



California Regional Water Quality Control Board Central Valley Region

Katherine Hart, Chair



Matthew Rodriguez
Secretary for
Environmental Protection

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Edmund G. Brown Jr.
Governor

22 December 2011

CERTIFIED MAIL
7010 0290 0000 8536 0324

Mr. Wayne Duty
1900 Feather River Blvd.
Olivehurst, CA 95961

NOTICE OF APPLICABILITY - ORDER R5-2008-0149-033, SHOEI FOODS, INC., 1900 FEATHER RIVER BLVD., OLIVEHURST, YUBA COUNTY

Shoei Foods Inc., submitted a Notice of Intent (NOI), on 14 April 2011 requesting coverage under Waste Discharge Requirements General Order R5-2008-0149 General Waste Discharge Requirements for In-Situ Groundwater Remediation at Sites with Volatile Organic Compounds, Nitrogen Compounds, Perchlorate, Pesticides, Semi-Volatile Compounds and/or Petroleum Compounds. Based on information in your submittals, it is our determination that this project meets the required conditions to be approved under Order R5-2008-0149. As such you are assigned Order No. R5-2008-0149-033. The land surrounding the proposed location of the ozone system is owned by Shoei Foods, Inc.; therefore, a 30-day Public Participation comment period was not required.

Shoei Foods, Inc., is currently monitoring wells related to the site's petroleum hydrocarbon plume in groundwater. This approved remediation project as described herein will require additional groundwater monitoring in accordance with enclosed Monitoring and Reporting Program (MRP) No. R5-2008-0149-0811.

Project Location:

The project is a commercial farm at 1900 Feather River Boulevard in Olivehurst, Yuba County. The legal description for the site is: Assessor's Parcel Number 016-060-019, Latitude 38.9948°N, Longitude 121.5773°W. The closest surface water body is the Feather River located approximately 1,000 feet west of the site.

Project Description:

In April 2007, two 1,000-gallon gasoline and diesel underground storage tanks (UST) were removed from this site. Soil and groundwater samples collected from beneath the UST's indicated the presence of petroleum hydrocarbons, primarily total petroleum hydrocarbons as gasoline (TPH-g), diesel (TPH-d), and benzene. From 2007 to the present, Shoei Foods, Inc., has completed a number of soil and groundwater investigations; however, petroleum impacts remain. Additional remediation efforts are required to expeditiously and cost-effectively clean up the impacts to groundwater.

California Environmental Protection Agency

Shoei Foods Inc. and its consultant, Hanover Environmental Services, Inc., (Hanover) propose to inject ozone into the subsurface groundwater at seven points around the former UST locations. Analytical testing will be performed on select monitoring wells per the enclosed MRP to evaluate if ozone injection is effective in destroying petroleum hydrocarbons and to monitor for increases in dissolved levels of specified metals, which may be caused by oxidation of native metals in soil. There are no surface waters associated with this project.

General Information:

1. The project will be operated in accordance with the requirements contained in the General Order No. R5-2008-0149 and in accordance with the information submitted in the Notice of Intent, and otherwise as specified in this Notice of Applicability (NOA).
2. The required annual fee (as specified in the annual billing you will receive from the State Water Resources Control Board) shall be submitted until this NOA is officially withdrawn.
3. Injection of material other than those specified in the NOI into the subsurface is prohibited, unless analysis, as specified in General Order No. R5-2008-0149, of the injectant is provided and approval is granted by Board staff.
4. Failure to abide by the conditions of the General Order and this NOA can result in enforcement actions as authorized by provisions of the California Water Code.
5. The Discharger shall comply with the enclosed MRP and any revisions thereto as ordered by the Executive Officer or directed by Board staff.

If you have any questions regarding this NOA, please telephone Mike Smith at (916) 464-4728, or by e-mail at msmith@waterboards.ca.gov.

Original Signed by FJM

PAMELA CREEDON
Executive Officer

Enclosure: General Order R5-2008-0149 and MRP

cc: w/ encl: Mr. Mark Owens, SWRCB, UST Cleanup Fund, Sacramento
Mr. Clark Pickell, Yuba County Environmental Health Department, Marysville
Mr. Mason McKellips, Hanover Environmental Services, Inc., Chico

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2008-0149-0811

FOR
IN-SITU GROUNDWATER REMEDIATION AT SITES WITH VOLATILE ORGANIC
COMPOUNDS, NITROGEN COMPOUNDS, PERCHLORATE, PESTICIDES,
SEMI-VOLATILE COMPOUNDS AND/OR PETROLEUM HYDROCARBONS
FOR
SHOEI FOODS INC.
1900 FEATHER RIVER BOULEVARD, OLIVEHURST
YUBA COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring an ozone injection system. This MRP is issued pursuant to Water Code Section 13267, and has been prepared based on Attachment C, a part of General Order R5-2008-0149.

No changes to this MRP shall be implemented (except sample location/frequency) unless and until a revised MRP is issued by the Executive Officer of the Central Valley Water Quality Control Board (Board). As appropriate, Board staff shall approve specific sample station locations prior to implementation of sampling activities.

PROJECT

1. **Parties Submitting a Notice of Intent under General Order R5-2008-0149:**
Shoei Foods Inc., (hereafter referred to as the “Discharger”).
2. **Project Location:** The project is a commercial farm at 1900 Feather River Boulevard in Olivehurst, Yuba County. The assessor parcel number is 016-060-019.
3. **Project Description:** Farm equipment fueling operations at Shoei Foods Inc., have caused pollution of soil and groundwater by petroleum constituents. The primary constituents are total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX). The petroleum impacts were found after removal of underground storage tanks (UST) in 2007. From 2007 to present, several soil and groundwater investigations have been completed. A past remedial measure consisted of soil excavation during the removal of the USTs. Although soil excavation was moderately successful, it has been determined that additional remedial efforts are required to more expeditiously and cost-effectively clean up the impacts to groundwater.

The Discharger proposes to inject ozone at various locations within the identified boundary seen in the attached Figure A1. The Discharger will also be conducting the applicable sampling and reporting. Adequate fail-safe alternates (stop ozone injection and monitor the unintended byproducts total and dissolved concentrations as aquifer conditions return to baseline.) are to be contained within the Discharger’s proposal, should adverse water quality conditions, such as the creation of hexavalent chromium (Cr+6), occur.

LEGAL REQUIREMENTS

4. CWC section 13267 states, in relevant part:

(a) A regional board ... in connection with any action relating to any plan or requirement authorized by this division, may investigate the quality of any waters of the state within its region.

(b)(1) In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

The Discharger has submitted a Notice of Intent to the Board indicating that they are responsible for the project subject to Order R5-2008-0149. The reports required herein are necessary to ensure compliance with Order R5-2008-0149.

5. CWC section 13268 states, in relevant part:

(a)(1) Any person failing or refusing to furnish technical or monitoring program reports ... or falsifying any information provided therein, is guilty of a misdemeanor, and may be liable civilly in accordance with subdivision (b).

...

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

...

(c) Any person discharging hazardous waste, as defined in Section 25117 of the Health and Safety Code, who knowingly fails or refuses to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or who knowingly falsifies any information provided in those technical or monitoring program reports, is guilty of a misdemeanor, may be civilly liable in accordance with subdivision (d)...

(d)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with Section 13323) of Chapter 5 for a violation of subdivision (c) in an amount which shall not exceed five thousand dollars (\$5,000) for each day in which the violation occurs.

It is Hereby Ordered that the Discharger shall comply with the following Monitoring and Reporting Program requirements:

GENERAL REQUIREMENTS

1. All samples should be representative of the volume and nature of the discharge or matrix of material sampled. The time, date, and location of each grab sample shall be recorded on the legal chain of custody form.

GROUNDWATER MONITORING

2. As shown on Figure 1, there are eight existing monitoring wells, three proposed monitoring wells, one domestic well, three existing ozone injections wells, and four proposed ozone injection wells associated with this site. The groundwater MRP for the groundwater monitoring wells and any groundwater monitoring wells installed subsequent to the issuance of this MRP, shall adhere to the schedule shown in Table 1. Groundwater monitoring wells with free-phase petroleum product or visible sheen shall be monitored, at a minimum, for product thickness and depth-to-water (DTW). Sample collection and analysis shall follow standard Environmental Protection Agency (EPA) protocol.

There will be three treatment zone wells (MW-2, MW-3, and proposed MW-9), two transition zone wells (MW-1 and MW-5), one compliance zone wells (MW-8), and one background well (MW-11) with a contingency background well being MW-8.

The groundwater monitoring wells shall be sampled according to the schedule in Table 1 and the samples analyzed by the methods in Table 2, as follows:

Table 1: Sampling Frequency and Constituent Suite

Well Number ¹	Frequency ²	Constituent Suite(s) ³	Monitoring Objective
MW-8	Prior to start, quarterly Prior to start, bi-annually	Suite A Suite C	Compliance ⁴
MW-2, MW-3, and proposed well MW-9 MW-2 MW-3	Prior to start, monthly Prior to start, bi-annually Prior to start, quarterly	Suite A Suite B, D Suite C	Treatment Zone ⁵
MW-1 MW-5	Prior to start, quarterly Prior to start, bi-annually Prior to start, quarterly	Suite C Suite B, C	Transition Zone ⁶
MW-4	Prior to start, annually	Suite A,B,C,D	Background ⁷

¹ Well numbers as shown on Figure A1.

² i.e., weekly, monthly, quarterly, annually, other.

³ Constituent suite components listed in Table 2.

⁴ Wells used to determine compliance with water groundwater limitations.

⁵ Wells sampled to evaluate in-situ bioremediation progress inside the treatment zone.

⁶ Wells sampled to evaluate migration of pollutants within the treatment zone.

⁷ Wells used to develop background concentrations.

Table 2: Analytical Methods

Constituent	Method ¹	Maximum Practical Quantitation Limit (µg/L) ²	Frequency
Suite A			
TPHg, TPHd	GC/MS	50	As indicated in Table 1
BTEX, Fuel Oxygenates	EPA 8260B	0.50 (1.0 for total xylenes, 5.0 for TBA)	
Suite B			
Metals, total and dissolved ³	EPA 6010B, 6020/7000	Various	As indicated in Table 1
Suite C			
Ferrous iron	EPA 218.6	10	As indicated in Table 1
Hexavalent Chromium	EPA 3500FED	2.0	As indicated in Table 1
Suite D			
Methane	Modified EPA 602	0.1	As indicated in Table 1
Alkalinity, total Alkalinity	EPA 310.1, 130.2	Various	As indicated in Table 1
Nitrate	EPA 352.1	300	As indicated in Table 1
Sulfate	EPA 375.3	200	As indicated in Table 1
Total Organic Carbon	EPA 405.1	300	As indicated in Table 1
Total Dissolved Solid	EPA 160.1	10,000	As indicated in Table 1

¹ Or an equivalent EPA Method that achieves the maximum Practical Quantitation Limit.

² All concentrations between the Method Detection Limit and the Practical Quantitation Limit shall be reported as an estimated value.

³ Metals include barium cadmium, calcium, chromium, copper, lead, magnesium, manganese, mercury, molybdenum, and nickel.

FIELD SAMPLING

- In addition to the above sampling and analysis, groundwater elevation, electrical conductivity, ORP, DO, pH, and water temperature will be measured and analyzed in the field during the semi-annual groundwater sampling activities each time a monitoring well is sampled. The sampling and analysis of field parameters is specified in Table 3.

Table 3: Field Sampling Requirements

Parameters	Units	Type of Sample
Groundwater Elevation	Feet, Mean Sea Level	Measurement
Water Temperature	Degrees Celsius	Grab
Electrical Conductivity	uhmos/cm	Grab
Oxygen-Reduction Potential	Millivolts	Grab
Dissolved Oxygen	mg/L	Grab
pH	pH Units (to 0.1 units)	Grab

An ozone detection meter will be used to monitor for the release of ozone at each injection wellhead during maintenance and monitoring field activities. The detection meter and other field test instruments (such as those used to test pH and dissolved oxygen) may be used provided that:

1. The operator is trained in proper use and maintenance of the instruments;
2. The instruments are calibrated prior to each monitoring event;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are submitted as described in item (b) of the “Reporting” section of this MRP.

An ambient ozone alarm has been mounted on the ozone injection system skid to continuously monitor for elevated concentrations of ozone gas during generation. If concentrations of ozone gas rise above the OSHA PELs the system will automatically shutdown the equipment. A manual reset is required to restart the system. The system is also equipped with an automatic shutdown when delivery pressures exceed the manufacturer’s specifications for the oxygen concentrator and the ozone generator. Following an automatic shutdown, a manual restart of the system is required.

DISCHARGE MONITORING

4. The Discharger shall monitor the amendments that are injected into the groundwater according to the requirements specified in Table 4. Each amendment addition shall be recorded individually, along with information regarding the time over which the amendment was injected into the aquifer. Periods when the ozone treatment system is inoperative shall be noted with dates and times in the monitoring report.

Table 4: Discharge Monitoring Requirements

Parameters	Units	Type of Sample
Ozone Gas Injected	grams per day	Measured

REPORTING

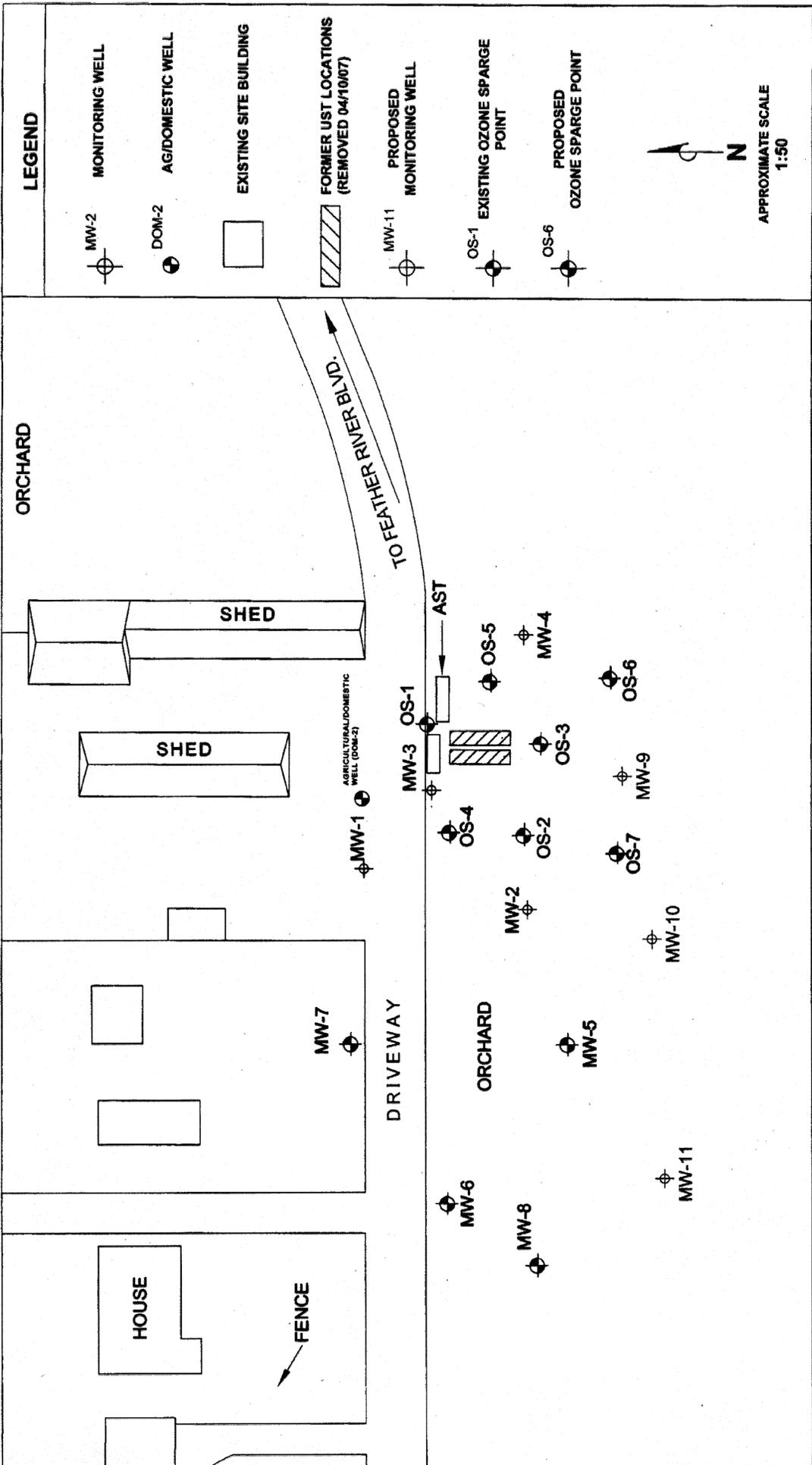
5. When reporting the data, the Discharger shall arrange the information in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner as to illustrate clearly the compliance with this Order. In addition, the Discharger shall notify the Regional Board within 48 hours of any unscheduled shutdown of any soil vapor and/or groundwater extraction system. The results of any monitoring done more frequently than required at the locations specified in the Monitoring and Reporting Program shall also be reported to the Regional Board.
6. As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.
7. The Discharger shall submit quarterly electronic data reports, which conform to the requirements of the California Code of Regulations, Title 23, Division 3, Chapter 30. The quarterly reports shall be submitted electronically over the internet to the Geotracker database system by the **30th day of the month** following the end of each calendar quarter, **30 April 30 July, 30 October, and 30 January**, until such time as site conditions and Regional Board staff determine that modification to the reporting requirements are applicable. And, hard copies of quarterly reports shall also be submitted to the Board by the 30th day of the month following the end of each calendar quarter. Each quarterly report shall include the following minimum information:
 - a) a description and discussion of the groundwater sampling event and results, including trends in the concentrations of pollutants and groundwater elevations in the wells, how and when samples were collected, and whether the pollutant plume(s) is delineated
 - b) field logs that contain, at a minimum, water quality parameters measured before, during, and after purging, method of purging, depth of water, volume of water purged, etc.
 - c) groundwater contour maps for all groundwater zones
 - d) pollutant concentration maps for all groundwater zones
 - e) cumulative data tables containing the water quality analytical results and depth to groundwater
 - f) a copy of the laboratory analytical data report, which may be submitted in an electronic format
 - g) the status of any ongoing remediation, including an estimate of the cumulative mass of pollutant removed from the subsurface, system operating time, the effectiveness of the remediation system, and any field notes pertaining to the operation and maintenance of the system
 - h) if applicable, the reasons for and duration of all interruptions in the operation of any remediation system, and actions planned or taken to correct and prevent interruptions
 - i) tabular and graphical summaries of all data obtained during the year
 - j) groundwater contour maps and pollutant concentration maps containing all data obtained during the previous year
 - k) a discussion of the long-term trends in the concentrations of the pollutants in the groundwater monitoring wells

- l) an analysis of whether the pollutant plume is being effectively treated
 - m) a description of all remedial activities conducted during the year, an analysis of their effectiveness in removing the pollutants, and plans to improve remediation system effectiveness
 - n) an identification of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program
 - o) desired, a proposal and rationale for any revisions to the groundwater sampling plan frequency and/or list of analytes.
8. A letter transmitting the monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program on the first day of the month following adoption of this Order.

Ordered by: Original Signed by FJM
PAMELA C. CREEDON Executive Officer

22 December 2011
(Date)



HANOVER ENVIRONMENTAL SERVICES, INC. 1072 MARAUDER, SUITE 220 CHICO, CA 95926 (530) 342-1333 FAX (530) 342-1490	NOTES:	REMEDIAL ACTION PLAN SHOEI FOODS 1900 FEATHER RIVER BLVD. OLIVEHURST, CA 95961	PROJECT NO: SHO101-G	DRAWING NO: F12 - PBL
	FIGURE 1 SITE MAP WITH PROPOSED BORING LOCATIONS		DRAWN BY DATE: MM /1-10-11	APPROVED BY DATE: JG/1-10-11