5, p.15.

Molenaar, C. M., 1977a, San Juan Basin time-stratigraphic nomenclature chart, in Guidebook of San Juan Basin III: New Mexico Geological Survey, 28th Field Conference, p. xii.

_____, 1977b, Stratigraphy and depositional history of Upper Cretaceous rocks of the San Juan Basin area, New Mexico and Colorado, *with a note* on Economic resources, in Guidebook of San Juan Basin III: New Mexico Geological Survey, 28th Field Conference, p. xii.

Powell, J. S., 1973, Paleontology and sedimentation models of the Kimbeto member of the Ojo Alamo Sandstone: Four Corners Geological Society, Memoir, p. 111-122.

Simpson, G. G., 1948a, The Eocene of the San Juan Basin, New Mexico: American Journal of Science, vol. 246, pt. 1, p. 257-282.

_____, G. G., 1948b, The Eocene of the San Juan Basin, New Mexico: American Journal of Science, vol. 246, pt. 2, p. 363-385.

Steven, T. A., Lipman, P. W., Hail, W. J., Jr., Barker, Fred, and Luedke, R. G., 1974, Geologic map of the Durango quadrangle, southwestern Colorado: U.S. Geological Survey Miscellaneous Geologic Investigations Map- I-764, scale 1:250,000, 1 sheet.

Stone, W. J.; Lyford, F. P; Frenzel, P. F.; Mizell, N. H.; and Padgett, E. T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico, Hydrologic Report 6: New Mexico Bureau of Mines and Mineral Resources, Socorro, NM.

Wells, Steven G. and Lambert, Wayne, eds., 1981, Environmental geology and hydrology in New Mexico: New Mexico Geological Society Special Publication, No. 10.

APPENDIX A

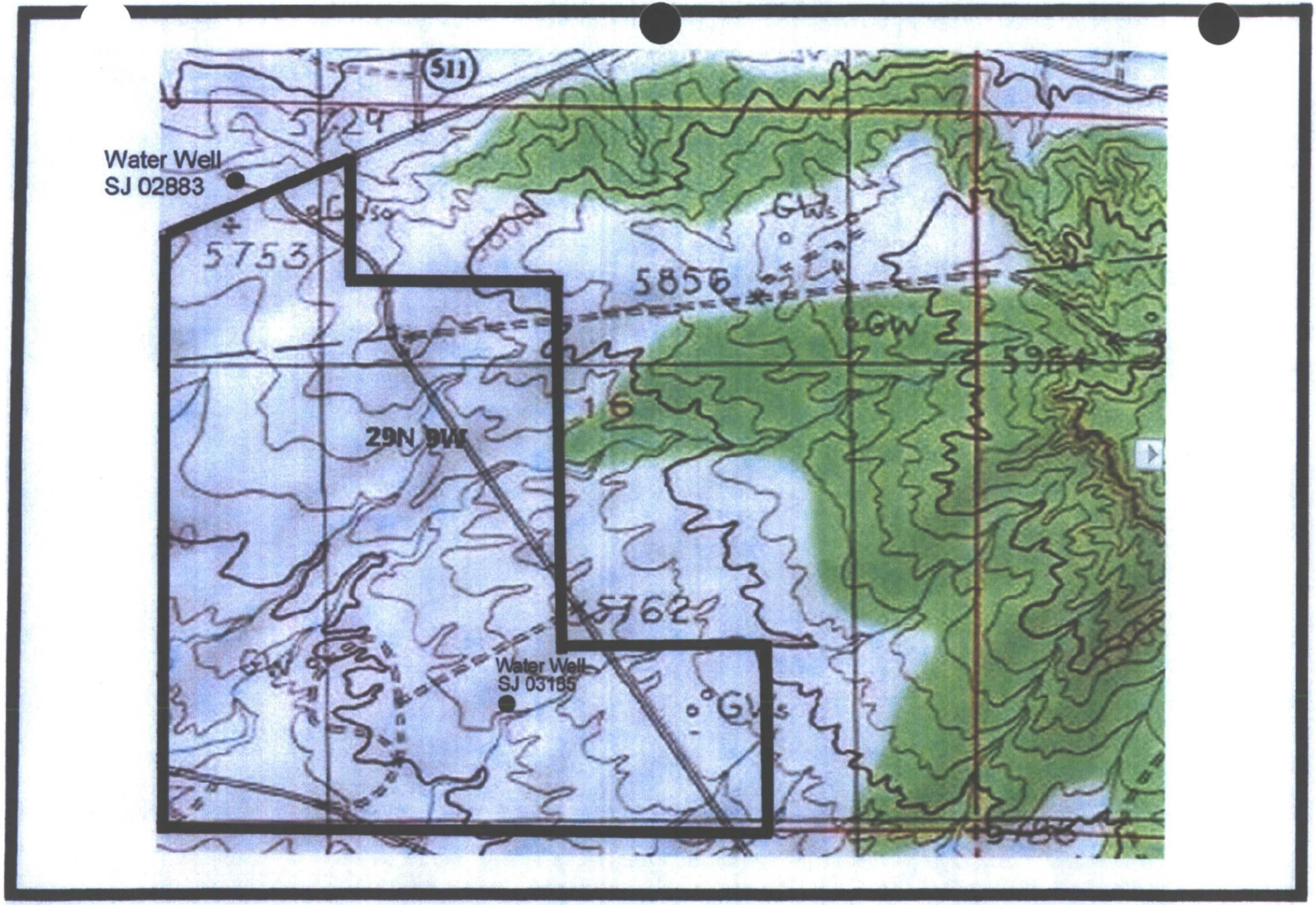


Figure A-1.
Location map of water wells in Section 16, T. 29 N., R. 9 W., NMPM.

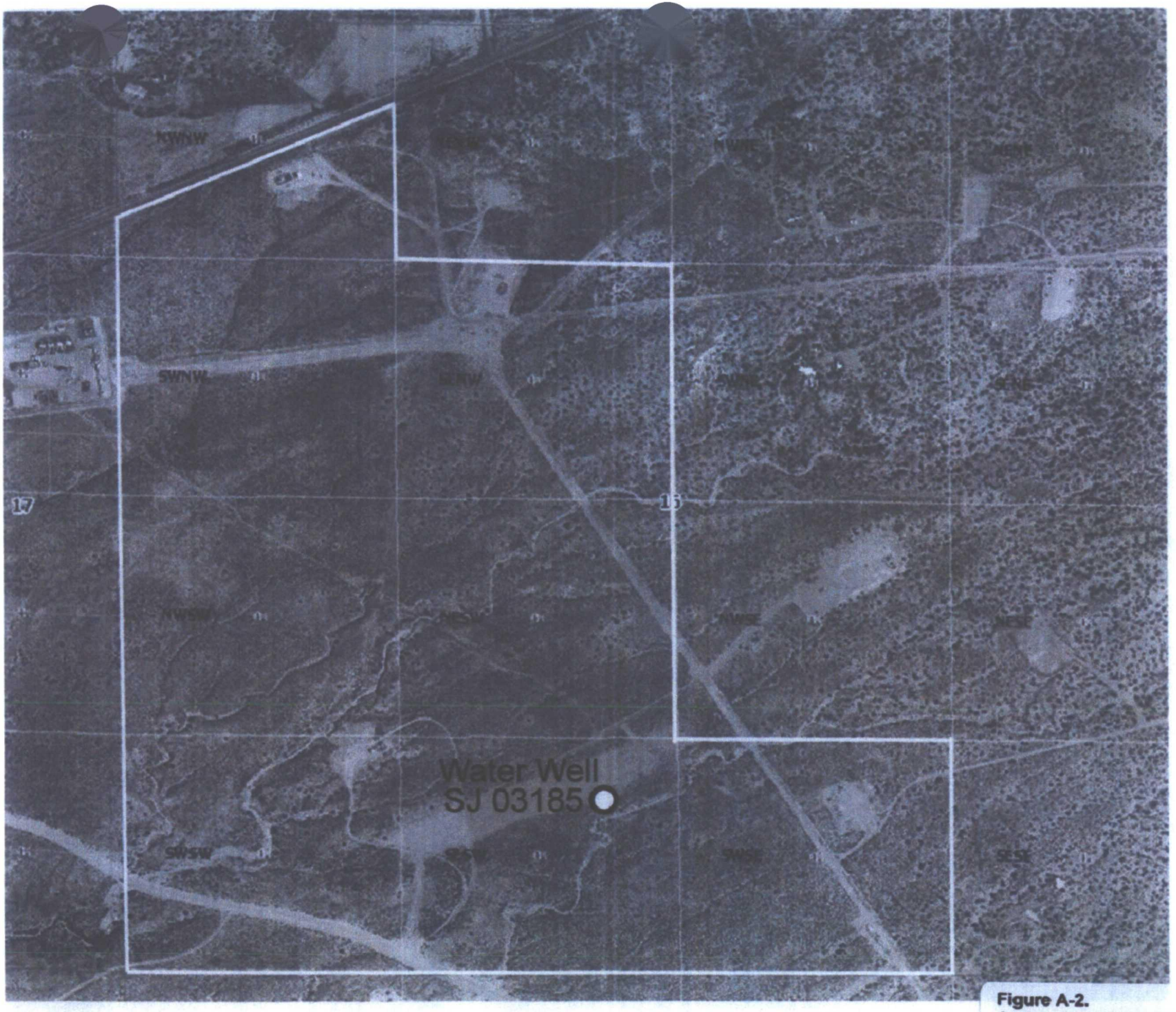


Figure A-2.
Aerial photographic base map showing general area of the project and approximate location of water well SJ 03185.

New Mexico Office of the State Engineer
Wells with Well Log Information

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (in feet)

POD Number	Sub basin	Use	County	Source	q 6416	q 4	q	Sec	Tws	Rng	X	Y	Start Date	Finish Date	Log File Date	Depth Well	Depth Water
SJ 02883		DOM	SJ	Shallow	3	3	2	16	29N	09W	251496	4068078*	07/20/1998	07/31/1998	08/10/1998	123	87
SJ 03185		DOM	SJ	Shallow	4	4	3	16	29N	09W	251290	4067283*	05/28/2002	06/01/2002	06/05/2002	220	100

Record Count: 2

Basin/County Search:

Basin: San Juan **County:** San Juan

PLSS Search:

Section(s): 16 **Township:** 29N **Range:** 09W

Usage Filter:

Use: All Usages

46

Table A-1.
Wells with well log information
SJ 02883 and SJ 03185.

M location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
SJ 02883	3	3	2	16	29N	09W	251496	4068078*

Driller License:	MCDONALD'S WATER WELL DRLG		
Driller Name:	KENNETH MCDONALD		
Source:	Shallow		
Drill Start Date:	07/20/1998	**Drill Finish Date:**	07/31/1998
Log File Date:	08/10/1998	**PCW Received Date:**	
Pump Type:		**Pipe Discharge Size:**	
Casing Size:	5.50	**Estimated Yield:**	4
Depth Well:	123 feet	**Depth Water:**	87 feet

Table A-2.
Point of Diversion summary SJ 02883.

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
SJ 03185	4	4	3	16	29N	09W	251290	4067283*

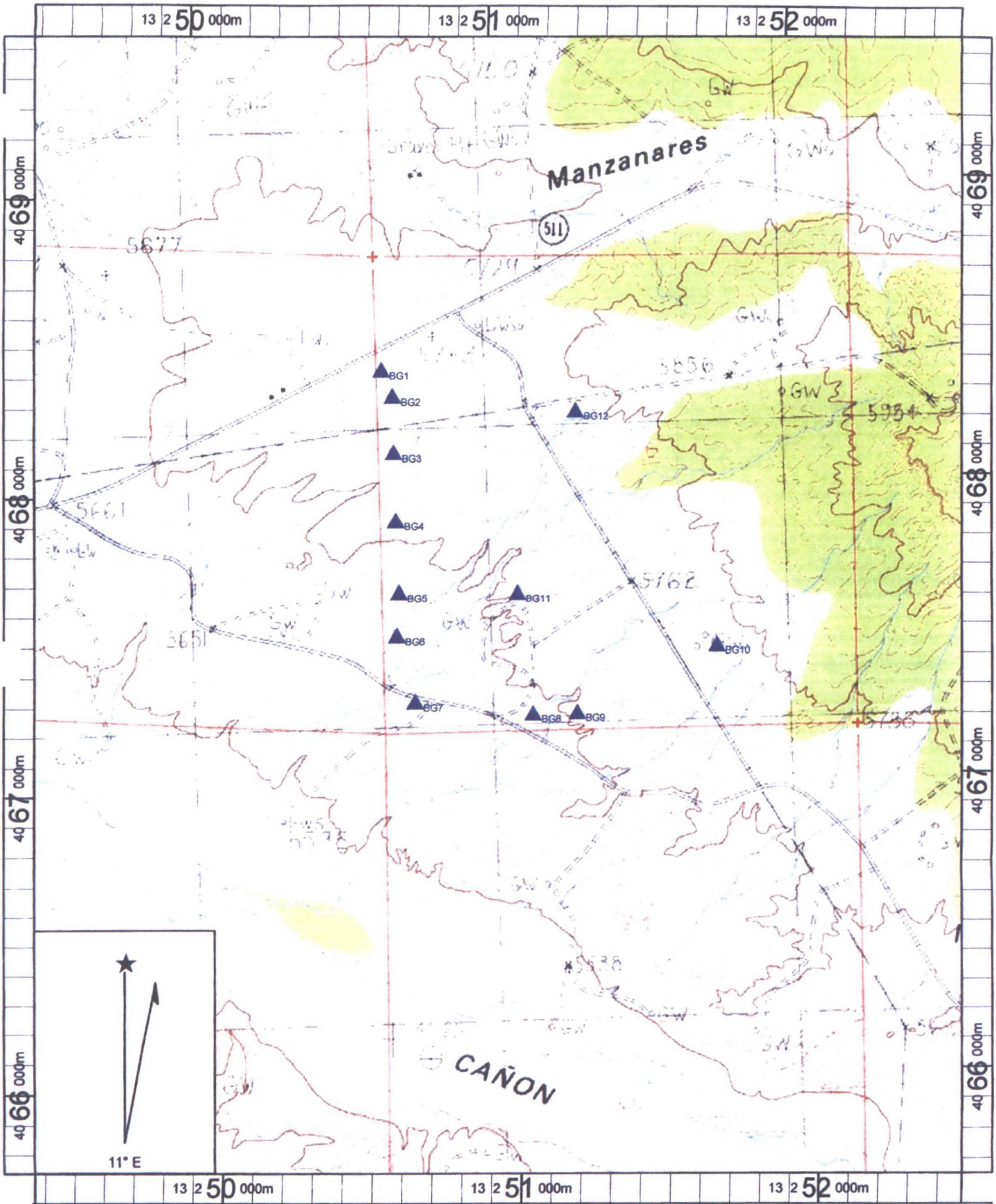
Driller License: HARGIS CONSULTING WATER WELL
Driller Name:
Source: Shallow
Drill Start Date: 05/28/2002 **Drill Finish Date:** 06/01/2002
Log File Date: 06/05/2002 **PCW Received Date:**
Pump Type: **Pipe Discharge Size:**
Casing Size: 4.50 **Estimated Yield:** 10
Depth Well: 220 feet **Depth Water:** 100 feet

Water Bearing Stratifications:	Top	Bottom	Description
	200	220	Other/Unknown

Casing Perforations:	Top	Bottom
	80	220

Table A-3.
Point of Diversion summary SJ 03185.

*UTM location was derived from PLSS - see Help



Name: BLANCO
Date: 9/22/2009
Scale: 1 inch equals 1333 feet

Location: 13 250979 E 4067597 N
Caption: Industrial Ecosystems Inc
New Landfarm
Background Sampling Points

Markers

Name: BG1

Short Name: BG1

Coordinates: 13 250609 E, 4068397 N

Name: BG2

Short Name: BG2

Coordinates: 13 250647 E, 4068309 N

Name: BG3

Short Name: BG3

Coordinates: 13 250646 E, 4068123 N

Name: BG4

Short Name: BG4

Coordinates: 13 250644 E, 4067892 N

Name: BG5

Short Name: BG5

Coordinates: 13 250648 E, 4067650 N

Name: BG6

Short Name: BG6

Coordinates: 13 250637 E, 4067501 N

Name: BG7

Short Name: BG7

Coordinates: 13 250691 E, 4067280 N

Name: BG8

Short Name: BG8

Coordinates: 13 251091 E, 4067231 N

Name: BG9

Short Name: BG9

Coordinates: 13 251239 E, 4067230 N

Name: BG10

Short Name: BG10

Coordinates: 13 251714 E, 4067442 N

Name: BG11

Short Name: BG11

Coordinates: 13 251049 E, 4067638 N

Name: BG12

Short Name: BG12

Coordinates: 13 251261 E, 4068246 N

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 1 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #1 Lab ID: 09083072-001A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:10

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.169 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 5.11 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	123 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.204 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	10.9 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	9.62 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	14700 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	8.99 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	301 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/28/09	RMD-CV
Selenium	< 8.18 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.43 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	34.9 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #1 Lab ID: 09083072-001B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:10

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
pH	7.22 @ 23.5°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.2 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/20/09	LNP-CV
Chloride	27.7 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/20/09	LNP-CV
Nitrate	< 10.2 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/20/09	LNP-CV
Sulfate	< 25.6 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/20/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		08/28/09 13:15	08/28/09	LNP-CV
Total Phenols	< 1.0 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	2.4 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	976000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.
* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA
L Value above calibration range but within annually verified linear range
Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Cli Mek DATE: 9/11/2009

LAB ID: PA39-401

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WO#: 09083072
PAGE: 2 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #1 Lab ID: 09083072-001C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 26 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.02 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #1 Lab ID: 09083072-001D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Naphthalene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
2-Methylnaphthalene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
1-Methylnaphthalene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthylene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Fluorene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Phenanthrene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Anthracene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Pyrene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV

REMARKS:

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MANAGER Clin Mek DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
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NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
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WO#: 09083072
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PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

Benzo[a]anthracene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Chrysene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[b]fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[k]fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]pyrene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
1,1-Dichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

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MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 4 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #1 Lab ID: 09083072-001E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:10

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Uranium	568.8 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	381.1 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: #2 Lab ID: 09083072-002A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:25

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.169 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 5.07 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	132 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.203 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	10.2 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	9.42 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	13900 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	7.97 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	280 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/28/09	RMD-CV
Selenium	< 8.12 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.42 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	37.2 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #2 Lab ID: 09083072-002B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:25

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
pH	7.83 @ 23.6°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.2 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/20/09	LNP-CV
Chloride	31.6 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/20/09	LNP-CV

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Industrial Ecosystems New Land Farm

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Nitrate	< 10.2 mg/Kg-dry	EPA 300.0	08/20/09 15:49	08/20/09	LNP-CV
Sulfate	< 25.5 mg/Kg-dry	EPA 300.0	08/20/09 15:49	08/20/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C	08/28/09 13:15	08/28/09	LNP-CV
Total Phenols	< 1.0 mg/Kg-dry	EPA 420.4	08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	1.8 %	SM2540G	08/21/09 15:35	08/24/09	DMB-CV
Total Solids	982000 mg/Kg	SM2540G	08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: #2 Lab ID: 09083072-002C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:25

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.02 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #2 Lab ID: 09083072-002D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:25

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Naphthalene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
2-Methylnaphthalene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
1-Methylnaphthalene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthylene	< 0.34 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV

REMARKS:

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TEST REPORT

Industrial Ecosystems New Land Farm

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Acenaphthene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Fluorene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Phenanthrene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Anthracene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Pyrene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]anthracene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Chrysene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[b]fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[k]fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]pyrene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.34 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
1,1-Dichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

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L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 7 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

m,p-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: #2 Lab ID: 09083072-002E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:25

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Uranium	555.4 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	372.1 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: #3 Lab ID: 09083072-003A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:40

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.173 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 5.05 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	141 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.202 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	11.1 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	9.02 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	15200 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	8.62 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	295 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/28/09	RMD-CV
Selenium	< 8.08 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.41 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	35.2 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

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MANAGER Clin Mel DATE: 9/11/2009

LAB ID: PA39-401

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TEST REPORT

Industrial Ecosystems New Land Farm

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SAMPLE: #3 Lab ID: 09083072-003B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:40

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
pH	7.80 @ 23.8°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	25.9 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.4 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		08/28/09 13:15	08/28/09	LNP-CV
Total Phenols	< 1.0 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	1.4 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	986000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: #3 Lab ID: 09083072-003C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:40

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #3 Lab ID: 09083072-003D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:40

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV

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TEST REPORT

Industrial Ecosystems New Land Farm

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Aroclor 1260	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
1,1-Dichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

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MANAGER Cliff Mehl DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 10 of 39
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

1,2-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: **#3** Lab ID: 09083072-003E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:40

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Uranium	635.8 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	426.0 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: **#4** Lab ID: 09083072-004A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:55

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.128 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 5.01 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	169 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/28/09	RMD-CV
Cadmium	< 0.200 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	9.11 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	8.00 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	12300 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	6.11 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	257 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/28/09	RMD-CV

REMARKS:

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Selenium	< 8.02 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.40 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Zinc	26.5 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #4 Lab ID: 09083072-004B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
pH	7.63 @ 23.7°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	27.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.3 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		08/28/09 13:15	08/28/09	LNP-CV
Total Phenols	< 0.98 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	1.3 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	987000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: #4 Lab ID: 09083072-004C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #4 Lab ID: 09083072-004D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV

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Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry	EPA 8082	08/27/09 9:00	08/29/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
1,1-Dichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

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L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 13 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

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1,1,1-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.041 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: **#4** Lab ID: 09083072-004E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 9:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Uranium	697.6 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	467.4 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: **#5** Lab ID: 09083072-005A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:10

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.152 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 4.95 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	51.4 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.198 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	3.23 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	2.41 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

REMARKS:

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MANAGER Clinch DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

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TEST REPORT

Industrial Ecosystems New Land Farm

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Iron	4320 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Lead	2.95 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Manganese	131 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Selenium	< 7.91 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.38 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Zinc	9.91 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: **#5** Lab ID: 09083072-005B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
pH	7.81 @ 23.9°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.0 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	< 25.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.0 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	< 0.95 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	0.4 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	996000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: **#5** Lab ID: 09083072-005C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.00 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

REMARKS:

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MANAGER Clin Mele DATE: 9/11/2009

LAB ID: PA39-401

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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #5 Lab ID: 09083072-005D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry	EPA 8082		08/27/09 9:00	08/29/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Acenaphthene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry	EPA 8270C		08/21/09 9:00	08/25/09	JJ6-CV

REMARKS:

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MANAGER Cli Mel DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 16 of 39
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry	EPA 8270C	08/21/09 9:00	08/25/09	JJ6-CV
1,1-Dichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: #5 Lab ID: 09083072-005E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:10

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Uranium	< 239.5 µg/Kg	EPA 200.8	30	08/31/09 9:00	09/03/09	JRA-CV
Uranium	< 162.8 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #6 Lab ID: 09083072-006A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:25

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.182 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 5.16 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	104 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.207 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	6.70 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	5.02 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	8960 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	5.14 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	221 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/28/09	RMD-CV
Selenium	< 8.26 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.45 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	20.2 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #6 Lab ID: 09083072-006B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:25

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
pH	8.10 @ 23.1°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.4 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	31.7 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.4 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 26.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	< 0.96 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	4.1 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	959000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

REMARKS:

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Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #6 Lab ID: 09083072-006C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:25

Test	Result		Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 26 mg/Kg-dry		API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.04 mg/Kg-dry		API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #6 Lab ID: 09083072-006D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:25

Test	Result		Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Naphthalene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
2-Methylnaphthalene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
1-Methylnaphthalene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthylene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Fluorene	< 0.34 mg/Kg-dry	Q	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Phenanthrene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Anthracene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Fluoranthene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Pyrene	< 0.34 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Chris Mehl DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 19 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

Benzo[a]anthracene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Chrysene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[b]fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[k]fluoranthene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]pyrene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.34 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1,1-Dichloroethylene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.042 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

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Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Cli Mel DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 20 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #6 Lab ID: 09083072-006E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:25

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Uranium	524.0 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	351.1 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: #7 Lab ID: 09083072-007A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:40

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.133 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 4.74 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	114 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.190 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	5.95 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	5.11 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	8050 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	4.74 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	189 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/28/09	RMD-CV
Selenium	< 7.59 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.33 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	20.1 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #7 Lab ID: 09083072-007B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:40

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
pH	7.72 @ 23.2°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	< 25.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

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MANAGER Clin Mel DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

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Fax: (610) 974-8104

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Nitrate	< 10.1 mg/Kg-dry	EPA 300.0	08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.1 mg/Kg-dry	EPA 300.0	08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C	09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	< 0.97 mg/Kg-dry	EPA 420.4	08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	0.5 %	SM2540G	08/21/09 15:35	08/24/09	DMB-CV
Total Solids	995000 mg/Kg	SM2540G	08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: #7 Lab ID: 09083072-007C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:40

Test	Result	Method	Reg. Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #7 Lab ID: 09083072-007D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:40

Test	Result	Method	Reg. Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV

REMARKS:

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MANAGER Clint Mele DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 22 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

Acenaphthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	Q	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1,1-Dichloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

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MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
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WO#: 09083072
PAGE: 23 of 39
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

m,p-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: #7 Lab ID: 09083072-007E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:40

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Uranium	372.5 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	249.6 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: #8 Lab ID: 09083072-008A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.118 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 4.78 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	73.8 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.191 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	4.72 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	5.05 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	6220 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	4.68 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	152 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Selenium	< 7.64 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.34 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	19.7 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

REMARKS:

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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #8 Lab ID: 09083072-008B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:55

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
pH	7.73 @ 23.9°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	27.7 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	< 0.85 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	0.5 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	995000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: #8 Lab ID: 09083072-008C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:55

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #8 Lab ID: 09083072-008D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:55

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV

REMARKS:

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* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 25 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

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Aroclor 1260	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	Q	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1,1-Dichloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

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MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

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Center Valley, PA 18034

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Work Order: 09083072

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WO#: 09083072
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TEST REPORT

Industrial Ecosystems New Land Farm

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1,2-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: #8 Lab ID: 09083072-008E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 10:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Uranium	318.4 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	213.3 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: #9 Lab ID: 09083072-009A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:10

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.196 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 4.87 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	74.3 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.195 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	4.98 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	4.92 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	7610 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	4.95 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	143 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

REMARKS:

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MANAGER Chris Mech DATE: 9/11/2009

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Industrial Ecosystems New Land Farm

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Selenium	< 7.80 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.36 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Zinc	17.9 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #9 Lab ID: 09083072-009B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
pH	8.21 @ 23.0°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	27.4 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.2 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	< 0.94 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	0.8 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	992000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: #9 Lab ID: 09083072-009C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #9 Lab ID: 09083072-009D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV

REMARKS:

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TEST REPORT

Industrial Ecosystems New Land Farm

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Aroclor 1242	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry		EPA 8082	08/31/09 9:00	09/01/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	Q	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1,1-Dichloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

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TEST REPORT

Industrial Ecosystems New Land Farm

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1,1,1-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: **#9** Lab ID: 09083072-009E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:10

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Uranium	396.7 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	265.8 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: **#10** Lab ID: 09083072-010A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:25

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.137 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 4.86 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	64.3 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.195 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	4.48 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	4.46 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

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Iron	6690 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Lead	4.45 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Manganese	144 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Selenium	< 7.78 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.36 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV
Zinc	18.2 mg/Kg-dry	EPA 6010B	08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: **#10** Lab ID: 09083072-010B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:25

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
pH	7.05 @ 22.9°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	31.9 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	1.6 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	0.5 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	995000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: **#10** Lab ID: 09083072-010C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:25

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

ANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Work Order: 09083072

Phone: (610) 974-8100
Fax: (610) 974-8104

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 31 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: **#10** Lab ID: 09083072-010D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:25

Test	Result		Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	Q	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV

REMARKS:

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L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Chris Mek DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 32 of 39
PO#:
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1,1-Dichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: #10 Lab ID: 09083072-010E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:25

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Uranium	381.9 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	255.8 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

REMARKS:

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MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
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WO#: 09083072
PAGE: 33 of 39
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #11 Lab ID: 09083072-011A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:40

Test	Result		Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.174 mg/Kg-dry		EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 4.90 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	104 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.196 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	6.97 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	6.97 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	9310 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	5.27 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	231 mg/Kg-dry	L	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Selenium	< 7.85 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.37 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	26.9 mg/Kg-dry		EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #11 Lab ID: 09083072-011B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:40

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
pH	7.71 @ 23.3°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	< 25.3 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Nitrate	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.3 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C		09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	< 0.98 mg/Kg-dry	EPA 420.4		08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	1.2 %	SM2540G		08/21/09 15:35	08/24/09	DMB-CV
Total Solids	988000 mg/Kg	SM2540G		08/21/09 15:35	08/24/09	DMB-CV

REMARKS:

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MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

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NAME: Jeff Blagg
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PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 34 of 39
PO#:
PWS ID#

TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #11 Lab ID: 09083072-011C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:40

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: #11 Lab ID: 09083072-011D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:40

Test	Result		Method	Req Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry		EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	Q	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry		EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV

REMARKS:

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MANAGER Cliff Mehl DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034

Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
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WO#: 09083072
PAGE: 35 of 39
PO#:
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

Benzo[a]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1,1-Dichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
m,p-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

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MANAGER Clin Mek DATE: 9/11/2009

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PAGE: 36 of 39
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #11 Lab ID: 09083072-011E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:40

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Uranium	402.4 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	269.6 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

SAMPLE: #12 Lab ID: 09083072-012A Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:55

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
Mercury	< 0.149 mg/Kg-dry	EPA 7471A		08/26/09 9:00	08/27/09	KW-CV
Arsenic	< 4.90 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Barium	69.5 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Cadmium	< 0.196 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Chromium	3.89 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Copper	3.76 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Iron	5770 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Lead	3.68 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Manganese	113 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Selenium	< 7.83 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Silver	< 1.37 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV
Zinc	16.3 mg/Kg-dry	EPA 6010B		08/26/09 10:30	08/27/09	RMD-CV

SAMPLE: #12 Lab ID: 09083072-012B Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:55

Test	Result	Method	Req Limit	Analysis Start	Analysis End	Analyst *
pH	7.77 @ 23.3°C	EPA 9045D		08/25/09 10:30	08/25/09	TLB-CV
Fluoride	< 10.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV
Chloride	< 25.1 mg/Kg-dry	EPA 300.0		08/20/09 15:49	08/21/09	LNP-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.

* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
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Nitrate	< 10.1 mg/Kg-dry	EPA 300.0	08/20/09 15:49	08/21/09	LNP-CV
Sulfate	< 25.1 mg/Kg-dry	EPA 300.0	08/20/09 15:49	08/21/09	LNP-CV
Cyanide, Total	< 0.2 mg/Kg-dry	EPA 9010C	09/10/09 9:15	09/10/09	LNP-CV
Total Phenols	< 0.89 mg/Kg-dry	EPA 420.4	08/25/09 12:05	08/25/09	SKK-CV
Percent Moisture	0.5 %	SM2540G	08/21/09 15:35	08/24/09	DMB-CV
Total Solids	995000 mg/Kg	SM2540G	08/21/09 15:35	08/24/09	DMB-CV

SAMPLE: **#12** Lab ID: 09083072-012C Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Diesel Range Organics	< 25 mg/Kg-dry	API-PHC 8015MOD		08/27/09 9:00	08/28/09	ASC-CV
Gasoline Range Organics	< 1.01 mg/Kg-dry	API-GRO 8015MOD		08/27/09 14:00	08/28/09	ASC-CV

SAMPLE: **#12** Lab ID: 09083072-012D Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:55

Test	Result	Method	Reg Limit	Analysis Start	Analysis End	Analyst *
Aroclor 1016	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1221	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1232	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1242	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1248	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1254	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1260	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1262	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Aroclor 1268	< 0.03 mg/Kg-dry	EPA 8082		08/31/09 9:00	09/01/09	JJ6-CV
Naphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
2-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
1-Methylnaphthalene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV
Acenaphthylene	< 0.33 mg/Kg-dry	EPA 8270C		08/28/09 9:00	09/01/09	JJ6-CV

REMARKS:

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MANAGER Clin Mek DATE: 9/11/2009

LAB ID: PA39-401

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Center Valley, PA 18034

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WO#: 09083072
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PWS ID#

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Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

Acenaphthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluorene	< 0.33 mg/Kg-dry	Q	EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Phenanthrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Chrysene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[b]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[k]fluoranthene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[a]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Indeno[1,2,3-cd]pyrene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Dibenz[a,h]anthracene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
Benzo[g,h,i]perylene	< 0.33 mg/Kg-dry		EPA 8270C	08/28/09 9:00	09/01/09	JJ6-CV
1,1-Dichloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Methylene chloride	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1-Dichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Chloroform	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,1-Trichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Carbon tetrachloride	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Benzene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,2-Dichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Trichloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Toluene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2-Trichloroethane	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Tetrachloroethylene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylene dibromide	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
Ethylbenzene	< 0.040 mg/Kg-dry		EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

REMARKS:

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L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER _____ DATE: 9/11/2009

LAB ID: PA39-401

Benchmark Analytics, Inc.

4777 Saucon Creek Road
Center Valley, PA 18034
Phone: (610) 974-8100
Fax: (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
COMPANY: Blagg Engineering Inc
ADDRESS: PO Box 87
Bloomfield, NM 87413

PHONE: (505) 632-1199
FAX:

WO#: 09083072
PAGE: 39 of 39
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

m,p-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
o-Xylene	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV
1,1,2,2-Tetrachloroethane	< 0.040 mg/Kg-dry	EPA 8260B	08/20/09 9:53	08/20/09	DN-CV

SAMPLE: **#12** Lab ID: 09083072-012E Grab
SAMPLED BY: Jeff Blagg Sample Time: 08/17/2009 11:55

Test	Result	Method	Reg. Limit	Analysis Start	Analysis End	Analyst *
Uranium	463.9 µg/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV
Uranium	310.8 pCi/Kg	EPA 200.8		08/31/09 9:00	09/03/09	JRA-CV

REMARKS:

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L Value above calibration range but within annually verified linear range

Q Due to matrix effects, not all quality control parameters met acceptance criteria

MANAGER Chris Mech DATE: 9/11/2009

LAB ID: PA39-401

BENCHMARK ANALYTICS, INC.
4777 Saucon Creek Road
Center Valley, PA 18034-9004

PHONE (610) 974-8100
FAX (610) 974-8104

Work Order: 09083072

SEND DATA TO:

NAME: Jeff Blagg
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WO#: 09083072
PAGE: 1 of 3
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #1 Lab ID: 09083072-001E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 9:10

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	155.2	± 13.65	74.55	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	787.9	± 429.7	197.5	pCi/Kg	EPA 904.0		08/28/09 8:30	09/01/09	AVB-CV

SAMPLE: #2 Lab ID: 09083072-002E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 9:25

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	150.9	± 12.53	73.16	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	724.3	± 397.2	197.6	pCi/Kg	EPA 904.0		08/28/09 8:30	09/01/09	AVB-CV

SAMPLE: #3 Lab ID: 09083072-003E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 9:40

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	182.2	± 14.76	74.55	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	629.1	± 173.8	197.5	pCi/Kg	EPA 904.0		08/28/09 8:30	09/01/09	AVB-CV

SAMPLE: #4 Lab ID: 09083072-004E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 9:55

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	177.9	± 14.24	76.82	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	7.22	± 144.3	276.1	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

SAMPLE: #5 Lab ID: 09083072-005E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 10:10

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	60.48	± 8.18	70.48	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	-95.71	± 123.0	278	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

REMARKS:
The above test procedures meet all the requirements of NELAC and relate only to these samples.
* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER _____ DATE: 9/11/2009

LAB ID: PA39-401

BENCHMARK ANALYTICS, INC.
4777 Saucon Creek Road
Center Valley, PA 18034-9004

PHONE (610) 974-8100
FAX (610) 974-8104

Work Order: 09083072

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WO#: 09083072
PAGE: 2 of 3
PO#:
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TEST REPORT

Industrial Ecosystems New Land Farm

RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: #6 Lab ID: 09083072-006E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 10:25

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	108.6	± 11.13	71.97	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	-67.24	± 141.9	275.9	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

SAMPLE: #7 Lab ID: 09083072-007E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 10:40

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	103.4	± 10.86	74.11	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	274.8	± 243.0	272.7	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

SAMPLE: #8 Lab ID: 09083072-008E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 10:55

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	90.08	± 10.38	76.82	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	623.1	± 229.5	276.8	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

SAMPLE: #9 Lab ID: 09083072-009E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 11:10

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	100.4	± 10.97	69.95	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	179.6	± 188.1	276.6	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

SAMPLE: #10 Lab ID: 09083072-010E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 11:25

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	89.36	± 10.25	67.49	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	9.03	± 180.4	276.8	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

REMARKS:

The above test procedures meet all the requirements of NELAC and relate only to these samples.
* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER Clin Mel DATE: 9/11/2009

LAB ID: PA39-401

BENCHMARK ANALYTICS, INC.
4777 Saucon Creek Road
Center Valley, PA 18034-9004

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FAX (610) 974-8104

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PAGE: 3 of 3
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TEST REPORT

Industrial Ecosystems New Land Farm
RECEIVED FOR LAB BY: DMB DATE: 08/20/2009 9:10

SAMPLE: **#11** Lab ID: 09083072-011E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 11:40

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	109.2	± 10.88	67.47	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	286.7	± 212.7	277.0	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

SAMPLE: **#12** Lab ID: 09083072-012E Grab
SAMPLED BY: Jeff Blagg Sample Time 08/17/2009 11:55

Test	Result	Uncert.	MDA	Units	Method	MCL	Analysis Start	Analysis End	Analyst *
Radium-226	59.76	± 8.54	74.22	pCi/Kg	EPA 903.0		08/22/09 14:25	09/04/09	BH-CV
Radium-228	-229.8	± 205.6	276.6	pCi/Kg	EPA 904.0		09/02/09 8:20	09/09/09	AVB-CV

REMARKS:
The above test procedures meet all the requirements of NELAC and relate only to these samples.
* CV = Benchmark Analytics, Inc. Center Valley, PA; SA = Benchmark Analytics, Inc. Sayre, PA

MANAGER Chris Mehl DATE: 9/11/2009

GEOMAT INC
2060 Afton Place ◆ Farmington, NM 87401 ◆ Tel (505) 327-7928 ◆ Fax (505) 326-5721

September 24, 2009

Richard P. Cheney, P.E.
Cheney-Walters-Echols, Inc.
909 West Apache
Farmington, New Mexico 87401

RE: Industrial Ecosystems Landfarm
San Juan County, New Mexico
GEOMAT Project No. 91-0919

As you requested, we have performed the following field and laboratory testing of the native soils for the above referenced project.

- In-place soil moisture-density
- Soil Index Properties (Sieve Analysis and Plasticity Index)
- Moisture-Density Relationship (Proctor)
- Swell tests on remolded samples
- Permeability tests on remolded samples
- Estimate of Porosity Values

The soils from four different locations were tested. The test locations were labeled in the field (by your office) as Test Holes 1, 2, 5, and 6. The laboratory testing was performed on samples obtained and submitted by C-W-E personnel on September 14, 2009. The field testing was performed by a GEOMAT technician also on September 14, 2009. The test results are presented below.

In-place Moisture-Density			
Test Hole No.	Wet Density, pcf	Dry Density, pcf	Moisture Content, %
1	93.7	90.8	3.3
2	100.4	96.2	4.4
5	100.3	98.6	1.8
6	99.4	97.9	1.6

Soil Index Properties						
Test Hole No.	Lab No.	Liquid Limit	Plastic Limit	Plasticity Index	% Passing #200 Sieve	Classification
1	8152	28	18	10	74	CL, Lean Clay w/ Sand
2	8153	23	18	5	74	CL-ML Silty Clay w/ Sand
5	8154	NLL	NPL	NP	21	SM, Silty Sand
6	8155	NLL	NPL	NP	14	SM, Silty Sand

Moisture-Density Relationship (Proctor)			
Test Hole No.	Lab No.	Maximum Dry Density, pcf	Optimum Moisture Content, %
1	8152	108.1	16.3
2	8153	111.5	14.7
5	8154	114.0	12.0
6	8155	111.1	11.9

Swell Tests on Remolded Samples		
Test Hole No.	Lab No.	Remolded Swell Potential, %
1 & 2 Combined	8179	0.0
5 & 6 Combined	8178	1.2
Measured on samples compacted to approximately 90 percent of the ASTM D698 maximum dry density at about 3 percent below optimum water content, confined under 144 psf surcharge and submerged		
The soils from test locations 1 and 2 were combined because of the close similarity of the materials. Likewise, the soils from test locations 5 & 6 were also combined for this test because of their close similarity.		

Permeability Tests on Remolded Samples		
Test Hole No.	Lab No.	Constant Head Permeability Rate, cm/s
1 & 2 Combined	8179	6.52E-04
5 & 6 Combined	8178	3.60E-04
Measured on samples compacted to approximately 85 percent of the ASTM D698 maximum dry density.		
The soils from test locations 1 and 2 were combined because of the close similarity of the materials. Likewise, the soils from test locations 5 & 6 were also combined for this test because of their close similarity.		

Estimate of Porosity[1]	
Test Hole No.	Estimated Porosity, %
1	45
2	41
5	40
6	40

[1] Basic Soils Engineering, B.K. Hough, Second Edition

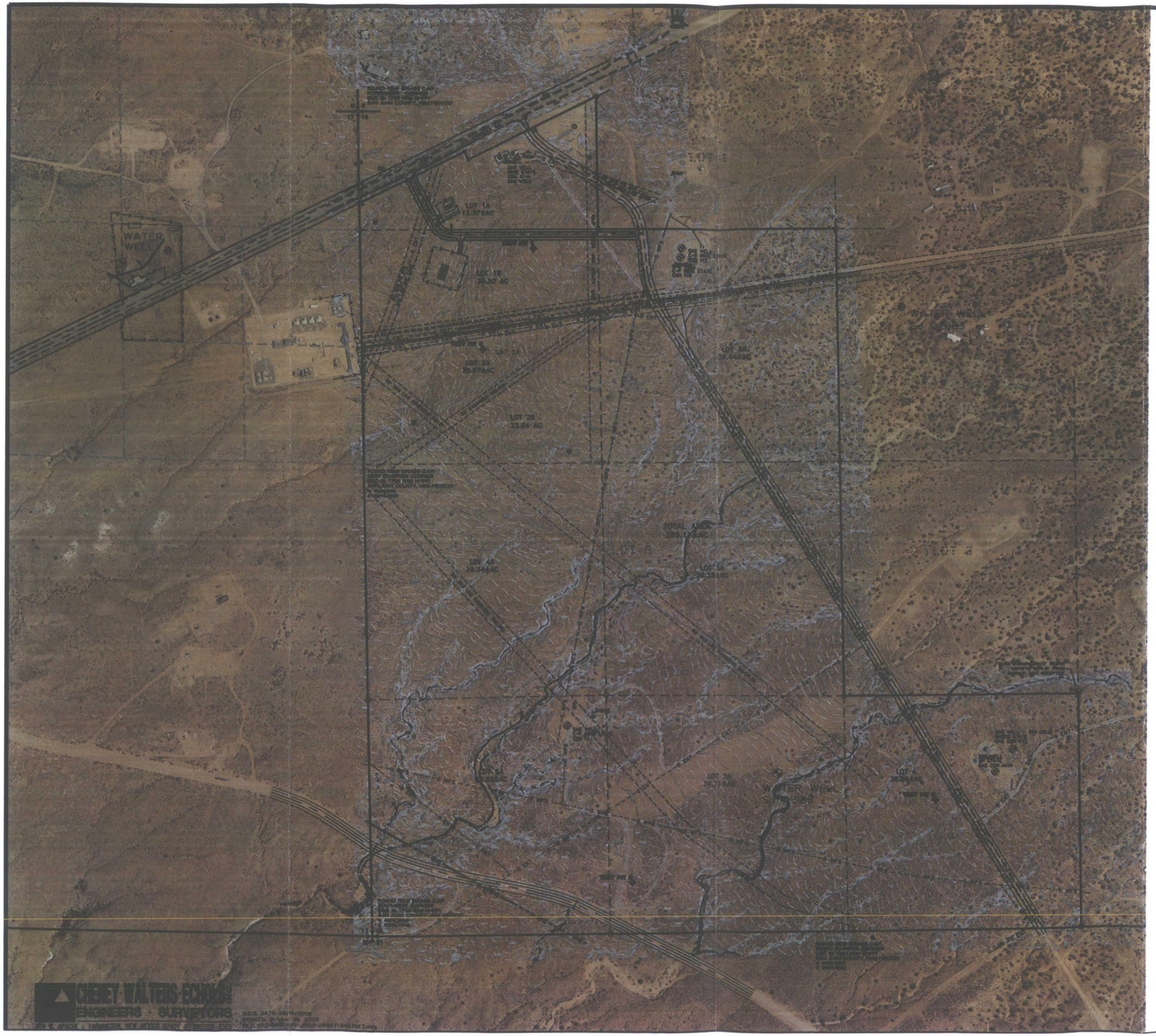
Thank you for the opportunity to work with you on this project. If have any questions or need additional information, please call.

Respectfully submitted,
GEOMAT Inc.

George A. Madrid, P.E.
President, Principal Engineer

Distribution: Addressee (2)

SOIL BORINGS
INDUSTRIAL ECOSYSTEMS
BLANCO, NEW MEXICO



CIEBEY WALTERS ECHOLS
ENGINEERS · SURVEYORS

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For State Use Only:

Form C-137
Revised March 1, 2007

Submit 1 Copy to Santa Fe Office

APPLICATION FOR SURFACE WASTE MANAGEMENT FACILITY

A meeting should be scheduled with the Division's Santa Fe office Environmental Bureau prior to pursuing an application for a surface waste management facility in order to determine if the proposed location is capable of satisfying the siting requirements of Subsections A and B of 19.15.36.13 NMAC for consideration of an application submittal.

1 Application: ☒ New ☐ Modification ☐ Renewal

2. Type: ☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfill ☒ Landfarm ☐ Other

3. Facility Status: ☒ Commercial ☐ Centralized

4. Operator: Crowe Blanco, LLC – Operated by Industrial Ecosystems, Inc.

Address: 49 CR 3150 * Aztec, NM 87410

Contact Person: Marcella Marquez or Terry Lattin Phone: (505) 632-1782

5. Location: /4 /4 Section 16 Township 29N Range 09W

6. Is this an existing facility? ☐ Yes ☒ No If yes, provide permit number

7. Attach the names and addresses of the applicant and principal officers and owners of 25 percent or more of the applicant. Specify the office held by each officer and identify the individual(s) primary responsible for overseeing management of the facility.

8. Attach a plat and topographic map showing the surface waste management facility's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the surface waste management facility site; watercourses; fresh water sources, including wells and springs; and inhabited buildings within one mile of the site's perimeter.

9. Attach the names and addresses of the surface owners of the real property on which the surface waste management facility is sited and surface owners of the real property within one mile of the site's perimeter.

10. Attach a description of the surface waste management facility with a diagram indicating the location of fences and cattle guards, and detailed construction/installation diagrams of pits, liners, dikes, piping, sprayers, tanks, roads, fences, gates, berms, pipelines crossing the surface waste management facility, buildings and chemical storage areas.

11. Attach engineering designs, certified by a registered professional engineer, including technical data on the design elements of each applicable treatment, remediation and disposal method and detailed designs of surface impoundments.

12. Attach a plan for management of approved oil field wastes that complies with the applicable requirements contained in 19.15.36.13, 19.15.36.14, 19.15.36.15 and 19.15.36.17 NMAC.

13. Attach an inspection and maintenance plan that complies with the requirements contained in Subsection L of 19.15.36.13 NMAC.

14. Attach a hydrogen sulfide prevention and contingency plan that complies with those provisions of 19.15.3.118 NMAC that apply to surface waste management facilities.

15. Attach a closure and post closure plan, including a responsible third party contractor's cost estimate, sufficient to close the surface waste management facility in a manner that will protect fresh water, public health, safety and the environment (the closure and post closure plan shall comply with the requirements contained in Subsection D of 19.15.36.18 NMAC).

16 Attach a contingency plan that complies with the requirements of Subsection N of 19.15.36.13 NMAC and with NMSA 1978, Sections 12-12-1 through 12-12-30, as amended (the Emergency Management Act).

17. Attach a plan to control run-on water onto the site and run-off water from the site that complies with the requirements of Subsection M of 19.15.36.13 NMAC.

~~18. In the case of an application to permit a new or expanded landfill, attach a leachate management plan that describes the anticipated amount of leachate that will be generated and the leachate's handling, storage, treatment and disposal, including final post closure options.~~

~~19. In the case of an application to permit a new or expanded landfill, attach a gas safety management plan that complies with the requirements of Subsection O of 19.15.36.13 NMAC~~

20. Attach a best management practice plan to ensure protection of fresh water, public health, safety and the environment.

21. Attach a demonstration of compliance with the siting requirements of Subsections A and B of 19.15.36.13 NMAC.

22. Attach geological/hydrological data including:

(a) a map showing names and location of streams, springs or other watercourses, and water wells within one mile of the site;

(b) laboratory analyses, performed by an independent commercial laboratory, for major cations and anions; benzene, toluene, ethyl benzene and xylenes (BTEX); RCRA metals; and total dissolved solids (TDS) of ground water samples of the shallowest fresh water aquifer beneath the proposed site;

(c) depth to, formation name, type and thickness of the shallowest fresh water aquifer;

(d) soil types beneath the proposed surface waste management facility, including a lithologic description of soil and rock members from ground surface down to the top of the shallowest fresh water aquifer;

(e) geologic cross-sections;

(f) potentiometric maps for the shallowest fresh water aquifer; and

(g) porosity, permeability, conductivity, compaction ratios and swelling characteristics for the sediments on which the contaminated soils will be placed.

~~23. In the case of an existing surface waste management facility applying for a minor modification, describe the proposed change and identify information that has changed from the last C-137 filing.~~

24. The division may require additional information to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, safety or the environment and that the surface waste management facility will comply with division rules and orders

25. CERTIFICATION

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name: Terry L. Lattin Title: Manager

Signature: [signature] Date: 11-17-09

E-mail Address: Terry@IndustrialEcosystems.com

INDUSTRIAL ECOSYSTEMS
LAND FARM

STORM WATER POLLUTION
PREVENTION PLAN (SWPPP)

National Pollutant Discharge Elimination System General Permit for Discharges from Large and Small Construction Activities

SAN JUAN COUNTY
NEW MEXICO

OCTOBER 2009

PREPARED BY:
CHENEY ▲ WALTERS ▲ ECHOLS, INC.
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Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

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1.0 PROJECT INFORMATION

Nature of Project:	Proposed Land Farm
Operators:	Industrial Ecosystems Inc., Terry Lattin
Subcontractors:	See site map(s) for list of subcontractors
Areas of control:	The Operator(s) shall be responsible for implementation and maintenance of erosion and sediment control measures shown on the site map. The subcontractors shall be responsible for not interfering with these measures, and repairing any facilities that are rendered ineffective due to their activities.

2.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) is prepared for improvements pertaining to the construction of the Industrial Ecosystems Blanco Land Farm. The property site is 289± acres in Blanco, San Juan County, New Mexico. The improvements will include disturbing approximately 208 acres in phases.

This SWPPP has been developed to meet the requirements of the Clean Water Act (CWA) as outlined in the Environmental Protection Agencies' (EPA) National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Construction Activities, effective June 30, 2008. The SWPPP is prepared in accordance with good engineering and environmental practices.

3.0 SITE DESCRIPTION

The project site for the Land Farm is located on the south side of U.S. Highway 64, near mile marker 75.8. The proposed Land Farm will be used as a soil remediation site for contaminated oilfield waste. The facility is planned to have two full accesses. The site is described as Lot 4 of the Blanco Land Subdivision No. 1 and Lots 1A thru 7A of the Blanco Land Subdivision No. 2, lying in the W½ and the SW¼ SW¼ of Section 16, T29N, R09W, N.M.P.M. Blanco, San Juan County, New Mexico (see Appendix A).

The average annual rainfall is approximately 8" per year. The area is considered to be arid. The selection of the needed erosion and sediment control measures will utilize all of the above factors in deciding which treatments are most appropriate for each location.

3.1 Description of Construction Activity

The onsite construction activities will consist of the following:

A. Installation of erosion and sediment control practices, measures or structures (BMP's) including stabilized construction entrance, and perimeter controls (see Attachment A, SWPPP Plan).
B. Installation of perimeter fence.
C. Clearing and grubbing of existing vegetation within project limits.
D. Installation of remaining stormwater and erosion control measures.

3.2 Potential Sources of Pollutants

It is anticipated that the following potential sources of pollutants may reasonably be expected to affect the quality of stormwater discharges from the construction site:

A. Sediment runoff due to grading activities
B. Sanitary waste
C. Solid waste
D. Fluids from construction equipment

3.3 Sequence of Major Soil Disturbing Activities

The major soil disturbing activities related to this project are listed below. The sequence of construction activities will be recorded in the inspection reports.

1. Install pollution controls within the development, including construction of a stabilized entrance for access into the property during construction (see Attachment A, SWPPP Plan).
2. Clearing and grubbing of existing vegetation within the construction limits.
3. Fine grading of areas that have been cleared for new construction.
4. Stabilize any disturbed areas beyond the limits of construction

3.4 Area of Disturbed Soil

The estimated area to be disturbed by construction is 8.0± acres.

3.5 Existing Soil Data

The soils within the project area are classified by the San Juan County Soil Survey as Doak Avalon association, gently sloping (DN) and Fruitland-Persayo-Sheppard complex, hilly (FX).

Doak-Avalon association, gently sloping soils are found on mesas, plateaus, and terraces. The native vegetation is mainly grass and the slopes range between 0% and 5%. The Doak Loam soils make up about 50% of the unit and the Avalon Loam soils make up about 35%. The hydrologic soil group for the Doak-Avalon soil is B.

The Doak soil is deep and well drained, formed in alluvium derived dominantly from sandstone and shale. The surface layer is typically brown loam about 5 inches thick. The underlying layer is brown and light brown silty clay loam and clay loam, approximately 38 inches thick. The substratum is light yellowish brown clay loam to a depth of 69 inches or more. The permeability of the Doak soil is 0.6 -2.0 inches per hour to a depth of 5 inches, below this depth to a depth of 69 inches the permeability is 0.2 - 0.6 inches per hour. The permeability of the Doak soil is classified as moderately slow. The available water capacity is very high, runoff is slow, and the hazard of water erosion is slight. The vegetation supported by the Doak soil is mainly blue grama, western wheatgrass, Indian ricegrass, and needleandthread. The soil loss tolerance is 5 and the soil erodability factor is 0.37.

The Avalon soil is a deep well drained soil, formed in alluvial and eolian material derived from sandstone and shale. The surface layer is typically brown loam about 4 inches thick. The underlying layer to a depth of 14 inches is also brown loam. The upper 22 inches of the substratum is pinkish white loam. The lower part to a depth of 60 inches or more is light yellowish brown loam. The permeability of the Avalon soil is 0.6 - 2.0 inches per hour to a depth of 60 inches. The permeability of the Avalon soil is classified as moderate. The available water capacity is high, runoff is medium, and the hazard of water erosion is moderate. The soil is slightly saline, used for grazing and wildlife habitat. The vegetation of the Avalon soil consists of Indian ricegrass, winterfat, galleta, and blue grama. The soil loss tolerance is 3 and the soil erodability factor is 0.43.

Fruitland-Persayo-Sheppard complex hilly soils are found on mesas, plateaus, fans and breaks. The slopes range between 5% and 30%. The native vegetation is mainly grass and scattered pinyon and juniper. The unit is 40% Fruitland sandy loam, 30% Persayo clay loam, and 25% Sheppard loamy fine sand. It was not practical to map these soils separately at the scale used.

The Fruitland soil is deep and well drained, formed in alluvium derived dominantly from sandstone and shale. The surface layer is typically brown sandy loam about 4 inches thick. The underlying material is brown fine sandy loam, to a depth of 60 inches or more. The permeability of the Fruitland soil is 2.0 - 6.0 inches per hour, classified as moderately rapid, and the available water capacity is moderate. Runoff is medium and the hazard of water erosion is moderate. The hydrologic soil group for the Fruitland soil is B. The soil loss tolerance is 5 and the soil erodability factor is 0.24 to a depth of 4 inches.

The Persayo soil is shallow and well drained, formed in residuum derived from shale. The surface layer is typically light brownish gray clay loam, about 2 inches thick. The underlying layer is light yellowish brown clay loam to a depth of 18 inches. Shale is at a depth of 18 inches. Permeability of the Persayo soil is 0.2 - 0.6 inches per hour, classified as moderately slow, and the available water capacity is very low. Runoff is rapid and the hazard of water erosion is high. The soil is slightly saline. The hydrologic soil group for the Persayo soil is D. The soil loss tolerance is 1 and the soil erodability factor is 0.37.

The Sheppard soil is deep and somewhat excessively drained, formed in eolian material derived from mixed sources. Typically the surface layer is light yellowish brown loamy fine sand about 4 inches thick. The underlying material to a depth of 60 inches or more is light yellowish brown loamy fine sand and fine sand. The permeability of the Sheppard soil is 6.0 - 20.0 inches per hour, classified as rapid, and the available water capacity is low. Runoff is slow and the hazard of water erosion is slight. The hydrologic soil group for the Sheppard soil is A. The soil loss tolerance is 5 and the soil erodability factor is 0.15.

3.6 Site Maps/Plans

The vicinity map shows the project location relative to surrounding landmarks (see Appendix B).

3.7 Name of Receiving Waters

The project area discharges non-contaminated stormwater into Largo Canyon (see Appendix C).

4.0 CONTROLS

Pollutant control and good housekeeping measures will be utilized during construction. The controls will be implemented to prevent and minimize the discharge of sediment and pollutants from the construction area due to stormwater discharge. All controls will be implemented and maintained by the Operator listed on the SWPPP map.

4.1 Materials Management

Potentially hazardous or toxic materials, such as chemicals solvents, fuels, etc., shall be properly transported, handled and stored according to manufacturers suggestions and regulations pertaining to such materials. The original product label should never be removed from the container, as it provides important safety information.

Fuels, lubricants and other fluids for operating and maintaining heavy equipment and vehicles shall be stored offsite. Equipment shall be serviced regularly at an offsite location, any leaks will be fixed immediately.

4.2 Waste Disposal

Any raw hazardous materials, excess construction materials and solid wastes shall be disposed of in the appropriate onsite receptacles. Receptacles shall be provided to receive these materials as appropriate to the waste being generated. All construction site wastes shall be disposed of at authorized disposal areas. The Operator shall schedule waste collection to prevent the containers from overfilling. In addition, certain types of excess construction materials (lumber, concrete, pipes) can be temporarily stored and stockpiled in a designated location, out of the stormwater flow to avoid debris in the runoff water.

4.3 Offsite Tracking

A stabilized construction entrance shall be constructed at the proposed full access, which will be stabilized and provide treatments to keep sediments and pollutants onsite (see Section 4.6.3).

4.4 Spill Prevention and Response

The discharge of or spills of hazardous substances is not expected to occur during construction activities. The contractor shall not mishandle or misuse any substance onsite.

In the event that an accident may occur within the facility during construction activities, the following measures shall be followed immediately:

A. The operator/contractor will a) stop the source of the spill, b) contain the spill using an absorbent material such as sawdust or kitty litter, c) clean up the spill, and d) dispose of material contaminated by the spill in an environmentally approved disposal site, following the manufacturer's cleanup instructions listed on the product label;
B. Notify both the National Response Center (1-800–424-8802) and the New Mexico Environment's Hazardous and Radioactive Materials Bureau (1-505-827-4300) within 24 hours of a release of hazardous materials in excess of reportable quantities;
C. The operator will submit, within 14 calendar days of the notification, a description of the event to the appropriate authorities;
D. The operator will modify the SWPPP as appropriate within 14 calendar days of the notification and identify measures to prevent a recurrence.

4.5 Sanitation

The Operator shall provide temporary facilities such as portable restrooms and trash containers to ensure that site sanitation requirements comply with state and local regulations.

4.6 Description of Erosion and Sediment Controls

Erosion and sediment control measures will be utilized in areas that have been disturbed by construction activities to prevent and reduce the movement of soils and discharge of pollutants to the waters of the United States. Erosion control measures may be used to keep disturbed soils from eroding, and sediment control measures may be implemented to remove sediment and pollutants from runoff before discharging from the site.

4.6.1 Land Grading

Land grading shall be minimized as much as possible within the construction area.

4.6.2 Preserving Natural Vegetation

The natural vegetation will be preserved as much as possible within the project limits.

4.6.3 Stabilized Entrance

A stabilized entrance shall be established for the construction site. This will minimize the amount of sediment leaving the area attached to motorized vehicles. The entrance will consist of a gravel pad over filter cloth, placed at a convenient location for vehicles exiting the site. As a vehicle passes over the gravel, sediment is removed from the vehicle's wheels and transport of soil offsite is reduced. The stabilized area also reduces erosion and rutting of the soil beneath. The filter fabric serves to maintain separation of the gravel from the soil below, preventing the gravel from being ground into the soil, as well as distributing the weight of the vehicle over an area greater than the tire width.

Alternate methods for entrance stabilization may be used. A description of the method shall be added to the SWPPP..

4.6.4 Earth Berm and V-Shaped Ditch

An earth berm and small V-shaped drainage ditch may be used as temporary perimeter controls for the project. It is anticipated that the earth berm and drainage ditch will pond surface runoff. The ponding will help settle out sediments that accumulate.

These measures will remain in place until all areas up-slope have been permanently stabilized by vegetation or other means allowed by the Construction General Permit.

4.6.5 Silt Fence

Silt fences may be used as temporary perimeter controls around the site. They consist of a length of filter fabric stretched between anchoring posts spaced at regular intervals along the site perimeter.

If a standard strength fabric is used, it can be reinforced with wire mesh behind the filter fabric to increase the effective life of the fence. The maximum life expectancy for synthetic fabric silt fences is approximately six months.

The stakes used to anchor the filter fabric shall be either wooden or metal. Wooden stakes should be at least 5' long and have a minimum diameter of 2" if á hardwood (i.e., oak) is used, or 4" if a softer wood (i.e., pine) is used. Metal posts should have a minimum weight of 1.00 to 1.33 pounds per linear foot, and attachment points are needed for fastening the fabric with wire ties.

The silt fence should be erected in a continuous fashion from a single roll of fabric to eliminate gaps in the fence. If a continuous roll is not available, the filter should overlap from both directions only at stakes or posts, with a minimum overlap of 6". The filter fabric should be entrenched in the ground between the support posts at least 6" below the ground surface. Gaps near the ground surface will render the fence useless as a sediment barrier.

The fence posts shall be between 16" and 34" above the original ground surface. If standard strength fabric is used in combination with wire mesh, the posts should be spaced no more than 10' apart. If extra-strength fabric is used without wire mesh, the posts should be spaced no more than 6' apart.

The fence should remain in place until all areas up-slope has been permanently stabilized by vegetation or other means.

4.6.6 Vegetated Buffer

A vegetated buffer is an area of either natural or established vegetation that is maintained to protect the water quality of neighboring areas. The buffer zone will reduce the velocity of stormwater runoff, provide a region where the stormwater can permeate into the soil, add to the recharge of groundwater and act as a filter for catching sediment.

4.6.7 Hay or Straw Bales

Hay or straw bales should be embedded into the soil to a depth of about 4". Each bale should be bound horizontally by twine or wire. They are most effective when installed so that they are tightly together. Additional hay can be used to fill any gaps between bales that may occur. Wooden stakes or rebar is then driven into the top of the bales (2/bale) to secure them. Use the excavated soil to prevent undercutting by compacting it along the uphill side of the base of the barriers after the bales have been secured with stakes.

To properly install hay or straw bale barriers:
Set the bales in a shallow trench to prevent water from flowing under the barrier. If digging is impractical due to frost, pack snow against the uphill side of the bales. Overlap the bales to avoid leaving gaps between them. Drive stakes or lath through the bales so that the stakes are buried 6" to 10" into the soil to firmly anchor them in place.

4.6.8 Slash Buffer

A slash buffer shall consist of trees and brush (cut during clearing operations) placed to effectively slow runoff and retain silt. Slash buffers may be placed adjacent to construction areas perpendicular to the anticipated direction of stormwater flow. Slash buffers provide a region where the stormwater can permeate into the soil, add to the recharge of groundwater and act as a filter for catching sediment.

4.6.9 Soil Swales

Soil swales may be used as controls in and around the site. Soil swales should be placed in a manner that directs stormwater runoff to areas of reduced velocity and sediment removal.

4.6.10 Earthen Perimeter Controls

Earthen perimeter controls usually consist of a dike or a combination dike and channel constructed along the perimeter of a disturbed site. Simply defined, an earthen perimeter control is a ridge of compacted soil, often accompanied by a ditch or swale with a vegetated lining, located at the top or base of a sloping disturbed area. The dikes can be erected at the top of a sloping area or in the middle of a slope to divert stormwater runoff around a disturbed construction site. In this way, earth dikes can be used to reduce the length of the slope across which runoff will travel, thereby reducing the erosion potential of the flow. If placed at the bottom of a sloping disturbed area, diversion dikes can divert

flow to a sediment trapping device. Temporary diversion dikes are usually appropriate for drainage basins smaller than 5 acres, but with modifications they can be capable of servicing areas as large as 10 acres. With regular maintenance, earthen diversion dikes have a useful life span of approximately 18 months.

To prevent stormwater runoff from entering a site, earthen perimeter controls can be used to divert runoff from areas upslope around the disturbed construction site. This is accomplished by constructing a continuous, compacted earthen mound along the upslope perimeter of the site. As an additional control measure, a shallow ditch can accompany the earthen mound.

Diversion dikes should be constructed and stabilized prior to commencement of major land disturbance. This will maximize the effectiveness of the diversion measure as an erosion and sediment control device.

The top of earthen perimeter controls designed as temporary flow diversion measures should be at least 2' wide. Bottom width at ground level is typically 6'. The minimum height for earthen dikes should be 18", with side slopes no steeper than 2:1. For points where vehicles will cross the dike, the slope should be no steeper than 3:1 and the mound should be constructed of gravel rather than soil. This will prolong the life of the dike and increase effectiveness at the point of vehicle crossing.

Most earthen perimeter structures are designed for short-term, temporary use. If the expected life span of the diversion structure is greater than 15 days, it is strongly recommended that both the earthen dike and the accompanying ditch be seeded with vegetation immediately after construction. This will increase the stability of the perimeter control and can decrease the need for frequent repairs and maintenance.

4.6.11 Mulching

Mulching is a temporary erosion control practice in which materials such as grass, hay, wood chips, wood fibers, straw, or gravel are placed on exposed or recently planted soil surfaces. When possible, organic mulches should be used for erosion control and plant material establishment. All materials should be free of seed, and loose hay or straw should be anchored by applying tackifier, stapling netting over the top, or crimping with a mulch crimping tool. Materials that are heavy enough to stay in place (for example, gravel or bark or wood chips on flat slopes) do not need anchoring. Other examples include hydraulic mulch products with 100-% post-consumer paper content, yard trimming composts, and wood mulch from recycled stumps and tree parts. Inorganic mulches such as pea gravel or crushed granite can be used in unvegetated areas.

Mulches may or may not require a binder, netting, or tacking. Effective use of netting and matting material requires firm, continuous contact between the materials and the soil. If there is no contact, the material will not hold the soil and erosion will occur underneath the material. Grading is not necessary before mulching.

There must be adequate coverage to prevent erosion, washout, and poor plant establishment. If an appropriate tacking agent is not applied, or is applied in insufficient amounts, mulch is lost to wind and runoff. The channel grade and liner must be appropriate for the amount of runoff, or there will be resulting erosion of the channel bottom. Also, hydro-mulch should be applied in spring, summer, or fall to prevent deterioration of mulch before plants can become established.

4.6.12 Check Dams

Check dams are small, temporary dams constructed across a swale or channel. Check dams can be constructed using gravel, rock, sandbags, logs, or straw bales and are used to slow the velocity of concentrated flow in a channel. By reducing the velocity of the water flowing through a swale or channel, check dams reduce the erosion in the swale or channel. Check dams can also be used to catch sediment from the channel itself or from the contributing drainage area as stormwater runoff flows through the structure.

4.6.13 Compost Filter Socks

A compost filter sock is a type of contained compost filter berm. It is a mesh tube filled with composted material that is placed perpendicular to sheet-flow runoff to control erosion and retain sediment in disturbed areas. The compost filter sock is oval to round in cross section. The sock provides a three-dimensional filter that retains sediment and other pollutants (e.g., suspended solids, nutrients, and motor oil) while allowing the cleaned water to flow through. The filter sock can be used in place of silt fence or straw bale barrier. Composts used in filter socks are made from a variety of feedstocks, including municipal yard trimmings, food residuals, separated municipal solid waste, biosolids, and manure.

Once the filter sock is filled and put in place, it should be anchored to the slope. The preferred anchoring method is to drive stakes through the center of the sock at regular intervals; alternatively, stakes can be placed on the downstream side of the sock. The ends of the filter sock should be directed upslope, to prevent stormwater from running around the end of the sock. The filter sock may be vegetated by incorporating seed into the compost prior to placement in the filter sock. Since compost filter socks do not have to be trenched into the ground, they can be installed on frozen ground or even cement.

4.7 Implementation of Control Measures

Grading shall be minimized as much as possible within the development. The Operator shall install erosion and sediment control measures in order to provide a barrier between the construction site and offsite properties.

Drawings showing erosion and sediment control measures within the development shall be prepared. These drawings shall include the locations of the stabilized entrance, the measures to be installed for control of stormwater, the spill kit, construction waste, construction materials, sanitary facilities, and any other pollution prevention measures to be placed onsite.

4.8 Stormwater Management

Temporary and permanent practices to be utilized for stormwater management control after the completion of construction activities could include but not limited to, revegetation, xeriscape, drainage swales, and culverts.

4.9 Site Management

The Operator will limit exposure and contact between potential pollutants and stormwater. The contractor and subcontractors will implement good housekeeping practices by maintaining a clean and orderly construction site.

4.10 Non-Stormwater Discharges

Non-Stormwater Discharges are not allowed under this permit, except for flows from fire fighting, water system and fire hydrant flushing, irrigation, building wash-down, washing of vehicles (without detergents), dust control, foundation and footing drains, and air conditioning condensate. Non-stormwater discharges are not planned or expected to take place during the construction activities for the facility, other than those allowed by this permit. If it becomes necessary to discharge a non-stormwater not covered by this permit, a separate permit will be obtained.

4.11 Approved State Or Local Plans

N/A

5.0 INSPECTIONS AND MAINTENANCE

The control measures implemented during construction can become ineffective if they are damaged or not properly maintained. The operator shall continuously monitor the implemented erosion and sediment control measures to ensure the effectiveness and appropriate functioning condition of the measures. If changes or repairs are needed to improve the effectiveness and operation of a control measure, changes or repairs will be implemented as soon as practicable and in no case greater than 7 days after the discovery, weather, supplies/materials and site conditions permitting. After the completion of construction activities, final stabilized areas and sites will be inspected once a month until the NOT is submitted to make sure control measures are maintained in good operating condition.

5.1 Inspections

The operator/contractor will ensure that inspections are conducted at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5" or greater. The inspections may be reduced to at least once every month if one of the following conditions is met: the entire site is temporarily stabilized; runoff is unlikely due to winter conditions; or construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

Inspections must be conducted by qualified personnel. "Qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and to assess the effectiveness of the measures put in place to control the quality of the stormwater discharge from the site.

Inspections shall include all disturbed areas of the site, and all material storage areas that are not covered. Inspectors should look for signs of pollutants entering the stormwater conveyances, or the potential for such occurrences.

5.2 Inspection Results (as related to SWPPP)

The operator/contractor will modify the SWPPP as necessary following an inspection if certain measures are deemed ineffective. The modifications shall include a record of the date the change was made, and a description and justification for the adjustment(s) to the SWPPP. See Appendix D for the "Amendments to SWPPP" form.

5.3 Inspection Reports

Following each inspection, an inspection report must be completed (see Appendix E for a sample inspection report form). This report should include the following information:

A. The inspection date
B. Names, titles and qualifications of personnel making the inspection
C. Weather information since the last inspection, including an estimation of the beginning of each storm event, duration of each storm event, approximate amount of rainfall (in inches) and whether any discharges occurred
D. Weather information at the time of the inspection, as well as a description of any discharges
E. Location of discharges of sediment or other pollutants from the site
F. Location of BMPs that need to maintained
G. Location of BMPs that failed to operate as designed or proved inadequate for a particular location
H. Location where additional BMPs are needed that did not exist at the time of inspection; and
I. Corrective action required including any modifications to the SWPPP and when these changes are implemented

All records associated with this facility will be kept for 3 years after the date on the Notice of Termination (see section 12.0). The reports must document any incidents of non-compliance with the permit. If there are no incidents of non-compliance identified, the report must contain a certification that the construction project is in compliance with the SWPPP and the construction general permit.

6.0 NOTICE OF INTENT

The Owner will submit a Notice of Intent (NOI) to the EPA prior to commencing construction. The Operator, if different than the Owner, shall also submit an NOI. The NOI may be submitted electronically, or by mail. An electronic NOI can be accessed and submitted on-line at: http://cfpub.epa.gov/npdes/stormwater/enoi.cfm. **A printed version of the NOI application is included in Appendix G. The printed version may be submitted to one of the following addresses:**

For Regular U.S. Mail Delivery:
EPA Stormwater Notice Processing Center
Mail Code 4203M
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:
EPA Stormwater Notice Processing Center
Room 7420
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

7.0 AVAILABILITY OF SWPPP

A copy of the SWPPP (which shall include the permit), NOI, and acknowledgment letter from the EPA must be available to EPA, state or local agencies approving sediment and erosion plans and representatives of the U.S. Fish and Wildlife Service, from the date construction activities begin to the date of final stabilization. An Operator having day-to-day operational control over a site must have a copy of the SWPPP available at a central location on-site for the use of all those identified as having responsibilities under the SWPPP whenever they are on the construction site. If an on-site location is unavailable for storing the SWPPP when no personnel are present, notice of the SWPPP's location must be posted near the main entrance to the construction site.

8.0 POSTED NOTICES

A sign must be posted conspicuously near the main entrance to the site containing the following information:

A. A copy of the completed NOI as submitted to the EPA; and
B. The current location of the SWPPP, name and telephone number of a contact person for scheduling viewing times *if* this information is different than that submitted to the EPA in the NOI.

9.0 SIGNATORY REQUIREMENTS

9.1 Qualifying Signatories for Applications

All applications, including NOIs, must be signed as follows:

A. For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (I) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

C. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (I) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

9.2 Qualifying Signatories for Reports

All reports required by the permit, including SWPPPs, must be signed by a person described in Section 9.1, or a duly authorized representative of that person. A person is a duly authorized representative only if:

A. The authorization is made in writing by a person described in Section 9.1;

B. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, or an individual or position having overall responsibility of environmental matters for the company; and

C. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to the EPA, if requested.

10.0 PERMANENT STABILIZATION MEASURES

The risk of pollutants entering stormwater runoff from the site will be minimized upon completion of construction. Permanent conditions of the site which will reduce potential pollutants are listed below:

A. The pollutant control measures, including dikes, retention areas, berms, silt fences, v-ditches, and straw bales will be installed and maintained throughout the duration of the Land Farm.

11.0 FINAL STABILIZATION

The operator/contractor will ensure that the appropriate erosion and sediment control measures and inspection and maintenance procedures continue (after construction has been completed) until final stabilization has been achieved.

11.1 Conditions for Final Stabilization

Final stabilization occurs when all soil-disturbing activities have been completed and either of the two following conditions are met:

A. A uniform vegetative cover with a density of 70% of the native background vegetation cover for the area has been established on all disturbed and exposed areas not covered by permanent structures. Over an area with no natural vegetation, no stabilization is required, or
B. Equivalent permanent stabilization measures have been employed.

After the determination that final stabilization has been achieved, the final inspection report will be prepared and a Notice of Termination will be submitted.

12.0 NOTICE OF TERMINATION

Upon final stabilization of the construction site, the operator will prepare and submit a Notice of Termination (NOT). Authorization to discharge terminates at midnight of the day the NOT is signed.

12.1 Conditions for Submitting an NOT

The NOT must be submitted within 30 days of one of the following:

A. Final stabilization has been achieved on all portions of the site for which you are responsible;
B. Another operator has assumed control over all areas of the site that have not been finally stabilized;
C. Coverage under an individual or alternative general NPDES permit has been obtained; or
D. For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

12.2 Methods for Submitting an NOT

Owners and operators will submit an NOT to the EPA upon final stabilization. The NOT may be submitted electronically, or by mail. An electronic NOT can be accessed and submitted on-line at: http://cfpub.epa.gov/npdes/stormwater/enoi.cfm. **A printed version of the NOT application is included in Appendix H. The printed version may be submitted to one of the following addresses:**

For Regular U.S. Mail Delivery:
EPA Stormwater Notice Processing Center
Mail Code 4203M
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:
EPA Stormwater Notice Processing Center
Room 7420
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

APPENDIX A

NPDES General Permit for Stormwater Discharges From Construction Activities

As modified effective January 8, 2009

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National Pollutant Discharge Elimination System
General Permit for Discharges from
Large and Small Construction Activities

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 et. seq., (hereafter CWA or the Act), as amended by the Water Quality Act of 1987, P.L. 100-4, operators of large and small construction activities that are described in Part 1.3 of this National Pollutant Discharge Elimination System (NPDES) general permit, except for those activities excluded from authorization of discharge in Part 1.3.C of this permit are authorized to discharge pollutants to waters of the United States in accordance with the conditions and requirements set forth herein. Permit coverage is required from the "commencement of construction activities" until "final stabilization" as defined in Appendix A.

This permit shall become effective on June 30, 2008.

This permit and the authorization to discharge shall expire at midnight, June 30, 2010.

Signed:

Stephen S. Perkins, Director, Office of Ecosystem Protection
EPA Region 1

Barbara Finazzo, Director, Division of Environmental Planning and Protection
EPA Region 2

Carl-Axel P. Soderberg, Division Director, Caribbean Environmental Protection Division
EPA Region 2

Jon M. Capacasa, Director, Water Protection Division
EPA Region 3

Tinka Hyde, Director, Water Division
EPA Region 5

Miguel I. Flores, Director, Water Quality Protection Division
EPA Region 6

William A. Spratlin, Director, Water, Wetlands and Pesticides Division
EPA Region 7

Stephen S. Tuber, Assistant Regional Administrator, Office of Partnerships & Regulatory Assistance
EPA Region 8

Alexis Strauss, Director, Water Division
EPA Region 9

Michael Gearheard, Director, Office of Water and Watersheds
EPA Region 10

The signatures are for the permit conditions in Parts 1 through 10 and Appendices A through G, and for any additional conditions which apply to facilities located in the corresponding state, Indian country, or other area.

PART 1: COVERAGE UNDER THIS PERMIT

1.1 Introduction

This Construction General Permit (CGP) authorizes stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter surface waters of the United States or a municipal separate storm sewer system (MS4) leading to surface waters of the United States subject to the conditions set forth in this permit. This permit also authorizes stormwater discharges from any other construction activity designated by EPA where EPA makes that designation based on the potential for contribution to an excursion of a water quality standard or for significant contribution of pollutants to waters of the United States. This permit replaces the permit issued in 2003 (68 FR 39087, July 1, 2003), including the modification made to that permit in 2004 (69 FR 76743, December 22, 2004).

This permit is presented in a reader-friendly, plain language format. This permit uses the terms "you" and "your" to identify the person(s) who owns or operates a "facility" or "activity" as defined in Appendix A and who must comply with the conditions of this permit. This format should allow you, the permittee and operator of a large or small construction activity, to easily locate and understand applicable requirements.

The goal of this permit is to minimize the discharge of stormwater pollutants from construction activity.

1.2 Permit Area

If your large or small construction activity is located within the areas listed in Appendix B, you may be eligible to obtain coverage under this permit. Permit coverage is actually provided by legally separate and distinctly numbered permits covering each of the areas listed in Appendix B.

1.3 Eligibility

Permit eligibility is limited to discharges from "large" and "small" construction activity, and to "new projects" and "unpermitted ongoing projects," as defined in Appendix A or as otherwise designated by EPA. This general permit contains eligibility restrictions, as well as permit conditions and requirements. You may have to take certain actions to be eligible for coverage under this permit. In such cases, you must continue to satisfy those eligibility provisions to maintain permit authorization. If you do not meet the requirements that are a pre-condition to eligibility, then resulting discharges constitute unpermitted discharges. By contrast, if you eligible for coverage under this permit and do not comply with the requirements of the general permit, you may be in violation of the general permit for your otherwise eligible discharges.

A. Allowable Stormwater Discharges

Subject to compliance with the terms and conditions of this permit, you are authorized to discharge pollutants in:

1. Stormwater discharges associated with large and small construction activity from "new projects" and "unpermitted ongoing projects" as defined in Appendix A;
2. Stormwater discharges designated by EPA as needing a stormwater permit under 40 CFR §122.26(a)(1)(v) or §122.26(b)(15)(ii);
3. Discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:
   a. The support activity is directly related to the construction site required to have NPDES permit coverage for discharges of stormwater associated with construction activity;
   b. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports; and
   c. Pollutant discharges from support activity areas are minimized in compliance with Part 3.1.G; and
4. Discharges composed of allowable discharges listed in 1.3.A and 1.3.B commingled with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

B. Allowable Non-Stormwater Discharges

You are authorized for the following non-stormwater discharges, provided the non-stormwater component of the discharge is in compliance with Part 5.4 (Non-Stormwater Discharges):

1. Discharges from fire-fighting activities;
2. Fire hydrant flushings;
3. Waters used to wash vehicles where detergents are not used;
4. Water used to control dust in accordance with Part 3.1.B;
5. Potable water including uncontaminated water line flushings;
6. Routine external building wash down that does not use detergents;
7. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
8. Uncontaminated air conditioning or compressor condensate;
9. Uncontaminated ground water or spring water;
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents;
11. Uncontaminated excavation dewatering;
12. Landscape irrigation.

C. Limitations on Coverage

1. This permit does not authorize post-construction discharges that originate from the site after construction activities have been completed and the site has achieved final stabilization, including any temporary support activity. Post-construction

stormwater discharges from industrial sites may need to be covered by a separate NPDES permit.

2. This permit does not authorize discharges mixed with non-stormwater. This exclusion does not apply to discharges identified in Part 1.3.B, provided the discharges are in compliance with Part 5.4 (Non-Stormwater Discharges).
3. This permit does not authorize stormwater discharges associated with construction activity that have been covered under an individual permit or required to obtain coverage under an alternative general permit in accordance with Part 2.6.
4. This permit does not authorize discharges that EPA, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary in accordance with Part 2.6. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures in your permit designed to bring your discharge into compliance with water quality standards.
5. *Discharging into Receiving Waters With an Approved or Established Total Maximum Daily Load Analysis*
   a. You are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is a total maximum daily load (TMDL) established or approved by EPA unless implement measures or controls that are consistent with the assumptions and requirements of such TMDL. To be eligible for coverage under this general permit, you must implement conditions applicable to your discharges necessary for consistency with the assumptions and requirements of such TMDL. If a specific wasteload allocation has been established that would apply to your discharge, you must implement necessary steps to meet that allocation.
   b. In a situation where an EPA-approved or established TMDL has specified a general wasteload allocation applicable to construction stormwater discharges, but no specific requirements for construction sites have been identified in the TMDL, you should consult with the State or Federal TMDL authority to confirm that meeting the effluent limits in Part 3 of this permit will be consistent with the approved TMDL. Where an EPA-approved or established TMDL has not specified a wasteload allocation applicable to construction stormwater discharges, but has not specifically excluded these discharges, compliance with the effluent limits in Part 3 of this permit will generally be assumed to be consistent with the approved TMDL. If the EPA-approved or established TMDL specifically precludes such discharges, the operator is not eligible for coverage under the CGP.
6. *Endangered and Threatened Species and Critical Habitat Protection*
   a. Coverage under this permit is available only if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities, as defined in Appendix A, are not likely to jeopardize the continued existence of any species that are federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) or result in the adverse

modification or destruction of habitat that is federally-designated as critical under the ESA ("critical habitat").

b. You are not eligible to discharge if the stormwater discharges, allowable non-stormwater discharges, or stormwater discharge-related activities would cause a prohibited "take" of federally-listed endangered or threatened species (as defined under section 3 of the ESA and 50 CFR 17.3), unless such takes are authorized under sections 7 or 10 of the ESA.

c. Determining Eligibility: You must use the process in Appendix C (ESA Review Procedures) to determine eligibility *PRIOR* to submittal of the Notice of Intent (NOI). You must meet one or more of the following six criteria (A-F) for the entire term of coverage under the permit:

Criterion A. No federally-listed threatened or endangered species or their designated critical habitat are in the project area as defined in Appendix C; or

Criterion B. Formal consultation with the Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded and that consultation:

i. Addressed the effects of the project's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and

ii. The consultation resulted in either:

a. Biological opinion finding no jeopardy to federally-listed species or destruction/adverse modification of federally-designated critical habitat, or

b. Written concurrence from the Service(s) with a finding that the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to adversely affect federally-listed species or federally-designated critical habitat; or

Criterion C. Informal consultation with the Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded and that consultation:

i. Addressed the effects of the project's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and

ii. The consultation resulted in either:

a. Biological opinion finding no jeopardy to federally-listed species or destruction/adverse modification of federally-designated critical habitat, or

b. Written concurrence from the Service(s) with a finding that the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are

not likely to adversely affect federally-listed species or federally-designated critical habitat; or

Criterion D. The construction activities are authorized through the issuance of a permit under section 10 of the ESA, and that authorization addresses the effects of the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed species and federally-designated critical habitat; or

Criterion E. Stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to adversely affect any federally-listed threatened or endangered species or result in the destruction or adverse modification of federally-designated critical habitat; or

Criterion F. The project's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities were already addressed in another operator's valid certification of eligibility under Criteria A-E which included your construction activities and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the project area. By certifying eligibility under this criterion, you agree to comply with any measures or controls upon which the other operator's certification was based.

You must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility requirements of the criteria in this section to remain eligible for coverage under this permit.

7. *Historic Properties*
   [Reserved]
   You are reminded that you must comply with applicable state, tribal and local laws concerning the protection of historic properties and places.

1.4 Waivers for Certain Small Construction Activities

Three scenarios exist under which small construction activities (see definition in Appendix A) may be waived from the NPDES permitting requirements detailed in this general permit. These exemptions are predicated on certain criteria being met and proper notification procedures being followed. Details of the waiver options and procedures for requesting a waiver are provided in Appendix D.

PART 2: AUTHORIZATION FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITY

2.1 How to Obtain Authorization

To obtain coverage under this general permit, you, the operator, must prepare and submit a complete and accurate Notice of Intent (NOI), as described in this Part. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage.

2.2 How to Submit Your NOI

You must either use EPA's electronic NOI system (accessible at www.epa.gov/npdes/eNOI or use a paper form (included in Appendix E) and then submit that paper form to:

For Regular U.S. Mail Delivery:
EPA Stormwater Notice Processing Center
Mail Code 4203M
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:
EPA Stormwater Notice Processing Center
Room 7420
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

2.3 Authorization to Discharge Date

You are authorized to discharge stormwater from construction activities under the terms and conditions of this permit seven (7) calendar days after acknowledgment of receipt of your complete NOI is posted on EPA's NPDES website http://www.epa.gov/npdes/stormwater/cgp. The exception to this 7-day timeframe is if EPA delays your authorization based on eligibility considerations of Part 1.3 (e.g., ESA concerns). Under this circumstance, you are not authorized for coverage under this permit until you receive notice from EPA of your eligibility.

2.4 Submission Deadlines

A. *New Projects:* To obtain coverage under this permit, you must submit a complete and accurate NOI and be authorized consistent with Part 2.3 prior to your commencement of construction activities.

B. *Permitted Ongoing Projects:* Permitted ongoing projects are not eligible for coverage under this permit. If you previously received authorization to discharge for your project under the 2003 CGP, your authorization will be automatically continued under that permit until the expiration of this permit and the issuance of a new CGP, or the termination of coverage by you under the 2003 CGP, whichever is earlier. Note: If you are an operator of a permitted ongoing project and you transfer ownership of the project, or a portion thereof, to a different operator, that operator will be required to submit a complete and accurate NOI for a new project in accordance with Part 2.2.

C. *Unpermitted Ongoing Projects:* If you previously did not receive authorization to discharge for your project under the 2003 CGP and you wish to obtain coverage under this permit, you must submit an NOI within 90 days of the issuance date of this permit.

D. *Late Notifications:* Operators are not prohibited from submitting NOIs after initiating clearing, grading, excavation activities, or other construction activities. When a late NOI is submitted, authorization for discharges occurs consistent with Part 2.3. The Agency reserves the right to take enforcement action for any unpermitted discharges that occur between the commencement of construction and discharge authorization.

2.5 Continuation of the Expired General Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and remain in force and effect. If you were granted permit coverage prior to the expiration date, you will automatically remain covered by the continued permit until the earliest of:

A. Reissuance or replacement of this permit, at which time you must comply with the conditions of the new permit to maintain authorization to discharge; or

B. Your submittal of a Notice of Termination; or

C. Issuance of an individual permit for the project's discharges; or

D. A formal permit decision by EPA to not reissue this general permit, at which time you must seek coverage under an alternative general permit or an individual permit.

2.6 Requiring Coverage Under an Individual Permit or an Alternative General Permit

A. EPA may require you to apply for and/or obtain either an individual NPDES permit or coverage under an alternative NPDES general permit. Any interested person may petition EPA to take action under this paragraph. If EPA requires you to apply for an individual NPDES permit, EPA will notify you in writing that a permit application is required. This notification will include a brief statement of the reasons for this decision and an application form. In addition, if you are an existing permittee covered under this permit, the notice will set a deadline to file the application, and will include a statement that on the effective date of issuance or denial of the individual NPDES permit or the coverage or denial of coverage under the alternative general permit as it applies to you, coverage under this general permit will automatically terminate. Applications must be submitted to EPA at the applicable EPA Regional offices listed in Appendix B of this permit. EPA may grant additional time to submit the application upon your request. If you are covered under this permit and you fail to submit in a timely manner an individual NPDES permit application as required by EPA, then the applicability of this permit to you is automatically terminated at the end of the day specified by EPA as the deadline for application submittal.

B. You may request to be excluded from coverage under this general permit by applying for an individual permit. In such a case, you must submit an individual application in accordance with the requirements of 40 CFR §122.26(c)(1)(ii), with reasons supporting the request, to EPA at the applicable EPA Regional office listed in

Appendix B of this permit. The request may be granted by issuance of an individual permit or coverage under an alternative general permit if your reasons are adequate to support the request.

C. When an individual NPDES permit is issued to you (as an entity that is otherwise subject to this permit), or you are authorized to discharge under an alternative NPDES general permit, the applicability of this permit to you is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. If you (as an entity that is otherwise subject to this permit) are denied an individual NPDES permit or an alternative NPDES general permit, the applicability of this permit to you is automatically terminated on the date of such denial, unless otherwise specified by EPA.

PART 3: EFFLUENT LIMITS

This section includes technology-based and water quality-based effluent limits that apply to all dischargers, unless otherwise specified. You must select, install, and maintain control measures (e.g., Best Management Practices ("BMPs"), controls, practices, etc.) for each major construction activity, identified in your Part 5 project description, to meet these effluent limits. All control measures must be properly selected, installed, and maintained in accordance with any relevant manufacturer specifications and good engineering practices. You must implement the control measures from commencement of construction activity until final stabilization is complete.

The term "minimize" as used in Part 3 means reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

3.1 Effluent Limits to Reduce Pollutants in Stormwater Discharges

You must implement control measures to minimize pollutants in stormwater discharges.

A. ***Sediment Controls:*** You must implement the following, where applicable:

1. Sediment Basins: For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from the drainage area from a 2-year, 24-hour storm, or equivalent control measures, must be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, must be provided where attainable until final stabilization of the site. When computing the number of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. In determining whether installing a sediment basin is attainable, the operator may consider factors such as site soils,

slope, available area on-site, etc. In any event, the operator must consider public safety, especially as it relates to children, as a design factor for the sediment basin, and alternative sediment controls must be used where site limitations would preclude a safe design.

2. For drainage locations which serve 10 or more disturbed acres at one time and where a temporary sediment basin or equivalent controls is not attainable, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions).

3. For drainage locations serving less than 10 acres, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.

B. ***Off-Site Sediment Tracking and Dust Control:*** You must minimize off-site vehicle tracking of sediments onto paved surfaces and the generation of dust. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.

C. ***Runoff Management:*** You must divert flows from exposed soils, retain/detain flows or otherwise minimize runoff and the discharge of pollutants from exposed areas of the site. You must avoid placement of structural practices in floodplains to the degree technologically and economically practicable and achievable.

D. ***Erosive Velocity Control:*** You must place velocity dissipation devices at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).

E. ***Post-Construction Stormwater Management:*** You must comply with any applicable federal, local, state, or tribal requirements regarding the design and installation of post-construction stormwater controls. Structural measures should be placed on upland soils to the degree practicable and achievable.

F. ***Construction and Waste Materials:*** You must:

1. Prevent the discharge of solid materials, including building materials, to waters of the United States, except as authorized by a permit issued under section 404 of the CWA;

2. Minimize exposure of construction and waste materials to stormwater, and the occurrence of spills, through the use of storage practices, prevention and response practices, and other controls;
3. Prevent litter, construction debris, and construction chemicals (e.g., diesel fuel, hydraulic fluids, and other petroleum products) that could be exposed to stormwater from becoming a pollutant source in stormwater discharges.

G. ***Non-Construction Wastes:*** You must minimize pollutant discharges from areas other than construction (including stormwater discharges from dedicated asphalt plants and dedicated concrete plants).

H. ***Erosion Control and Stabilization:***
1. ***General Requirements:*** You must stabilize the site. You must ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized. You should avoid using impervious surfaces for stabilization.
2. ***Initiation Deadlines:*** You must initiate stabilization measures, except as provided below, as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.
   i. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practicable.
   ii. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the site.
   iii. In arid, semiarid, and drought-stricken areas where initiating perennial vegetative stabilization measures is not possible within 14 days after construction activity has temporarily or permanently ceased, final vegetative stabilization measures must be initiated as soon as practicable.

I. ***Spills / Releases in Excess of Reportable Quantities:*** You are not authorized to discharge hazardous substances or oil resulting from an on-site spill. This permit does not relieve you of the federal reporting requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 relating to spills or other releases of oils or hazardous substances.

Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117 or 40 CFR Part 302, occurs during a 24-hour period:

- you must provide notice to the National Response Center (NRC) (800–424–8802; in the Washington, DC, metropolitan area call 202–267–2675) in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 as soon as site staff have knowledge of the discharge; and

- you must, within 7 calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. You must also implement measures to prevent the reoccurrence of such releases and to respond to such releases.

3.2 Effluent Limits to Reduce Pollutants in Non-Stormwater Discharges

You must minimize any non-stormwater discharges authorized by this permit.

3.3 Effluent Limits Related to Endangered Species

You must protect federally-listed endangered or threatened species, or federally-designated critical habitat to maintain eligibility under Part 1.3.C.6.

3.4 Attainment of Water Quality Standards

A. You must select, install, implement and maintain control measures at your construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, except in situations explained in Part 3.4.B below, your stormwater controls developed, implemented, and updated consistent with the other provisions of Part 3 are considered as stringent as necessary to ensure that your discharges do not cause or contribute to an excursion above any applicable water quality standard.

B. At any time after authorization, EPA may determine that your stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, EPA will require you to:

   i. Modify your stormwater controls in accordance with Part 3.6 to address adequately the identified water quality concerns;
   ii. Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
   iii. Cease discharges of pollutants from construction activity and submit an individual permit application according to Part 2.6.

All written responses required under this part must include a signed certification consistent with Appendix G, Section 11.

3.5 Consistency with Total Maximum Daily Loads

If you are discharging into a water with an EPA established or approved TMDL, you must implement measures to ensure that your discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including any specific wasteload allocation that has been established that would apply to your discharge. See Part 1.3.C.5 for further information on determining permit eligibility related to TMDLs.

3.6 Maintenance of Control Measures

A. You must maintain all control measures and other protective measures in effective operating condition. If site inspections required by Part 4 identify BMPs that are not operating effectively, you must perform maintenance as soon as possible and before the next storm event whenever practicable to maintain the continued effectiveness of stormwater controls.

B. If existing BMPs need to be modified or if additional BMPs are necessary for any reason, you must complete implementation before the next storm event whenever practicable. If implementation before the next storm event is impracticable, you must implement alternative BMPs as soon as possible.

C. You must remove sediment from sediment traps or sedimentation ponds when design capacity has been reduced by 50 percent.

D. You must remove trapped sediment from a silt fence before the deposit reaches 50 percent of the above-ground fence height (or before it reaches a lower height based on manufacturer's specifications).

3.7 Training of Employees

You must train employees and subcontractors as necessary to make them aware of the applicable control measures implemented at the site so that they follow applicable procedures.

3.8 Applicable State, Tribal, or Local Programs

You must ensure that the stormwater controls implemented at your site are consistent with all applicable federal, state, tribal, or local requirements for soil and erosion control and stormwater management.

PART 4: INSPECTIONS

A. ***Inspection Frequency:*** You must conduct inspections in accordance with one of the two schedules listed below. You must specify in your SWPPP which schedule you will be following.
   1. At least once every 7 calendar days, OR
   2. At least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

B. ***Case-by-Case Reductions in Inspection Frequency:*** You may reduce your inspection frequency to at least once every month if:
   1. The entire site is temporarily stabilized,
   2. Runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or
   3. Construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

C. ***Inspection Waiver for Frozen Conditions:*** A waiver of the inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following requirements are met:
   1. The project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month);
   2. Land disturbance activities have been suspended; and
   3. The beginning and ending dates of the waiver period are documented in the SWPPP.

D. ***Qualified Personnel:*** Inspections must be conducted by qualified personnel (provided by the operator or cooperatively by multiple operators). "Qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity.

E. ***Scope of Inspections:*** Inspections must include all areas of the site disturbed by construction activity and areas used for storage of materials that are exposed to precipitation. Inspectors must look for evidence of, or the potential for, pollutants entering the stormwater conveyance system. Sedimentation and erosion control measures must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.

F. ***Reductions in Scope of Inspections for Stabilized Areas:*** Once a definable area has been finally stabilized, no further inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in a complex are done and the area is finally stabilized, one mile of a roadway or pipeline project is done and finally stabilized, etc).

G. ***Utility Line Inspections:*** Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may limit the access of inspection personnel to the areas described in Part 4.E above. Inspection of these areas could require that vehicles compromise temporarily or even permanently stabilized areas, cause additional disturbance of soils, and increase the potential for erosion. In these circumstances, controls must be inspected on the same frequencies as other construction projects, but representative inspections may be performed. For representative inspections, personnel must inspect controls along the construction site for 0.25 mile above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the areas described above. The conditions of the controls along each inspected 0.25 mile segment may be considered as representative of the condition of controls along

that reach extending from the end of the 0.25 mile segment to either the end of the next 0.25 mile inspected segment, or to the end of the project, whichever occurs first.

H. ***Inspection Report:*** For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include:
   1. The inspection date;
   2. Names, titles, and qualifications of personnel making the inspection;
   3. Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
   4. Weather information and a description of any discharges occurring at the time of the inspection;
   5. Location(s) of discharges of sediment or other pollutants from the site;
   6. Location(s) of BMPs that need to be maintained;
   7. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
   8. Location(s) where additional BMPs are needed that did not exist at the time of inspection; and
   9. Corrective action required including implementation dates.

The inspection report must be signed in accordance with Appendix G, Section 11 of this permit.

PART 5: STORMWATER POLLUTION PREVETNION PLANS (SWPPPs)

5.1 Stormwater Pollution Prevention Plan Framework

You must prepare a SWPPP before submitting your Notice of Intent (NOI) for permit coverage. At least one SWPPP must be developed for each construction project covered by this permit and the stormwater controls implemented at your site must be documented in the SWPPP. If you prepared a SWPPP for coverage under a previous NPDES permit, you must review and update the SWPPP prior to submitting your NOI.

The SWPPP does not contain effluent limitations; the technology and water quality-based effluent limitations are contained in Part 3 of this permit. The SWPPP is intended to document the selection, design, installation, and implementation of control measures that are being used to comply with the effluent limitations set forth in Part 3.

The SWPPP must:
1. Identify all potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the construction site; and
2. Describe control measures to be used to meet the effluent limits set forth in Part 3.

5.2 SWPPP Contents: Site and Activity Description

A. ***Construction Site Operators:*** The SWPPP must identify all operators for the project site, and the areas of the site over which each operator has control.

B. ***Nature of Construction Activity:*** The SWPPP briefly must describe the nature of the construction activity, including:
   1. The function of the project (e.g., low density residential, shopping mall, highway, etc.);
   2. The intended sequence and timing of activities that disturb soils at the site;
   3. Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas; and
   4. A general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and waters of the United States within one mile of the site.

C. ***Site Map:*** The SWPPP must contain a legible site map, showing the entire site, identifying:
   1. Direction(s) of stormwater flow and approximate slopes anticipated after grading activities;
   2. Areas of soil disturbance and areas that will not be disturbed (or a statement that all areas of the site will be disturbed unless otherwise noted);
   3. Locations of major structural and nonstructural BMPs identified in the SWPPP;
   4. Locations where stabilization practices are expected to occur;
   5. Locations of off-site material, waste, borrow or equipment storage areas;
   6. Locations of all waters of the United States (including wetlands);
   7. Locations where stormwater discharges to a surface water; and
   8. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.

D. ***Construction and Waste Materials:*** The SWPPP must include a description of construction and waste materials expected to be stored on-site with updates as appropriate.

E. ***Locations of Other Industrial Stormwater Discharges:*** The SWPPP must describe and identify the location and description of any stormwater discharge associated with industrial activity other than construction at the site. This includes stormwater discharges from dedicated asphalt plants and dedicated concrete plants that are covered by this permit.

5.3 Description of Control Measures to Reduce Pollutant Discharges

A. ***Control Measures:*** The SWPPP must include a description of all control measures that will be implemented to meet the effluent limits in Part 3. For each major activity identified in the project description the SWPPP must clearly document appropriate control measures, the general sequence during the construction process in which the

measures will be implemented, and which operator is responsible for the control measure's implementation.

B. ***Stabilization:*** The SWPPP must include a description of interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented.

C. ***Post-Authorization Records:*** The following records must be maintained with the SWPPP following authorization under this permit:
   1. Dates when grading activities occur;
   2. Dates when construction activities temporarily or permanently cease on a portion of the site; and
   3. Dates when stabilization measures are initiated.

5.4 Non-Stormwater Discharges

The SWPPP must identify all allowable sources of non-stormwater discharges listed in Part 1.3.B of this permit, except for flows from fire fighting activities that are combined with stormwater discharges associated with construction activity at the site. The SWPPP must also describe the pollution prevention measures used to eliminate or reduce non-stormwater discharges consistent with Part 3.2.

5.5 Documentation of Permit Eligibility Related to Endangered Species

The SWPPP must include documentation supporting a determination of permit eligibility with regard to Endangered Species, including:

A. Information on whether federally-listed endangered or threatened species, or federally-designated critical habitat may be in the project area;

B. Whether such species or critical habitat may be adversely affected by stormwater discharges or stormwater discharge-related activities from the project;

C. Results of the Appendix C listed species and critical habitat screening determinations;

D. Confirmation of delivery of NOI to EPA or to EPA's electronic NOI system. This may include an overnight, express or registered mail receipt acknowledgment; or electronic acknowledgment from EPA's electronic NOI system;

E. Any correspondence for any stage of project planning between the U.S. Fish and Wildlife Service (FWS), EPA, the U.S. National Marine Fisheries Service (NMFS), or others and you regarding listed species and critical habitat, including any notification that delays your authorization to discharge under this permit; and

F. A description of measures necessary to protect federally-listed endangered or threatened species, or federally-designated critical habitat.

5.6 Documentation of Permit Eligibility Related to Total Maximum Daily Loads

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an EPA-established or approved TMDL, including:

A. Identification of whether your discharge is identified, either specifically or generally, in an EPA-established or approved TMDL and any associated allocations, requirements, and assumptions identified for your discharge;

B. Summaries of consultation with State or Federal TMDL authorities on consistency of SWPPP conditions with the approved TMDL, and

C. Measures taken by you to ensure that your discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including any specific wasteload allocation that has been established that would apply to your discharge.

See Part 1.3.C.5 for further information on determining permit eligibility related to TMDLs.

5.7 Copy of Permit Requirements

Copies of this permit and of the signed and certified NOI form that was submitted to EPA must be included in the SWPPP. Also, upon receipt, a copy of the letter from the EPA Stormwater Notice Processing Center notifying you of their receipt of your administratively complete NOI must also be included as a component of the SWPPP.

5.8 Applicable State, Tribal, or Local Programs

The SWPPP must be updated as necessary to reflect any revisions to applicable federal, state, tribal, or local requirements that affect the stormwater controls you implement at your site.

5.9 Inspections

A record of each inspection and of any actions taken in accordance with Part 4 must be retained with the SWPPP for at least three years from the date that permit coverage expires or is terminated. The inspection reports must identify any incidents of non-compliance with the permit conditions. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the construction project or site is in compliance with this permit.

5.10 Maintaining an Updated Plan

The SWPPP must be modified:

A. To reflect modifications to stormwater control measures made in response to a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants to the waters of the United States that has not been previously addressed in the SWPPP.

B. If during inspections or investigations by site staff, or by local, state, tribal or federal officials, it is determined that the existing stormwater controls are ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site.

C. Based on the results of an inspection, as necessary to properly document additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP must be completed within seven (7) calendar days following the inspection.

5.11 Signature, Plan Review and Making Plans Available

A. ***Retention of SWPPP:*** A copy of the SWPPP (including a copy of the permit), NOI, and acknowledgement letter from EPA must be retained at the construction site (or other location easily accessible during normal business hours to EPA, a state, tribal or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service) from the date of commencement of construction activities to the date of final stabilization. If you have day-to-day operational control over SWPPP implementation, you must have a copy of the SWPPP available at a central location on-site for the use of all those identified as having responsibilities under the SWPPP whenever they are on the construction site. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.

B. ***Main Entrance Signage:*** A sign or other notice must be posted conspicuously near the main entrance of the construction site. If displaying near the main entrance is infeasible, the notice can be posted in a local public building such as the town hall or public library. The sign or other notice must contain the following information:
   1. A copy of the completed Notice of Intent as submitted to the EPA Stormwater Notice Processing Center; and
   2. If the location of the SWPPP or the name and telephone number of the contact person for scheduling SWPPP viewing times has changed (i.e., is different than that submitted to EPA in the NOI), the current location of the SWPPP and name and telephone number of a contact person for scheduling viewing times.

   For linear projects, the sign or other notice must be posted at a publicly accessible location near the active part of the construction project (e.g., where a pipeline project crosses a public road).

C. ***Availability of SWPPP:*** SWPPPs must be made available upon request by EPA; a state, tribal or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to the requestor. The copy of the SWPPP that is required to be kept on-site or

locally available must be made available, in its entirety, to the EPA staff for review and copying at the time of an on-site inspection.

D. ***Signature and Certification:*** All SWPPPs must be signed and certified in accordance with Appendix G, Section 11.

5.12 Requirements for Different Types of Operators

You may meet one or both of the operational control components in the definition of operator found in Appendix A. Part 5.12.C applies to all permittees having control over only a portion of a construction site.

A. If you have operational control over construction plans and specifications, you must ensure that:
   1. The project specifications meet the minimum requirements of this Part and all other applicable permit conditions;
   2. The SWPPP indicates the areas of the project where the operator has operational control over project specifications, including the ability to make modifications in specifications;
   3. All other permittees implementing portions of the SWPPP (or their own SWPPP) who may be impacted by a change to the construction plan are notified of such changes in a timely manner; and
   4. The SWPPP indicates the name of the party(ies) with day-to-day operational control of those activities necessary to ensure compliance with the SWPPP or other permit conditions.

B. If you have operational control over day-to-day activities, you must ensure that:
   1. The SWPPP meets the minimum requirements of this Part and identifies the parties responsible for implementation of control measures identified in the plan;
   2. The SWPPP indicates areas of the project where you have operational control over day-to-day activities;
   3. The SWPPP indicates the name of the party(ies) with operational control over project specifications (including the ability to make modifications in specifications).

C. If you have operational control over only a portion of a larger project (e.g., one of four homebuilders in a subdivision), you are responsible for compliance with all applicable effluent limits, terms, and conditions of this permit as it relates to your activities on your portion of the construction site, including protection of endangered species, critical habitat, and historic properties, and implementation of control measures described in the SWPPP. You must ensure either directly or through coordination with other permittees, that your activities do not render another party's pollutant discharge controls ineffective. You must either implement your portion of a common SWPPP or develop and implement your own SWPPP.
   For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site to prepare and participate in a comprehensive SWPPP is encouraged. Individual operators at a site may, but are not

required to, develop separate SWPPPs that cover only their portion of the project provided reference is made to other operators at the site. In instances where there is more than one SWPPP for a site, cooperation between the permittees is encouraged to ensure the stormwater discharge control measures are consistent with one another (e.g., provisions to protect listed species and critical habitat).

PART 6: TERMINATION OF COVERAGE

6.1 Submitting a Notice of Termination

Submit a complete and accurate Notice of Termination (NOT) either electronically (strongly encouraged) at www.epa.gov/npdes/eNOI or by completing the paper Notice of Termination form included in Appendix F of this permit and submitting that form to the address listed in Part 2.2.

6.2 When to Submit a Notice of Termination

You may only submit a Notice of Termination (NOT) after one or more of the following conditions have been met:

A. Final stabilization has been achieved on all portions of the site for which you are responsible;

B. Another operator has assumed control according to Appendix G, Section 11.C over all areas of the site that have not been finally stabilized;

C. Coverage under an individual or alternative general NPDES permit has been obtained; or

D. For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

The NOT must be submitted within 30 days of one of the above conditions being met. Authorization to discharge terminates at midnight of the day the NOT is signed.

PART 7: RETENTION OF RECORDS

Copies of the SWPPP and all documentation required by this permit, including records of all data used to complete the NOI to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

PART 8: REOPENER CLAUSE

8.1 Procedures for Modification or Revocation

Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.

8.2 Water Quality Protection

If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit in accordance with Part 2.6 of this permit, or the permit may be modified to include different limitations and/or requirements.

8.3 Timing of Permit Modification

EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.

PART 9: STANDARD PERMIT CONDITIONS

The federal regulations require that the Standard Conditions provisioned at 40 CFR §122.41 be applied to all NPDES permits. You are required to comply with those Standard Conditions, details of which are provided in Appendix G.

PART 10: PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY, OR TERRITORIES

The provisions of this Part provide modifications or additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the state or tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific states, Indian country, and federal facilities. States, Indian country, and federal facilities not included in this Part do not have any modifications or additions to the applicable conditions of this permit.

A. Region 1

1. MAR100000: Commonwealth of Massachusetts, except Indian country
   a. State Water Quality Statutes, Regulations, and Policies:
      i. You must comply with the Massachusetts Clean Waters Act (Ch. 21, ss. 26-53).
      ii. You must comply with the conditions in 314 CMR 4.00 - Surface Water Quality Standards.
      iii. You must comply with the conditions in 314 CMR 3.00 - Surface Water Discharge Permit Program.
      iv. You must comply with the Wetlands Protection Act, Ch. 131, s. 40 and its regulations, 310 CMR 10.00 and any order of Conditions issued by a Conservation Commission or a Superseding Order of Conditions issued by the Massachusetts Department of Environmental Protection.

b. Department of Environmental Protection Storm Water Management Policy:
   i. You must comply with the Massachusetts Storm Water Management Policy, and applicable Storm Water Performance Standards, as prescribed by state regulations promulgated under the authority of the Massachusetts Clean Waters Act, MGL Ch. 21, ss. 26-53 and the Wetlands Protection Act Ch. 131, s. 40.

c. Other State Environmental Laws, Regulations, Policies:
   i. You must comply with the Massachusetts Endangered Species Act [MESA] (MGL Ch. 313A and regulations at 321 CMR 10.00) and any actions undertaken to comply with this storm water permit, shall not result in non-compliance with the MESA.
   ii. You must not conduct activities under this permit that will interfere with implementation of mosquito control work conducted in accordance with Chapter 252 including, s. 5A thereunder and MassDEP Guideline Number BRP G01-02, West Nile Virus Application of Pesticides to Wetland Resource Areas and Buffer Zones, and Public Water Systems.

d. Other Department Directives:
   i. The Department may require you to perform water quality monitoring during the permit term if monitoring is necessary for the protection of public health or the environment as designated under the authority at 314 CMR 3.00.
   ii. The Department may require you to provide measurable verification of the effectiveness of BMPs and other control measures in your management program, including water quality monitoring.
   iii. The Department has determined that compliance with this permit does not protect you from enforcement actions deemed necessary by the Department under its associated regulations to address an imminent threat to the public health or a significant adverse environmental impact which results in a violation of the Massachusetts Clean Waters Act, Ch. 21, ss. 26-53.
   iv. The Department reserves the right to modify the 401 Water Quality Certification if any changes, modifications or deletions are made to the general permit. In addition, the Department reserves the right to add and/or alter the terms and conditions of its 401 Water Quality Certification to carry out its responsibilities during the term of this permit with respect to water quality, including any revisions to 314 CMR 4.00, Surface Water Quality Standards.

e. Permit Compliance
   i. Should any violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or the conditions of this certification occur, the Department will direct you to correct the violations(s). The Department has the right to take any action as authorized by the General Laws of the Commonwealth to address the violation of this permit or the MA Clean Waters Act and the regulations promulgated thereunder. Substantial civil and criminal penalties are authorized under MGL Ch. 21, s. 42 for discharging into Massachusetts' waters in violation of an order or permit issued by this Department. This

certification does not relieve you of the duty to comply with other applicable Massachusetts statutes and regulations.

2. NHR100000: State of New Hampshire
   a. If you disturb 100,000 square feet or more of contiguous area, you must also apply for a "Significant Alteration of the Terrain Permit from DES pursuant to RSA 485-A:17 and Env-Ws 415. This requirement applies to the disturbances of only 50,000 square feet when construction occurs within the protected shoreline (see RSA 483-B and Env-Ws 1400).
   b. You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-storm water discharge under this permit (see Subpart 1.3.B). The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the discharge. Information on groundwater contamination can be generated over the Internet via the NHDES web site http://www.des.state.nh.us (One Stop Data Retrieval, Onestop Master Site Table). The web site also provides E-mail access to an NHDES Site Remediation Contact to answer questions about using the Web site.
   c. You must treat any uncontaminated excavation dewatering discharges as necessary to remove suspended solids and turbidity. The discharges must be sampled at a location prior to mixing with storm water at least once per week during weeks when discharges occur. The samples must be analyzed for total suspended solids (TSS) and must meet monthly average and maximum daily TSS limitations of 50 milligrams per liter (mg/L) and 100 mg/L, respectively. TSS (a.k.a. Residue, Nonfilterable) analysis and sampling must be performed in accordance with Tables IB (parameter, units and method) and II (required containers, preservation techniques and holding times) in 40 CFR 136.3 (see: http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr136_02.html). Records of any sampling and analysis must be maintained and kept with the SWPPP for at least three years after final site stabilization.
   d. During site design and preparation of the storm water pollution prevention plan (SWPPP), you must consider opportunities for groundwater recharge using on-site infiltration. The SWPPP must include a description of any on-site infiltration that will be installed as a post construction storm water management measure (see Subpart 3.4.E) or reasons for not employing such measures. For design considerations for infiltration measures see the September 2001 DES publication titled "Managing Storm Water as a Valuable Resource" which is available online at: http://www.des.state.nh.us/StormWater/construction.htm. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures wherever feasible.

B. Region 2 – No additional requirements.

C. Region 5

1. MNR100000: Indian Country within the State of Minnesota

a. *Fond du Lac Band of Lake Superior Chippewa*

i. A copy of the Storm Water Pollution Prevention Plan must be submitted to the following office at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Fond du Lac Reservation
Office of Water Protection
1720 Big Lake Road
Cloquet, MN 55720

CGP applicants are encouraged to work with the FDL Office of Water Protection in the identification of all proposed receiving waters.

ii. Copies of the NOI and the Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA.

iii. This certification does not pertain to any new discharge to Outstanding Reservation Resource Waters (ORRW) as described in §105 b.3 of the Fond du Lac Water Quality Standards (Ordinance #12/98). Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake and Jaskari Lake are designated as ORRWs. New dischargers wishing to discharge to an ORRW must obtain an individual permit for stormwater discharges from large and small construction activities.

iv. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance 12/98 as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm and cold water fisheries, subsistence fishing (netting), primary contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation and commercial.

v. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Fond du Lac Reservation. All spills must be reported to the appropriate emergency management agency, and measures shall be taken immediately to prevent the pollution of waters of the Fond du Lac reservation, including groundwater.

vi. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

b. *Grand Portage Band of Lake Superior Chippewa* **[Coverage not yet available]**

2. WIR100000: Indian Country within the State of Wisconsin, except the Sokaogon Chippewa Community.

a. No additional requirements

Note: Facilities within the Sokaogon Chippewa Community are not eligible for stormwater discharge coverage under this permit. Contact the Region 5 office for an individual permit application.

D. Region 6

1. NMR100000: The State of New Mexico, except Indian country
   a. In addition to all other provisions of this permit, operators who intend to obtain authorization under this permit for all new stormwater discharges must satisfy the conditions in Part 10.C.1.b., unless a TMDL has been established for the receiving stream which specifies a waste load allocation (WLA) for construction stormwater discharges or the receiving stream is a Tier 3 water, in which case Part 10.C.1.c. applies.
   b. The SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion, and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4 NMAC, including the antidegradation policy, or WLAs are met. This requirement applies to discharges both during construction and after construction operations have been completed. The SWPPP must identify, and document the rationale for selecting these BMPs and/or other controls. The SWPPP must also describe design specifications, construction specifications, maintenance schedules (including a long term maintenance plan), criteria for inspections, as well as expected performance and longevity of these BMPs. BMP selection must be made based on the use of appropriate soil loss prediction models (such as SEDCAD 4.0, RUSLE, SEDIMOT II, MULTISED, etc.), or equivalent, generally accepted (by professional erosion control specialists), soil loss prediction tools. The operator(s) must demonstrate, and include documentation in the SWPPP, that implementation of the site-specific practices will assure that the applicable standards or WLAs are met, and will result in sediment yields and flow velocities that, to the maximum extent practicable, will not be greater than the sediment yield levels and flow velocities from pre-construction, pre-development conditions. The SWPPP must be prepared in accordance with good engineering practices by qualified (e.g., CPESC certified, engineers with appropriate training, etc.) erosion control specialists familiar with the use of soil loss prediction models and design of erosion and sediment control systems based on these models (or equivalent soil loss prediction tools). The operator(s) must design, implement, and maintain BMPs in the manner specified in the SWPPP.
   c. Operators are not eligible to obtain authorization under this permit for all new stormwater discharges to outstanding national resource waters (ONRWs) (also referred to as "Tier 3: waters). According to the Antidegradation Policy at Paragraph 3 of Subsection A of 20.6.4.8 NMAC, in part, "ONRWs may include, but are not limited to, surface waters of the state within national and state monuments, parks, wildlife refuges, waters of exceptional recreational or

ecological significance, and waters identified under the Wild and Scenic Rivers Act." No ONRWs exist at the time this permit is being finalized; however, during the term of the permit, if a receiving water is designated as an ONRW, the operator must obtain an individual permit for stormwater discharges from large and small construction activities.

d. Stormwater discharges associated with construction activity that the State has determined to be or may reasonably be expected to be contributing to a violation of an applicable standard, including the antidegradation policy, are not authorized by this permit. *Note: Upon receipt of this determination, NMED anticipates that, within a reasonable period of time, EPA will notify the general permittee to apply for and obtain an individual NPDES permit for these discharges per 40 CFR Part 122.28(b)(3).*
e. Inspections required under Part 4 must be conducted at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. The option for inspections at least once per 7 calendar days is not available. The Inspection Waivers provided in Part 4.B and C still apply.
f. Permittees can use temporary erosion controls as described in item 3 of the Appendix A definition of "Final Stabilization" as a method for final stabilization under the permit only under the following conditions:

   If this option is selected, you must notify SWQB at the address listed in item g. below at the time the NOT is submitted to EPA. The information to be submitted includes:

- A copy of the NOT;
- Contact information, including individual name or title, address, and phone number for the qualified (see CGP Part 4.10.D) party responsible for implementing the final stabilization measures; and
- The date that the temporary erosion control practice was implemented (this is always prior to, and sometimes significantly prior to, submission of an NOT) and the projected timeframe that the 70% native vegetative cover requirements are expected to be met. (Note that if more than three years is required to establish 70 percent of the natural vegetative cover, this technique cannot be used or cited for fulfillment of the final stabilization requirement – you remain responsible for establishment of final stabilization)

SWQB also requires that you periodically (minimum once/year) inspect and properly maintain the area until the criteria for final stabilization, as defined in Appendix A, item 3 of the CGP, have been met. You must prepare an inspection report documenting the findings of these inspections and signed in accordance with Appendix G, Section 11 of the CGP. This inspection record must be retained along with the SWPPP for three years after the NOT is submitted for the site and additionally submitted to SWQB at the address listed in item g. below. The inspections must at a minimum include the following:

- Observations of all areas of the site disturbed by construction activity;

- Best Management Practices (BMPs)/post-construction storm water controls must be observed to ensure they are effective;
- An assessment of the status of vegetative re-establishment; and
- Corrective actions required to ensure vegetative success within three years, and control of pollutants in storm water runoff from the site, including implementation dates.

Signed copies of discharge monitoring reports, individual permit applications, and all other reports required by the permit to be submitted, shall also be sent to:

Program Manager
Point Source Regulation Section
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502

2. NMR10000I: Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I
   a. *Pueblo of Acoma.* The following conditions apply only to facilities on or bordering the Pueblo of Acoma with discharges into or flowing into waters of the Pueblo.
      i. A copy of the Notice of Intent and Notice of Termination must be submitted to the Haaku Water Office at the address below at the same time they are submitted to EPA. A copy of the storm water pollution prevention plan must be provided to the Haaku Water Office upon request.
      ii. HAAKU WATER OFFICE
      PO Box 309
      Pueblo of Acoma, NM 87034
   b. *Pueblo of Isleta.* The following conditions apply only to discharges on the Pueblo of Isleta.
      i. Subpart 1.3.C.4, (Eligibility, Limitations on Coverage) first sentence, is revised to read: "This permit does not authorize discharges that EPA or the Pueblo of Isleta, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard or impairment of a designated use of receiving waters."
      ii. Subpart 2.2. (How to Submit) is amended to require: Copies of all Notices of Intent submitted to EPA must also be sent concurrently to the Pueblo of Isleta at the following address. Discharges are not authorized by this permit unless an accurate and complete Notice of Intent has been submitted to the Pueblo of Isleta.

      Regular U.S. Mail Delivery
      Natural Resources Department
      Pueblo of Isleta

P.O. Box 1270
Isleta, NM 87022

Overnight/Express Mail Delivery
Natural Resources Department
Building L
11000 Broadway, SE
Albuquerque, NM 87105

iii. Part 2 (Authorizations for Discharges of Storm Water from Construction Activity), second sentence, is amended to read: "Discharges are not authorized if your NOI is incomplete or inaccurate, if you failed to submit a copy of the NOI to the Pueblo of Isleta, or if you were never eligible for permit coverage.

iv. Subpart 5.3 (Description of Control Measures to Reduce Pollutant Discharges), section A, last sentence, is amended to read: "For each major activity identified in the project description the SWPPP must clearly describe appropriate control measures, the general sequence during the construction process in which the measures will be implemented, and which operator is responsible for the control measure's implementation and maintenance."

v. Subpart 5.7 (Copy of Permit Requirements), first sentence, is revised to read "Copies of this permit and of the signed and certified NOI form that was submitted to the Pueblo of Isleta and EPA must be included in the SWPPP."

vi. Subpart 4. (Inspections), section A is revised to read "Inspections must be conducted at least once every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater."

vii. Subpart 4. (Inspections), section H, last paragraph, is amended to add: "Copies of inspection reports that identify incidents of noncompliance shall be sent to Pueblo of Isleta at the address listed in Subpart 2.2." (See above)

viii. Subpart 5.11. (Signature, Plan Review and Making Plans Available), section A, first sentence is amended to read:

"A copy of the SWPPP (including a copy of the permit), NOI, and acknowledgement letter from EPA must be retained at the construction site (or other location easily accessible during normal business hours to the Pueblo of Isleta's Natural Resources Department, EPA, a state, tribal or local agency approving sediment and erosion plans, grading plans, or storm water management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service) from the date of commencement of construction activities to the date of final stabilization."

ix. Subpart 5.11. (Signature, Plan Review and Making Plans Available), section C. is amended to read: "SWPPPs must be made available upon request by EPA; representatives of the Pueblo of Isleta Natural Resources Department, a state, tribal or local agency approving sediment and erosion plans, grading

plans, or storm water management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to the requestor. The copy of the SWPPP that is required to be kept on-site or locally available must be made available, in its entirety, to the EPA staff and the Pueblo of Isleta's Natural Resources Department staff for review and copying at the time of an on-site inspection.

x. Subpart 3.1.A (Sediment Controls), is amended to add: "Erosion and sediment controls shall be designed to retain sediment on-site."

xi. Subpart 3.1.I (Spills/Releases in Excess of Reportable Quantities), first bullet is amended to read: "you must provide notice to the Pueblo of Isleta Natural Resources Department (505-869-5748) and the National Response Center (NRC) (800–424–8802; in the Washington, DC, metropolitan area call 202–426– 2675) in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 as soon as site staff have knowledge of the discharge; and"

xii. Subpart 3.4.B (Attainment of Water Quality Standards After Authorization), is amended to add: "You must provide the Pueblo of Isleta, at the address listed in Subpart 2.2, with a copy of the EPA notification, modifications to your storm water controls, data and certification required by EPA."

xiii. Subpart 6.1. (Submitting a Notice of Termination) is amended to add: Copies of all Notices of Termination submitted to EPA must also be sent concurrently to the Pueblo of Isleta at the following address in Subpart 2.2.

xiv. Any correspondence, other than NOIs and NOTs, with the Pueblo of Isleta concerning storm water discharges authorized by this permit shall sent one of the addresses in Subpart 2.2.

xv. Appendix G, Section 9, first sentence is amended to read: "You must allow the Pueblo of Isleta's Natural Resources Department, EPA, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:..."

xvi. Appendix G, Section 12, subsections A- H are amended to require that when you must notify EPA of an event (e.g., planned changes, anticipated noncompliance, transfers, required reporting due to potential adverse effects or environmental impacts or other noncompliance matters), the Pueblo of Isleta must also be notified.

xvii. Parties wishing to apply for an Equivalent Analysis Waiver (see Appendix D, Section C) must provide a copy of the waiver analysis to the Pueblo of Isleta at the address specified in Subpart 2.2 at the time it is submitted to EPA.

c. *Ohkay Owingeh (San Juan Pueblo).* The following conditions apply only to discharges on Ohkay Owinegeh.

i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency, at the following address. A copy of the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.

Office of Environmental Affairs
P.O. Box 717
Ohkay Owingeh, NM 87566

ii. Appendix G, Section 10 (Monitoring and records), item D is amended to add: "All monitoring must be conducted in accordance with the Pueblo of San Juan's Quality Assurance Project Plan."

d. *Pueblo of Nambé.* The following conditions apply only to discharges on the Pueblo of Nambé.
   i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data must be provided to the Nambé Pueblo Department of Environment and Natural Resources (DENR) at the time it is provided to the Environmental Protection Agency, at the following address. A copy of the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.
   ii. All correspondence chall be sent to:
   Pueblo of Nambé
   Department of Environment and Natural Resources
   Rt. 1 Box 117-BB
   Santa Fe, NM 87506
   505-455-2036 ext. 120 fax: 505-455-8873

e. *Pueblo of Picuris.* The following conditions apply only to discharges on the Pueblo of Picuris.
   i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data (e.g. Discharge Monitoring Reports, etc.) or any other reports must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency. A copy of the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.
   ii. All correspondence shall be sent to:

   Cordell Arellano
   Director, Environment Department
   Pueblo of Picuris
   PO Box 158
   Penasco, NM 87553

f. *Pueblo of Pojoaque.* The following conditions apply only to discharges on the Pueblo of Pojoaque.
   i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data (e.g. Discharge Monitoring Reports, etc.) or any other reports must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency. A copy of documents related to the

Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.

ii. All correspondence shall be sent to:

Luke Mario Duran
Director, Environment Department
Pueblo of Pojoaque
5 West Gutierrez, Suite 2b
Santa Fe, NM 87506

g. *Pueblo of Taos.* The following conditions apply only to discharges on the Pueblo of Taos.

i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Taos Pueblo Governor's Office and the Taos Pueblo Environmental Office at the same time as or prior to submission to the Environmental Protection Agency. A copy of the Storm Water Pollution Prevention Plan must be provided to Pueblo environmental personnel upon request.

ii. All correspondence for both the Taos Pueblo Governor's Office and the Taos Pueblo Environmental Office (same address) shall be sent to:

Governor/ Taos Pueblo Environmental Office (as applicable)
Taos Pueblo
PO Box 1846
Taos, NM 87571

h. *Pueblo of Sandia.* The following conditions apply only to discharges on the Pueblo of Sandia.

i. A copy of the Notice of Intent (NOI) must be provided to the Pueblo at the same, (or prior to) the time it is submitted to the Environmental Protection Agency.

ii. The Pueblo of Sandia objects to use of Low Rainfall Erosivity Waivers (see Appendix D, Part A) for any small construction activities on the Pueblo, so this waiver will not be available for construction projects on the Pueblo. Permittees wishing to apply for all other waivers (see Appendix D) must provide a copy of the waiver certification or analysis to the Pueblo of Sandia Environment Department.

iii. The Storm Water Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia either electronically or hard copy upon request for review. The SWPPP must be made available at least fourteen (14) days before construction begins. The fourteen (14) day period will give Tribal staff time to become familiar with the project site, prepare for construction inspections, and determine compliance with the Pueblo of Sandia Water Quality Standards. Failure to provide a SWPPP to the Pueblo of Sandia may result in denial of the discharge or construction delay.

iv. Discharges are not authorized by this permit unless and until:

a. An accurate and complete NOI has been submitted to the Pueblo; AND

b. An "Authorization to Proceed Letter" with any site specific mitigation requirements has been received from the Pueblo of Sandia following their review of the NOI and SWPPP and the permittee complies with all applicable requirements therein.

v. Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to the Pueblo of Sandia Environment Department though a site visit or documentation that requirements for site stabilization have been met and any temporary erosion control structures have been removed (or operational control is being passed to another operator). A short letter concurring that conditions for submittal of an NOT have met will be sent to the permittee by the Pueblo. Upon receipt of this letter, and provided the all other applicable requirements of the permit are met, the permittee will be eligible to submit and NOT.

vi. You must telephone the Pueblo of Sandia Environment Department at (505) 867-4533 of any noncompliance that may endanger human health or the environment within ten (10) hours of becoming aware of the circumstance.

vii. All corresondance shall be sent to:

Scott Bulgrin, Water Quality Manager
Pueblo of Sandia
481 Sandia Loop
Bernalillo, NM 87004

i. *Santa Clara Pueblo.* The following conditions apply only to discharges on the Santa Clara Pueblo.

i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pueblo of Santa Clara Office of Environmental Affairs when they are submitted to the Environmental Protection Agency.

ii. A copy of the storm water pollution prevention plan must be made available to the Pueblo of Santa Clara Office of Environmental Affairs upon request.

iii. Construction site operators must notify the Pueblo of Santa Clara Office of Environmental Affairs by telephone at (505) 753-7326 of any non-compliance discharges that may endanger human health or the environment within twenty-fout (24) hours of becoming aware of the discharge.

iv. All correspondence shall be sent to:

Santa Clara Office of Environmental Affairs Taos Pueblo
One Kee Street
PO Box 580
Espanola, NM 87532
505-753-7326 Tel
505-747-2728 Fax

j. *Pueblo of Tesuque.* The following conditions apply only to discharges on the Pueblo of Tesuque.

i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data (e.g. Discharge Monitoring Reports, etc.) or any other

reports must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency.

ii. A copy of documents related to the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.

iii. All correspondence shall be sent to:

Ryan Swazo-Hinds
Sr. Envirionmental Technician
Pueblo of Tesuque
Environment Department
Rt. 42, Box 360-T
Santa Fe, NM 87506

3. OKR10000F: Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).
   a. In accordance with Oklahoma's Water Quality Standards (OAC 785:45-5-25), Subpart 1.3.C. (Limitations on Coverage) is modified to add paragraphs 8 and 9 as follows:

   "8. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated "ORW" (Outstanding Resource Water) in Oklahoma's Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Discharges from any on-going activities such as sand and gravel mining or any other mineral mining are not authorized.

   9. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated "ORW" (Outstanding Resource Water) in Oklahoma's Water Quality Standards, this permit may not be used to authorize discharges from support activities, including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas."

4. OKR10000I: Indian country within the State of Oklahoma.
   a. In order to protect downstream waters subject to the state of Oklahoma's Water Quality Standards (OAC 785:45-5-25) where receiving waters flow from Indian Country to State waters, Subpart 1.3.C. (Limitations on Coverage) is modified to add paragraphs 8 and 9 as follows:

   "8. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated

"ORW" (Outstanding Resource Water) in Oklahoma's Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Discharges from any on-going activities such as sand and gravel mining or any other mineral mining are not authorized.

9. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated "ORW" (Outstanding Resource Water) in Oklahoma's Water Quality Standards, this permit may not be used to authorize discharges from support activities, including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas."

b. *Pawnee Nation of Oklahoma.* The following conditions apply only to discharges on the Pawnee Nation of Oklahoma.
   i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pawnee Nation at the same time they are submitted to the Environmental Protection Agency.
   ii. A copy of the storm water pollution prevention plan must be made available to Pawnee Nation Department of Environmental Conservation and Safety upon request.
   iii. Construction site operators must notify the Pawnee Nation Department of Environmental Conservation and Safety by telephone at (918) 762-3655 immediately of any non-compliance with any provision of the permit conditions.
   iv. All correspondence shall be sent to:

Pawnee Nation
Department of Environmental Conservation and Safety
PO Box 470
Pawnee, OK 74058

5. TXR10000F: Discharges in the State of Texas that are not under the authority of the Texas Commission on Environmental Quality, including activities associated with the exploration, development, or production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline.

NOTE: This permit does not create an obligation to obtain a permit where such obligation does not already exist under federal statute or regulation. For more information on the Clean Water Act §§ 402(l)(2) permitting exemption for uncontaminated discharges of storm water from oil and gas exploration, production, processing, or treatment operations or transmission facilities, visit: http://cfpub.epa.gov/npdes/stormwater/oilgas.cfm

D. Region 8

1. MTR10000I:

a. Confederated Salish and Kootenai Tribes. The following conditions only apply for projects on the Flathead Indian Reservation:

i. Permittees must send a Stormwater Pollution Prevention Plan (SWPPP) to the Tribe at least 30 days before construction starts;
ii. Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to an appointed tribal staff person during an on-site inspection that requirements for site stabilization have been met;
iii. Permittees submitting electronic Notices of Intents (eNOI's) to USEPA must cc a copy to NRD-EPD@cskt.org; and
iv. Written NOIs, SWPPPs, and NOTs shall be mailed to:

Confederated Salish and Kootenai Tribes
National Resources Department
Department Head
P.O. Box 278
Pablo, MT 59855

Permittees may also submit their SWPPP and NOT to
NRD-EPD@cskt.org

b. Fort Peck Tribes. The following conditions only apply for projects on the Fort Peck Indian Reservation:
i. The permittee must send a copy of the Notice of Intent (NOI) and the Notice of Termination (NOT) to the Tribes at the same time that the NOI and NOT is submitted to EPA. Copies of the NOI and NOT shall be accepted either electronically or hard copy format and should be sent to:

Deb Madison
Environmental Programs Manager
Fort Peck Assiniboine & Sioux Tribes
P.O. Box 1027
Poplar, MT 59255
Tel: 406.768.2389 Fax: 406.768.5606
E-mail: 2horses@nemont.net

ii. A copy of the proposed SWPPP at the time of NOI/NOT submissions must be sent to the Tribes to ensure that upon closure of the site and/or activities all environmental commitments have been met.

c. Northern Cheyenne Reservation. The following conditions only apply for projects on the Northern Cheyenne Indian Reservation:
i. Permittees must contact the Northern Cheyenne Environmental Protection Department at (406) 477-6506 prior to authorization to discharge under the general permit;
ii. The Tribe shall review and approve SWPPPs prior to approval; and
iii. The Tribe shall review and improve BMPs on site to ensure that Tribal water quality standards are protected.

E. Region 9

1. ASR100000: The Island of American Samoa
   a. Discharges authorized by the general permit shall meet all applicable American Samoa water quality standards.
   b. Permittees discharging under the general permit shall comply with all conditions of the permit.

3. AZR10000I: Indian country lands within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah
   a. White Mountain Apache Tribe. The following condition applies only for projects on the White Mountain Apache Reservation: All NOIs for proposed stormwater discharge coverage shall be provided to the following address:

      Tribal Environmental Planning Office
      P.O. Box 2109
      Whiteriver, AZ 85941

   b. Hoopa Valley Tribe. The following conditions apply only for projects on the Hoopa Valley Reservation:
      i. All notices of intent submitted for stormwater discharges under the general permit in Hoopa Valley Indian Reservation (HVIR) shall be submitted to the Tribal Environmental Protection Agency (TEPA); and
      ii. All pollution prevention plans for stormwater discharge in HVIR shall be submitted to TEPA for review and approval.
   c. 29 Palms Band of Mission Indians. The following conditions apply only for projects on the 29 Palms Band of Mission Indians Reservation:
      i. The 29 Palms Tribal EPA is informed of any future changes made to the proposed CGP;
      ii. For each permitted activity, the U.S. EPA will ensure that all terms and conditions of the proposed CGP are complied with;
      iii Notices of intent must be submitted to the 29 Palms Tribal EPA for review, comment and tracking;
      iv. Copies of stormwater pollution prevention plans (SWPPPs) and supporting Best Management Practices (BMPs) must be submitted to the 29 Palms Tribal EPA for review and compliance;
      v. Copies of all monitoring reports must be provided to the 29 Palms Tribal EPA;
      vi. Depending on the permitted activity, the 29 Palms Tribal EPA reserves the right to stipulate additional monitoring requirements; and
      vii. In order to meet the requirements of Tribal law, including water quality standards, each of the conditions cited in the proposed CGP and the Twenty-Nine Palms Band of Mission Indians certification shall not be made any less stringent.

d. Hualapai Tribe. The following conditions apply only for projects on the Hualapai Reservation:

   i. All notices of intent for proposed stormwater discharges under the CGP and all pollution prevention plans for stormwater discharges on Hualapai Tribal lands shall be submitted to the Water Resource Program through the Tribal Chairman for review and approval, P.O. Box 179, Peach Springs, AZ 86434.

e. Pyramid Lake Paiute Tribe. The following conditions apply only for projects on the Pyramid Lake Paiute Reservation:

   i. All notices of intent (NOIs) must be submitted to the Tribe for review, comments and tracking;

   ii. copies of all Stormwater Pollution Prevention Plan (SWPPPs) and supporting Best Management Practices (BMPs) must be submitted to the Pyramid Lake Paiute Tribe for review and concurrence;

   iii. copies of the criteria for Effluent Limitations Guidelines (ELGs) and the criteria for proposed Qualifying Local Programs (QLPs) to be used for sediment and erosion control pursuant to 40 CFR 122.44(s) be provided to the Pyramid Lake Paiute Tribe; and

   iv. copies of all monitoring reports must be provided to the Pyramid Lake Paiute Tribe.

4. MPR100000: Commonwealth of the Northern Mariana Islands (CNMI)

   a. An Earthmoving and Erosion Control Permit shall be obtained from the CNMI DEQ prior to any construction activity covered under the NPDES general permit.

   b. All conditions and requirements set forth in the USEPA NPDES general permit for discharges from large and small construction must be complied with.

   c. A SWPPP for storm water discharges from construction activity must be approved by the Director of the CNMI DEQ prior to the submission of the NOI to USEPA. The CNMI address for the submittal of the SWPPP for approval is:

      Commonwealth of the Northern Mariana Islands
      Office of the Governor
      Director, Division of Environmental Quality (DEQ)
      P.O. Box 501304 C.K.
      Saipan, MP 96950-1304

   d. An NOI to be covered by the general permit for discharges from large and small construction sites must be submitted to CNMI DEQ (use above address) and USEPA, Region 9, in the form prescribed by USEPA, accompanied by a SWPPP approval letter from CNMI DEQ.

   e. The NOI must be postmarked seven (7) calendar days prior to any storm water discharges and a copy must be submitted to the Director of CNMI DEQ (use above address) no later than seven (7) calendar days prior to any stormwater discharges.

f. Copies of all monitoring reports required by the NPDES general permit must be submitted to CNMI DEQ (use above address).

g. In accordance with section 10.3(h) and (i) of the CNMI water quality standards, CNMI DEQ reserves the right to deny coverage under the general permit and to require submittal of an application for an individual NPDES permit based on a review of the NOI or other information made available to the Director.

F. Region 10

1. AKR100000: The State of Alaska, except Indian country

a. For Storm Water Pollution Prevention Plans

i. Operators of construction projects disturbing at least one acre of land but less than five acres of land shall submit a copy of the Notice of Intent (NOI) to the Alaska Department of Environmental Conservation (ADEC) at the same time it is submitted to the EPA. Submittals to ADEC shall be made to the following address

Alaska Department of Environmental Conservation
Wastewater Discharge/Storm Water
555 Cordova St.
Anchorage, AK 99501

ii. Operators of construction projects that disturb five or more acres of land and that are located outside the areas of the local governments described in numbers iii, iv, v, or vi below, shall submit a copy of the Storm Water Pollution Prevention Plan (SWPPP) and a copy of the NOI to ADEC for review. The SWPPP shall be accompanied by the state-required plan review fee (see 18 AAC 72.955).

iii. Within the Municipality of Anchorage

(1) Operators of construction projects disturbing one or more acres of land shall submit a copy of the SWPPP to either ADEC or the Municipality based on the project type and operator as shown in the following table

Project Type	Submit SWPPP to
Government (federal, state, municipal) road projects and other government transportation projects such as ports, railroads or airports	ADEC
Utility projects for which the utility is initiating the work	Municipality
Work that requires a Building Permit	Municipality
Non-publicly funded transportation projects	Municipality

(2) Submittal of the SWPPP to the Municipality should be made before or at the same time the NOI is submitted to the EPA and ADEC and shall be accompanied by any Municipality-required fee. Copies of the SWPPP shall be submitted to the Municipality at the following address

Municipality of Anchorage
Office of Planning Development and Public Works
4700 South Elmore Rd.
PO Box 196650
Anchorage, AK 99519-6650

(3) Submittals to ADEC shall include a copy of the SWPPP and a copy of the NOI for review and shall be accompanied by the state-required plan review fee (see 18 AAC 72.995).

iv. Within the urbanized area boundary of the Fairbanks North Star Borough check with the Borough for the latest requirements.

Fairbanks North Star Borough
Department of Public Works
PO Box 71267
Fairbanks, AK 99707

v. Within the urbanized area boundary of the City of Fairbanks

(1) Operators of privately-funded construction projects disturbing one or more acres of land shall submit a copy of the SWPPP to the City of Fairbanks.

(2) Submittal of the SWPPP to the City of Fairbanks should be made before or at the same time the NOI is submitted to the EPA and ADEC and shall be accompanied by any City-required fee. Copies of the SWPPP shall be submitted to the City of Fairbanks at the following address

City of Fairbanks
Engineering Division
800 Cushman St
Fairbanks, AK 99701

(3) Operators of publicly-funded projects disturbing one or more acres of land shall submit a copy of the SWPPP and a copy of the NOI to ADEC for review, and shall be accompanied by the state-required plan review fee (see 18 AAC 72.995).

vi. Within the urbanized area boundary of the City of North Pole

(1) Operators of privately-funded construction projects disturbing one or more acres of land shall submit a copy of the SWPPP to the City of North Pole.

(2) Submittal of the SWPPP to the City of North Pole should be made before or at the same time the NOI is submitted to the EPA and ADEC and shall be accompanied by any City-required fee. Copies of the SWPPP shall be submitted to the City of North Pole at the following address

City of North Pole
Department of Public Works
125 Snowman Lane
North Pole, AK 99705

(3) Operators of publicly-funded projects disturbing one or more acres of land shall submit a copy of the SWPPP and a copy of the NOI to ADEC for review, and shall be accompanied by the state-required plan review fee (see 18 AAC 72.995).

vii. For hardrock mines that are designed to process 500 or more tons per day and intend to file a Notice of Intent to begin construction under this permit

(1) The operator shall submit their SWPPP to ADEC for review at least 90 days before the start of construction,

(2) Representatives of the operator and the prime site construction contractor shall meet with ADEC representatives in a pre-construction conference at least 20 days before the start of construction to discuss the details of the SWPPP and stormwater management during construction,

(3) The operator shall submit to ADEC addendums to the SWPPP that address any planned physical alterations, additions to the permitted facility, or unanticipated conditions that arise during planned construction that could significantly change the nature, or increase the quantity, of pollutants discharged from the facility, and

(4) The operator shall have at least one person on-site during construction who is qualified and trained in the principles and practices of erosion and sediment control and has the authority to direct the maintenance of storm water best management practices.

b. For Post-Construction (Permanent) Storm Water Control Measures (Section 3.1.E *[Post-Construction Stormwater Management]* of the CGP)
   i. Operators of construction projects who construct, alter, install, modify, or operate any part of a storm water treatment system and are located outside the Municipality of Anchorage, shall submit a copy of the engineering plans to ADEC for review at the address given above (see 18 AAC 72.600).
   ii. Operators of construction projects who construct, alter, install, modify, or operate any part of a storm water treatment system and are located inside the Municipality of Anchorage, shall submit a copy of the engineering plans to the respective government agency based on project type, as indicated in the table in a.iii.*(1)* above, for review at the addresses given in a.i. or a.iii.*(2)* above.

2. IDR100000: The State of Idaho, except Indian country
   a. *303(d)-listed Water Bodies with Approved TMDLs.*
   Discharges of storm water will be consistent with load allocations established by the applicable TMDL.
   b. *303(d)-listed Water Bodies without Approved TMDLs (High Priority)*
   If a TMDL has not been established for a high priority 303(d)-listed water body, then discharges of storm water may not cause an increase in the total load of listed pollutant(s) in the receiving water body.
   c. *303(d)-listed Water Bodies without Approved TMDLs (Medium or Low Priority)*
   If a TMDL has not been established for a medium or low priority 303(d)-listed water body, then best management practices shall be employed as necessary to prohibit further impairment of the designated or existing beneficial uses in the receiving water body.
   d. *Best Management Practices (BMPs)*
   BMPs must be designed, implemented, and maintained by the permittee to fully protect and maintain the beneficial uses of the receiving water body. The permittee should select appropriate BMPs that are either authorized by the

appropriate designated agency as defined in Idaho Water Quality Standards (IDAPA 58.01.02), recommended in IDEQ's *Catalog of Stormwater BMPs for Idaho Cities and Counties*, or recommended by other local government entities or guidance documents.

e. *Equivalent Analysis Waiver* - Use of the "Equivalent Analysis Waiver" in Appendix D of the permit is not authorized.

f. Operators may contact the Idaho Department of Environmental Quality regional office nearest the construction activity for more information about impaired waterways:

Boise Regional Office:
1445 N. Orchard
Boise ID 83706-2239
Tel: (208)373-0550
Fax: (208)373-0287

Grangeville Satellite Office:
300 W. Main
Grangeville ID 83530
Tel: (208)983-0808
Fax: (208)983-2873

Pocatello Regional Office:
444 Hospital Way #300
Pocatello ID 83201
Tel: (208)236-6160
Fax: (208)236-6168

McCall Satellite Office:
502 N. 3rd Street #9A
P.O. Box 4654
McCall, ID 83638
Tel: (208)634-4900
Fax: (208)634-9405

Idaho Falls Regional Office:
900 N. Skyline, Suite B
Idaho Falls, ID 83402
Tel: (208)528-2650
Fax: (208)528-2695

Twin Falls Regional Office:
1363 Fillmore
Twin Falls, ID 83301
Tel: (208)736-2190
Fax: (208)736-2194

Coeur d'Alene Regional Office:
2110 Ironwood Parkway
Coeur d'Alene ID 83814
Tel: (208)769-1422
Fax: (208)769-1404

Lewiston Regional Office:
1118 "F" Street
Lewiston, ID 83501
Tel: (208)799-4370
Toll Free: 1-877-541-3304
Fax: (208)799-3451

3. ORR10000I: Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9):

a. Confederated Tribes of the Umatilla Indian Reservation.
The following conditions apply only for projects within the exterior boundaries of the Umatilla Indian Reservation:
   i. The operator shall be responsible for achieving compliance with the Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Water Quality Standards.
   ii. The operator must submit all Storm Water Pollution Prevention Plans required under this general permit to the CTUIR Water Resources Program for review and determination that the SWPPP is sufficient to meet Tribal Water Quality Standards prior to the beginning of any discharge activities taking place.
   iii. The operator must submit a copy of the Notice of Intent (NOI) to be covered by this general permit to the CTUIR Water Resources Program at the address below, at the same time it is submitted to EPA.
   iv. The operator shall be responsible for reporting an exceedance of Tribal Water Quality Standards to the CTUIR Water Resources Program at the same time it is reported to EPA.
      Confederated Tribes of the Umatilla Indian Reservation
      Water Resources Program
      P.O. Box 638
      Pendleton, OR 97801
      (541) 966-2420
   v. At least 45 days prior to beginning any discharge activities, the operator must submit a copy of the Notice of Intent to be covered under this general permit and an assessment of whether the undertaking has the potential to affect historic properties to CTUIR Tribal Historic Preservation Office (THPO) at the address below. If the project has potential to affect historic properties, the operator must define the area of potential effect (APE). The operator must provide the THPO at least 30 days to comment on the APE as defined.

vi. If the project is an undertaking, the operator must conduct a cultural resource investigation. All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of the Interior's Standards and Guidelines found at http://www.nps.gov/history/local-law/arch_stnds_0.htm). All fieldwork must be documented using Oregon Reporting Standards (as outlined at http://egov.oregon.gov/OPRD/HCD/ARCH/arch_pubsandlinks.shtml). The resulting report must be submitted to the THPO for concurrence before any ground disturbing work can occur. The operator must provide the THPO at least 30 days to review and respond to all reports.
The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties.

Confederated Tribes of the Umatilla Indian Reservation
Cultural Resources Protection Program
Tribal Historic Preservation Office
P.O. Box 638
Pendleton, OR 97801
(541) 966-2340

b. Confederated Tribes of Warm Springs.
The following conditions apply only for projects on the Warm Springs Indian Reservation:
   i. All activities covered by this NPDES general permit occurring within a designated riparian buffer zone as established in Ordinance 74 (Integrated Resource Management Plan or IRMP) must be reviewed, approved and permitted through the Tribe's Hydraulic Permit Application process, including payment of any applicable fees.
   ii. All activities covered by this NPDES general permit must follow all applicable land management and resource conservation requirements specified in the IRMP.
   iii. Operators of activities covered by this NPDES general permit must submit a Storm Water Pollution Prevention Plan to the Tribe's Water Control Board at the following address for approval at least 30 days prior to beginning construction activity:

Chair, Warm Springs Water Control Board
P.O. Box C
Warm Springs, Oregon 97761

4. WAR10000F: Federal Facilities in the State of Washington, except those located on Indian Country

a. Discharges shall not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges that are not in compliance with these standards are not authorized.

b. Prior to the discharge of stormwater and non-stormwater to waters of the state, the Permittee shall apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate best management practices (BMPs) installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.

c. Sampling & Numeric Effluent Limitations – For Sites Discharging to Certain Waterbodies on the 303(d) List or with an Applicable TMDL

i. Permittees that discharge to water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH or phosphorus, shall conduct water quality sampling according to the requirements of this section.

(1) The operator must retain all monitoring results required by this section as part of the SWPPP. All data and related monitoring records must be provided to EPA or the Washington Department of Ecology upon request.

(2) The operator must notify EPA when the discharge turbidity or discharge pH exceeds the water quality standards as defined in Parts 10.F.4.d.ii and e.ii below, in accordance with the reporting requirements of Part G.12.F of this permit. All reports must be submitted to EPA at the following address:
U.S EPA Region 10
NPDES Compliance Unit - Attn: Federal Facilities Compliance Officer
1200 6th Avenue, Suite 900
OCE-133
Seattle, WA 98101
(206) 553-1846

ii. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters that exists on November 16, 2005, or the date when the operator's complete NOI is received by EPA, whichever is later.

Parameter identified in 303(d) listing	Parameter/Units	Analytical Method	Sampling Frequency	Water Quality Standard
Turbidity Fine Sediment Phosphorus	Turbidity/NTU	SM2130 or EPA180.1	Weekly, if discharging	If background is 50 NTU or less: 5 NTU over background; or If background is more than 50 NTU: 10% over background
High pH	pH/Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5

d. Discharges to waterbodies on the 303(d) list for turbidity, fine sediment, or phosphorus

i. Permittees which discharge to waterbodies on the 303(d) list for turbidity, fine sediment, or phosphorus shall conduct turbidity sampling at the

following locations to evaluate compliance with the water quality standard for turbidity:

(1) Background turbidity shall be measured in the 303(d) listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge; and

(2) Discharge turbidity shall be measured at the point of discharge into the 303(d) listed receiving waterbody, inside the area of influence of the discharge; **or**
Alternatively, discharge turbidity may be measured at the point where the discharge leaves the construction site, rather than in the receiving waterbody.

ii. Based on sampling, if the discharge turbidity ever exceeds the water quality standard for turbidity (more than 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or more than a 10% increase in turbidity when the background turbidity is more than 50 NTU), all future discharges shall comply with a numeric effluent limit which is equal to the water quality standard for turbidity. If a future discharge exceeds the water quality standard for turbidity, the permittee shall:

(1) Review the SWPPP for compliance with the permit and make appropriate revisions within 7 days of the discharge that exceeded the standard;

(2) Fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, but no later than 10 days of the discharge that exceeded the standard;

(3) Document BMP implementation and maintenance in the site log book;

(4) Continue to sample daily until discharge turbidity meets the water quality standard for turbidity.

e. Discharges to waterbodies on the 303(d) list for High pH

i. Permittees which discharge to waterbodies on the 303(d) list for high pH shall conduct sampling at one of the following locations to evaluate compliance with the water quality standard for pH (in the range of 6.5 – 8.5):

(1) pH shall be measured at the point of discharge into the 303(d) listed waterbody, inside the area of influence of the discharge; or

(2) Alternatively, pH may be measured at the point where the discharge leaves the construction site, rather than in the receiving water.

ii. Based on the sampling set forth above, if the pH ever exceeds the water quality standard for pH (in the range of 6.5 – 8.5), all future discharges shall comply with a numeric effluent limit which is equal to the water quality standard for pH. If a future discharge exceeds the water quality standard for pH, the permittee shall:

(1) Review the SWPPP for compliance with the permit and make appropriate revisions within 7 days of the discharge;

(2) Fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, but no later than 10 days of the discharge that exceeded the standards;
(3) Document BMP implementation and maintenance in the site log book;
(4) Continue to sample daily until discharge meets the water quality standard for pH (in the range of 6.5 – 8.5).

f. Sampling & Limitations – For Sites Discharging to TMDLs
   i. Discharges to waterbodies subject to an applicable Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus, shall be consistent with the assumptions and requirements of the TMDL.
      (1) Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges shall be consistent with any specific waste load allocations or requirements established by the applicable TMDL.
         a. Discharges shall be sampled weekly, or as otherwise specified by the TMDL, to evaluate compliance with the specific waste load allocations or requirements.
         b. Analytical methods used to meet the monitoring requirements shall conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136.
      (2) Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but no specific requirements have been identified, compliance with this permit will be assumed to be consistent with the approved TMDL.
      (3) Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not excluded these discharges, compliance with this permit will be assumed to be consistent with the approved TMDL.
      (4) Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.
   ii. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which has been completed and approved by EPA prior to November 16, 2005, or prior to the date the operator's complete NOI is received by EPA, whichever is later.
   Information on impaired waterways is available from the Department of Ecology website at:
   http://www.ecy.wa.gov/programs/wq/stormwater/construction/impaired.html
   or by phone: 360-407-6460.

5. WAR10000I: Indian country within the State of Washington
   a. Kalispel Tribe.
      The following conditions apply only for projects on the Kalispel Reservation:

i. The permittee shall be responsible for achieving compliance with the Kalispel Tribe's Water Quality Standards.
ii. The permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the Kalispel Tribe Natural Resources Department at the same time as it submitted to the U.S. EPA
iii. The permittee shall submit all Storm Water Prevention Plans (SWPP) to the Kalispel Tribe Natural Resources Department thirty (30) days prior to beginning any discharge activities for review.
iv. Prior to any land disturbing activities on the Kalispel Indian Reservation and its dependent communities, the permittee shall obtain a cultural resource clearance letter from the Kalispel Natural Resource Department.
v. All tribal correspondence pertaining to the general permit for discharges of construction stormwater shall be sent to:

Kalispel Tribe Natural Resources Department
PO Box 39
Usk, WA 99180

b. Lummi Nation

The following conditions apply only for projects on the Lummi Reservation:

i. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.
ii. Pursuant to LCL 17.05.020(a), each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.
iii. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210).
iv. Each operator shall submit a copy of the Notice of Intent to the Lummi Water Resources Division at the same time it is submitted to the Environmental Protection Agency (EPA).
v. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:

Lummi Natural Resources Department
ATTN: Water Resources Manager
2616 Kwina Road
Bellingham, WA 98226

vi. Refer to the Lummi Nation website at *http://www.lummi-nsn.gov* to review a copy of Title 17 of the Lummi Code of Laws and the references upon which the conditions identified above are based.

c. Makah Tribe

The following conditions apply only for projects on the Makah Reservation:

i. The operator shall be responsible for achieving compliance with the Makah Tribe's Water Quality Standards.
ii. The operator shall submit a Storm Water Pollution Prevention Plan to the

Makah Tribe Water Quality Program and Makah Fisheries Habitat Division for review and approval at least thirty (30) days prior to beginning any discharge activities.

iii. The operator shall submit a copy of the Notice of Intent to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division at the same time it is submitted to EPA.

iv. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:

Makah Fisheries Water Quality and Habitat Division
PO Box 115
Neah Bay, WA 98357

d. Puyallup Tribe of Indians.

The following conditions apply only to stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter surface waters of the Puyallup Tribe:

i. Each permittee shall be responsible for achieving compliance with the Puyallup Tribe's Water Quality Standards, including antidegradation provisions. The Puyallup Natural Resources Department will conduct an antidegradation review for permitted activities that have the potential to affect water quality. The antidegradation review will be consistent with the Tribe's Antidegradation Implementation Procedures.

ii. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Puyallup Tribe's antidegradation policies if the discharge point is located within 1 linear mile upstream of waters designated by the Tribe.

iii. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the Puyallup Tribal Natural Resources Department at the address listed below at the same time it is submitted to EPA.

Puyallup Tribe of Indians
3009 E. Portland Avenue
Tacoma, WA 98404
ATTN: Natural Resources Department

iv. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to the Puyallup Tribal Natural Resources Department for review.

v. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to the Puyallup Tribal Natural Resources Department at the address listed above.

vi. The permittee shall submit all stormwater pollution prevention plans to the Puyallup Tribal Natural Resources Department for review and approval prior to beginning any activities resulting in a discharge to tribal waters.

Appendix A - Definitions and Acronyms

Definitions

"Arid Areas" means areas with an average annual rainfall of 0 to 10 inches.

"Best Management Practices" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"Commencement of Construction Activities" means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material).

"Control Measure" as used in this permit, refers to any BMP or other method used to prevent or reduce the discharge of pollutants to waters of the United States.

"CWA" means the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq.

"Discharge" when used without qualification means the "discharge of a pollutant."

"Discharge of Stormwater Associated with Construction Activity" as used in this permit, refers to a discharge of pollutants in stormwater from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

"Eligible" means qualified for authorization to discharge stormwater under this general permit.

"Facility" or "Activity" means any "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

"Federal Facility" means any buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned by, or constructed or manufactured for the purpose of leasing to, the Federal government.

"Final Stabilization" means that:

1. All soil disturbing activities at the site have been completed and either of the two following criteria are met:
   a. a uniform (e.g,, evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background

vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or

b. equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

2. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent (0.70 X 0.50 = 0.35) would require 35 percent total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required.
3. In arid and semi-arid areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
   a. Temporary erosion control measures (e.g., degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by you,
   b. The temporary erosion control measures are selected, designed, and installed to achieve 70 percent vegetative coverage within three years.
4. For individual lots in residential construction, final stabilization means that either:
   a. The homebuilder has completed final stabilization as specified above, or
   b. The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.
5. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land, staging areas for highway construction, etc.), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to "water of the United States," and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization criteria (1) or (2) or (3) above.

"Indian country" is defined at 40 CFR §122.2 to mean:

1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
2. All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and
3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-ways running through the same.

"Large Construction Activity" is defined at 40 CFR §122.26(b)(14)(x) and incorporated here by reference. A large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres. Large

construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

"Municipal Separate Storm Sewer System" or "MS4" is defined at 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

"New Project" means the "commencement of construction activities" occurs after the effective date of this permit.

"Ongoing Project" means the "commencement of construction activities" occurs before the effective date of this permit.

"Operator" for the purpose of this permit and in the context of stormwater associated with construction activity, means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions). This definition is provided to inform permittees of EPA's interpretation of how the regulatory definitions of "owner or operator" and "facility or activity" are applied to discharges of stormwater associated with construction activity.

"Owner or operator" means the owner or operator of any ''facility or activity'' subject to regulation under the NPDES program.

"Permitting Authority" means the United States Environmental Protection Agency, EPA, a Regional Administrator of the Environmental Protection Agency or an authorized representative.

"Point Source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

"Pollutant" is defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

"Project Area" means:
– The areas on the construction site where stormwater discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur) and the immediate vicinity. (Example: 1. Where bald eagles nest in a tree that is on or bordering a construction site and could be disturbed by the construction activity or where grading causes stormwater to flow into a small wetland or other habitat that is on the site that contains listed species.)
– The areas where stormwater discharges flow from the construction site to the point of discharge into receiving waters. (Example: Where stormwater flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as amphibians) are found in the ditch, swale, or gully.)
– The areas where stormwater from construction activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where stormwater from construction activities discharges into a stream segment that is known to harbor listed aquatic species.)
– The areas where stormwater BMPs will be constructed and operated, including any areas where stormwater flows to and from BMPs. (Example: Where a stormwater retention pond would be built.)
– The areas upstream and /or downstream from construction activities discharges into a stream segment that may be affected by the said discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

"Receiving water" means the "Water of the United States" as defined in 40 CFR §122.2 into which the regulated stormwater discharges.

"Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.

"Semi-Arid Areas" means areas with an average annual rainfall of 10 to 20 inches.

"Site" means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

"Small Construction Activity" is defined at 40 CFR §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

"Stormwater" means stormwater runoff, snow melt runoff, and surface runoff and drainage.

"Stormwater Discharge-Related Activities" as used in this permit, include: activities that cause, contribute to, or result in stormwater point source pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; and measures to control stormwater including the siting, construction and operation of BMPs to control, reduce or prevent stormwater pollution.

"Total Maximum Daily Load" or "TMDL" means the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

"Waters of the United States" is as defined at 40 CFR §122.2.

"Wetland" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

ACRONYMS

BMP - Best Management Practices
CGP - Construction General Permit
CFR - Code of Federal Regulations
CWA - Clean Water Act
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FWS - United States Fish and Wildlife Service
MS4 - Municipal Separate Storm Sewer System
MSGP - Multi-Sector General Permit
NHPA - National Historic Preservation Act
NMFS - United States National Marine Fisheries Service
NOI - Notice of Intent

NOT - Notice of Termination
NPDES - National Pollutant Discharge Elimination System
POTW - Publicly Owned Treatment Works
SHPO - State Historic Preservation Officer
SWPPP - Stormwater Pollution Prevention Plan
THPO - Tribal Historic Preservation Officer
TMDL - Total Maximum Daily Load
WQS - Water Quality Standard

Appendix B - Permit Areas Eligible for Coverage

Permit coverage for stormwater discharges from construction activity occurring within the following areas is provided by legally separate and distinctly numbered permits:

1. EPA Region 1: CT, MA, ME, NH, RI, VT

US EPA, Region 01
Office of Ecosystem Protection
NPDES Stormwater Program
1 Congress St, Suite 1100 (CMU)
Boston, MA 02114-2023

The States of Connecticut, Maine, Rhode Island, and Vermont are the NPDES Permitting Authority for the majority of discharges within their respective states.

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
MAR100000	Commonwealth of Massachusetts (except Indian country)
MAR10000I	Indian country within the State of Massachusetts
CTR10000I	Indian country within the State of Connecticut
NHR100000	State of New Hampshire
RIR10000I	Indian country within the State of Rhode Island
VTR10000F	Federal Facilities in the State of Vermont

2. EPA Region 2: NJ, NY, PR, VI

For NJ, NY, and VI:
US EPA, Region 02
NPDES Stormwater Program
290 Broadway, 24th Floor
New York, NY 10007-1866

For PR:
US EPA, Region 02
Caribbean Environmental Protection Division
NPDES Stormwater Program
1492 Ponce de Leon Ave
Central Europa Building, Suite 417
San Juan, PR 00907-4127

The State of New York is the NPDES Permitting Authority for the majority of discharges within its state. The State of New Jersey and the Virgin Islands are the NPDES Permitting Authority for all discharges within their respective states.

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
NYR10000I	Indian country within the State of New York
PRR100000	The Commonwealth of Puerto Rico

3. EPA Region 3: DE, DC, MD, PA, VA, WV

US EPA, Region 03
NPDES Stormwater Program
1650 Arch St
Philadelphia, PA 19103

The State of Delaware is the NPDES Permitting Authority for the majority of discharges within its state. Maryland, Pennsylvania, Virginia, and West Virginia are the NPDES Permitting Authority for all discharges within their respective states.

Permit No.	Areas of Coverage/Where EPA is Permitting Authority
DCR100000	The District of Columbia
DER10000F	Federal Facilities in the State of Delaware

4. EPA Region 4: AL, FL, GA, KY, MS, NC, SC, TN

US EPA, Region 04
Water Management Division
NPDES Stormwater Program
61 Forsyth St SW
Atlanta, GA 30303-3104

Coverage Not Available. Construction activities in Region 4 must obtain permit coverage under an alternative permit.

5. EPA Region 5: IL, IN, MI, MN, OH, WI

US EPA, Region 05
NPDES & Technical Support
NPDES Stormwater Program
77 W Jackson Blvd
(WN-16J)
Chicago, IL 60604-3507

The States of Michigan, Minnesota, and Wisconsin are the NPDES Permitting Authority for the majority of discharges within their respective states. The States of Illinois, Indiana, and Ohio are the NPDES Permitting Authorities for all discharges within their respective states.

Permit No.	Areas of coverage/where EPA is Permitting Authority
MIR10000I	Indian country within the State of Michigan
MNR10000I	Indian country within the State of Minnesota, except the Grand Portage Band of Chippewa
WIR10000I	Indian country within the State of Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community.

6. EPA Region 6: AR, LA, OK, TX, NM (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands)

US EPA, Region 06
NPDES Stormwater Program
1445 Ross Ave, Suite 1200
Dallas, TX 75202-2733

The States of Louisiana, Oklahoma, and Texas are the NPDES Permitting Authority for the majority of discharges within their respective state. The State of Arkansas is the NPDES Permitting Authority for all discharges within its respective state.

Permit No.	Areas of coverage/where EPA is Permitting Authority
LAR10000I	Indian country within the State of Louisiana
NMR100000	The State of New Mexico, except Indian country
NMR10000I	Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.
OKR10000I	Indian country within the State of Oklahoma
OKR10000F	Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).
TXR10000F	Discharges in the State of Texas that are not under the authority of the Texas Commission on Environmental Quality (formerly TNRCC), including activities associated with the exploration, development, or production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline.
TXR10000I	Indian country within the State of Texas.

7. EPA Region 7: IA, KS, MO, NE (except see Region 8 for Pine Ridge Reservation Lands)

US EPA, Region 07
NPDES Stormwater Program
901 N 5th St
Kansas City, KS 66101

The States of Iowa, Kansas, and Nebraska are the NPDES Permitting Authority for the majority of discharges within their respective states. The State of Missouri is the NPDES Permitting Authority for all discharges within its state.

Permit No.	Areas of coverage/where EPA is Permitting Authority
IAR10000I	Indian country within the State of Iowa
KSR10000I	Indian country within the State of Kansas
NER10000I	Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)

8. EPA Region 8: CO, MT, ND, SD, WY, UT (except see Region 9 for Goshute Reservation and Navajo Reservation Lands), the Ute Mountain Reservation in NM, and the Pine Ridge Reservation in NE.

US EPA, Region 08
NPDES Stormwater Program
999 18th St, Suite 300
(EPR-EP)
Denver, CO 80202-2466

The States of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming are the NPDES Permitting Authority for the majority of discharges within their respective states.

Permit No.	Areas of coverage/where EPA is Permitting Authority
COR10000F	Federal Facilities in the State of Colorado, except those located on Indian country
COR10000I	Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico
MTR10000I	Indian country within the State of Montana
NDR10000I	Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation which is covered under South Dakota permit SDR10000I listed below)
SDR10000I	Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake

	Traverse Reservation located in North Dakota (except for the Standing Rock Reservation which is covered under North Dakota permit NDR10000I listed above)
UTR10000I	Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)
WYR10000I	Indian country within the State of Wyoming

9. EPA Region 9: CA, HI, NV, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Goshute Reservation in UT and NV, the Navajo Reservation in UT, NM, and AZ, the Duck Valley Reservation in ID, and the Fort McDermitt Reservation in OR.

US EPA, Region 09
NPDES Stormwater Program
75 Hawthorne St
San Francisco, CA 94105-3901

The States of Arizona, California and Nevada are the NPDES Permitting Authority for the majority of discharges within their respective states. The State of Hawaii is the NPDES Permitting Authority for all discharges within its state.

Permit No.	**Areas of coverage/where EPA is Permitting Authority**
ASR100000	The Island of American Samoa
AZR10000I	Indian country within the State of Arizona, as well as Navajo Reservation lands in New Mexico and Utah
CAR10000I	Indian country within the State of California
GUR100000	The Island of Guam
JAR100000	Johnston Atoll
MWR100000	Midway Island and Wake Island
MPR100000	Commonwealth of the Northern Mariana Islands
NVR10000I	Indian country within the State of Nevada, as well as the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Goshute Reservation in Utah

10. EPA Region 10: AK, WA, ID (except see Region 9 for Duck Valley Reservation Lands), and OR (except see Region 9 for Fort McDermitt Reservation).

US EPA, Region 10
NPDES Stormwater Program
1200 6th Ave (OW-130)
Seattle, WA 98101-1128
Phone: (206) 553-6650

The States of Oregon and Washington are the NPDES Permitting Authority for the majority of discharges within their respective states.

Permit No.	Areas of coverage/where EPA is Permitting Authority
AKR100000	The State of Alaska, except Indian country
AKR10000I	Indian country within the state of Alaska
IDR100000	The State of Idaho, except Indian country
IDR10000I	Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)
ORR10000I	Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9)
WAR10000F	Federal Facilities in the State of Washington, except those located on Indian country
WAR10000I	Indian country within the State of Washington

Appendix C - Endangered Species Act Review Procedures

You must meet at least one of the six criteria in Part 1.3.C.6 to be eligible for coverage under this permit. You must follow the procedures in this Appendix to assess the potential effects of stormwater discharges and stormwater discharge-related activities on listed species and their critical habitat. When evaluating these potential effects, operators must evaluate the entire project area.

For purposes of this Appendix, the term "project area" is inclusive of the term "Action Area." Action area is defined in 50 CFR §402.02 as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.

This includes areas beyond the footprint of the construction area that may be affected by stormwater discharges and stormwater discharge related activities. "Project area" is defined in Appendix A.

(Operators who are eligible and able to certify eligibility under Criterion B, C, D, or F of Part 1.3.C.6 because of a previously issued ESA section 10 permit, a previously completed ESA section 7 consultation, or because the operator's activities were already addressed in another operator's certification of eligibility may proceed directly to Step Four.)

Step One: Determine if Listed Threatened or Endangered Species are Present On or Near Your Project Area

You must determine, to the best of your knowledge, whether listed species are located on or near your project area. To make this determination, you should:

- Determine if listed species are in your county or township. The local offices of the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and State or Tribal Heritage Centers often maintain lists of federally listed endangered or threatened species on their internet sites. Visit http://www.epa.gov/npdes/stormwater/cgp to find the appropriate site for your state or check with your local office. In most cases, these lists allow you to determine if there are listed species in your county or township.
- If there are listed species in your county or township, check to see if critical habitat has been designated and if that area overlaps or is near your project area.
- Contact your local FWS, NMFS, or State or Tribal Heritage Center to determine if the listed species could be found on or near your project area and if any critical habitat areas have been designated that overlap or are near your project area. Critical habitat areas maybe designated independently from the listed species for your county, so even if there are no listed species in your county or township, you must still contact one of the agencies mentioned above to determine if there are any critical habitat areas on or near your project area.

You can also find critical habitat designations and associated requirements at 50 CFR Parts 17 and 226. http://www.access.gpo.gov.

- If there are no listed species in your county or township, no critical habitat areas on or near your project area, or if your local FWS, NMFS, or State or Tribal Heritage Center indicates that listed species are not a concern in your part of the county or township, you may check box A on the Notice of Intent Form.
- If there are listed species and if your local FWS, NMFS, or State or Tribal Heritage Center indicates that these species could exist on or near your project area, you will need to do one or more of the following:
  - Conduct visual inspections: This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal stormwater collection systems.
  - Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive stormwater discharges, biological surveys may be an appropriate way to assess whether species are located on or near the project area and whether there are likely adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms. A biological survey may in some cases be useful in conjunction with Steps Two, Three, or Four of these instructions.
  - Conduct an environmental assessment under the National Environmental Policy Act (NEPA). Such reviews may indicate if listed species are in proximity to the project area. Coverage under the CGP does not trigger such a review because the CGP does not regulate new sources (that is, dischargers subject to New Source Performance Standards under section 306 of the Clean Water Act), and is thus statutorily exempted from NEPA. See CWA section 511(c). However, some construction activities might require review under NEPA for other reasons such as federal funding or other federal involvement in the project.
  - If listed threatened or endangered species or critical habitat are present in the project area, you must look at impacts to species and/or habitat when following Steps Two through Four. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CGP may require measures to protect critical habitat that are separate from those to protect listed species.

Step Two: Determine if the Construction Activity's Stormwater Discharges or Stormwater Discharge- Related Activities Are Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat

To receive CGP coverage, you must assess whether your stormwater discharges or stormwater discharge related activities is likely to adversely affect listed threatened or endangered species or designated critical habitat that are present on or near your project area.

Potential adverse effects from stormwater discharges and stormwater discharge-related activities include:

- *Hydrological.* Stormwater discharges may cause siltation, sedimentation or induce other changes in receiving waters such as temperature, salinity or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity itself may also alter drainage patterns on a site where construction occurs that can impact listed species or critical habitat.
- *Habitat.* Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of stormwater BMPs, may adversely affect listed species or their habitat. Stormwater may drain or inundate listed species habitat.
- *Toxicity.* In some cases, pollutants in stormwater may have toxic effects on listed species.

The scope of effects to consider will vary with each site. If you are having difficulty determining whether your project is likely to adversely affect listed species or critical habitat, or one of the Services has already raised concerns to you, you must contact the appropriate office of the FWS, NMFS or Natural Heritage Center for assistance. If adverse effects are not likely, then you may check box E on the NOI form and apply for coverage under the CGP. If the discharge may adversely effect listed species or critical habitat, you must follow Step Three.

Step Three: Determine if Measures Can Be Implemented to Avoid Adverse Effects
If you make a preliminary determination that adverse effects are likely to occur, you can still receive coverage under Criterion E of Part 1.3.C.6 of the CGP if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for CGP coverage. These measures may involve relatively simple changes to construction activities such as re-routing a stormwater discharge to bypass an area where species are located, relocating BMPs, or by changing the "footprint" of the construction activity. You should contact the FWS and/or NMFS to see what appropriate measures might be suitable to avoid or eliminate the likelihood of adverse impacts to listed species and/or critical habitat. (See 50 CFR §402.13(b)). This can entail the initiation of informal consultation with the FWS and/or NMFS (described in more detail in Step Four).

If you adopt measures to avoid or eliminate adverse affects, you must continue to abide by those measures for the duration of the construction project and coverage under the CGP. These measures must be described in the SWPPP and are enforceable CGP conditions and/or conditions for meeting the eligibility criteria in Part 1.3. If appropriate measures to avoid the likelihood of adverse effects are not available, you must follow Step Four.

Step Four: Determine if the Eligibility Requirements of Criterion B, C, D, or F of Part 1.3.C.6 Can Be Met
Where adverse effects are likely, you must contact the FWS and/or NMFS. You may still be eligible for CGP coverage if any likely adverse effects can be addressed through meeting Criterion B, C, D, or F of Part 1.3.C.6 of the CGP. These criteria are as follows:

1. *An ESA Section 7 Consultation Is Performed for Your Activity (See Criterion B or C of Part 1.3.C.6 of the CGP).*

Formal or informal ESA section 7 consultation is performed with the FWS and/or NMFS that addresses the effects of your stormwater discharges and stormwater discharge-related activities on federally-listed and threatened species and designated critical habitat. FWS and/or NMFS may request that consultation take place if any actions are identified that may affect listed species or critical habitat. In order to be eligible for coverage under this permit, consultation must result in a "no jeopardy opinion" or a written concurrence by the Service(s) on a finding that your stormwater discharge(s) and stormwater discharge-related activities are not likely to adversely affect listed species or critical habitat (For more information on consultation, see 50 CFR §402). If you receive a "jeopardy opinion," you may continue to work with the FWS and/or NMFS and your permitting authority to modify your project so that it will not jeopardize listed species or designated critical habitat.

Most consultations are accomplished through informal consultation. By the terms of this CGP, EPA has automatically designated operators as non-federal representatives for the purpose of conducting informal consultations. See Part 1.3.C.6 and 50 CFR §402.08 and §402.13. When conducting informal ESA section 7 consultation as a non-federal representative, you must follow the procedures found in 50 CFR Part 402 of the ESA regulations. You must notify FWS and/or NMFS of your intention and agreement to conduct consultation as a non-federal representative.

Consultation may occur in the context of another federal action at the construction site (e.g., where ESA section 7 consultation was performed for issuance of a wetlands dredge and fill permit for the project or where a NEPA review is performed for the project that incorporates a section 7 consultation). Any terms and conditions developed through consultations to protect listed species and critical habitat must be incorporated into the SWPPP. As noted above, operators may, if they wish, initiate consultation with the Services at Step Four.

Whether ESA section 7 consultation must be performed with either the FWS, NMFS or both Services depends on the listed species that may be affected by the operator's activity. In general, NMFS has jurisdiction over marine, estuaries, and anadromous species. Operators should also be aware that while formal section 7 consultation provides protection from incidental takings liability, informal consultation does not.

2. *An Incidental Taking Permit Under Section 10 of the ESA is Issued for the Operators Activity (See Criterion D of Part 1.3.C.6 of the CGP).*

Your construction activities are authorized through the issuance of a permit under section 10 of the ESA and that authorization addresses the effects of your stormwater discharge(s) and stormwater discharge-related activities on federally-listed species and designated critical habitat. You must follow FWS and/or NMFS procedures when applying for an ESA Section 10 permit (see 50 CFR §17.22(b)(1) for FWS and §222.22

for NMFS). Application instructions for section 10 permits for FWS and NMFS can be obtained by accessing the FWS and NMFS websites (http://www.fws.gov and http://www.nmfs.noaa.gov) or by contacting the appropriate FWS and NMFS regional office.

3. *You are Covered Under the Eligibility Certification of Another Operator for the Project Area (See Criterion F of Part 1.3.C.6 of the CGP).*

Your stormwater discharges and stormwater discharge-related activities were already addressed in another operator's certification of eligibility under Criteria A through E of Part 1.3.C.6 which also included your project area. For example, a general contractor or developer may have completed and filed an NOI for the entire project area with the necessary Endangered Species Act certifications (criteria A-E), subcontractors may then rely upon that certification and must comply with any conditions resulting from that process. By certifying eligibility under Criterion F of Part 1.3.C.6, you agree to comply with any measures or controls upon which the other operator's certification under Criterion B, C, or D of Part 1.3.C.6 was based. Certification under Criterion F of Part 1.3.C.6 is discussed in more detail in the Fact Sheet that accompanies this permit.

You must comply with any terms and conditions imposed under the eligibility requirements of Criterion A through F to ensure that your stormwater discharges and stormwater discharge-related activities are protective of listed species and/or critical habitat. Such terms and conditions must be incorporated in the project's SWPPP. If the eligibility requirements of Part 1.3.C.6 cannot be met, then you are not eligible for coverage under the CGP. In these instances, you may consider applying to EPA for an individual permit.

Appendix D - Small Construction Waivers and Instructions

These waivers are only available to stormwater discharges associated with small construction activities (i.e., 1-5 acres). As the operator of a small construction activity, you may be able to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on: (A) a low rainfall erosivity factor, (B) a TMDL analysis, or (C) an equivalent analysis that determines allocations for small construction sites are not needed. Each operator, otherwise needing permit coverage, must notify EPA of its intention for a waiver. It is the responsibility of those individuals wishing to obtain a waiver from coverage under this general permit to submit a complete and accurate waiver certification as described below. Where the operator changes or another is added during the construction project, the new operator must also submit a waiver certification to be waived.

A. Rainfall Erosivity Waiver

Under this scenario the small construction project's rainfall erosivity factor calculation ("R" in the Revised Universal Soil Loss Equation) is less than 5 during the period of construction activity. The operator must certify to the EPA that construction activity will occur only when the rainfall erosivity factor is less than 5. The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a stabilization practice that will provide interim non-vegetative stabilization can be used for the end of the construction period, provided the operator commits (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the construction general permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with its certification statement constitutes acceptance of and commitment to complete the final stabilization process. The operator must submit a waiver certification to EPA prior to commencing construction activities.

Note: The rainfall erosivity factor "R" is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21–64, dated January 1997; United States Department of Agriculture (USDA), Agricultural Research Service.

EPA has developed an online rainfall erosivity calculator to help small construction sites determine potential eligibility for the rainfall erosivity waiver. You can access the calculator from EPA's website at: www.epa.gov/npdes/stormwater/lew. The R factor can easily be calculated by using the construction site latitude/longitude or address and estimated start and end dates of construction. This calculator may also be useful in determining the time periods during which construction activity could be waived from permit coverage. You may find that moving your construction activity by a few weeks or expediting site stabilization will allow you to qualify for the waiver. Use this online calculator or the Construction Rainfall Erosivity Waiver Fact Sheet

(www.epa.gov/npdes/pubs/fact3-1.pdf) to assist in determining the R Factor for your small construction site.

If you are the operator of the construction activity and eligible for a waiver based on low erosivity potential, you may submit a rainfall erosivity waiver electronically via EPA's eNOI system (www.epa.gov/npdes/eNOI) or provide the following information on the waiver certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operators;
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The rainfall erosivity factor calculation that applies to the active construction phase at your project site; and
5. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection 11, that certifies that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five.

You can access the waiver certification form from EPA's website at: (http://www.epa.gov/npdes/pubs/construction_waiver_form.pdf). Paper copies of the form must be sent to one of the addresses listed in Part D of this section.

Note: If the R factor is 5 or greater, you cannot apply for the rainfall erosivity waiver, and must apply for permit coverage as per Subpart 2.1 of the construction general permit, unless you qualify for the Water Quality Waiver as described below.

If your small construction project continues beyond the projected completion date given on the waiver certification, you must recalculate the rainfall erosivity factor for the new project duration. If the R factor is below five (5), you must update all applicable information on the waiver certification and retain a copy of the revised waiver as part of the site SWPPP. The new waiver certification must be submitted prior to the projected completion date listed on the original waiver form to assure your exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, you must submit an NOI as per Part 2.

B. TMDL Waiver

This waiver is available if EPA has established or approved a TMDL that addresses the pollutant(s) of concern and has determined that controls on stormwater discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. Information on TMDLs that have been established or approved by EPA is available from EPA online at http://www.epa.gov/owow/tmdl/ and from state and tribal water quality agencies.

If you are the operator of the construction activity and eligible for a waiver based on compliance with an EPA established or approved TMDL, you must provide the following information on the Waiver Certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the water body(s) that would be receiving stormwater discharges from your construction project;
5. The name and approval date of the TMDL;
6. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection 11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the TMDL.

C. Equivalent Analysis Waiver

This waiver is available for non-impaired waters only. The operator can develop an equivalent analysis that determines allocations for his small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality. This waiver requires a small construction operator to develop an equivalent analysis based on existing in-stream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

If you are a construction operator who wants to use this waiver, you must develop your equivalent analysis and provide the following information to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the water bodies that would be receiving stormwater discharges from your construction project;
5. Your equivalent analysis;
6. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection 11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the equivalent analysis.

D. Waiver Deadlines and Submissions

1. Waiver certifications must be submitted prior to commencement of construction activities.
2. If you submit a TMDL or equivalent analysis waiver request, you are not waived until EPA approves your request. As such, you may not commence construction activities until receipt of approval from EPA.
3. Late Notifications: Operators are not prohibited from submitting waiver certifications after initiating clearing, grading, excavation activities, or other construction activities. The Agency reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and waiver authorization is granted.

Submittal of a waiver certification is an optional alternative to obtaining permit coverage for discharges of stormwater associated with small construction activity, provided you qualify for the waiver. Any discharge of stormwater associated with small construction activity not covered by either a permit or a waiver may be considered an unpermitted discharge under the Clean Water Act. As mentioned above, EPA reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and either discharge authorization is granted or a complete and accurate waiver certification is submitted. EPA may notify any operator covered by a waiver that they must apply for a permit. EPA may notify any operator who has been in non-compliance with a waiver that they may no longer use the waiver for future projects. Any member of the public may petition EPA to take action under this provision by submitting written notice along with supporting justification.

Complete and accurate Rainfall Erosivity waiver certifications not otherwise submitted electronically via EPA's eNOI system (www.epa.gov/npdes/eNOI) must be sent to one of the following addresses:

Regular U.S. Mail Delivery
EPA Stormwater Notice Processing Center
Mail Code 4203M
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Overnight/Express Mail Delivery
EPA Stormwater Notice Processing Center
Room 7420
U.S. EPA
1201Constitution Avenue, NW
Washington, DC 20004

Complete and accurate TMDL or equivalent analysis waiver requests must be sent to the applicable EPA Region office specified in Appendix B.

Appendix E - Notice of Intent Form and Instructions

From the effective date of this permit, operators are to use the Notice of Intent Form contained in this Appendix to obtain permit coverage.

This Form Replaces Form 3510-9 (8-98)
Refer to the Following Pages for Instructions

Form Approved OMB Nos. 2040-0188 and 2040-0211

NPDES FORM

EPA

United States Environmental Protection Agency
Washington, DC 20460

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

Submission of this Notice of Intent (NOI) constitutes notice that the party identified in Section II of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section I of this form. Submission of this NOI also constitutes notice that the party identified in Section II of this form meets the eligibility requirements of the CGP for the project identified in Section III of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Refer to the instructions at the end of this form.

I. Permit Number

II. Operator Information

Name:

IRS Employer Identification Number (EIN): –

Mailing Address:

Street:

City: State: Zip Code: -

Phone: - - Fax (optional): - -

E-mail:

III. Project/Site Information

Project/Site Name:

Project Street/Location:

City: State: Zip Code: -

County or similar government subdivision:

Latitude/Longitude (Use one of three possible formats, and specify method)

Latitude 1. __°__'__.__" N (degrees, minutes, seconds)
2. __°__.__' N (degrees, minutes, decimal)
3. __.__° N (degrees decimal)

Longitude 1. __°__'__.__" W (degrees, minutes, seconds)
2. __°__.__' W (degrees, minutes, decimal)
3. __.__° W (degrees decimal)

Method: ☐ U.S.G.S. topographic map ☐ EPA web site ☐ GPS ☐ Other:

If you used a U.S.G.S. topographic map, what was the scale? _____

Project located in Indian Country? ☐ YES ☐ NO

If yes, name of reservation, or if not part of a reservation, put "Not Applicable:" _____

Estimated Project Start Date: / / (Month Day Year)

Estimated Project Completion Date: / / (Month Day Year)

Estimated Area to be Disturbed (to the nearest quarter acre): .

IV. SWPPP Information

Has the SWPPP been prepared in advance of filing this NOI? ☐ YES ☐ NO

Location of SWPP for Viewing: ☐ Address in Section II ☐ Address in Section III ☐ Other

If other:

SWPPP Street:

City: State: Zip Code: -

SWPPP Contact Information (if different than that in Section II):

Name:

Phone: - - Fax (optional): - -

E-mail:

V. Discharge Information

Identify the name(s) of waterbodies to which you discharge. _____

_____

Is this discharge consistent with the assumptions and requirements of applicable EPA approved or established TMDL(s)? ☐ YES ☐ NO

VI. Endangered Species Protection

Under which criterion of the permit have you satisfied your ESA eligibility obligations?

☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

If you select criterion F, provide permit tracking number of operator under which you are certifying eligibility:

VII. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name:

Title:

Signature: _____ Date:

E-mail: _____

NOI Preparer (Complete if NOI was prepared by someone other than the certifier)

Prepared by:

Organization:

Phone: - - Ext. E-mail: _____

Instructions for Completing EPA Form 3510-9

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

NPDES Form Date | This Form Replaces Form 3510-9 (8/98) | Form Approved OMB Nos. 2040-0188 and 2040-0211

Who Must File an NOI Form

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; the Act), federal law prohibits storm water discharges from certain construction activities to waters of the U.S. unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) Permit. Operator(s) of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must submit an NOI to obtain coverage under an NPDES general permit. Each person, firm, public organization, or any other entity that meets either of the following criteria must file this form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with SWPPP requirements or other permit conditions. If you have questions about whether you need an NPDES storm water permit, or if you need information to determine whether EPA or your state agency is the permitting authority, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Storm Water Notice Processing Center at (866) 352-7755.

Where to File NOI Form

See the applicable CGP for information on where to send your completed NOI form.

Completing the Form

Obtain and read a copy of the appropriate EPA Storm Water Construction General Permit for your area. To complete this form, type or print uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Storm Water Notice Processing Center at (866) 352-7755. Please submit original document with signature in ink . do not send a photocopied signature.

Section I. Permit Number

Provide the number of the permit under which you are applying for coverage (see Appendix B of the general permit for the list of eligible permit numbers).

Section II. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application. An operator of a project is a legal entity that controls at least a portion of site operations and is not necessarily the site manager. Provide the employer identification number (EIN from the Internal Revenue Service; IRS), also commonly referred to as your taxpayer ID. If the applicant does not have an EIN enter "NA" in the space provided. Also provide the operator's mailing address, telephone number, fax number (optional) and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

Section III. Project/Site Information

Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). *Complete site information must be provided for permit* coverage to be granted.

The applicant must also provide the latitude and longitude of the facility either in degrees, minutes, seconds; degrees, minutes, decimal; or decimal format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, and EPA's web-based siting tools, among others. Refer to *www.epa.gov/npdes/stormwater/cgp* for further guidance on the use of these methodologies. For consistency, EPA requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used.

Indicate whether the project is in Indian country, and if so, provide the name of the Reservation. If the project is in Indian Country Lands that are not part of a Reservation, indicate "not applicable" in the space provided.

Enter the estimated construction start and completion dates using four digits for the year (i.e., 05/27/1998). Enter the estimated area to be disturbed including but not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest quarter acre. Note: 1 acre = 43,560 sq. ft.

Section IV. SWPPP Information

Indicate whether or not the SWPPP was prepared in advance of filing the NOI form. Check the appropriate box for the location where the SWPPP may be viewed. Provide the name, fax number (optional), and e-mail address of the contact person if different than that listed in Section II of the NOI form.

Section V. Discharge Information

Enter the name(s) of receiving waterbodies to which the project's storm water will discharge. These should be the first bodies of water that the discharge will reach. (Note: If you discharge to more than one waterbody, please indicate all such waters in the space provided and attach a separate sheet if necessary.) For example, if the discharge leaves your

site and travels through a roadside swale or a storm sewer and then enters a stream that flows to a river, the stream would be the receiving waterbody. Waters of the U.S. include lakes, streams, creeks, rivers, wetlands, impoundments, estuaries, bays, oceans, and other surface bodies of water within the confines of the U.S. and U.S. coastal waters. Waters of the U.S. do not include man-made structures created solely for the purpose of wastewater treatment. U.S. Geological Survey topographical maps may be used to make this determination. If the map does not provide a name, use a format such as "unnamed tributary to Cross Creek". If you discharge into a municipal separate storm sewer system (MS4), you must identify the waterbody into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

Indicate whether your storm water discharges from construction activities will be consistent with the assumptions and requirements of applicable EPA approved or established TMDL(s). To answer this question, refer to www.epa.gov/npdes/stormwater/cgp for state- and regional-specific TMDL information related to the construction general permit. You may also have to contact your EPA regional office or state agency. If there are no applicable TMDLs or no related requirements, please check the "yes" box in the NOI form.

Section VI. Endangered Species Information

Indicate for which criterion (i.e., A, B, C, D, E, or F) of the permit the applicant is eligible with regard to protection of federally listed endangered and threatened species, and designated critical habitat. See Part 1.3.C.6 and Appendix C of the permit. If you select criterion F, provide the permit tracking number of the operator under which you are certifying eligibility. The permit tracking number is the number assigned to the operator by the Storm Water Notice Processing Center after EPA acceptance of a complete NOI.

Section VII. Certification Information

All applications, including NOIs, must be signed as follows: *For a corporation:* By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered eligible for permit coverage. If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the name, organization, phone number and email address of the NOI preparer.

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 3.7 hours. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch 2136, U.S. Environmental Protection, Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instructions:
www.epa.gov/npdes/stormwater/mail

Visit this website for instructions on how to submit electronically:
www.epa.gov/npdes/stormwater/enoi

Appendix F - Notice of Termination Form and Instructions

From the effective date of this permit, operators are to use the Notice of Termination Form contained in this Appendix to terminate permit coverage.

This Form Replaces Form 3517-7 (8-98)
Refer to the Following Page for Instructions

Form Approved OMB Nos. 2040-0086 and 2040-0211

NPDES FORM

United States Environmental Protection Agency
Washington, DC 20460

Notice of Termination (NOT) of Coverage Under an NPDES General Permit for Stormwater Discharges Associated with Construction Activity

Submission of this Notice of Termination constitutes notice that the party identified in Section II of this form is no longer authorized to discharge stormwater associated with construction activity under the NPDES program from the site identified in Section III of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

I. Permit Information

NPDES Stormwater General Permit Tracking Number:

Reason for Termination (Check only one):

- ☐ Final stabilization has been achieved on all portions of the site for which you are responsible.
- ☐ Another operator has assumed control, according to Appendix G, Section 11.C of the CGP, over all areas of the site that have not been finally stabilized.
- ☐ Coverage under an alternative NPDES permit has been obtained.
- ☐ For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

II. Operator Information

Name:

IRS Employer Identification Number (EIN): –

Mailing Address:

Street:

City: State: Zip Code: -

Phone: - - Fax (optional): - -

E-mail:

III. Project/Site Information

Project/Site Name:

Project Street/Location:

City: State: Zip Code: -

County or similar government subdivision:

IV. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: _____

Print Title: _____

Email: _____

Signature: _____

Date: _____

Instructions for Completing EPA Form 3510-13

Notice of Termination (NOT) of Coverage Under an NPDES General Permit for Stormwater Discharges Associated with Construction Activity

NPDES Form | This Form Replaces Form 3517-7 (8-98) | Form Approved OMB Nos. 2040-0086 and 2040-0211

Who May File an NOT Form
Permittees who are presently covered under the EPA-issued National Pollutant Discharge Elimination System (NPDES) General Permit for *Stormwater Discharges Associated with Construction Activity* may submit an NOT form when final stabilization has been achieved on all portions of the site for which you are responsible; another operator has assumed control in accordance with Appendix G, Section 11.C of the General Permit over all areas of the site that have not been finally stabilized; coverage under an alternative NPDES permit has been obtained; or for residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

"Final stabilization" means that all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed. See "final stabilization" definition in Appendix A of the Construction General Permit for further guidance where background native vegetation covers less than 100 percent of the ground, in arid or semi-arid areas, for individual lots in residential construction, and for construction projects on land used for agricultural purposes.

Completing the Form
Type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Stormwater Notice Processing Center at (866) 352-7755. Please submit original document with signature in ink - do not send a photocopied signature.

Section I. Permit Number
Enter the existing NPDES Stormwater General Permit Tracking Number assigned to the project by EPA's Stormwater Notice Processing Center. If you do not know the permit tracking number, refer to *www.epa.gov/npdes/stormwater/cgp* or contact the Stormwater Notice Processing Center at (866) 352-7755.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one:

Final stabilization has been achieved on all portions of the site for which you are responsible.

Another operator has assumed control according to Appendix G, Section 11.C over all areas of the site that have not been finally stabilized.

Coverage under an alternative NPDES permit has been obtained.

For residential construction only, if temporary stabilization has been completed and the residence has been transferred to the homeowner.

Section II. Operator Information
Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application and is covered by the permit tracking number identified in Section I. The operator of the project is the legal entity that controls the site operation, rather than the site manager. Provide the employer identification number (EIN from the Internal Revenue Service; IRS). If the applicant does not have an EIN enter "NA" in the space provided. Enter the complete mailing address, telephone number, and email address of the operator. Optional: enter the fax number of the operator.

Section III. Project/Site Information
Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for termination of permit coverage to be valid.

Section IV. Certification Information
All applications, including NOIs, must be signed as follows:
For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Paperwork Reduction Act Notice
Public reporting burden for this application is estimated to average 0.5 hours per notice, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to; a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Include the OMB number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instruction:
www.epa.gov/npdes/stormwater/mail

Visit this website for instructions on how to submit electronically:
www.epa.gov/npdes/stormwater/enoi

Appendix G - Standard Permit Conditions

STANDARD PERMIT CONDITIONS

1. Duty To Comply

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

A. You must comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

B. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently $27,500 per day for each violation).

The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

C. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Pursuant to 40 CFR Part 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently $11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $27,500). Pursuant to 40 CFR Part 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently $11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $137,500).

2. Duty to Reapply

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain a new permit.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate

You must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privileges.

8. Duty to Provide Information

You must furnish to EPA, within a reasonable time, any information which EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA upon request, copies of records required to be kept by this permit.

9. Inspection and Entry

You must allow EPA, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

A. Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Monitoring and Records

A. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.

B. You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of EPA at any time.

C. Records of monitoring information must include:
   1. The date, exact place, and time of sampling or measurements;
   2. The individual(s) who performed the sampling or measurements;
   3. The date(s) analyses were performed
   4. The individual(s) who performed the analyses;
   5. The analytical techniques or methods used; and
   6. The results of such analyses.

D. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.

E. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

11. Signatory Requirements

A. All applications, including NOIs, must be signed as follows:
   1. For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any

other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

2. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
3. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

B. All reports required by this permit, including SWPPPs, must be signed by a person described in Appendix G, Subsection 11.A above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   1. The authorization is made in writing by a person described in Appendix G, Subsection 11.A;
   2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
   3. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.

C. Changes to Authorization. If an authorization under Part 2.1 is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new NOI satisfying the requirements of Part 2.1 must be submitted to EPA prior to or together with any reports, information, or applications to be signed by an authorized representative. The change in authorization must be submitted within the time frame specified in Part 2.4, and sent to the address specified in Part 2.2.

D. Any person signing documents required under the terms of this permit must include the following certification:
"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons

directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

12. Reporting Requirements

A. Planned changes. You must give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
   1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b); or
   2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR §122.42(a)(1).

B. Anticipated noncompliance. You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

C. Transfers. This permit is not transferable to any person except after notice to EPA. EPA may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See 40 CFR §122.61; in some cases, modification or revocation and reissuance is mandatory.)

D. Monitoring reports. Monitoring results must be reported at the intervals specified elsewhere in this permit.
   1. Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by EPA for reporting results of monitoring of sludge use or disposal practices.
   2. If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by EPA.
   3. Calculations for all limitations which require averaging of measurements must use an arithmetic mean.

E. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.

F. Twenty-four hour reporting.

1. You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
2. The following shall be included as information which must be reported within 24 hours under this paragraph.
   a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)
   b. Any upset which exceeds any effluent limitation in the permit
   c. Violation of a maximum daily discharge limitation for any of the pollutants listed by EPA in the permit to be reported within 24 hours. (See 40 CFR §122.44(g).)

13. EPA may waive the written report on a case-by-case basis for reports under Appendix G, Subsection 12.F.2 if the oral report has been received within 24 hours.

G. Other noncompliance. You must report all instances of noncompliance not reported under Appendix G, Subsections 12.D, 12.E, and 12.F, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix G, Subsection 12.F.

H. Other information. Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Permitting Authority, you must promptly submit such facts or information.

13. Bypass

A. Definitions.
   1. Bypass means the intentional diversion of waste streams from any portion of a treatment facility
   2. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

B. Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix G, Subsections 13.C and 13.D.

C. Notice–
   1. Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass.
   2. Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix G, Subsection 12.F (24-hour notice).

D. Prohibition of bypass.
   1. Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:
      a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      c. You submitted notices as required under Appendix G, Subsection 13.C.
   2. EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix G, Subsection 13.D.1.

14. Upset

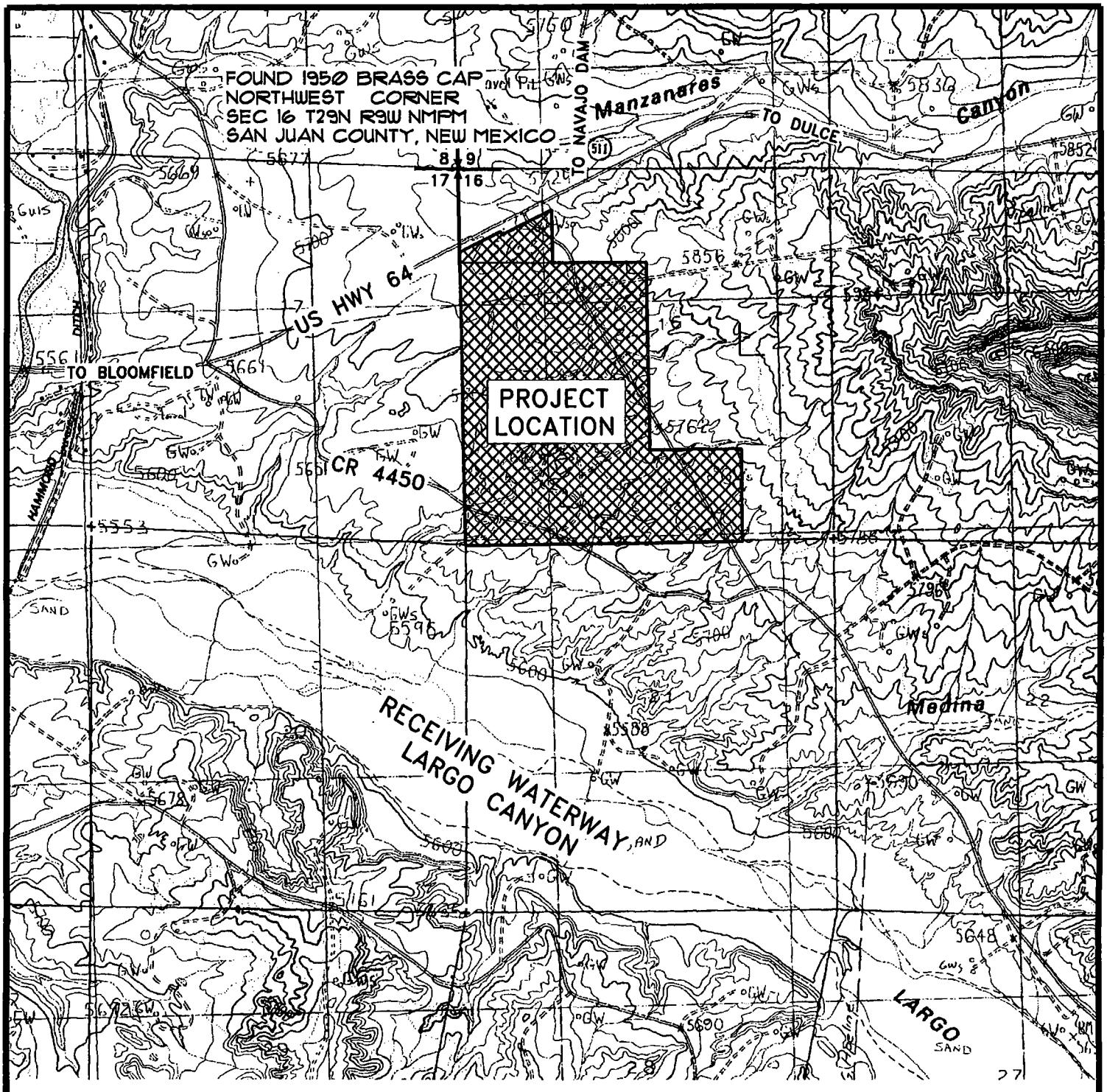
A. Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

B. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Appendix G, Subsection 14.C are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

C. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
   1. An upset occurred and that you can identify the cause(s) of the upset;
   2. The permitted facility was at the time being properly operated; and
   3. You submitted notice of the upset as required in Appendix G, Subsection 12.F.2.b(24 hour notice).
   4. You complied with any remedial measures required under Appendix G, Section 4.

D. Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, has the burden of proof.

APPENDIX B



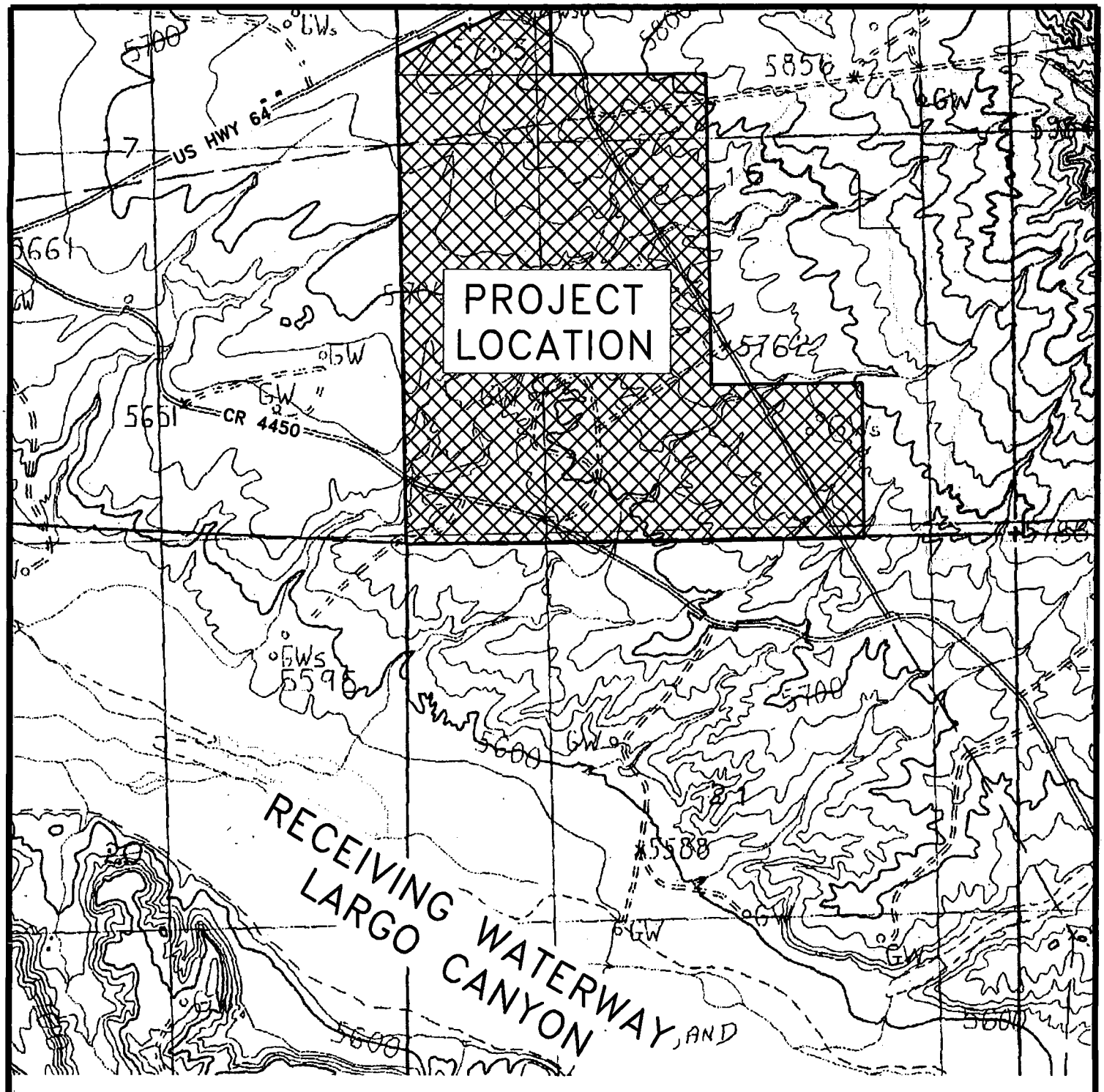
VICINITY MAP
INDUSTRIAL ECOSYSTEM
BLANCO, SAN JUAN COUNTY
NEW MEXICO

SCALE = N.T.S.

CHENEY·WALTERS·ECHOLS INC.
ENGINEERS · SURVEYORS
909 W. APACHE · FARMINGTON, NEW MEXICO 87401 · (505)327-3303

ISSUE DATE: 10/12/2009
PRINTED: October 22, 2009
FILE: C:\D\DWG-HWS\2009\09467\9467VIN.dwg

APPENDIX C



RECEIVING WATERS
INDUSTRIAL ECOSYSTEM
BLANCO, SAN JUAN COUNTY
NEW MEXICO

CHENEY-WALTERS-ECHOLS INC.
ENGINEERS ▲ SURVEYORS
909 W. APACHE ▲ FARMINGTON, NEW MEXICO 87401 ▲ (505)327-3303

SCALE = N.T.S.

ISSUE DATE: 10/12/2009
PRINTED: October 22, 2009
FILE: C:\D\DWG-HWS\2009\09467\9467RECWATER.dwg

APPENDIX D

Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

AMENDMENTS TO SWPPP

Amendment Date	Description and Reason for Amendment	Section and Page Affected	Amendor's Signature

APPENDIX E

Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

INSPECTION AND MAINTENANCE REPORT

Facility Location: Blanco, San Juan County, New Mexico
Inspector/Title: _____ Date: _____
Inspector's Qualifications (if information not available on previous report):
_____
_____

Weather since last inspection (estimated beginning, duration, inches of any storm events):
_____
_____

Discharges since last inspection (describe location, any evidence of pollutants exiting the site):
_____
_____

Weather during inspection:
_____
_____

Discharges occurring during inspection (describe discharge; include location, any sediment or other pollutants exiting the site):
_____
_____
_____
_____
_____
_____

In the event of a discharge, list BMPs that need to be maintained, BMPs that are inadequate, and locations where additional BMPs are needed. Also, list corrective action including any changes to the SWPPP necessary and implementation dates: Modifications to the SWPPP shall be recorded on the "Amendments to SWPPP" form.
_____
_____
_____
_____
_____
_____
_____
_____
_____

INSPECTION AND MAINTENANCE REPORT CERTIFICATION

I certify under penalty of the law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed:_____ Date:_____

APPENDIX F

Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

RECORD OF ACTIVITIES

Facility Location: Blanco, San Juan County, New Mexico
Recorder: _____
Title (Owner/Operator/Authorized Representative): _____

Date	Description (major grading activities, construction temporarily or permanently ceased, stabilization measures initiated)

APPENDIX G

This Form Replaces Form 3510-9 (8-98)
Refer to the Following Pages for Instructions

Form Approved OMB Nos. 2040-0188 and 2040-0211

NPDES FORM

EPA

United States Environmental Protection Agency
Washington, DC 20460

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

Submission of this Notice of Intent (NOI) constitutes notice that the party identified in Section II of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section I of this form. Submission of this NOI also constitutes notice that the party identified in Section II of this form meets the eligibility requirements of the CGP for the project identified in Section III of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Refer to the instructions at the end of this form.

I. Permit Number

II. Operator Information

Name:

IRS Employer Identification Number (EIN): __ – _____

Mailing Address:

Street:

City: State: Zip Code: -

Phone: - - Fax (optional): - -

E-mail:

III. Project/Site Information

Project/Site Name:

Project Street/Location:

City: State: Zip Code: -

County or similar government subdivision:

Latitude/Longitude (Use one of three possible formats, and specify method)

Latitude 1. __°__'__" N (degrees, minutes, seconds)
2. __°__.__' N (degrees, minutes, decimal)
3. __.__° N (degrees decimal)

Longitude 1. __°__'__" W (degrees, minutes, seconds)
2. __°__.__' W (degrees, minutes, decimal)
3. __.__° W (degrees decimal)

Method: ☐ U.S.G.S. topographic map ☐ EPA web site ☐ GPS ☐ Other:

If you used a U.S.G.S. topographic map, what was the scale? _____

Project located in Indian Country? ☐ YES ☐ NO

If yes, name of reservation, or if not part of a reservation, put "Not Applicable:" _____

Estimated Project Start Date: __/__/____ (Month / Day / Year)

Estimated Project Completion Date: __/__/____ (Month / Day / Year)

Estimated Area to be Disturbed (to the nearest quarter acre): ____.__

IV. SWPPP Information

Has the SWPPP been prepared in advance of filing this NOI? ☐ YES ☐ NO

Location of SWPP for Viewing: ☐ Address in Section II ☐ Address in Section III ☐ Other

If other:

SWPPP Street:

City: State: Zip Code: -

SWPPP Contact Information (if different than that in Section II):

Name:

Phone: - - Fax (optional): - -

E-mail:

V. Discharge Information

Identify the name(s) of waterbodies to which you discharge. _____

_____

Is this discharge consistent with the assumptions and requirements of applicable EPA approved or established TMDL(s)? ☐ YES ☐ NO

VI. Endangered Species Protection

Under which criterion of the permit have you satisfied your ESA eligibility obligations?

☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

If you select criterion F, provide permit tracking number of operator under which you are certifying eligibility:

VII. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name:

Title:

Signature: _____ Date:

E-mail: _____

NOI Preparer (Complete if NOI was prepared by someone other than the certifier)

Prepared by:

Organization:

Phone: - - Ext. E-mail: _____

Instructions for Completing EPA Form 3510-9

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

NPDES Form Date | This Form Replaces Form 3510-9 (8/98) | Form Approved OMB Nos. 2040-0188 and 2040-0211

Who Must File an NOI Form

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; the Act), federal law prohibits storm water discharges from certain construction activities to waters of the U.S. unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) Permit. Operator(s) of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must submit an NOI to obtain coverage under an NPDES general permit. Each person, firm, public organization, or any other entity that meets either of the following criteria must file this form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with SWPPP requirements or other permit conditions. If you have questions about whether you need an NPDES storm water permit, or if you need information to determine whether EPA or your state agency is the permitting authority, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Storm Water Notice Processing Center at (866) 352-7755.

Where to File NOI Form

See the applicable CGP for information on where to send your completed NOI form.

Completing the Form

Obtain and read a copy of the appropriate EPA Storm Water Construction General Permit for your area. To complete this form, type or print uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Storm Water Notice Processing Center at (866) 352-7755. Please submit original document with signature in ink . do not send a photocopied signature.

Section I. Permit Number

Provide the number of the permit under which you are applying for coverage (see Appendix B of the general permit for the list of eligible permit numbers).

Section II. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application. An operator of a project is a legal entity that controls at least a portion of site operations and is not necessarily the site manager. Provide the employer identification number (EIN from the Internal Revenue Service; IRS), also commonly referred to as your taxpayer ID. If the applicant does not have an EIN enter "NA" in the space provided. Also provide the operator's mailing address, telephone number, fax number (optional) and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

Section III. Project/Site Information

Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit coverage to be granted.

The applicant must also provide the latitude and longitude of the facility either in degrees, minutes, seconds; degrees, minutes, decimal; or decimal format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, and EPA's web-based siting tools, among others. Refer to *www.epa.gov/npdes/stormwater/cgp* for further guidance on the use of these methodologies. For consistency, EPA requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used.

Indicate whether the project is in Indian country, and if so, provide the name of the Reservation. If the project is in Indian Country Lands that are not part of a Reservation, indicate "not applicable" in the space provided.

Enter the estimated construction start and completion dates using four digits for the year (i.e., 05/27/1998). Enter the estimated area to be disturbed including but not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest quarter acre. Note: 1 acre = 43,560 sq. ft.

Section IV. SWPPP Information

Indicate whether or not the SWPPP was prepared in advance of filing the NOI form. Check the appropriate box for the location where the SWPPP may be viewed. Provide the name, fax number (optional), and e-mail address of the contact person if different than that listed in Section II of the NOI form.

Section V. Discharge Information

Enter the name(s) of receiving waterbodies to which the project's storm water will discharge. These should be the first bodies of water that the discharge will reach. (Note: If you discharge to more than one waterbody, please indicate all such waters in the space provided and attach a separate sheet if necessary.) For example, if the discharge leaves your

site and travels through a roadside swale or a storm sewer and then enters a stream that flows to a river, the stream would be the receiving waterbody. Waters of the U.S. include lakes, streams, creeks, rivers, wetlands, impoundments, estuaries, bays, oceans, and other surface bodies of water within the confines of the U.S. and U.S. coastal waters. Waters of the U.S. do not include man-made structures created solely for the purpose of wastewater treatment. U.S. Geological Survey topographical maps may be used to make this determination. If the map does not provide a name, use a format such as "unnamed tributary to Cross Creek". If you discharge into a municipal separate storm sewer system (MS4), you must identify the waterbody into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

Indicate whether your storm water discharges from construction activities will be consistent with the assumptions and requirements of applicable EPA approved or established TMDL(s). To answer this question, refer to *www.epa.gov/npdes/stormwater/cgp* for state- and regional-specific TMDL information related to the construction general permit. You may also have to contact your EPA regional office or state agency. If there are no applicable TMDLs or no related requirements, please check the "yes" box in the NOI form.

Section VI. Endangered Species Information

Indicate for which criterion (i.e., A, B, C, D, E, or F) of the permit the applicant is eligible with regard to protection of federally listed endangered and threatened species, and designated critical habitat. See Part 1.3.C.6 and Appendix C of the permit. If you select criterion F, provide the permit tracking number of the operator under which you are certifying eligibility. The permit tracking number is the number assigned to the operator by the Storm Water Notice Processing Center after EPA acceptance of a complete NOI.

Section VII. Certification Information

All applications, including NOIs, must be signed as follows: *For a corporation:* By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered eligible for permit coverage. If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the name, organization, phone number and email address of the NOI preparer.

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 3.7 hours. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch 2136, U.S. Environmental Protection, Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instructions:
www.epa.gov/npdes/stormwater/mail

Visit this website for instructions on how to submit electronically:
www.epa.gov/npdes/stormwater/enoi

APPENDIX H

This Form Replaces Form 3517-7 (8-98)
Refer to the Following Page for Instructions

Form Approved OMB Nos. 2040-0086 and 2040-0211

NPDES FORM

EPA

United States Environmental Protection Agency
Washington, DC 20460

Notice of Termination (NOT) of Coverage Under an NPDES General Permit for Stormwater Discharges Associated with Construction Activity

Submission of this Notice of Termination constitutes notice that the party identified in Section II of this form is no longer authorized to discharge stormwater associated with construction activity under the NPDES program from the site identified in Section III of this form. All necessary information must be included on this form. Refer to the instructions at the end of this form.

I. Permit Information

NPDES Stormwater General Permit Tracking Number:

Reason for Termination (Check only one):

- ☐ Final stabilization has been achieved on all portions of the site for which you are responsible.
- ☐ Another operator has assumed control, according to Appendix G, Section 11.C of the CGP, over all areas of the site that have not been finally stabilized.
- ☐ Coverage under an alternative NPDES permit has been obtained.
- ☐ For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

II. Operator Information

Name:

IRS Employer Identification Number (EIN): -

Mailing Address:

Street:

City: State: Zip Code: -

Phone: - - Fax (optional): - -

E-mail:

III. Project/Site Information

Project/Site Name:

Project Street/Location:

City: State: Zip Code: -

County or similar government subdivision:

IV. Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: _____

Print Title: _____

Email: _____

Signature: _____

Date: _____

Instructions for Completing EPA Form 3510-13

Notice of Termination (NOT) of Coverage Under an NPDES General Permit for Stormwater Discharges Associated with Construction Activity

NPDES Form | This Form Replaces Form 3517-7 (8-98) | Form Approved OMB Nos. 2040-0086 and 2040-0211

Who May File an NOT Form
Permittees who are presently covered under the EPA-issued National Pollutant Discharge Elimination System (NPDES) General Permit for *Stormwater Discharges Associated with Construction Activity* may submit an NOT form when final stabilization has been achieved on all portions of the site for which you are responsible; another operator has assumed control in accordance with Appendix G, Section 11.C of the General Permit over all areas of the site that have not been finally stabilized; coverage under an alternative NPDES permit has been obtained; or for residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

"Final stabilization" means that all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed. See "final stabilization" definition in Appendix A of the Construction General Permit for further guidance where background native vegetation covers less than 100 percent of the ground, in arid or semi-arid areas, for individual lots in residential construction, and for construction projects on land used for agricultural purposes.

Completing the Form
Type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, refer to *www.epa.gov/npdes/stormwater/cgp* or telephone the Stormwater Notice Processing Center at (866) 352-7755. Please submit original document with signature in ink - do not send a photocopied signature.

Section I. Permit Number
Enter the existing NPDES Stormwater General Permit Tracking Number assigned to the project by EPA's Stormwater Notice Processing Center. If you do not know the permit tracking number, refer to *www.epa.gov/npdes/stormwater/cgp* or contact the Stormwater Notice Processing Center at (866) 352-7755.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one:

Final stabilization has been achieved on all portions of the site for which you are responsible.

Another operator has assumed control according to Appendix G, Section 11.C over all areas of the site that have not been finally stabilized.

Coverage under an alternative NPDES permit has been obtained.

For residential construction only, if temporary stabilization has been completed and the residence has been transferred to the homeowner.

Section II. Operator Information
Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application and is covered by the permit tracking number identified in Section I. The operator of the project is the legal entity that controls the site operation, rather than the site manager. Provide the employer identification number (EIN from the Internal Revenue Service; IRS). If the applicant does not have an EIN enter "NA" in the space provided. Enter the complete mailing address, telephone number, and email address of the operator. Optional: enter the fax number of the operator.

Section III. Project/Site Information
Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for termination of permit coverage to be valid.

Section IV. Certification Information
All applications, including NOIs, must be signed as follows:
For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Paperwork Reduction Act Notice
Public reporting burden for this application is estimated to average 0.5 hours per notice, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Include the OMB number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instruction:
www.epa.gov/npdes/stormwater/mail

Visit this website for instructions on how to submit electronically:
www.epa.gov/npdes/stormwater/enoi

APPENDIX I

A review of the available resource agencies have determined that there are no species eligible for the Endangered Species Act (ESA) protection on the undeveloped property.

According to the U.S. Fish and Wildlife Service, there are 10 federally listed threatened, endangered or tentative plant and animal species with potential to occur in San Juan County, New Mexico. The listed species consist of one mammal, two fish, four birds and three plants. The State of New Mexico has identified 13 species as being listed as threatened or endangered with the potential to occur in San Juan County. There are no plants as listed on the endangered species on this property. The bird species as listed on the threatened and endangered list all occur along the Animas River corridor which is not in the immediate vicinity of this development. The Mexican Spotted Owl does not nest in this area due to a lack of caves, cliffs or trees within steep walled canyons. There are no prairie dog colonies on the property which is a habitat association for the black footed ferret. We believe that the project will not and is not likely to have any adverse affects to any species eligible (or their critical habitat) for coverage under the ESA.

APPENDIX J

SEDIMENT CONTROL PLAN
Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

PROJECT DESCRIPTION

The 289 acre project site for the Land Farm is located on the south side of U.S. Highway 64, near mile marker 75.8. The facility is planned to have two full access, one existing and one proposed. The site is described as Lot 4 of the Blanco Land Subdivision No. 1 and Lots 1A thru 7A of the Blanco Land Subdivision No. 2, lying in the W½ and the SW¼ SW¼ of Section 16, T29N, R09W, N.M.P.M. Blanco, San Juan County, New Mexico. The site will be used to remediate contaminated soil waste.

SITE DESCRIPTION (HISTORICAL)

The vacant project site consists of sparse grass, juniper and sagebrush. The average slope is 3% over a distance of 600 feet. There are 3 major waterways that bisect the property. Each waterway will be protected from storm water runoff with v-ditches, berms, silt fences and straw bales.

SITE DESCRIPTION (DEVELOPED)

The developed Land Farm will be a soil remediation site for contaminated oilfield waste. The soils to be remediated will be stockpiled on one of the 10 acre cells. When a cell reaches capacity, a new cell will be prepared for occupancy. The perimeter of the site will be bermed with a v-ditch to divert the fresh water into one of the waterways and the contaminated water into one the holding ponds. Additional controls of storm water runoff include straw bales, retention ponds, and dikes. The sediment and erosion control measures will remain installed for the life of the Land Farm. T he control measures will be maintained according to the CGP 2008.

SOILS

The soils within the project area are classified by the San Juan County Soil Survey as Doak Avalon association, gently sloping (DN) and Fruitland-Persayo-Sheppard complex, hilly (FX).

Doak-Avalon association, gently sloping soils are found on mesas, plateaus, and terraces. The native vegetation is mainly grass and the slopes range between 0% and 5%. The Doak Loam soils make up about 50% of the unit and the Avalon Loam soils make up about 35%. The hydrologic soil group for the Doak-Avalon soil is B.

The Doak soil is deep and well drained, formed in alluvium derived dominantly from sandstone and shale. The surface layer is typically brown loam about 5 inches thick. The underlying layer is brown and light brown silty clay loam and clay loam, approximately 38

inches thick. The substratum is light yellowish brown clay loam to a depth of 69 inches or more. The permeability of the Doak soil is 0.6 -2.0 inches per hour to a depth of 5 inches. Below this depth to a depth of 69 inches, the permeability is 0.2 - 0.6 inches per hour. The permeability of the Doak soil is classified as moderately slow. The available water capacity is very high, runoff is slow, and the hazard of water erosion is slight. The vegetation supported by the Doak soil is mainly blue grama, western wheatgrass, Indian ricegrass, and needleandthread. The soil loss tolerance is 5 and the soil erodability factor is 0.37.

The Avalon soil is a deep well drained soil, formed in alluvial and eolian material derived from sandstone and shale. The surface layer is typically brown loam about 4 inches thick. The underlying layer to a depth of 14 inches is also brown loam. The upper 22 inches of the substratum is pinkish white loam. The lower part to a depth of 60 inches or more is light yellowish brown loam. The permeability of the Avalon soil is 0.6 - 2.0 inches per hour to a depth of 60 inches. The permeability of the Avalon soil is classified as moderate. The available water capacity is high, runoff is medium, and the hazard of water erosion is moderate. The soil is slightly saline, used for grazing and wildlife habitat. The vegetation of the Avalon soil consists of Indian ricegrass, winterfat, galleta, and blue grama. The soil loss tolerance is 3 and the soil erodability factor is 0.43.

Fruitland-Persayo-Sheppard complex hilly soils are found on mesas, plateaus, fans and breaks. The slopes range between 5% and 30%. The native vegetation is mainly grass and scattered pinyon and juniper. The unit is 40% Fruitland sandy loam, 30% Persayo clay loam, and 25% Sheppard loamy fine sand. It was not practical to map these soils separately at the scale used.

The Fruitland soil is deep and well drained, formed in alluvium derived dominantly from sandstone and shale. The surface layer is typically brown sandy loam about 4 inches thick. The underlying material is brown fine sandy loam, to a depth of 60 inches or more. The permeability of the Fruitland soil is 2.0 - 6.0 inches per hour, classified as moderately rapid, and the available water capacity is moderate. Runoff is medium and the hazard of water erosion is moderate. The hydrologic soil group for the Fruitland soil is B. The soil loss tolerance is 5 and the soil erodability factor is 0.24 to a depth of 4 inches.

The Persayo soil is shallow and well drained, formed in residuum derived from shale. The surface layer is typically light brownish gray clay loam, about 2 inches thick. The underlying layer is light yellowish brown clay loam to a depth of 18 inches. Shale is at a depth of 18 inches. Permeability of the Persayo soil is 0.2 - 0.6 inches per hour, classified as moderately slow, and the available water capacity is very low. Runoff is rapid and the hazard of water erosion is high. The soil is slightly saline. The hydrologic soil group for the Persayo soil is D. The soil loss tolerance is 1 and the soil erodability factor is 0.37.

The Sheppard soil is deep and somewhat excessively drained, formed in eolian material derived from mixed sources. Typically the surface layer is light yellowish brown loamy fine sand about 4 inches thick. The underlying material to a depth of 60 inches or more is light yellowish brown loamy fine sand and fine sand. The permeability of the Sheppard soil is

6.0 - 20.0 inches per hour, classified as rapid, and the available water capacity is low. Runoff is slow and the hazard of water erosion is slight. The hydrologic soil group for the Sheppard soil is A. The soil loss tolerance is 5 and the soil erodability factor is 0.15.

PLANNED EROSION, SEDIMENT AND STORM WATER CONTROL PRACTICES

See the Storm Water Pollution Prevention Plan and site plan for control practices to be implemented as part of this development.

MAINTENANCE SCHEDULE

The sediment control measures as described above shall be constructed and maintained as shown on the site grading plan and SWPPP. The Best Management Practices (BMP's) will be inspected on a bi-weekly basis, and any breach of these measures will be documented and repaired. In the course of these inspections, if the Owner/Operator determines that the measures being used are insufficient, the measures will be modified on the plan and in the field to reflect more appropriate BMP's. The Operator will be responsible for general maintenance, as necessary, resulting from disturbances to sediment control measures by construction equipment or any other means.

RUSLE SOIL LOSS COMPUTATIONS

The Rusle Program was used to evaluate the estimated soil loss due to water erosion for the project area. Several scenarios were evaluated. The first case is for the historical condition, where a total of 29.0 tons per year of soil loss were estimated. The next condition analyzed is for during construction, when an estimated 12.6 tons per year of material will be eroded. During the construction phase, the erosion and sediment control measures will be installed and remain in place for the duration of the Land Farm. The final condition, after completion of construction, will yield an estimated 13.5 tons per year. Both the construction phase and the developed phase yield less water erosion than the historical phase.

CERTIFICATION

This is to certify that this Sediment Control Plan was prepared in accordance with good engineering practices. The Rusle program was used according to instruction from the State Agronomist with the Natural Resources Conservation Service (NRCS).

SOIL LOSS COMPUTATION

Benchmark:	X (check one)	**Client:**	Industrial Ecosystems Land F
Alternative Treatment:		**Location:**	Blanco, NM
Rainfall Factor (RUSLE):	10	**County:**	San Juan
Soil Name & Tex:	DN & FX - Doak Avalon, Fruitla	**Date:**	10/22/2009
Soil Loss Tolerance (T):	3 t/ac/yr	**Field Office:**	
Wind Climate Factor:		**Planner:**	kkn
RUSLE C factor (field 1):	0.059	**Crop Rotation:**	Historic
(field 2):		**Mgt. Condition:**	The native vegetation for the vacant site consists of grass, scattered pinyon, juniper and sagebrush. A 30% cover was assumed for the historic condition. The waterways shall be protected from silt runoff with berms, silt fences and straw bales.
(field 3):			
(field 4):			
(field 5):			
(field 6):			
Type of Land:	Rangeland		

WIND EROSION (Mgt. Period Method)

Note: Attach WEQ run

(Wind erosion field number and size must be filled out to use in other forms of erosion.)

Field (num)	Size (ac)	Climatic C (factor)	Wnd I (factor)	Actual Loss (t/ac/yr)	Ton Ero by Field (t/yr)
1	289	0			0

WATER EROSION (RUSLE)-sheet and rill erosion

R x K x LS x C x P = A

Field (num)	Size (ac)	Rainfall R (factor)	Soil K (factor)	Slope (%)	Length (ft)	Length-Slope LS (factor)	Cover-Mgt C (factor)	Support Practices P (factor)	Soil Loss A (t/ac/yr)	Tons by Field (t/yr)
1	289	10	0.37	3.00	300	0.46	0.059	1	0.1	29.0
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	

EPHEMERAL GULLY EROSION (voided area method for the group of fields)*

Rill formula: (top width+bottom width)/2 x Depth = Tons of Soil Loss from each Rill on per Ac bases.

Rill Number:	1	2	3	4	5	6	7	8	
Top width (in):									measured
Bottom width (in):									measured
Sum (in):									
Average Width (in):									
Average Depth (in):									measured
WxD (in^2=tons loss):									

Total Loss (tons/ac):	0	**Yrs to Create:**		**Tt Loss per Year (t/ac/yr):**	0.0
***Based on a 12.5 foot long strip.**		**No. of Ac w/Gully Ero:**		**Total Tons of Soil Loss:**	0.0

CLASSIC GULLY EROSION (voided area method)

Gully formula: (L x W x D) x 80 lbs/cf / 2000 = Ton of Soil loss

Gully Number:	1	2	3	4	5	6	
Ave. Length (ft):							(measured)
Ave. Width (ft):							(measured)
Ave. Depth (ft):							(measured)
Soil Loss (tons):							

Total Loss (tons/ac):	0	Yrs to Create:		Tt Loss per Year (t/ac/yr):	0.0
		No. of Ac w/Gully Ero:		Total Tons of Soil Loss:	0.0

IRRIGATION EROSION

Are the fields irrigated? N Y or N

Irrigation type: Furrow [ ] Flood [ ] Sprinkler [ ] (check one)

Field (num)	Size (ac)	Actual Loss (t/ac/yr)	Ton Ero by Field (t/yr)
			0
			0
			0
			0
			0
			0

EROSION SUMMARY TOTALS

		Tons/Acre/Year by Field					Tons/Year by Field				
Field (num)	Size (ac)	Wind (t/ac/yr)	Water (t/ac/yr)	Rill/Gully (t/ac/yr)	Irr (t/ac/yr)	Total (t/ac/yr)	Wind (t/yr)	Water (t/yr)	Rill/Gully (t/yr)	Irr (t/yr)	Total (t/yr)
1	289	0.0	0.1	0.00	0.0	0.1	0	29	0.0	0	29
Total Ac:	289										
Wt. Ave (t/ac/yr):		0.00	0.10	0.00	0.00	0.10					
						Total Loss by type (t/yr all fields):	0.0	29.0	0.0	0.0	
										Sum of All fields (tons/yr):	29.0

Notes:

Water erosion is less than T, but still may require control.

All forms of erosion are controled under T, no additional control is required.

SOIL LOSS COMPUTATION

Benchmark:		(check one)	**Client:**	Industrial Ecosystems Land F	
Alternative Treatment:	X		**Location:**	Blanco, NM	
Rainfall Factor (RUSLE):	10		**County:**	San Juan	
Soil Name & Tex:	DN, FX - Doak Avalon, Fruitlan		**Date:**	10/22/2009	
Soil Loss Tolerance (T):	3	t/ac/yr	**Field Office:**		
Wind Climate Factor:			**Planner:**	kkn	
RUSLE C factor (field 1):	0.059		**Crop Rotation:**	During Construction	
(field 2):	1				
(field 3):					
(field 4):					
(field 5):					
(field 6):					
Type of Land:	Disturbed Land				

Mgt. Condition: The erosion and sediment control measures for the Land Farm (Facility) will be installed during the construction phase and will remain in place for the duration of the Facility. The control measures include silt fences, straw bales, berms, dikes, retention ponds and v-ditches. The control measures will be maintained as per CGP2008.

WIND EROSION (Mgt. Period Method)

Note: Attach WEQ run

(Wind erosion field number and size must be filled out to use in other forms of erosion.)

Field (num)	Size (ac)	Climatic C (factor)	Wnd I (factor)	Actual Loss (t/ac/yr)	Ton Ero by Field (t/yr)
1	281	0			0
2	8	0			0

WATER EROSION (RUSLE)-sheet and rill erosion

R x K x LS x C x P = A

Field (num)	Size (ac)	Rainfall R (factor)	Soil K (factor)	Slope (%)	Length (ft)	Length-Slope LS (factor)	Cover-Mgt C (factor)	Support Practices P (factor)	Soil Loss A (t/ac/yr)	Tons by Field (t/yr)
1	281	10	0.37	3.00	300	0.69	0.059	0.2	0.0	8.5
2	8	10	0.37	3.00	300	0.69	1	0.2	0.5	4.1
									0.0	
									0.0	
									0.0	
									0.0	

EPHEMERAL GULLY EROSION (voided area method for the group of fields)*

Rill formula: (top width+bottom width)/2 x Depth = Tons of Soil Loss from each Rill on per Ac bases.

Rill Number:	1	2	3	4	5	6	7	8	
Top width (in):									measured
Bottom width (in):									measured
Sum (in):									
Average Width (in):									
Average Depth (in):									measured
WxD (in^2=tons loss):									

Total Loss (tons/ac):	0	**Yrs to Create:**		**Tt Loss per Year (t/ac/yr):**	0.0
***Based on a 12.5 foot long strip.**		**No. of Ac w/Gully Ero:**		**Total Tons of Soil Loss:**	0.0

CLASSIC GULLY EROSION (voided area method)

Gully formula: (L x W x D) x 80 lbs/cf / 2000 = Ton of Soil loss

Gully Number:	1	2	3	4	5	6	
Ave. Length (ft):							(measured)
Ave. Width (ft):							(measured)
Ave. Depth (ft):							(measured)
Soil Loss (tons):							

Total Loss (tons/ac): 0 | Yrs to Create: | Tt Loss per Year (t/ac/yr): 0.0

No. of Ac w/Gully Ero: | Total Tons of Soil Loss: 0.0

IRRIGATION EROSION

Are the fields irrigated? N Y or N

Irrigation type: Furrow | Flood | Sprinkler (check one)

Field (num)	Size (ac)	Actual Loss (t/ac/yr)	Ton Ero by Field (t/yr)
			0
			0
			0
			0
			0
			0

EROSION SUMMARY TOTALS

		Tons/Acre/Year by Field					Tons/Year by Field				
Field (num)	Size (ac)	Wind (t/ac/yr)	Water (t/ac/yr)	Rill/Gully (t/ac/yr)	Irr (t/ac/yr)	Total (t/ac/yr)	Wind (t/yr)	Water (t/yr)	Rill/Gully (t/yr)	Irr (t/yr)	Total (t/yr)
1	281	0.0	0.0	0.00	0.0	0.0	0	8	0.0	0	8
2	8	0.0	0.5	0.00	0.0	0.5	0	4	0.0	0	4
Total Ac:	289										
Wt. Ave (t/ac/yr):		0.00	0.04	0.00	0.00	0.04					
					Total Loss by type (t/yr all fields):		0.0	12.6	0.0	0.0	
										Sum of All fields (tons/yr):	12.6

Notes:

Water erosion is less than T, but still may require control.

All forms of erosion are controled under T, no additional control is required.

SOIL LOSS COMPUTATION

Benchmark:		(check one)	**Client:**	Industrial Ecosystems Land F	
Alternative Treatment:	X		**Location:**	Blanco, NM	
Rainfall Factor (RUSLE):	10		**County:**	San Juan	
Soil Name & Tex:	DN & FX Doak Avalon, Fruitlan		**Date:**	10/22/2009	
Soil Loss Tolerance (T):	3	t/ac/yr	**Field Office:**		
Wind Climate Factor:			**Planner:**	kkn	
RUSLE C factor (field 1):	0.059		**Crop Rotation:**	Developed Condition	
(field 2):	1		**Mgt. Condition:**	The developed condition of the Industrial Ecosystems Land Farm will be a remediation site for contaminated oilfield waste. Ten acre cells will developed when needed. Approximately 3 cells will be in use at time.	
(field 3):					
(field 4):					
(field 5):					
(field 6):					
Type of Land:	Disturbed Land				

WIND EROSION (Mgt. Period Method)

Note: Attach WEQ run

(Wind erosion field number and size must be filled out to use in other forms of erosion.)

Field (num)	Size (ac)	Climatic C (factor)	Wnd I (factor)	Actual Loss (t/ac/yr)	Ton Ero by Field (t/yr)
1	251	0			0
2	38	0			0

WATER EROSION (RUSLE)-sheet and rill erosion

R x K x LS x C x P = A

Field (num)	Size (ac)	Rainfall R (factor)	Soil K (factor)	Slope (%)	Length (ft)	Length-Slope LS (factor)	Cover-Mgt C (factor)	Support Practices P (factor)	Soil Loss A (t/ac/yr)	Tons by Field (t/yr)
1	251	10	0.37	3.00	300	0.69	0.059	0.1	0.0	3.8
2	38	10	0.37	3.00	300	0.69	1	0.1	0.3	9.7
									0.0	
									0.0	
									0.0	
									0.0	

EPHEMERAL GULLY EROSION (voided area method for the group of fields)*

Rill formula: (top width+bottom width)/2 x Depth = Tons of Soil Loss from each Rill on per Ac bases.

Rill Number:	1	2	3	4	5	6	7	8	
Top width (in):									measured
Bottom width (In):									measured
Sum (in):									
Average Width (in):									
Average Depth (in):									measured
WxD (in^2=tons loss):									

Total Loss (tons/ac):	0	**Yrs to Create:**		**Tt Loss per Year (t/ac/yr):**	0.0
***Based on a 12.5 foot long strip.**		**No. of Ac w/Gully Ero:**		**Total Tons of Soil Loss:**	0.0

CLASSIC GULLY EROSION (voided area method)

Gully formula: (L x W x D) x 80 lbs/cf / 2000 = Ton of Soil loss

Gully Number:	1	2	3	4	5	6	
Ave. Length (ft):							(measured)
Ave. Width (ft):							(measured)
Ave. Depth (ft):							(measured)
Soil Loss (tons):							

Total Loss (tons/ac): 0 Yrs to Create: Tt Loss per Year (t/ac/yr): 0.0

No. of Ac w/Gully Ero: Total Tons of Soil Loss: 0.0

IRRIGATION EROSION

Are the fields irrigated? N Y or N

Irrigation type: Furrow Flood Sprinkler (check one)

Field (num)	Size (ac)	Actual Loss (t/ac/yr)	Ton Ero by Field (t/yr)
			0
			0
			0
			0
			0
			0

EROSION SUMMARY TOTALS

		Tons/Acre/Year by Field					Tons/Year by Field				
Field (num)	Size (ac)	Wind (t/ac/yr)	Water (t/ac/yr)	Rill/Gully (t/ac/yr)	Irr (t/ac/yr)	Total (t/ac/yr)	Wind (t/yr)	Water (t/yr)	Rill/Gully (t/yr)	Irr (t/yr)	Total (t/yr)
1	251	0.0	0.0	0.00	0.0	0.0	0	4	0.0	0	4
2	38	0.0	0.3	0.00	0.0	0.3	0	10	0.0	0	10
Total Ac:	289										
Wt. Ave (t/ac/yr):		0.00	0.05	0.00	0.00	0.05					
						Total Loss by type (t/yr all fields):	0.0	13.5	0.0	0.0	
										Sum of All fields (tons/yr):	13.5

Notes:

Water erosion is less than T, but still may require control.

All forms of erosion are controled under T, no additional control is required.

APPENDIX K

Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

SAMPLE AUTHORIZATION LETTER

(DATE)

To Whom it May Concern:

I, _____, of _____,
(Title/Position) (Corporation/Partnership/Municipality)

do hereby authorize _____
(Name or Position)

to sign all reports required by the National Pollutant Discharge Elimination System General Permit for Discharges from Large and Small Construction Activities, in compliance with the provisions of the Clean Water Act, effective June 30, 2008, which shall include the Stormwater Pollution Prevention Plan.

_____

Signature of Authorizing Agent

APPENDIX L

Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

SAMPLE AGREEMENT

BETWEEN OPERATOR AND OWNER

The purpose of this Agreement is to certify that the Land Farm located at _____
_____(Address)
has been completed by the Operator, and is prepared for occupation by the owner. The operator has established temporary stabilization including perimeter controls, and has informed the owner of the need for and benefits of final stabilization. Final stabilization means that soil disturbing activities have ceased, and that one of the following conditions has been met:

a. A uniform vegetative cover with a density of 70% of the native vegetation has been established on all unpaved areas and areas not covered by permanent structures, or;

b. Other stabilization measures (such as landscape rock or geotextile fabrics) have been placed. Final stabilization will prevent or reduce the discharge of sediment pollutants to waters of the United States.

By signing below, the operator and owner acknowledge that the above described transaction has taken place.

_____ _____

Operator Date

_____ _____

Owner Date

APPENDIX M

Electronic Notice of Intent
Online Application

HOME HELP PROFILE LOGOUT

1 General Permit Notice of Intent to Discharge

Review **History**

Form Review

Construction General Permit

State:	NM
Project Located on Indian Land?	No
Is this industrial facility a federal facility?	No
General Permit Number you are seeking coverage under:	NMR100000
Permit Tracking Number:	NMR10GQ48

Operator Information

Operator/Company Name:	Industrial Ecosystems Inc.
IRS EIN:	943200034
Street:	49 CR 3150
City/State/ZIP:	Aztec NM 87410
Phone:	505-632-1782
Fax:	505-632-1876
Email:	terry@industrialecosystems.com

Project/Site Information

Facility Name:	Industrial Ecosystems Blanco Land Farm
Facility Address:	Highway 64, near mile marker 75.8
County:	San Juan
City/State/ZIP:	Blanco NM 87412

Facility/Site Latitude and Longitude

Degrees/Minutes/Seconds (Latitude):	36 ° 43 ' 22 " N
Degrees/Minutes/Seconds (Longitude):	107 ° 47 ' 19 " W
Latitude/Longitude Method:	GPS
The distance between your facility and the location determined by the Latitude/Longitude provided:	20.6 miles

Project Dates

Estimated Project Start Date:	10/20/2009
Estimated Project Completion Date:	01/30/2010
Estimated area to be disturbed:	289 (acres)

Stormwater Pollution Prevention Plan Information

SWPPP Contact Name:	Terry Lattin
How can the SWPPP Contact be Reached?	
Telephone Number:	
SWPPP E-mail:	terry@industrialecosystems.com
Address of location for viewing the SWPPP:	Same as Operator's Address

Recieving Water	Impaired	Pollutants	Discharge (Yes/No)	Completed (Yes/No)
Largo Wash	No			

Water Quality Standards

Are any of your discharges into, or within one linear mile upstream of any portion of a receiving water designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds level necessary to support propogation of fish, shellfish, and wildlife and recreation in and on the water)?	No
Has the receiving water(s) been designated by the state or tribal authority under its antidegradation policy as a Tier III water(Outstanding Natural Resource Waters)?	No

Federal Effluent Limitation Guidelines and Sector-Specific Requirements

Are you requesting coverage under the MSGP for any stormwater discharges subject to effluent limitations ?	Yes

Effluent limitation guidelines that apply to your stormwater discharge:

40 CFR Part/Subpart	Eligible Discharges	Affected MSGP Sector
Part 445, Subparts A & B	Runoff from landfills	K,L

If you are a Sector S (Air Transportation) facility, do you anticipate using more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis?	No
Is your site inactive and unstaffed?	No

Standard Industrial Classification (SIC) Code Information

Activity Code:	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60

Sector/Subsector Information

Sector(s) and Subsector(s):

L	Landfills, Land Application Sites, and Open Dumps
L.1	All Landfill, Land Application Sites and Open Dumps

Stormwater Pollution Prevention Plan Information

SWPPP Contact Name:	Terry Lattin
SWPPP Email:	terry@industrialecosystems.com
How can the SWPPP Contact be Reached?	Same as Operator's Contact

Endangered Species Protection

ESA Criterion:

Criterion A.
No federally-listed threatened or endangered species or their designated critical habitat are likely to occur in the "action area".

Historic Preservation Information

Historic Preservation:

Criterion A - Your stormwater discharges and allowable non-stormwater discharges do not have the potential to have an effect on historic properties and you are not constructing or installing new stormwater control measures on your site that cause subsurface disturbance; or

Certifying Official Information

Certifying Official Name:	Terry Lattin
Certifying Official Email:	terry@industrialecosystems.com

Certify

APPENDIX N

Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

STORMWATER POLLUTION PREVENTION PLAN CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel property gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

OPERATOR:

Print: _____

Signature:_____ Date:_____

APPENDIX O

Industrial Ecosystems Blanco Land Farm
Blanco, San Juan County, New Mexico

OPERATOR AGREEMENT

The Operator(s) listed below agree that their activities will not destroy or render ineffective any control measures placed to prevent the pollution of stormwater. The Operator(s) shall also implement pollution control measures as part of this plan, or develop and implement their own SWPPP which meets the EPA's NPDES Stormwater Requirements.

PRINT:_____

SIGNATURE:_____

DATE:_____

AREA OF RESPONSIBILITY (DESCRIBE THE SUBCONTRACTOR'S AREA OF EXPERTISE AND/OR PHYSICAL AREA OF SEPARATE RESPONSIBILITY):

_____

PRINT:_____

SIGNATURE:_____

DATE:_____

AREA OF RESPONSIBILITY (DESCRIBE THE SUBCONTRACTOR'S AREA OF EXPERTISE AND/OR PHYSICAL AREA OF SEPARATE RESPONSIBILITY):

_____